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The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

Foreign Agricultural Service

7 CFR Part 1550

RIN 0551–AA26

Programs To Help Develop Foreign Markets for Agricultural Commodities (Foreign Market Development Cooperator Program)

AGENCY: Foreign Agricultural Service, USDA.

ACTION: Final Rule.

SUMMARY: This rule revises regulations applicable to the Foreign Market Development Cooperator (Cooperator) Program. The revisions provide more detailed information concerning program administration, including participant eligibility, the application review process, allocation criteria, strategic planning and goal setting requirements, reimbursement rules and procedures, financial reporting and program evaluation requirements, appeal procedures, and program controls. The intent of this rule is to improve the effective administration of the Cooperator Program.

DATES: Effective October 1, 1999. *Applicability date:* This rule does not apply to Cooperator marketing plan years prior to the Fiscal Year 2000 program.

FOR FURTHER INFORMATION CONTACT: Kent Sisson or Denise Huttenlocker at (202) 720–4327.

SUPPLEMENTARY INFORMATION:

Executive Order 12866

This final rule is issued in conformance with Executive Order 12866. It has been determined that this final rule will not have an annual economic effect in excess of $100 million; will not cause a major increase in costs to consumers, individual industries, Federal, State, or local government agencies, or geographic regions; and will not have an adverse effect on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or foreign markets.

Executive Order 12988

This final rule has been reviewed in accordance with Executive Order 12988, Civil Justice Reform. The rule would have preemptive effect with respect to any State or local laws, regulations or policies which conflict with such provisions or which otherwise impede their full implementation; does not have retroactive effect; and does require administrative proceedings before suit may be filed.

Executive Order 12372

This program is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials (see the Notice related to 7 CFR part 3015, subpart V, published at 48 FR 29115).

Regulatory Flexibility Act

It has been determined that the Regulatory Flexibility Act is not applicable to this final rule because the Foreign Agricultural Service (FAS) is not required by any provision of law to publish a notice of rulemaking with respect to the subject matter of this rule.

Paperwork Reduction Act

The information collection requirements for participating in the Cooperator program were approved for use by the Office of Management and Budget (OMB) through December 31, 1999, and assigned OMB No. 0551–0026. This final rule does not impose new information collection requirements.

Background

The Foreign Market Development Cooperator Program's first participants (known as Cooperators) entered into agreements with FAS in 1954. The Cooperator program is currently authorized by Title VII of the Agricultural Trade Act of 1978, which directs the Secretary of Agriculture to ''establish and, in cooperation with eligible trade organizations, carry out a foreign market development cooperator program to maintain and develop foreign markets for United States agricultural commodities and products.'' FAS implements this provision by entering into agreements with non-profit U.S. agricultural trade organizations that have the broadest possible producer representation of the commodity being promoted and gives priority to those organizations that are nationwide in membership and scope.

Summary and Analysis of Comments

On June 15, 1999, FAS published a rule in the **Federal Register** (64 FR 32156) proposing to revise the regulations which govern the Cooperator program. That rule also requested interested parties to submit comments by July 14, 1999. FAS received seven comments on the proposed rule. Following is a summary of the comments which specifically address the proposed rule and FAS's response to each. General comments relating to the value of the program, editorial suggestions, and non-substantive comments have been omitted.

Premium Class Travel

FAS received 4 comments on this issue.

Comment: Extensive travel in business class is often less expensive than the full fare economy rate. Preventing business class travel in such cases would increase program costs.

Comment: Business class travel is especially important when hosting foreign trade teams. Both government and private representatives are accustomed to business class travel for transoceanic travel in many countries. The savings in cost from using economy class rather than business class would quickly become a net loss if the entire program is undermined by the poor experiences or feelings of disrespect that result.

Comment: If FAS personnel at a certain level are permitted to travel business class, then it seems unfair in the extreme that individuals who are equally influential within their governments or trade organizations or companies should not be permitted the same consideration and accommodations and courtesy.

Response: This new rule does not prevent any class of travel. It merely limits reimbursement, generally to the full fare economy rate. If a business (or higher) class ticket can be purchased at

a price equal to or less than the full fare economy rate, it may be reimbursed in its entirety subject to proper documentation. If a Cooperator believes that purchase of a higher class ticket at a rate higher than the full fare economy rate is necessary to achieve its market promotion goals, then the amount exceeding the reimbursable full fare economy rate can be claimed as a contribution to the program.

Comment: Elimination of reimbursement of business class travel will materially weaken the Cooperator program. Business class travel for flights longer than 6 hours ensures that staff, consultants, and foreign visitors arrive without the delays of mid-journey rest stops, are less stressed and fatigued by the flight, and are more quickly available to work.

Response: The FTR only allows for authorization of business class due to flight time when the origin or destination is outside of the continental U.S. and the scheduled flight time exceeds 14 hours. As an aid to organizations which may not be familiar with the FTR, FAS will issue a program notice to Cooperators which lists the exceptions under which FAS will reimburse the full price of business class travel.

Contributions

FAS received 5 comments on this issue.

Comment: The proposed rule states that Cooperators must contribute at least 50 percent of the value of resources provided by FAS. Can this 50 percent include contributions from U.S. industry members? Also, ''third party'' contributions are mentioned in the proposed rule. Does this refer only to the U.S. industry?

Response: As defined in § 1550.13, contributions from the U.S. industry are counted toward a Cooperator's contributions. FAS agrees that the term ''third party'' is misleading, and has replaced it with ''U.S. industry'' where appropriate in the final rule.

Comment: If a Cooperator contributes less to the program than was specified in its application, the Cooperator should not be required to pay to FAS the difference between the contribution estimate and actual contributions. There are several good reasons why a Cooperator might contribute less than expected.

Response: Cooperator program applicants compete against each other for funds based, in part, on the contributions promised in their applications. To maintain the integrity of the competitive process, the level of contributions specified in each Cooperator's application must be met. Therefore, FAS is adopting the rule as proposed.

Comment: This rule establishes a due date of ''January 31 of the year following the completion of the marketing plan year'' for Cooperators' end-of-year contribution reports. This allows only four months, while the Market Access Program (MAP) allows six months to submit contribution reports.

Response: The Cooperator program currently operates with the January 31 due date. FAS needs to receive these reports earlier in the calendar year because the data contained therein is used in the FAS budget process. Therefore, FAS is adopting the rule as proposed.

Comment: The proposed rule states that product research may not be reimbursed and that product development and modifications may not even be claimed as contributions. This seems to be inconsistent with the statement in the ''General Background'' section that activities address constraints or opportunities by focusing on matters such as ''identifying new markets or new applications or uses'' for products in the foreign market. Perhaps the rule should only exclude branded product research, development, and modifications.

Response: The language regarding new applications or uses in the foreign market refers to market research which would identify foreign marketing opportunities. It is not meant to refer to developing or modifying products, which are activities generally undertaken to benefit a company. FAS will allow certain types of product research, which are generally undertaken to benefit an industry and have a specific export application, to be claimed as a contribution. Therefore, FAS is adopting the rule as proposed.

Contingent Liabilities

FAS received 2 comments on this issue.

Comment: The proposed rule is silent on the issue of contingent liabilities. Under the existing guidelines, FAS may reimburse costs that would be due or forfeited if an overseas office closed on the last day of the marketing plan year, such as severance payments, deposits, and rent.

Response: FAS agrees that contingent liabilities should remain reimbursable under the program, and is amending § 1550.54 accordingly by adding a new paragraph (38).

Wireless Phones

FAS received 2 comments on this issue.

Comment: Please clarify whether monthly service fees for wireless phones are reimbursable in their entirety or if these fees must be prorated based on airtime devoted to program activities.

Response: Monthly service fees must be prorated based on airtime devoted to program activities. The prorated portion is reimbursable by FAS. FAS is amending § 1550.54 for clarification.

Comment: The costs of purchasing wireless phones should be reimbursable by FAS. How is the purchase of a wireless phone different from wireless phone usage or the purchase of a portable computer?

Response: Unlike portable computers, wireless phones are often used for non-business purposes and incoming non-business calls accrue charges. Wireless phone usage can be separated into business and non-business calls, but the purchase of the wireless phone cannot be separated or prorated because the Cooperator is not able to determine in advance the amount of usage that would be devoted to program activities. FAS has decided to disallow reimbursement of the costs of purchasing wireless phones, and, thus, the rule is adopted as proposed. The cost of purchasing a wireless phone can be claimed as a contribution to the program.

Required Notification of Attachés/ Counselors of In-Country Travel

FAS received 2 comments on this issue.

Comment: The proposed rule would require that Cooperators notify the attaché in any destination country in writing in advance of any proposed travel. Failure to provide advance notification may result in disallowance of the travel expenses. This penalty seems to be too severe, considering that some attachés do not respond to such notifications.

Response: This requirement, which is currently in effect, was added to the program at the request of several attachés. Although attachés may not always respond to travel notification, it is important that they be notified because their awareness of Cooperator activity in their countries of responsibility is important to the success of the program. The regulations do not require that attachés specifically approve Cooperator travel. Acceptable written notification includes electronic mail and facsimile. Thus, the rule is adopted as proposed.

Salaries and Allowances

FAS received 3 comments on this issue.

Comment: The proposed regulations do not mention several important

allowances currently reimbursable with FMD funds, such as: foreign transfer allowance, temporary lodging, post hardship differential. We request that these and other similar allowances be authorized for use of FMD funds.

Response: The proposed rule was not intended to change the allowances which are eligible for reimbursement under the program. FAS is amending § 1550.54 for clarification.

Comment: The proposed rule limits a combination of salary and certain allowances to the amount paid to a GS–15, step 10. The proposed limit should be rejected and replaced with a salary limitation and unlimited allowances.

Response: FAS must balance benefits to program participants against limited financial resources. FAS is establishing this limit to be consistent with the MAP, and, accordingly, is adopting the rule as proposed.

Comment: Our major concern is with clarity on the compensation limit for non-U.S. citizen employees who occupy the position of country or regional director. We had been led to believe that the Cooperator regulations would parallel the MAP regulations thereby permitting these positions to be compensated at the Foreign Service National (FSN) ''Supergrade'' levels. Would cooperators have this latitude to exceed the published FSN wage scales for country or regional directors under section 1550.20(b)(8)?

Response: Under the new regulations, a Cooperator may request to exceed a published FSN wage scale if the Cooperator can show that the existing scale is inappropriate. This provides greater flexibility in that there would be no limitations imposed by a ''supergrade'' structure, however, Cooperators could certainly maintain the ''supergrade'' scale for their own use. FAS is adopting the rule as proposed.

Contracting

FAS received 3 comments on this issue.

Comment: Past practice did not require written contracts for certain services for which written contracts are not customary (i.e., lawyer fees, interpreter or translation services, part time secretarial help and other short term services). We hope that the intent of the new Cooperator program regulations is not to change that practice.

Response: The existing guidelines require written contracts with legal firms. FAS believes that entering into written contracts for interpreter and translation services is prudent and would also assist in FAS compliance efforts. FAS did not intend to include short-term or part-time secretarial help. FAS is amending § 1550.35 to clarify these points.

Comment: The wording in this contracting section of the proposed rule is similar to the Market Access Program regulations. FAS issued a Program Notice about a year after those final regulations were published. It provided some contracting guidelines for MAP participants. Does this Program Notice apply to the Cooperator program?

Response: FAS intends to issue a Cooperator Program Notice providing contracting guidance.

Consumer Promotion

FAS received 1 comment on this issue.

Comment: The proposed rule states that the program provides assistance for generic promotion and, therefore, does not involve activities targeted directly toward individual consumers. We believe that generic promotions can be directed toward individual consumers.

Response: It was the intent of the proposed rule to remove the eligibility of consumer promotions from the Cooperator program. Assistance for consumer promotions remains available through the MAP. FAS is amending § 1550.12 and § 1550.55 to clarify that promotions directed toward consumers are not reimbursable under the Cooperator program.

Miscellaneous

FAS received comments on several other topics.

Comment: The proposed rule requires that Cooperators maintain an inventory of all capital goods valued at over $100. We recommend increasing this minimum value to $500. Also, what is meant by ''capital goods''?

Response: FAS agrees that the minimum value for inventory items should be increased to $500 and is amending § 1550.36 accordingly. FAS is amending the rule by replacing the term ''capital goods'' with the term ''property'' throughout and adding a definition of ''property'' in § 1550.13.

Comment: In some sections the proposed rule refers to contributions as cash and goods and services, in others it refers to cash and in-kind items. Is this intentional?

Response: FAS meant to refer only to cash and goods and services in the proposed rule. FAS is amending the rule by removing all references to in-kind items from the final rule.

Comment: Section 1550.54(a)(2) should be removed to make the final rule consistent with the MAP regulations.

Response: The parallel language in the MAP regulations was removed when a definition was added for ''expenditure''. For consistency, FAS will remove § 1550.54(a)(2) and add a definition of ''expenditure'' in § 1550.13.

Comment: Sometimes an expenditure is listed as reimbursable but does not seem to be a prudent way to expend Federal funds. Are expenditures that are listed as reimbursable always acceptable?

Response: FAS agrees that some levels of expenditures associated with reimbursable items could be unreasonable. To clarify this, FAS is amending § 1550.54 (a) and § 1550.55 (a) to clearly establish a standard that expenditures must be reasonable.

Comment: The proposed rule lists, among application requirements, market assessments including constraints facing exporters. In the annual program announcement, FAS also asks for opportunities for increasing exports. Does this signify a change in direction for the program?

Response: FAS prefers that market assessments also include export growth opportunities, and is amending sections 1550.12, 1550.13, 1550.20, and 1550.72 for clarification.

Comment: The proposed rule would require a receipt, purchase order, invoice, or contract for every expenditure in excess of $25.00. The Federal Travel Regulation only requires receipts for expenditures over $75.00. FAS should only require receipts, purchase orders, invoices, or contracts for expenditures in excess of $75.00.

Response: In order to maintain the integrity of the program and ensure effective program compliance, FAS will continue to require that Cooperators maintain expenditure documentation as detailed in the proposed rule. This includes that Cooperators must maintain original receipts for travel expenditures in excess of $25.00. Therefore, FAS is adopting the rule as proposed.

Comment: The proposed rule would require that Cooperators designate at least 2 individuals who can sign documents, including reimbursement claims. Our organization submits all of its claims electronically, with no signature.

Response: The rule does not require that all reimbursement claims be signed. Reimbursement claims submitted on paper require signatures. Reimbursement claims submitted electronically require identification codes and passwords for security. The rule merely requires that individuals be designated to act on the behalf of each

Cooperator so that it is clear to FAS when an authorized official has signed a document. Thus, FAS is adopting the rule as proposed.

Comment: The proposed rule does not mention reimbursement of storage fees for necessary program items, e.g., past records, current brochures. It is generally cheaper to find warehouse space than to lease extra office space for such items. Are storage fees still reimbursable?

Response: FAS intends for storage fees to remain reimbursable. FAS is amending § 1550.54 to include storage fees.

Effective Date

Pursuant to 5 U.S.C. 553, it is found and determined that good cause exists for making this final rule effective prior to 30 days after publication in the **Federal Register** because: (1) this action codifies program guidelines which have been in effect for many years and participants do not, therefore, need a transition period; and (2) delaying this rule beyond the beginning of the 2000 marketing plan year (October 1, 1999), would postpone the implementation of the marketing programs of more than two dozen agricultural trade organizations.

This rule is effective October 1, 1999, but does not apply to Cooperator marketing plan years prior to the Fiscal Year 2000 program.

List of Subjects in 7 CFR Part 1550

Agricultural commodities, Exports, Grant programs–agriculture, Reporting and recordkeeping requirements.

Accordingly, part 1550 of Title 7 of the Code of Federal Regulations is revised as follows:

PART 1550—PROGRAMS TO HELP DEVELOP FOREIGN MARKETS FOR AGRICULTURAL COMMODITIES

Subpart A—General Information

1550.10 What is the effective date of this part?
1550.11 Has the Office of Management and Budget reviewed the paperwork and record keeping requirements contained in this part?
1550.12 What is the Cooperator program?
1550.13 What special definitions apply to the Cooperator program?
1550.14 Is my organization eligible to participate in the Cooperator program?

Subpart B—Application and Fund Allocation

1550.20 How can my organization apply to the Cooperator program?
1550.21 How does FAS determine which Cooperator program applications are approved?
1550.22 How are Cooperator program funds allocated?

Subpart C—Program Operations

1550.30 How does FAS formalize its working relationship with approved Cooperators?
1550.31 Who acts on behalf of each Cooperator?
1550.32 Must Cooperators follow specific employment practices?
1550.33 Must Cooperators follow certain financial management guidelines?
1550.34 Must Cooperators adhere to specific standards of ethical conduct?
1550.35 Must Cooperators follow specific contracting procedures?
1550.36 How do Cooperators dispose of disposable property?
1550.37 Must Cooperators adhere to Federal Travel Regulations?
1550.38 Can a Cooperator keep proceeds generated from an activity?

Subpart D—Contributions and Reimbursements

1550.50 What cost share contributions are eligible?
1550.51 What are ineligible contributions?
1550.52 What are the guidelines for computing the value of non-cash contributions?
1550.53 What are the requirements for documenting and reporting contributions?
1550.54 What expenditures may FAS reimburse under the Cooperator program?
1550.55 What expenditures may not be reimbursed under the Cooperator program?
1550.56 How are Cooperators reimbursed?
1550.57 Will FAS make advance payments to a Cooperator?

Subpart E—Reporting, Evaluation, and Compliance

1550.70 Must Cooperators report to FAS?
1550.71 Are Cooperator documents subject to the provisions of the Freedom of Information Act?
1550.72 How is program effectiveness measured?
1550.73 Are Cooperators penalized for failing to make required contributions?
1550.74 How is Cooperator program compliance monitored?
1550.75 How does a Cooperator respond to a compliance report?
1550.76 Can a Cooperator appeal the determinations of the Deputy Administrator?

Authority: 7 U.S.C. 5721–5723.

Subpart A—General Information

§ 1550.10 What is the effective date of this part?

This part applies to activities that are conducted in accordance with the Cooperators' FY 2000 and subsequent marketing plan years.

§ 1550.11 Has the Office of Management and Budget reviewed the paperwork and record keeping requirements contained in this part?

The paperwork and record keeping requirements imposed by this part have been submitted to the Office of Management and Budget (OMB) for emergency review and reinstatement under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). OMB has previously assigned control number 0551–0026 for this information collection.

§ 1550.12 What is the Cooperator program?

(a) Under the Foreign Market Development Cooperator (Cooperator) Program, FAS enters into project agreements with eligible nonprofit U.S. trade organizations to share the costs of certain overseas marketing and promotion activities that are intended to create, expand, or maintain foreign markets for U.S. agricultural commodities and products. FAS does not provide brand promotion assistance to Cooperators under this program.

(b) FAS enters into project agreements with those eligible nonprofit U.S. trade organizations that have the broadest possible producer representation of the commodity being promoted and gives priority to those organizations that are nationwide in membership and scope. Project agreements involve the promotion of agricultural commodities on a generic basis. Project agreements do not involve activities targeted directly toward consumers purchasing as individuals. Activities must contribute to the maintenance or growth of demand for the agricultural commodities and generally address long-term foreign import constraints and export growth opportunities by focusing on matters such as reducing infra-structural or historical market impediments; improving processing capabilities; modifying codes and standards; and identifying new markets or new applications or uses for the agricultural commodity or product in the foreign market.

(c) The Cooperator program generally operates on a reimbursement basis.

(d) FAS policy is to ensure that benefits generated by Cooperator agreements are broadly available throughout the relevant agricultural sector and no one entity gains an undue advantage or sole benefit from program activities.

§ 1550.13 What special definitions apply to the Cooperator program?

For purposes of this part the following definitions apply:

Activity—a specific market development effort undertaken by a Cooperator to address a constraint or opportunity.

Administrator—the Administrator, FAS, USDA, or designee.

Agricultural Commodity—an agricultural commodity, food, feed, fiber, wood, livestock or insect, and any product thereof; and fish harvested from a U.S. aquaculture farm, or harvested by a vessel as defined in title 46, United States Code, in waters that are not waters (including the territorial sea) of a foreign country.

Attache/Counselor—the FAS employee representing USDA interests in the foreign country in which promotional activities are conducted.

Commodity Division—the office within the Foreign Agricultural Service responsible for the commodity covered by the project agreement.

Compliance Review Staff—the office within the Foreign Agricultural Service responsible for performing periodic reviews of Cooperators to ensure compliance with this part.

Constraint—a condition in a particular country or region which needs to be addressed in order to develop, expand, or maintain exports of a specific U.S. agricultural commodity.

Consumer Promotion—activities that are designed to directly influence consumers by changing attitudes or purchasing behaviors towards U.S. agricultural products.

Contribution—the cost-share expenditure made by a Cooperator or the U.S. industry in support of an activity; e.g., money, personnel, materials, services, facilities, or supplies.

Cooperator or *U.S. Cooperator*—a nonprofit U.S. agricultural trade organization which has entered into a foreign market development agreement with FAS.

Cooperator Program—the Foreign Market Development Cooperator Program.

Deputy Administrator—the Deputy Administrator, Commodity and Marketing Programs, FAS, USDA, or designee.

Division Director—the director of a commodity division, Commodity and Marketing Programs, FAS, USDA.

Eligible Commodity—an agricultural commodity that is comprised of at least 50 percent U.S. origin content by weight, exclusive of added water.

Eligible Trade Organization—a United States trade organization that promotes the exports of one or more United States agricultural commodities or products and does not have a business interest in or receive remuneration from specific sales of agricultural commodities or products.

Expenditure—transfer of funds.

FAS—Foreign Agricultural Service, USDA.

Foreign Third Party—a foreign entity that assists, in accordance with this part, in promoting the export of a U.S. agricultural commodity.

Generic Promotion—a promotion that does not involve the exclusive or predominant use of a single company name or logo(s) or brand name(s) of a single company.

Market—a country or region in which an activity is conducted.

Marketing Plan Year—the program year beginning on October 1 and ending on September 30, during which Cooperators can undertake activities, consistent with this part and their agreements with FAS, and seek reimbursement. For example, marketing plan year 2000 begins on October 1, 1999, and ends on September 30, 2000.

Project Agreement—a contract between FAS and a Cooperator in which the basic working relationship is described including the program and financial obligations of each.

Project Funds—the funds made available to a Cooperator by FAS under a project agreement, and authorized for expenditure in accordance with this part.

Property—furniture or equipment having a useful life of over one year and an acquisition cost of $500 or more.

STRE—sales and trade relations expenditures.

Trade Team—a group of individuals engaged in an activity intended to promote the interests of an entire agricultural sector rather than to result in specific sales by any of its members.

USDA—the United States Department of Agriculture.

§ 1550.14 Is my organization eligible to participate in the Cooperator program?

(a) To participate in the Cooperator program, an entity must be a nonprofit U.S. agricultural trade organization and contribute at least 50 percent of the value of resources provided by FAS for activities conducted under the project agreement.

(b) FAS may require that a project agreement include a contribution level greater than that specified in paragraph (a) of this section. In requiring a higher contribution level, FAS will take into account such factors as past Cooperator contributions, previous Cooperator program funding levels, the length of time an entity participates in the program, and the entity's ability to increase its contribution.

(c) FAS will enter into Cooperator agreements only for the promotion of eligible commodities.

Subpart B—Application and Fund Allocation

§ 1550.20 How can my organization apply to the Cooperator program?

FAS will publish a Notice in the **Federal Register** that it is accepting applications for participation in the Cooperator program for a specified marketing plan year. Applications shall be submitted in accordance with the terms and requirements specified in the Notice. An application shall contain basic information about the applicant and the proposed program, a strategic plan, and performance measures. FAS may request any additional information which it deems necessary to evaluate a Cooperator program application.

(a) *Basic applicant and program information.* All Cooperator program applications shall contain:

(1) The name and address of the applicant;

(2) The name of the Chief Executive Officer (or designee);

(3) The name and telephone number of the applicant's primary contact person;

(4) A description of management and administrative capability;

(5) The name(s) of the person(s) responsible for managing the program;

(6) A description of prior export promotion experience;

(7) A description of the organization, its membership, and membership criteria;

(8) A list of affiliated organizations;

(9) The applicant's Federal Tax Identification Number;

(10) The dollar amount of FAS resources requested under the Cooperator program;

(11) The value of the applicant's contribution, stated in dollars or as a percentage of paragraph (a)(10) of this section;

(12) The value of contributions from other sources, stated in dollars or as a percentage of paragraph (a)(10) of this section;

(13) A description of the eligible commodity(s); the associated commodity aggregate code(s), obtained from FAS; and the percentage of U.S. origin content by weight, exclusive of added water; and

(14) A certification statement, and, if requested by the Deputy Administrator, a written explanation supporting the certification, that any funds received will supplement, but not supplant, any private or industry funds or other contributions to program activities. The

written explanation, if necessary, shall indicate why the Cooperator is unlikely to carry out the activities without Federal financial assistance. The certification shall also state that information contained in the application is true and accurate and that all records supporting the claim that project funds do not supplant other funds will be made available to authorized officials of the U.S. Government.

(b) *Strategic plan and performance measures.* All Cooperator program applications shall also contain:

(1) A description of the U.S. and world market situation for the eligible commodity;

(2) Data summarizing historical and projected U.S. production, U.S. exports to the world, world trade, and U.S. market share;

(3) A summary of proposed activity budgets by country or region;

(4) A summary of proposed administrative budgets by country or region;

(5) A list of all countries that define any designated region;

(6) For each country or region for which activities are proposed:

(i) A market assessment, including the constraint(s) impeding U.S. exports, the export growth opportunities, the performance of competing suppliers, expected changes in demand, etc.;

(ii) The long-term strategy that will be used to counteract the constraints and achieve additional U.S. exports;

(iii) Previous activities, performance, and evaluation results;

(iv) Projected export goals and U.S. market share; and

(v) Performance indicators against which future success in addressing the constraint(s) or opportunities may be measured;

(7) A description of all proposed activities, including the requested FAS resources and the specific goals and benchmarks to be used to measure the effectiveness of each activity;

(8) A justification for any new overseas office, including a list of job titles, corresponding position descriptions, salary ranges, and any request for approval of salaries above the Foreign Service National (FSN) salary plan. To request approval of a salary above the FSN salary plan, the Cooperator shall include a detailed description of both the duties and responsibilities of the position, and of the qualifications and background of the individual concerned. The Cooperator shall also justify, based on a verifiable local salary survey or other documented local salary information, why the highest FSN salary level is inappropriate.

§ 1550.21 How does FAS determine which Cooperator program applications are approved?

(a) *General.* FAS allocates funds in a manner that effectively supports the strategic decision-making initiatives of the Government Performance and Results Act (GPRA) of 1993. In deciding whether a proposed project will contribute to the effective creation, expansion, or maintenance of foreign markets, FAS seeks to identify those projects that would demonstrate a clear, long-term agricultural trade strategy by market or product and a program effectiveness time line against which results can be measured at specific intervals using quantifiable product or country or region goals. These performance indicators are part of FAS' resource allocation strategy to fund applicants which can demonstrate performance based on a long-term strategic plan and address the performance measurement objectives of the GPRA.

(b) *Approval criteria.* FAS will consider a number of factors when reviewing proposed projects, including:

(1) The ability of the organization to provide an experienced U.S.-based staff with technical and international trade expertise to ensure adequate development, supervision, and execution of the proposed project;

(2) The organization's willingness to contribute resources, including cash and goods and services of the U.S. industry and foreign third parties;

(3) The conditions or constraints affecting the level of U.S. exports and market share for the agricultural commodities and products;

(4) The degree to which the proposed project is likely to contribute to the creation, expansion, or maintenance of foreign markets;

(5) The degree to which the strategic plan is coordinated with other private or U.S. government-funded market development projects;

(6) Past program results and evaluations, if applicable; and

(7) Previous Cooperator program funding.

§ 1550.22 How are Cooperator program funds allocated?

After determining which applications to recommend for approval, the Commodity Divisions recommend funding levels for the approved applicants within their respective divisions. Applications then compete for funds on the basis of the following allocation criteria (the number in parentheses represents a percentage weight factor). Data used in the calculations for contribution levels, past export performance and past demand expansion performance will cover not more than a 6-year period, to the extent such data is available. The method for applying the following criteria will be described in the Cooperator program announcement in the **Federal Register**:

(a) Contribution Level (40%).

(b) Past Export Performance (20%).

(c) Past Demand Expansion Performance (20%).

(d) Future Demand Expansion Goals (10%).

(e) Accuracy of Past Demand Expansion Projections (10%).

Subpart C—Program Operations

§ 1550.30 How does FAS formalize its working relationship with approved Cooperators?

FAS will notify each applicant in writing of the final disposition of its application. FAS will send a program agreement, allocation approval letter, and a signature card to each approved applicant. The allocation approval letter will specify any special terms and conditions applicable to a Cooperator's program, including the required level of Cooperator contribution. An applicant that accepts the terms and conditions contained in the program agreement and allocation approval letter should so indicate by having its Chief Executive Officer sign the program agreement and submit the signed agreement to the Director, Marketing Operations Staff, FAS, USDA. Final agreement shall occur when the Administrator signs the agreement on behalf of FAS. The application, the program agreement, the allocation approval letter, and this part shall establish the terms and conditions of a Cooperator agreement between FAS and the approved applicant.

§ 1550.31 Who acts on behalf of each Cooperator?

The Cooperator shall designate at least two individuals in its organization to sign program agreements, reimbursement claims, and requests. The Cooperator shall submit the signature card signed by those designated individuals and by the Cooperator's Chief Executive Officer to the Director, Marketing Operations Staff, FAS, USDA, prior to the start of the marketing plan year. The Cooperator shall immediately notify the Director of any changes in signatories (e.g., removal or addition of individuals, name changes, etc.), and shall submit a revised signature card accordingly.

§ 1550.32 Must Cooperators follow specific employment practices?

(a) A Cooperator shall enter into written contracts with all overseas employees and shall ensure that all terms, conditions, and related formalities of such contracts conform to governing local law.

(b) A Cooperator shall, in its overseas offices, conform its office hours, work week, and holidays to local law and to the custom generally observed by U.S. commercial entities in the local business community.

(c) A Cooperator may pay salaries or fees in any currency (U.S. or foreign) in conformance with contract specifications. Cooperators are cautioned to consult local laws regarding currency restrictions.

§ 1550.33 Must Cooperators follow certain financial management guidelines?

(a) A Cooperator shall implement and maintain a financial management system that conforms to generally accepted accounting principles.

(b) A Cooperator shall institute internal controls and provide written guidance to commercial entities participating in its activities to ensure their compliance with these provisions. Each Cooperator shall maintain all original records and documents relating to program activities for 5 calendar years following the end of the applicable marketing plan year and shall make such records and documents available upon request to authorized officials of the U.S. Government. A Cooperator shall also maintain all documents related to employment, such as employment applications, contracts, position descriptions, leave records, and salary changes; and all records pertaining to contractors. A Cooperator shall also maintain adequate documentation related to the proper disposition of all property purchased by the Cooperator and for which the Cooperator is reimbursed with program funds.

(c) A Cooperator shall maintain its records of expenditures and contributions in a manner that allows it to provide information by marketing plan year, country or region, activity number, and cost category. Such records shall include:

(1) Receipts for all STRE (actual vendor invoices or restaurant checks, rather than credit card receipts);

(2) Original receipts for any other program related expenditure in excess of $25.00;

(3) The exchange rate used to calculate the dollar equivalent of each expenditure made in a foreign currency and the basis for such calculation;

(4) Copies of reimbursement claims;

(5) An itemized list of claims charged to the Cooperator's FMD account;

(6) Documentation with accompanying English translation supporting each reimbursement claim, including original evidence to support the financial transactions, such as canceled checks, receipted paid bills, contracts or purchase orders, per diem calculations, and travel vouchers; and

(7) Documentation supporting contributions including: the date(s), purpose, and location(s) of each activity for which cash, goods, or services were claimed as a contribution; who conducted the activity; the participating groups or individuals; and the method of computing the claimed contributions. Cooperators must retain, and make available for audit, documentation related to claimed contributions.

(d) Upon request, a Cooperator shall provide to FAS the original documents which support the Cooperator's reimbursement claims. FAS may deny a claim for reimbursement if the claim is not supported by adequate documentation.

§ 1550.34 Must Cooperators adhere to specific standards of ethical conduct?

(a) A Cooperator shall conduct its business in accordance with the laws and regulations of the country(s) in which each activity is carried out.

(b) Neither a Cooperator nor its affiliates shall make export sales of agricultural commodities covered under the terms of a project agreement. Neither a Cooperator nor its affiliates shall charge a fee for facilitating an export sale. For the purposes of this paragraph, ''affiliate'' means any partnership, association, company, corporation, trust, or any other such party in which the Cooperator has an investment, other than a mutual fund. A Cooperator may collect check-off funds and membership fees that are required for membership in the Cooperator's organization.

(c) The Cooperator shall not use program activities or program funds to promote private self interests or conduct private business, except as members of sales teams.

(d) A Cooperator shall select U.S. agricultural industry representatives to participate in activities such as trade teams or trade fairs based on criteria that ensure participation on an equitable basis by a broad cross section of the U.S. industry. If requested, a Cooperator shall submit such selection criteria to FAS for approval.

(e) All Cooperators should endeavor to ensure fair and accurate fact-based advertising. Deceptive or misleading promotions may result in cancellation or termination of a project agreement.

(f) The Cooperator must report any actions or circumstances that have a bearing on the propriety of program activities to the Attache/Counselor and the Cooperator's U.S. office shall report such actions in writing to the appropriate Division Director.

§ 1550.35 Must Cooperators follow specific contracting procedures?

(a) Cooperators have full and sole responsibility for the legal sufficiency of all contracts and assume financial liability for any costs or claims resulting from suits, challenges, or other disputes based on contracts entered into by the Cooperator. Neither FAS nor any other agency of the United States Government or any official or employee of FAS or the United States Government has any obligation or responsibility with respect to Cooperator contracts with third parties.

(b) Cooperators are responsible for ensuring to the extent possible that the terms, conditions, and costs of contracts constitute the most economical and effective use of project funds.

(c) All fees for professional and consulting services paid in any part with project funds must be covered by written contracts.

(d) A Cooperator shall:

(1) Ensure that all expenditures for goods and services reimbursed, in excess of $25.00, by FAS are documented by a purchase order, invoice, or contract;

(2) Ensure that no employee or officer participates in the selection or award of a contract in which such employee or officer, or the employee's or officer's family or partners has a financial interest;

(3) Conduct all contracting in an open manner. Individuals who develop or draft specifications, requirements, statements of work, invitations for bids, or requests for proposals for procurement of any goods or services shall be excluded from competition for such procurement;

(4) Base each solicitation for professional or consulting services on a clear and accurate description of the requirements for the services to be procured;

(5) Perform some form of price or cost analysis, such as a comparison of price quotations to market prices or other price indicia, to determine the reasonableness of the offered prices; and

(6) Document the decision-making process.

§ 1550.36 How do Cooperators dispose of disposable property?

(a) Property purchased by the Cooperator and for which the Cooperator is reimbursed by FAS that is unusable, unserviceable, or no longer needed for project purposes shall be disposed of in one of the following ways. The Cooperator may:

(1) Exchange or sell the property, provided that it applies any exchange allowance, insurance proceeds, or sales proceeds toward the purchase of other property needed in the project;

(2) With FAS approval, transfer the goods to other Cooperators for their activities, or to a foreign third party; or

(3) Upon Attache/Counselor approval, donate the goods to a local charity, or convey the goods to the Attache/Counselor, along with an itemized inventory list and any documents of title.

(b) A Cooperator shall maintain an inventory of all property valued at $500 or more which was acquired in furtherance of program activities. The inventory shall list and number each item and include the date of purchase or acquisition, cost of purchase, replacement value, serial number, make, model, and electrical requirements.

(c) The Cooperator shall insure all property which was acquired with program funds and safeguard such property against theft, damage, and unauthorized use. The Cooperator shall promptly report any loss, theft, or damage of such property to the insurance company.

(d) The Cooperator is responsible for reimbursing FAS for the value of any uninsured property at the time of the loss or theft of the property.

§ 1550.37 Must Cooperators adhere to Federal Travel Regulations?

Travel shall conform to the U.S. Federal Travel Regulation (41 CFR Chapters 300 through 304) and air travel shall conform to the requirements of the ''Fly America Act'' (49 U.S.C. 1517). The Cooperator shall notify the Attache/Counselor in the destination countries in writing in advance of any proposed travel. The timing of such notice should be far enough in advance to enable the Attache/Counselor to schedule appointments, make preparations, or otherwise provide any assistance being requested. Failure to provide advance notification of travel may result in disallowance of the expenses related to the travel.

§ 1550.38 Can a Cooperator keep proceeds generated from an activity?

Any income or refunds generated from an activity, i.e., participation fees, proceeds of sales, refunds of value added taxes (VAT), the expenditures for which have been wholly or partially reimbursed, shall be repaid by submitting a check payable to FAS or by offsetting the Cooperator's next reimbursement claim.

Subpart D—Contributions and Reimbursements

§ 1550.50 What cost share contributions are eligible?

(a) The Cooperator shall pay all costs necessary for the operation of the Cooperator's U.S. office.

(b) In calculating the amount of contributions that it will make, and the contributions it will receive from a U.S. industry or a State agency, a Cooperator program applicant may include the costs (or such prorated costs) listed under paragraph (c) of this section if:

(1) Expenditures will be made in furtherance of the Cooperator's overall foreign market development program;

(2) The contributor has not been or will not be reimbursed by any other source for such costs; and

(3) The contribution is made during the period covered by the project agreement.

(c) Subject to paragraph (b) of this section, eligible contributions are:

(1) Cash;

(2) Compensation paid to personnel;

(3) The cost of acquiring materials, supplies, or services;

(4) The cost of office space;

(5) A reasonable and justifiable proportion of general administrative costs and overhead;

(6) Payments for indemnity and fidelity bond expenses;

(7) The cost of business cards;

(8) The cost of seasonal greeting cards;

(9) Fees for office parking;

(10) The cost of subscriptions to publications;

(11) The cost of activities conducted overseas;

(12) Credit card fees;

(13) The cost of any independent evaluation or audit that is not required by FAS to ensure compliance with program requirements;

(14) The cost of giveaways, awards, prizes and gifts;

(15) The cost of product samples;

(16) Fees for participating in U.S. government activities;

(17) The cost of air and local travel in the United States related to a foreign market development effort;

(18) Transportation and shipping costs;

(19) The cost of displays and promotional materials;

(20) Advertising costs;

(21) Reasonable travel costs and expenses related to undertaking a foreign market development activity;

(22) Payment of employee's or contractor's share of personal taxes;

(23) The cost associated with trade shows, seminars, entertainment and STRE conducted in the United States;

(24) Product research that is undertaken to benefit an industry and has a specific export application; and

(25) Consumer promotions.

§ 1550.51 What are ineligible contributions?

(a) The following are not eligible contributions:

(1) Any portion of salary or compensation of an individual who is the target of a promotional activity;

(2) Any land costs other than allowable costs for office space;

(3) Depreciation;

(4) The cost of refreshments and related equipment provided to office staff;

(5) The cost of insuring articles owned by private individuals;

(6) The cost of any arrangement which has the effect of reducing the selling price of an agricultural commodity;

(7) The cost of product development or product modifications;

(8) Slotting fees or similar sales expenditures;

(9) Funds, services, or personnel provided by any U.S. government agency;

(10) Capital investments made by a third party, such as permanent structures, real estate, and the purchase of office equipment and furniture;

(11) The value of any services generated by a Cooperator or third party which involve no expenditure by the Cooperator or third party, e.g., free publicity;

(12) Membership fees in clubs and social organizations; and

(13) costs included as contributions for any other federally-assisted project or program.

(b) The Deputy Administrator shall determine, at the Deputy Administrator's discretion, whether any cost not expressly listed in this section may be included by the Cooperator as an eligible contribution.

§ 1550.52 What are the guidelines for computing the value of non-cash contributions?

(a) *Computing the value of an individual's time.* If an individual's salary is known, allocate the individual's salary on the basis of time spent on foreign market development activities. If the individual's salary is unknown, claim up to the equivalent of

a step 10, GS–15 for professional personnel and up to the current estimated industry rate at the person's level of employment for nonprofessional personnel.

(b) *Computing the value of indirect expenditures.* Allocate value on the basis of sound management and accounting procedures when considering indirect expenditures, such as overhead and facilities, which are furnished by the industry.

§ 1550.53 What are the requirements for documenting and reporting contributions?

(a) Each claimed contribution must be documented by the Cooperator, showing the method of computing non-cash contributions, salaries, and travel expenses.

(b) Each Cooperator must keep records of the methods used to compute the value of non-cash contributions, and

(1) Copies of invoices or receipts for expenses paid by the U.S. industry and not reimbursed by the Cooperator for the joint activity; or

(2) If invoices are not available, an itemized statement from the U.S. industry as to what costs it incurred pursuant to the joint activity; or

(3) If neither of the foregoing is available, a statement from the U.S. industry as to what goods and services it provided; or

(4) If none of the foregoing are available, a memo to the files of the U.S. Cooperator's estimate of what contributions were made by the U.S. industry, item by item, and the method used to assign a value to each.

(c) Each Cooperator must report its contributions as described in § 1550.70 (a).

§ 1550.54 What expenditures may FAS reimburse under the Cooperator program?

(a) A Cooperator may seek reimbursement for an expenditure if:

(1) The expenditure is reasonable and has been made in furtherance of a market development activity; and

(2) The Cooperator has not been or will not be reimbursed for such expenditure by any other source.

(b) Subject to paragraph (a) of this section, FAS will reimburse, in whole or in part, the cost of:

(1) Production and placement of advertising in print or electronic media or on billboards or posters;

(2) Production and distribution of banners, recipe cards, table tents, shelf talkers, and similar point of sale materials;

(3) Direct mail advertising;

(4) Food service promotions, product demonstrations to the trade, and distribution of promotional samples;

(5) Temporary displays and rental of space for temporary displays;

(6) Fees for participation in retail and trade exhibits and shows, and booth construction and transportation of related materials to such exhibits and shows;

(7) Trade seminars, including space rental, equipment rental, and duplication of seminar materials;

(8) Production and distribution of publications;

(9) Part-time contractors, such as interpreters, translators, and receptionists, to help with the implementation of promotional activities, such as trade shows, food service promotions, and trade seminars;

(10) Giveaways, awards, prizes, gifts, and other similar promotional materials, subject to the limitation that FAS will not reimburse more than $1.00 per item;

(11) Compensation and allowances for housing, educational tuition, and cost of living adjustments paid to U.S. citizen employees or U.S. citizen contractors stationed overseas, subject to the limitation that FAS shall not reimburse that portion of:

(i) The total of compensation and allowances that exceed 125 percent of the level of a GS–15, Step 10 salary for U.S. Government employees, and

(ii) Allowances that exceed the rate authorized for U.S. Embassy personnel;

(12) Foreign transfer, temporary lodging, and post hardship differential allowances for U.S. citizen employees;

(13) Approved salaries or compensation for non-U.S. citizens and non-U.S. contractors. Generally, FAS will not reimburse any portion of a non-U.S. citizen employee's compensation that exceeds the compensation prescribed for the most comparable position in the Foreign Service National (FSN) salary plan applicable to the country in which the employee works. However, if the local FSN salary plan is inappropriate, a Cooperator may request a higher level of reimbursement for a non-U.S. citizen in accordance with § 1550.20 (b)(8);

(14) A retroactive salary adjustment that conforms to a change in FSN salary plans, effective as of the date of such change;

(15) Accrued annual leave at such time when employment is terminated or when required by local law;

(16) Overtime paid to clerical staff;

(17) Fees for professional and consultant services;

(18) Air travel, plus passports, visas, and inoculations, subject to the limitation that FAS will not reimburse any portion of air travel in excess of the full fare economy rate or when the Cooperator fails to notify the Attaché/Counselor in the destination country in advance of the travel, unless the Deputy Administrator determines it was impractical to provide such notification;

(19) Per diem, subject to the limitation that FAS will not reimburse per diem in excess of the rates allowed under the U.S. Federal Travel Regulation (41 CFR Chapters 300 through 304);

(20) Automobile mileage at the local U.S. Embassy rate, or rental cars while in travel status;

(21) Other allowable expenditures while in travel status as authorized by the U.S. Federal Travel Regulation (41 CFR Chapters 300 through 304);

(22) An overseas office, including rent, utilities, communications originating overseas, office supplies, accident liability insurance premiums, and legal and accounting services;

(23) The purchase, lease, or repair of, or insurance premiums for, property that has an expected useful life of at least one year, such as furniture, equipment, machinery, removable fixtures, floor coverings, and computer hardware and software;

(24) Office decor, such as draperies or blinds;

(25) Premiums for health or accident insurance or other benefits for foreign national employees that the employer is required by law to pay;

(26) Accident liability insurance premiums for facilities used jointly with third party participants for Cooperator program activities, or such insurance premiums for travel of non-Cooperator personnel;

(27) Market research;

(28) Evaluations, if not required by FAS to ensure compliance with program requirements;

(29) Legal fees to obtain advice on the host country's labor laws;

(30) Employment agency fees;

(31) STRE, including breakfast, lunch, dinner, receptions, and refreshments at activities; miscellaneous courtesies such as checkroom fees, taxi fares, and tips; and decorations for a special promotional occasion;

(32) Educational travel of dependent children, visitation travel, rest and recuperation travel, home leave travel, and emergency visitation travel for U.S. overseas employees as allowed under the Foreign Affairs Manual;

(33) Evacuation payments (safe haven), and shipment and storage of household goods and motor vehicles;

(34) Demonstration projects;

(35) Purchase of trade and business periodicals containing material related to market development activities for use by overseas staffs;

(36) Training expenses in the U.S. for FSNs;

(37) Language training for U.S. citizen employees at the foreign post of assignment;

(38) Forward year financial obligations required by local law or custom; such as severance pay, attributable to employment of foreign nationals; or forfeiture of rent or deposits, attributable to the closure of an office;

(39) Fees for storage of necessary program materials;

(40) Shipment of samples or other program materials from the U.S. to foreign countries; and

(41) That portion of airtime for wireless phones that is devoted to program activities and monthly service fees prorated at the proportion of program-related airtime to total airtime.

§ 1550.55 What expenditures may not be reimbursed under the Cooperator program?

(a) FAS will not reimburse expenditures made prior to approval of a Cooperator's program, unreasonable expenditures, or any cost of:

(1) Expenses, fines, settlements, or claims resulting from suits, challenges, or disputes emanating from employment terms, conditions, contract provisions, or related formalities;

(2) Product development, product modification, or product research;

(3) Product samples;

(4) Slotting fees or similar sales expenditures;

(5) The purchase, construction, or lease of space for permanent displays, i.e., displays lasting beyond one marketing plan year;

(6) Office parking fees;

(7) Coupon redemption or price discounts;

(8) Refundable deposits or advances;

(9) Giveaways, awards, prizes, gifts, and other similar promotional materials in excess of $1.00 per item;

(10) Alcoholic beverages that are not an integral part of a promotional activity;

(11) The purchase, lease (except for use in authorized travel status), or repair of motor vehicles;

(12) Travel of applicants for employment interviews;

(13) Unused non-refundable airline tickets or associated penalty fees, except where travel is restricted by U.S. government action or advisory;

(14) Any arrangement which has the effect of reducing the selling price of an agricultural commodity;

(15) Goods and services and salaries of third party personnel;

(16) Membership fees in clubs and social organizations;

(17) Indemnity and fidelity bonds;

(18) Fees for participating in U.S. Government sponsored activities, other than trade fairs, shows, and exhibits;

(19) Business cards;

(20) Seasonal greeting cards;

(21) Subscriptions to non-trade related publications;

(22) Credit card fees;

(23) Refreshments, or related equipment, for office staff;

(24) Insurance on household goods and personal effects, including privately-owned automobiles, whether overseas or stored in the U.S., belonging to U.S. citizen employees;

(25) Home office domestic administrative expenses, including communication costs;

(26) Payment of U.S. or foreign employee's or contractor's share of personal taxes, except as legally required in a foreign country;

(27) Wireless phone equipment, equipment repair, insurance, and other related charges;

(28) STRE expenses incurred in the U.S;

(29) Entertainment, e.g., amusements, diversions, cover charges, personal gifts, or tickets to theatrical or sporting events;

(30) Functions (including receptions and meals at Cooperator staff conferences) at which target groups, such as members of the overseas trade, opinion leaders, foreign government officials, and other similar groups, are not present; or

(31) Promotions directed at consumers purchasing in their individual capacity.

(b) The Deputy Administrator may determine, at the Deputy Administrator's discretion, whether any cost not expressly listed in this section will be reimbursed.

(c) FAS will reimburse for expenses incurred up to 30 calendar days beyond the conclusion of the marketing plan year.

§ 1550.56 How are Cooperators reimbursed?

(a) A format for reimbursement claims is available from the Director, Marketing Operations Staff, FAS, USDA. Claims for reimbursement shall contain at least the following information:

(1) Activity code;

(2) Country code;

(3) Cost category;

(4) Amount to be reimbursed or credited;

(5) If applicable, any reduction in the amount of reimbursement claimed to offset FAS demand for refund of amounts previously reimbursed, and reference to the relevant Compliance Report; and

(6) If applicable, any amount previously claimed that has not been reimbursed.

(b) All claims for reimbursement shall be submitted by the Cooperator's U.S. office to the Director, Marketing Operations Staff, FAS, USDA.

(c) FAS will not reimburse claims submitted later than 6 months after the end of a marketing plan year.

(d) If FAS overpays a reimbursement claim, the Cooperator shall repay FAS within 30 days the amount of the overpayment either by submitting a check payable to FAS or by offsetting its next reimbursement claim.

(e) If a Cooperator receives a reimbursement or offsets an advanced payment which is later disallowed, the Cooperator shall within 30 days of such disallowance repay FAS the amount owed either by submitting a check payable to FAS or by offsetting its next reimbursement claim.

(f) The Cooperator shall report any actions having a bearing on the propriety of any claims for reimbursement to the Attache/Counselor and its U.S. office shall report such actions in writing to the Division Director(s).

§ 1550.57 Will FAS make advance payments to a Cooperator?

(a) *Policy*. In general, FAS operates the Cooperator program on a reimbursable basis.

(b) *Exception*. Upon request, FAS may make two types of advance payments to a Cooperator. The first is a revolving fund operating advance provided by FAS only to Cooperators with foreign offices supported with project funds. The second is a special advance payment used to pay an impending large cost item. FAS will provide this type of advance expense payment in lieu of direct payments by FAS to vendors or other third parties. All Cooperators, with or without project fund-supported foreign offices, are eligible to request special advance payments. Normally, special advance payments received from FAS must be liquidated by the Cooperator within 90 days from the date of receipt. Prior to making an advance, FAS may require the participant to submit security in a form and amount acceptable to FAS to protect FAS' financial interests. FAS will not make any special advance payment to a Cooperator where a special advance is outstanding from a prior marketing plan year. Cooperators shall deposit and maintain advances in insured, interest-bearing accounts, unless such accounts are prohibited by law or custom of a host country.

(c) *Refunds due FAS.* A participant shall return any unexpended portion of an advance, plus any interest earned, either by submitting a check payable to FAS or by offsetting its next reimbursement claim. All checks shall be mailed to the Director, Marketing Operations Staff, FAS, USDA.

Subpart E—Reporting, Evaluation, and Compliance

§ 1550.70 Must Cooperators report to FAS?

(a) *End-of-Year contribution report.* Not later than January 31 of the year following the completion of the marketing plan year, a Cooperator shall submit two copies of a report which identifies contributions made by the Cooperator and the U.S. industry during that marketing plan year. A suggested format of a contribution report is available on the FAS home page (http://www.fas.usda.gov/mos/programs/fnotice.html) on the Internet or from the Director, Marketing Operations Staff, FAS, USDA.

(b) *Trip reports.* Not later than 45 days after completion of travel (other than local travel), a Cooperator shall submit a trip report. The report must include the name(s) of the traveler(s), purpose of travel, itinerary, names and affiliations of contacts, and a brief summary of findings, conclusions, recommendations, or specific accomplishments.

(c) *Research reports.* Not later than 6 months after the end of its marketing plan year, a Cooperator shall submit a report on any research conducted in accordance with its application.

(d) *Submission of reports.* A Cooperator shall submit the reports required by this section to the appropriate Division Director. Trip reports and research reports shall also be submitted to the appropriate Attache/Counselor(s). All reports shall be in English and include the Cooperator's agreement number, the countries and period covered, and the date of the report.

(e) *Additional reports.* FAS may require the submission of additional reports.

(f) *Independent audit reports.* A Cooperator shall provide to the FAS Compliance Review Staff, upon request, any audit reports by independent public accountants.

§ 1550.71 Are Cooperator documents subject to the provisions of the Freedom of Information Act?

(a) Documents submitted to FAS by Cooperators are subject to the provisions of the Freedom of Information Act (FOIA), 5 U.S.C. 552, 7 CFR part 1, Subpart A—Official Records, and, specifically, 7 CFR 1.11—Handling Information from a Private Business.

(b) If requested by a person located in the United States, a Cooperator shall provide to such person a copy of any document in its possession or control containing market information developed and produced under the terms of its agreement. The Cooperator may charge a fee not to exceed the costs for assembling, duplicating, and distributing the materials.

(c) The results of any research conducted by a Cooperator under an agreement shall be the property of the U.S. Government.

§ 1550.72 How is program effectiveness measured?

(a) The Government Performance and Results Act (GPRA) of 1993 (5 U.S.C. 306; 31 U.S.C. 1105, 1115–1119, 3515, 9703–9704) requires performance measurement of Federal programs, including the Cooperator program. Evaluation of the Cooperator program's effectiveness will depend on a clear statement by each Cooperator of the constraints and opportunities facing U.S. exports, goals to be met within a specified time, a schedule of measurable milestones for gauging success, a plan for achievement, and reports of activity results.

(b) Evaluation is an integral element of program planning and implementation, providing the basis for the strategic plan. The evaluation results guide the development and scope of a Cooperator's program, contribute to program accountability, and provide evidence of program effectiveness.

(c) A Cooperator shall conduct periodic evaluations of its program and activities and may contract with an independent evaluator to satisfy this requirement. FAS reserves the right to have direct input and control over design, scope, and methodology of any such evaluation, including direct contact with and provision of guidance to the independent evaluator.

(d) A Cooperator shall complete at least one program evaluation each year. Actual scope and timing of the program evaluation shall be determined by the Cooperator and the Division Director and specified in the Cooperator's application approval letter. A program evaluation shall contain:

(1) The name of the party conducting the evaluation;

(2) The activities covered by the evaluation;

(3) A concise statement of the constraint(s) and opportunities and the goals specified in the application;

(4) A description of the evaluation methodology;

(5) A description of additional export sales achieved, including the ratio of additional export sales in relation to Cooperator program funding received;

(6) A summary of the findings, including an analysis of the strengths and weaknesses of the program(s); and

(7) Recommendations for future programs.

(e) A Cooperator shall submit, via a cover letter to the Division Director, an executive summary which assesses the program evaluation's findings and recommendations and proposes changes in program strategy or design as a result of the evaluation.

§ 1550.73 Are Cooperators penalized for failing to make required contributions?

A Cooperator's contribution requirement is specified in the Cooperator program allocation letter. If a Cooperator fails to contribute the amount specified in its allocation approval letter, the Cooperator shall pay to FAS in U.S. dollars the difference between the amount it has contributed and the amount specified in the allocation approval letter. A Cooperator shall remit such payment by December 31 following the end of the marketing plan year.

§ 1550.74 How is Cooperator program compliance monitored?

(a) The Compliance Review Staff (CRS), FAS, performs periodic on-site reviews of Cooperators to ensure compliance with this part.

(b) In order to verify that federal funds received by a Cooperator do not supplant private or U.S. industry funds or contributions pursuant to § 1550.20(a)(14), FAS will consider the Cooperator's overall marketing budget from year to year, variations in promotional strategies within a country or region, and new markets.

(c) The Director, CRS, will notify a Cooperator through a compliance report when it appears that FAS may be entitled to recover funds from that Cooperator. The compliance report will state the basis for this action.

§ 1550.75 How does a Cooperator respond to a compliance report?

(a) A Cooperator shall, within 60 days of the date of the compliance report, submit a written response to the Director, CRS. This response shall include any money owed to FAS if the Cooperator does not wish to contest the compliance report. The Director, CRS, at the Director's discretion, may extend the period for response up to an additional 30 days. If the Cooperator does not respond to the compliance report within

the required time period or, if after review of the Cooperator's response, the Director, CRS, determines that FAS may be entitled to recover funds from the Cooperator, the Director, CRS, will refer the compliance report to the Deputy Administrator.

(b) If, after review of the compliance report and response, the Deputy Administrator determines that the Cooperator owes money to FAS, the Deputy Administrator will so inform the Cooperator. The Deputy Administrator may initiate action to collect such amount pursuant to 7 CFR Part 1403, Debt Settlement Policies and Procedures. Determinations of the Deputy Administrator will be in writing and in sufficient detail to inform the Cooperator of the basis for the determination. The Cooperator has 30 days from the date of the Deputy Administrator's initial determination to submit any money owed to FAS or to request reconsideration.

§ 1550.76 Can a Cooperator appeal the determinations of the Deputy Administrator?

(a) The Cooperator may appeal the determinations of the Deputy Administrator to the Administrator. An appeal must be in writing and be submitted to the Office of the Administrator within 30 days following the date of the initial determination by the Deputy Administrator or the determination on reconsideration. The Cooperator may request a hearing.

(b) If the Cooperator submits its appeal and requests a hearing, the Administrator, or the Administrator's designee, will set a date and time, generally within 60 days. The hearing will be an informal proceeding. A transcript will not ordinarily be prepared unless the Cooperator bears the cost of a transcript; however, the Administrator may have a transcript prepared at FAS's expense.

(c) The Administrator will base the determination on appeal upon information contained in the administrative record and will endeavor to make a determination within 60 days after submission of the appeal, hearing, or receipt of any transcript, whichever is later. The determination of the Administrator will be the final determination of FAS. The Cooperator must exhaust all administrative remedies contained in this section before pursuing judicial review of a determination by the Administrator.

Signed at Washington, D.C., on September 23, 1999.

Timothy J. Galvin,

Administrator, Foreign Agricultural Service.

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DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

12 CFR Part 30

[Docket No. 99–12]

RIN 1557–AB73

Guidelines Establishing Year 2000 Standards for Safety and Soundness for National Bank Transfer Agents and Broker-Dealers

AGENCY: Office of the Comptroller of the Currency, Treasury.

ACTION: Interim rule with request for comment.

SUMMARY: The Office of the Comptroller of the Currency (OCC) is issuing interim guidelines (Supplemental Guidelines) establishing Year 2000 standards for safety and soundness for national bank transfer agents and brokers or dealers pursuant to section 39 of the Federal Deposit Insurance Act (FDI Act). Last year, the OCC, together with the other member agencies of the Federal Financial Institutions Examination Council (FFIEC), published joint Guidelines (Year 2000 Guidelines) establishing standards for safety and soundness that insured depository institutions must follow to ensure the Year 2000 readiness of their mission-critical systems. These Supplemental Guidelines complement the Year 2000 Guidelines by describing two essential steps that national banks and, in certain cases, national bank operating subsidiaries, and Federal branches that are subject to the provisions of section 39 of the FDI Act must take to ensure the Year 2000 readiness of their transfer agent and broker or dealer automated systems.

DATES: This interim rule is effective on September 30, 1999. Comments must be received by November 29, 1999.

ADDRESSES: Direct comments to the Office of the Comptroller of the Currency, Communications Division, 250 E Street, SW, Washington, DC 20219, Attention: Docket No. 99–12. Comments may be inspected and photocopied at the same location. In addition, comments may be sent by fax to (202) 874–5274 or by electronic mail to regs.comments@occ.treas.gov.

FOR FURTHER INFORMATION CONTACT: Karl Betz, Attorney, Legislative and Regulatory Activities (202) 874–5090; Stuart E. Feldstein, Assistant Director, Legislative and Regulatory Activities (202) 874–5090; Joe Malott, National Bank Examiner (202) 874–4967; or Vaughn Folks, National Bank Examiner (202) 874–4270.

SUPPLEMENTARY INFORMATION:

Background

Pursuant to section 39 of the FDI Act (12 U.S.C. 1831p–1), the OCC is issuing Supplemental Guidelines establishing Year 2000 standards for safety and soundness for the following: (1) Registered transfer agents that are national banks, national bank operating subsidiaries, and Federal branches subject to the provisions of section 39 of the FDI Act (bank transfer agents); and (2) national banks and Federal branches subject to the provisions of section 39 of the FDI Act that effect securities brokerage or dealer transactions (bank brokers or dealers).[1] These standards apply to transfer agent and broker or dealer systems that have not been designated as mission-critical and, therefore, are not covered under the Year 2000 Guidelines jointly issued by the OCC and the other member agencies of the FFIEC (collectively, the Agencies)[2], which also implement section 39 of the FDI Act. The Securities and Exchange Commission (SEC) recently approved a rule for non-bank transfer agents and broker-dealers that further highlights these risks. *See* Year 2000 Operational Capability Requirements for Registered Broker-Dealers and Transfer Agents, 64 FR 42012 (August 3, 1999) (imposing Year 2000 readiness requirements on non-bank transfer agents and broker-dealers).[3]

On October 15, 1998, the Agencies issued joint interim final guidelines (Year 2000 Guidelines) establishing Year 2000 standards for safety and

[1] Section 39 requires each appropriate Federal banking agency to establish operational and managerial standards relating to, among other things, internal controls, information systems, and internal audit systems, or such other standards as each agency determines to be appropriate.

[2] The OCC, the Board of Governors of the Federal Reserve System (Board), the Federal Deposit Insurance Corporation (FDIC), and the Office of Thrift Supervision (OTS) jointly issued the Year 2000 Guidelines.

[3] The SEC's rule requires broker-dealers and non-bank transfer agents to file a notice regarding any Year 2000 problems with the SEC by August 31, 1999, but allows firms that have Year 2000 problems to continue to operate if they certify that they will complete their Year 2000 efforts no later than November 15, 1999. Firms that are not Year 2000 compliant on November 15 will be required to cease operations by December 1, 1999.

soundness pursuant to section 39 of the FDI Act. 63 FR 55480 (Oct. 15, 1998). The Year 2000 Guidelines describe certain essential steps that each insured depository institution must take in order to achieve Year 2000 readiness of its mission-critical systems.

The Supplemental Guidelines complement but do not supersede the existing Year 2000 Guidelines. Therefore, if a national bank has designated or should have designated a transfer agent or broker-dealer system as mission-critical, the standards contained in the Year 2000 Guidelines continue to apply to these systems, including the renovation, testing, and contingency planning deadlines that are earlier than the deadlines contained in the Supplemental Guidelines.

The FFIEC has also issued Guidance Concerning Fiduciary Services and Year 2000 Readiness (September 2, 1998). This issuance instructed financial institutions that offer transfer agent services to clients to ensure that they address any Year 2000 concerns, particularly those associated with the use of automated transfer agent systems. The Supplemental Guidelines complement this guidance by providing specific instructions on the steps national banks, and where applicable, their operating subsidiaries, or Federal branches that are subject to section 39 of the FDI Act must take at a minimum to ensure that their automated transfer agent and broker or dealer systems are Year 2000 ready.

The OCC anticipates that most bank transfer agents and bank brokers or dealers will already have satisfied the safety and soundness standards set forth in the Supplemental Guidelines. Plans or procedures that a national bank has already adopted may suffice for purposes of complying with the Supplemental Guidelines if they have been deemed acceptable by the OCC. However, the Supplemental Guidelines will help ensure that non-mission-critical transfer agent and broker or dealer systems are Year 2000 ready.

Description of Supplemental Guidelines

Definitions (Section C.)

The Supplemental Guidelines define certain key terms to help clarify the types of actions national banks and, where applicable, national bank operating subsidiaries, and Federal branches that are subject to the provisions of section 39 of the FDI Act, are expected to undertake. In addition to those terms previously defined in the Year 2000 Guidelines, these Supplemental Guidelines define the terms ''bank transfer agent,'' ''bank broker or dealer,'' and ''system.''

For example, the term ''bank transfer agent'' covers a national bank that provides transfer agent services directly or through an operating subsidiary, or a Federal branch that is subject to the provisions of section 39 of the FDI Act, and either the national bank, operating subsidiary or Federal branch is a registered transfer agent whose appropriate regulatory agency, as that term is defined in 15 U.S.C. 78c(a)(34), is the OCC.[4] For purposes of these Supplemental Guidelines, the term ''bank transfer agent'' does not cover a transfer agent that qualifies as an issuer or small transfer agent as these terms are defined under SEC rules. 17 CFR 240.17Ad–13(d)(1) and (2).

The term ''bank broker or dealer'' means a national bank or a Federal branch that is subject to the provisions of section 39 of the FDI Act, that effects securities brokerage or dealer transactions for customers. This definition does not include operating subsidiaries of national banks because national bank operating subsidiaries are subject to the SEC's regulations. For purposes of these Supplemental Guidelines, the term ''bank broker or dealer'' does not cover a national bank effecting fewer than 500 securities brokerage transactions per year for customers over the prior three calender year period.[5]

Year 2000 Standards for Safety and Soundness (Section D.)

The Supplemental Guidelines impose two requirements. First, no later than November 1, 1999, each bank transfer agent and broker or dealer must identify all transfer agent or broker or dealer systems that are not Year 2000 ready. Second, for each non-Year 2000 ready transfer agent or broker or dealer system the bank transfer agent or bank broker or dealer must develop and implement an effective written business resumption contingency plan by November 15, 1999. Among other things, this contingency plan must describe how the bank transfer agent or bank broker or dealer will mitigate the risks associated with the failure of the transfer agent and broker or dealer systems.

As noted earlier, plans and procedures already adopted may suffice if the OCC has deemed them acceptable. Nevertheless, contingency planning is a dynamic process. A contingency plan may become inadequate at a later date if it is not revised to address current needs. Accordingly, each bank transfer agent and bank broker or dealer must continue to update the contingency plans they have developed and implemented, as needed, to ensure the plans remain effective.

This interim rule also updates 12 CFR part 30 pertaining to safety and soundness standards issued under section 39 of the FDI Act. The Supplemental Guidelines published today will appear as appendix C to part 30. This interim rule makes minor conforming amendments to part 30 to incorporate appropriate references to the Supplemental Guidelines.

This interim rule makes no substantive change to part 30.

Request for Comment

The OCC invites comment on all aspects of the Supplemental Guidelines.

Request for Comments on Plain Language

On June 1, 1998, the President issued a Memorandum directing each agency in the Executive branch to write its rules in plain language. This directive is effective for all new proposed and final rulemaking documents issued on or after January 1, 1999. The OCC invites comments on how to make this interim rule clearer. For example, you may wish to discuss: (1) Whether we have organized the material to suit your needs; (2) whether the requirements of this interim rule are clear; or (3) whether there is something else we could do to make this rule easier to understand.

Request for Comment on Impact of Guidelines on Community Banks

The OCC also seeks comments on the impact of this interim rule on community banks. The OCC recognizes that community banks operate with more limited resources than larger institutions and may present a different risk profile. Thus, the OCC specifically requests comments on the impact of this interim rule on community banks' current resources and available personnel with the requisite expertise, and whether the goals of the interim rule could be achieved, for community banks, through an alternative approach.

[4] The OCC is the appropriate regulatory agency for operating subsidiaries of national banks that are registered transfer agents. The Securities Exchange Act of 1934 defines ''appropriate regulatory agency,'' when used with respect to transfer agents, as ''the Comptroller of the Currency, in the case of a national bank or a bank operating under the Code of Law for the District of Columbia, or a subsidiary of any such bank.'' 15 U.S.C. 78(c)(a)(34)(B)(i) (emphasis added).

[5] This exception is drawn from existing OCC provisions in 12 CFR Part 12 exempting national banks that do not engage in extensive securities transactions from the specific recordkeeping and securities policies and procedures set forth in that part.

Effective Date

The OCC finds good cause for issuing this interim rule effective immediately, without prior notice and comment. (*Cf.* 5 U.S.C. 553(b)(B) (Administrative Procedure Act (APA) provision permitting an agency to issue a rule without prior notice and comment when the agency for good cause finds that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest); 5 U.S.C. 553(d) (good cause exception to APA requirement for a 30-day delayed effective date for interim rule); 12 U.S.C. 4802(b)(1) (good cause exception to the CDRIA requirement that the Federal banking agencies make rules effective on the first day of a calender quarter which begins on or after the date on which the regulations are published in final form). Making this interim rule effective immediately is essential for ensuring that the OCC can properly and timely address the Year 2000 problem and that insured depository institutions can achieve Year 2000 readiness in the relatively short time remaining before Year 2000 problems may begin to occur. The OCC notes that Congress recently underscored the importance and urgency of ensuring Year 2000 readiness in the financial services sector by passing the Examination Parity and Year 2000 Readiness for Financial Institutions Act, Public Law 105–164, sec. 2, 112 Stat. 32, 32 (1998). Congress expressly found that the Year 2000 problem poses a serious challenge to the American economy, including the Nation's banking and financial services industries, and that Federal financial regulatory agencies must have sufficient examination authority to ensure that the safety and soundness of the Nation's financial institutions will not be at risk. *See also* the Y2K Act, Pub. L. 106–37, 113 Stat. 185 (July 20, 1999) (addressing the economic threat posed by Year 2000 problems). Under these circumstances, the OCC concludes that it has good cause for issuing this interim rule with an immediate effective date, without prior notice and comment. Nevertheless, the OCC is inviting comment and will consider the comments received before finalizing the rule.

Regulatory Flexibility Act Analysis

An initial regulatory flexibility analysis under the Regulatory Flexibility Act (RFA) is required when an agency is required to publish a general notice of proposed rulemaking. 5 U.S.C. 603. As noted above, the OCC concluded, for good cause, that this interim rule should take immediate effect and, therefore, that a notice of proposed rulemaking is not required. Accordingly, the RFA does not require an initial regulatory flexibility analysis of this interim rule.

Nonetheless, the OCC has considered the likely impact of this interim rule on small entities and believes that this interim rule will not have a significant economic impact on a substantial number of small entities. The potential inability of computers to correctly recognize certain dates in 1999, and on and after January 1, 2000, compels all national banks, including small national banks, to formulate appropriate and timely management responses. The interim rule provides a procedural framework for formulating that response and reiterates the OCC's expectations regarding appropriate business practices for achieving Year 2000 readiness. For example, as indicated earlier in this preamble, plans and procedures that bank transfer agents and bank broker or dealers have already developed to achieve Year 2000 readiness can satisfy the Supplemental Guidelines if they have been deemed acceptable by the OCC.

The OCC invites interested persons to submit comments on the impact of the interim rule on small entities for consideration in the development of the final rule.

Paperwork Reduction Act

The OCC invites comment on:

(1) Whether the proposed collection of information contained in the Supplemental Guidelines are necessary for the proper performance of the OCC's functions, including whether the information has practical utility;

(2) The accuracy of the OCC's estimate of the burden of the proposed information collection;

(3) Ways to enhance the quality, utility, and clarity of the information to be collected;

(4) Ways to minimize the burden of the information collection on respondents, including the use of automated collection techniques or other forms of information technology; and

(5) Estimates of capital or start-up costs and costs of operation, minutes, and purchase of services to provide information.

The collection of information requirement contained in this interim rule has been submitted to and approved by the OMB under its emergency procedures and in accordance with the Paperwork Reduction Act of 1995. 44 U.S.C. 3507. Since OMB clearance is for a six-month period, OCC will use any comments received to develop its renewed request if appropriate. Comments on the collection of information should be sent to the Office of Management and Budget, Paperwork Reduction Project (1557–0214), Washington, DC 20503, with a copy to the Communications Division (1557–0214), Office of the Comptroller of the Currency, 250 E Street, SW, Washington, DC 20219.

Respondents and recordkeepers are not required to respond to this collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. The OMB Control Number for this collection is 1557–0214.

In addition to the paperwork usually maintained by a national bank in the regular course of business, the Supplemental Guidelines impose some additional paperwork burden. This burden is found in appendix C, section D to part 30. The OCC needs this information to assess a national bank's compliance with the Supplemental Guidelines set forth in appendix C. The likely respondents are national banks.

Estimated number of respondents: 98.

Estimated average annual burden hours per respondent: 1.6 hours.[6]

Estimated total annual recordkeeping burden: 161 hours.

Executive Order 12866

The OCC has determined that this interim rule is not a significant regulatory action under Executive Order 12866.

Unfunded Mandates Reform Act Analysis

The Unfunded Mandates Reform Act of 1995 (UMA), Public Law 104–4, applies only when an agency is required to issue a general notice of proposed rulemaking or a final rule for which a general notice of proposed rulemaking was published. 2 U.S.C. 1532. As noted earlier, the OCC has concluded, for good cause, that a notice of proposed rulemaking is not required. Accordingly, the OCC has concluded that the UMA does not require an unfunded mandates analysis of this interim rule.

Moreover, the OCC believes that the interim rule will not result in expenditures by State, local, and tribal governments, or by the private sector, of more than $100 million in any one year.

[6] Consistent with guidance provided by the Office of Management and Budget, the burden hour estimate is presented as an average for all national banks subject to the Supplemental Guidelines. Most of the paperwork burden associated with this interim rule results from the requirement to prepare a contingency plan. The OCC expects that only a small percentage of the national banks covered by these guidelines will be required to prepare a contingency plan.

Accordingly, the OCC has not prepared a budgetary impact statement or specifically addressed the regulatory alternatives considered.

List of Subjects in 12 CFR Part 30

Administrative practice and procedure, National banks, Reporting and recordkeeping requirements, Safety and soundness.

Authority and Issuance

For the reasons set out in the preamble, part 30 of chapter I of title 12 of the Code of Federal Regulations is amended as set forth below:

PART 30—SAFETY AND SOUNDNESS STANDARDS

1. The authority citation for part 30 is revised to read as follows:

Authority: 12 U.S.C. 93a, 1818, 1831p–1, 3102(b).

2. In § 30.2, the last sentence is revised to read as follows:

§ 30.2 Purpose.

* * * The Interagency Guidelines Establishing Standards for Safety and Soundness are set forth in appendix A to this part, the Interagency Guidelines Establishing Year 2000 Standards for Safety and Soundness are set forth in appendix B to this part, and the Supplemental Guidelines Establishing Year 2000 Standards for Safety and Soundness for National Bank Transfer Agents and Brokers or Dealers are set forth in appendix C to this part.

3. In § 30.3, paragraph (a) is revised to read as follows:

§ 30.3 Determination and notification of failure to meet safety and soundness standard and request for compliance plan.

(a) *Determination.* The OCC may, based upon an examination, inspection, or any other information that becomes available to the OCC, determine that a bank has failed to satisfy the safety and soundness standards contained in the Interagency Guidelines Establishing Standards for Safety and Soundness set forth in appendix A to this part, the Interagency Guidelines Establishing Year 2000 Standards for Safety and Soundness set forth in appendix B to this part, or the Guidelines Establishing Year 2000 Standards for Safety and Soundness for National Bank Transfer Agents and Brokers or Dealers are set forth in appendix C to this part.

* * * * *

4. A new appendix C is added to part 30 to read as follows:

Appendix C to Part 30—Supplemental Guidelines Establishing Year 2000 Standards for Safety and Soundness for National Bank Transfer Agents and Brokers or Dealers

Table of Contents

A. Introduction.
B. Preservation of existing authority.
C. Definitions.
D. Year 2000 Standards for safety and soundness.

A. Introduction

These Supplemental Guidelines are issued pursuant to section 39 of the Federal Deposit Insurance Act (FDI Act) (12 U.S.C. 1831p–1) and apply to transfer agent and broker or dealer systems that a national bank has not designated as mission-critical. These Supplemental Guidelines are in addition to, but do not supersede, the Year 2000 Guidelines previously adopted as Appendix B to 12 CFR Part 30. The Guidelines in Appendix B continue to apply to efforts of national banks to achieve Year 2000 readiness of their mission-critical systems.

B. Preservation of existing authority

Neither section 39 nor these Supplemental Guidelines in any way limits the authority of the OCC to address unsafe or unsound practices, violations of law, unsafe or unsound conditions, or other practices of bank transfer agents and brokers or dealers. For example, failure to complete any of the standards set forth in the Supplemental Guidelines may constitute an unsafe or unsound practice under 12 U.S.C. 1818(b). Action under section 39 and the Supplemental Guidelines may be taken independently of, in conjunction with, or in addition to any other remedy, including enforcement action, available to the OCC.

C. Definitions

1. In general. For purposes of the Supplemental Guidelines the following definitions apply:

a. *Bank transfer agent* means a national bank that provides transfer agent services directly or through an operating subsidiary, or a Federal branch that is subject to the provisions of section 39 of the FDI Act (12 U.S.C. 1831p–1), if the national bank, operating subsidiary or Federal branch is a registered transfer agent whose appropriate regulatory agency, as that term is defined in 15 U.S.C. 78c(a)(34), is the Office of the Comptroller of the Currency. The term bank transfer agent does not include a transfer agent that qualifies as an issuer or small transfer agent, as these terms are defined in 17 CFR 240.17Ad–13(d) (1) and (2).

b. *Bank broker or dealer* means a national bank that effects securities brokerage or dealer transactions for customers, or a Federal branch that is subject to the provisions of section 39 of the FDI Act (12 U.S.C. 1831p–1). The term bank broker or dealer does not include operating subsidiaries of national banks. The term bank broker or dealer does not include a national bank effecting fewer than 500 securities brokerage transactions per year for customers during the prior three calendar year period.

c. *System* means an automated system and related applications necessary to ensure the prompt and accurate processing of securities transactions, including order entry, transfer execution, comparison, allocation, clearance and settlement of securities transactions, the maintenance of customer accounts, the delivery of funds and securities, or the production or retention of required records.

d. *Business resumption contingency plan* means a plan that describes how a bank transfer agent or bank broker or dealer will continue to perform transfer agent or broker or dealer functions, respectively, in the event transfer agent or broker or dealer systems fail to function because of Year 2000 readiness.

e. *Year 2000 ready or readiness with respect to a system* means the system accurately processes, calculates, compares, or sequences date or time data from, into, or between the 20th and 21st centuries; and the years 1999 and 2000; and with regard to leap year calculations.

D. Year 2000 standards for safety and soundness

1. No later than November 1, 1999, each bank transfer agent and bank broker or dealer shall identify all transfer agent and broker or dealer systems that are not Year 2000 ready.

2. For each system identified pursuant to section D.1., each bank transfer agent and bank broker or dealer shall develop and implement an effective written business resumption contingency plan by November 15, 1999, that, at a minimum:

a. Defines scenarios for transfer agent and broker or dealer systems failing to achieve Year 2000 readiness;

b. Evaluates options and selects a reasonable contingency strategy for those systems; and

c. Provides for independent testing of the business resumption contingency plan by an objective independent party (such as an auditor, consultant, or qualified individual from another area of the insured depository institution who is independent of the plan under review).

Dated: September 17, 1999.

John D. Hawke, Jr.,

Comptroller of the Currency.

[FR Doc. 99–25442 Filed 9–29–99; 8:45 am]

BILLING CODE 4810–33–P

SMALL BUSINESS ADMINISTRATION

13 CFR Part 107

Small Business Investment Companies

AGENCY: Small Business Administration.

ACTION: Final rule.

SUMMARY: In order to encourage small business investment companies (SBICs) to invest in inner cities and rural areas and in businesses that serve such areas, the Small Business Administration (SBA) is introducing a new SBIC investment category called low and moderate income investments (LMI

Investments). For each SBIC financing that qualifies as an LMI Investment, SBA is modifying its regulations on control of the small business, ''cost of money'' of the financing, and term of the financing. SBA also will make available a patient form of debenture leverage that may be issued only by SBICs that make LMI Investments.

DATES: *Effective Date:* This final rule is effective September 30, 1999.

Applicability Date: The regulatory and financial incentives described in this rule will apply only to investments made after September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Saunders Miller, Investment Division, at (202) 205–3646.

SUPPLEMENTARY INFORMATION: On February 9, 1999, SBA proposed a program of narrowly-tailored regulatory and financial incentives to encourage SBICs to expand their investment activity into inner cities and rural areas. See 64 FR 6256. The incentives were proposed to be available to any SBIC making qualified investments (LMI Investments) in qualified small businesses (LMI Enterprises) located in or providing employment for economically distressed inner cities and rural areas (LMI Zones). The incentives fell into two categories. First, SBA proposed to allow SBICs greater regulatory flexibility when structuring and making LMI Investments. Second, SBA proposed to make available a deferred-interest debenture exclusively for the financing of LMI Investments.

SBA received four comment letters on the proposed rule during the 30-day public comment period. Overall, the four letters were supportive of SBA's initiative, although all of the letters contained suggestions for improving the proposal. This final rule incorporates certain of the changes recommended in those comment letters.

Defining Low and Moderate Income Zones (LMI Zones)

SBA received two comments on the definition of the markets targeted by the proposed LMI initiative. The proposed rule defined those markets as small businesses that are located in certain distressed geographic areas or that have 35 percent of their full time employees residing in those areas.

One of the two comments suggested that the final rule target historically underserved *entrepreneurs*, regardless of their business location, instead of underserved *geographic areas*. The other comment suggested expanding the geographic areas identified in the proposed rule to include some or all of the markets targeted for economic development by the Federal Home Loan Banks. Those markets are set forth in the Community Investment Cash Advance regulation of the Federal Housing Finance Board. They include any project that provides jobs or services for individuals with income levels at or below certain levels, as well as projects located in geographic areas broader than the locations specified in SBA's proposed rule.

SBA considered the comments, but has decided to adopt the proposed definition of LMI Zone without change. SBA's proposal was designed to bring investment dollars into distressed urban and rural areas to help revitalize those communities and bring jobs to their residents. Given the finite resources available to the LMI initiative, any expansion of the proposal to include groups of individuals without regard to their business locations or their residences would dilute the impact of the benefits SBA hopes will inure to the targeted communities.

SBA also believes that, in order to be successful, the definition of the targeted markets must be easy for SBICs and SBA examiners to use. SBA therefore selected only those geographic areas that are not only distressed, but are also found on a government-operated electronic address-database. Through the use of these user-friendly databases, SBICs and SBA examiners should be able to quickly and easily determine whether a given address is located in an ''LMI Zone''.

If SBA learns that other severely distressed areas are also capable of identification through a Government electronic address-database, it might consider expanding the targeted markets of the LMI initiative at a later date.

As mentioned in the proposed rule, SBA is exploring the possibility of consolidating the various Government databases into a single electronic database at SBA. While that possibility still exists, any such consolidation is unlikely to be accomplished this calendar year. Until SBICs are notified otherwise, they should research addresses through the various databases referenced in this rule, and should document their files accordingly.

As was stated in the proposed rule, any address located in a HUBZone, an Empowerment Zone, an Enterprise Community, a Low or Moderate Income area, or a Persistent Poverty county will be considered to be located in an LMI Zone. The government databases for those five areas are:

1. HUBZones: *www.sba.gov/hubzone/hubqual.html*
2. Empowerment Zones: *www.hud.gov/ezec/locator/*
3. Enterprise Communities: same as for Empowerment Zones
4. Low and Moderate Income areas: *www.ffiec.gov/geocode*
5. Persistent Poverty counties: *www.econ.ag.gov/epubs/other/typolog*

Defining LMI Enterprise

SBA received one comment on the proposed definition of LMI Enterprise. Under the proposal, a small business's qualification as an LMI Enterprise would be determined as of the time the business applies for SBIC financing. This would be true whether the business were qualifying under the ''principal place of business'' test or the ''percentage of employees'' test.

The commenter pointed out that determining a small business's qualification under the principal place of business test ''as of the time of application for SBIC financing'' would exclude those small businesses that would use the proceeds of the SBIC financing to move into an LMI Zone. That is true. Similarly, determining a small business's qualification under the percentage of employees test ''as of the time of application for SBIC financing'' would exclude those small business that would use the proceeds of the SBIC financing to expand their business and hire new employees from LMI Zones. SBA had thought that determining a business's qualification based only on its intention to locate into or hire from eligible areas would introduce too much uncertainty into the program.

Upon reconsideration of the issue, however, SBA believes that the rule can be modified in a manner that will encourage businesses to use SBIC financing to locate in LMI Zones or to hire residents of LMI Zones, while minimizing the risk that the incentives in this LMI initiative will be misused. SBA believes this can be accomplished by allowing companies that intend either to locate in or to hire from an LMI Zone a fixed period of time after closing on their SBIC financing to do so. During that time, the business would be considered an LMI Enterprise. At the end of the period, though, the business would lose its LMI status if it had not located in an LMI Zone or qualified as an LMI Enterprise under the percentage of employees test.

SBA believes that a company should be able to establish its principal place of business in an LMI Zone or hire employees from an LMI Zone within 180 days from the date the SBIC financing closes. Six months should be ample time for a company to resolve any zoning or other issues that might delay the opening of the business in an LMI

Zone or the hiring of residents from an LMI Zone.

Accordingly, the final rule allows a company to temporarily qualify as an LMI Enterprise if, at the time of application for SBIC financing, the company certifies as to its intent to locate its principal place of business in an LMI Zone or its intent to hire the required number of residents of LMI Zones, in either case within 180 days after the SBIC financing closes. At the end of the 180-day period, if the company does not have its principal place of business in an LMI Zone or 35 percent of its employees residing in LMI Zones, it will no longer qualify as an LMI Enterprise. This means that the SBIC's financing of the company will no longer qualify as an LMI Investment.

SBA has considered whether the SBIC or the small business should bear the risk of the small business' loss of qualification as an LMI Enterprise and the financing's loss of qualification as an LMI Investment. If the loss of LMI qualification constitutes a default by the small business under the financing and the SBIC can demand repayment or redemption of the financing, the small business bears most of the risk. If loss of LMI qualification does not constitute a default, the SBIC must continue to hold its investment in the company and must revise the terms of the financing to conform to standard (non-LMI) SBA regulations (e.g., minimum term, control restrictions). In that event, the SBIC alone bears the risk since the small business gets the benefit of SBIC financing on standard (non-LMI) terms.

SBA has concluded that the parties themselves (the SBIC and the small business) should determine who is to bear the risk of the loss of LMI qualification. The terms of the financing agreement negotiated between the small business and the SBIC should specify whether the loss of qualification as an LMI Enterprise constitutes a default by the small business under the financing. If the loss of qualification as an LMI Enterprise does not constitute a default under the financing agreement, the SBIC must be sure that the terms of the financing, going forward, satisfy SBA requirements for non-LMI financings (e.g., minimum term; control restrictions). If the loss of qualification as an LMI Enterprise does constitute a default under the financing agreement, the SBIC will be entitled to whatever remedies are available to it for the default.

The proposed version of § 107.610(e) required each LMI Enterprise to certify to the investing SBIC as to the location of either its principal place of business or the primary residences of all of its full-time employees. The certification was to be dated no earlier than the date the small business applied for the SBIC financing and was to be kept in the SBIC's files, along with the SBIC's own certification that the small business qualifies as an LMI Enterprise and the basis for such qualification.

The final version of § 107.610(e) still requires certifications from both the small business and the SBIC, but allows a small business that is intending to locate into an LMI Zone or to hire residents of LMI Zones to so certify. Any small business that qualifies as an LMI Enterprise based on its intention to locate in an LMI Zone or to hire residents of LMI Zones must also provide the SBIC with a later certification, dated within the 180 day period discussed above, certifying that its principal place of business is located in an LMI Zone or that it has 35 percent of its employees residing in LMI Zones. The SBIC must make its own certification(s) contemporaneously with the certification(s) of the small business.

SBA has made one final modification to the definition of LMI Enterprise and to § 107.610(e). Since the term ''principal place of business'' is susceptible to more than one interpretation, SBA has decided to specify precisely what is intended by the term as it relates to LMI Enterprises. SBA believes that an LMI Enterprise's principal place of business should be determined by reference to the location of its employees or tangible assets, not its books and records or its corporate headquarters. This approach is similar to the one used in § 107.720(g)(1)(ii)—SBA's criteria for determining whether a business is a non-U.S. business for purposes of the prohibition on foreign investments in the SBIC Program.

Under the final rule, SBA will consider an LMI Enterprise to be located where at least 50 percent of its employees or tangible assets are located. SBA realizes, though, that the use of the term ''principal place of business'' may, itself, cause confusion since that term has already been defined differently in other SBA programs. Accordingly, the final rule replaces the term ''principal place of business'' with the ''50% of employees or tangible assets'' test in the definition of LMI Enterprise and in § 107.610(e).

Defining LMI Investment

As discussed in the proposed rule, SBA wants to ensure that the SBIC Program is used to promote true venture capital financing in LMI Zones, not just high-interest lending. SBA is also concerned that LMI Enterprises that receive SBIC financing not be precluded from using their assets to secure third-party debt. SBA therefore proposed that LMI Investments be defined to include only those SBIC financings that are in the form of equity securities (as defined in § 107.800) or debt securities (as defined in § 107.815) which are subordinated to all borrowings of the business from financial institutions. The proposed rule also required that LMI Investments in the form of debt securities be unsecured, although the SBIC would have been permitted to accept a guarantee of the debt security if the guarantee were itself unsecured.

SBA received two comments on the proposed definition of an LMI Investment. Both comments argued in favor of expanding the definition to include debt securities that are secured by the assets of the small business if the security interest is junior to any other secured debt of the business. The commenters argued that excluding secured financing of LMI Enterprises would discourage SBIC support of those businesses. One commenter further argued that an SBIC holding an unsecured position in a company might take more precipitous action to protect its interest than if the SBIC had collateral to protect its position.

SBA concurs with the suggested change to the definition. SBA expects that allowing SBICs to take a junior secured position in the assets of an LMI Enterprise will not prevent the LMI Enterprise from obtaining secured debt from other sources.

This change would place SBICs ahead of any unsecured debt of the LMI Enterprise. SBA believes, though, that unsecured debt is generally unavailable to most LMI Enterprises, except from the principals of the enterprise. Even under the proposed rule, LMI Investments were not required to subordinate in favor of borrowings from the principals of the enterprise. Accordingly, the final definition of LMI Investment includes debt securities that are secured by the assets of the small business *provided* the SBIC's security interest is junior to any other existing or future secured debt of the business.

Regulatory and Financial Incentives

Under the proposed rule, SBA proposed to modify the regulations governing three subject matters, as they would apply to LMI Investments—control of the small business, the treatment of royalties in the calculation of cost of money, and minimum term of investment. SBA also discussed its intention to create a new form of debenture for use by SBICs that make LMI Investments.

1. Temporary Control of the LMI Enterprise

SBA proposed to permit SBICs to take temporary control of each business in which they make an LMI Investment. No comments were received on this portion of the proposal. Accordingly, § 107.865(d) is finalized as proposed.

2. Royalties and Cost of Money

SBA proposed to exclude royalty payments on LMI Investments from the calculation of ''Cost of Money'' under § 107.855. Cost of Money is the term for the sum of the interest rate and other charges that an SBIC imposes on a small business. The Cost of Money to the small business must not exceed the SBIC's Cost of Money ceiling, as computed under § 107.855(c).

To qualify for the proposed exclusion, the royalty would have to be based on improvement in the performance of the LMI Enterprise after the date of the financing. The proposed rule explained that the royalty might be expressed, for example, as a percentage of any *increase* in an underlying unit of measurement (e.g., revenue or sales) after the date of the financing.

SBA received one comment on this provision. The comment asked for clarification as to whether a royalty could be based on an increase in more than one unit of measurement and still be excluded from the Cost of Money calculation. For example, could a royalty provide for payment to the SBIC if either the revenues or the profits of the small business increased?

SBA was not intending to restrict royalties to increases in a single underlying unit of measurement. To do so would force SBICs to determine in advance which performance measurement would be most likely to reflect the improved performance of the small business. A business might have higher profits but steady or even declining revenues, or it might have increased revenues but steady profits. Either circumstance could constitute improvement in the performance of the business.

If an SBIC and a small business agree to a royalty that is expressed as a percentage of increases in alternative performance measurements (e.g., profits or revenues), the royalty will be excluded from Cost of Money. SBA believes that the text of proposed § 107.855 is sufficiently broad to cover this possibility. Accordingly, proposed § 107.855 is finalized without change.

SBA would also like to clarify the application of the royalty provision to any LMI Investments that an SBIC makes through a holding company or an investment vehicle, as permitted under § 107.720(b). In determining whether a business's performance has improved, SBA will look through any holding company or investment vehicle to the performance of the operating business itself. It is the improvement in the operating business's performance, not the improvement in the performance of a holding company or investment vehicle, which would serve as the basis for the calculation of the royalty payment to the SBIC.

Since the publication of the proposed rule, the President signed the Small Business Investment Improvement Act of 1999. See Public Law 106–9, 113 Stat. 17, April 5, 1999. Section 2(a) of the new law excludes certain royalty payments from the calculation of Cost of Money for all investments made by SBICs. SBA will be publishing a proposed rule to implement this change in the near future.

3. Minimum Term of LMI Investment

SBA received no comments on its proposal to set a one-year minimum term for LMI Investments. The proposed changes to §§ 107.835 and 107.850(a) are, therefore, adopted without change.

4. Deferred Interest Debenture

SBA proposed to allow SBICs to finance LMI Investments with a more patient-type of debenture (called an LMI Debenture). No regulatory changes are necessary to create the new debenture, but SBA is continuing to work on its design and method of funding.

The LMI Debenture under development would be a non-amortizing debenture with a term of up to 10 years, issued at a discount so as to be, in effect, ''zero coupon'' for the first five years. It would require semi-annual interest payments on the face amount for the remainder of the term. SBA leverage fees would not be deferred; they would be paid as required under § 107.1130.

The proposed rule explained that an SBIC's eligibility for LMI Debentures would be based solely on the SBIC's outstanding LMI Investments (made after the effective date of the final rule). SBA has come to the conclusion that this approach might discourage SBICs from making LMI Investments since the LMI Debenture funds would only be available after the investment had already been made.

Instead, SBA has decided to determine an SBIC's eligibility for LMI Debentures based on the sum of its outstanding LMI Investments (made after the effective date of the final rule) plus any LMI Investments the SBIC intends to make with the proceeds of the LMI Debenture. If an SBIC with no outstanding LMI Investments applies for a draw down of debenture leverage and intends to use the leverage to make an LMI Investment, SBA can approve the issuance of an LMI Debenture.

As stated in the proposed rule, an SBIC's overall eligibility for an LMI Debenture will still be determined in two ways. First, the SBIC will have to be eligible to issue leverage in an amount equal to the face amount of the LMI Debenture. Eligibility for this purpose is determined under §§ 107.1120–107.1160.

Second, the face amount of the SBIC's requested LMI Debenture, plus the face amount of the SBIC's outstanding LMI Debenture(s), cannot exceed 1.5 times the sum of the SBIC's outstanding LMI Investments plus the proposed LMI Investment. In other words, under this second test an SBIC would be eligible for an LMI Debenture with a face amount equal to (a) 1.5 times the sum of the SBIC's existing and planned LMI Investments at the time of application, minus (b) the face amount of any outstanding LMI Debentures. The 1.5 multiple takes into consideration the zero-coupon feature of the LMI Debenture and allows for an approximate matching of net proceeds of LMI Debentures with funds invested in LMI Investments.

SBA will notify all SBICs when LMI Debentures are ready for use.

The regulatory and financial incentives described in this final rule will apply only to investments made after the effective date of this rule.

Compliance With Executive Orders 12612, 12778 and 12866, the Regulatory Flexibility Act (5 U.S.C. 601, et seq.), and the Paperwork Reduction Act (44 U.S.C. Ch. 35)

SBA certifies that this final rule may constitute a significant regulatory action within the meaning of Executive Order 12866, since it raises a new policy issue reflecting the President's priorities.

One of the purposes of the SBIC Program is to encourage the flow of equity-type investments into small businesses. For the first 35 years of the SBIC Program, however, the only type of leverage available to SBICs (other than Specialized SBICs) was debt leverage with interest payable every six months.

Congress recognized this mismatch of source and use of funds and created Participating Securities leverage in 1992. Participating Securities leverage is a type of ''patient capital'' and helps to promote equity investing by SBICs. However, because required payments on Participating Securities are a function of an SBIC's profits, SBA makes such leverage available only to larger SBICs

that can reasonably project returns-on-investments greater than 20 percent.

While the Participating Securities program has been very successful at encouraging SBICs to do equity investing in general, SBA wishes to encourage more equity-type investments in underserved areas or ''New Markets''—urban and rural areas that have severe shortages of equity capital. Unfortunately, investments in these areas often are of a type that will not have the potential for yielding returns that are high enough to justify the use of Participating Securities.

The LMI Debenture is being created to fill this gap. It is another type of patient capital, with interest deferred for the first 5 years. An SBIC utilizing the LMI Debenture will not be expected to achieve the high returns expected of Participating Securities users. Thus, the availability of the LMI Debenture is expected to increase the flow of equity-type capital to New Markets.

Some of this increase will come from existing SBICs which find that the LMI Debentures, together with the regulatory incentives in this final rule, will encourage them to make investments that they may perceive as having greater risk than their typical investments. SBA expects these SBICs to make investments in businesses which lie in areas that they have previously overlooked.

While it is expected that existing SBICs will participate to some degree in the LMI program, SBA anticipates that most of the LMI program benefits will derive from new SBICs that are currently being formed and which will be created in the future. Already, SBA is seeing an increase in the number of venture capitalists who are working to form new SBICs with an LMI orientation.

SBA also believes that an increasing number of banks will actively seek to invest in SBICs since a bank's investment in an SBIC is now presumed to satisfy one of the tests under the Community Reinvestment Act (CRA) regulations. SBA expects that many banks will find LMI-oriented SBICs to be especially attractive. This should be true not only because the banks can receive CRA credit for their investment, but also because they will find that (1) such investments expand their urban and rural markets, and (2) with equity infusions of capital, small businesses can become less risky borrowers.

The LMI Debentures have the same subsidy rate as do regular debentures and will carry interest rates similar to those of regular debentures. They present no additional cost either to the government or to the SBICs. Regarding reporting requirements (further discussed below), an SBIC must ascertain that the company in which it is investing meets the LMI standards, and must report this to SBA on its usual financing report (form 1031). The cost to the SBIC to obtain this information is nominal.

SBA certifies that this final rule does not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.* This final rule will change some requirements to encourage SBICs to make additional qualified investments in low and moderate income zones. In FY 1998, SBICs invested in 2700 small businesses. While the final rule may increase the number of small businesses receiving SBIC investments because SBICs may make investments in smaller increments, the number of small businesses eligible for SBIC investments would not change.

For purposes of the Paperwork Reduction Act, 44 U.S.C. CH. 35, SBA has requested approval to require participating SBICs to report the information they are required to maintain by the final rule. The final rule requires SBICs that make LMI Investments to keep track of their LMI Investments and report them to SBA in connection with applications for LMI Debentures. To determine whether an SBIC is making an LMI Investment, the SBIC will have to verify the location of the LMI Enterprise or its employees using the databases discussed in this rule. SBA estimates that the time necessary to verify the location of an LMI Enterprise or its employees will average less than one hour per LMI Investment. The reporting requirements are de minimis since current forms will only be changed to reflect LMI Investments. SBA further estimates that SBICs may make approximately 500 LMI Investments per year. SBA believes this information is necessary for the proper performance of the function of the agency.

For purposes of Executive Order 12612, SBA certifies that this rule will not have any federalism implications warranting the preparation of a Federalism Assessment.

For purposes of Executive Order 12778, SBA certifies that this rule is drafted, to the extent practicable, in accordance with the standards set forth in Section 2 of that Order.

List of Subjects in 13 CFR Part 107

Investment companies, Loan programs-business, Reporting and recordkeeping requirements, Small businesses.

For the reasons set forth above, SBA is amending 13 CFR part 107 as follows:

PART 107—SMALL BUSINESS INVESTMENT COMPANIES

1. The authority citation for part 107 continues to read as follows:

Authority: 15 U.S.C. 681 *et seq.*, 683, 687(c), 687b, 687d, 687g and 687m.

2. Amend § 107.50 to add definitions of LMI Enterprise, LMI Investment, and LMI Zone, to read as follows:

§ 107.50 Definitions of terms.

* * * * *

LMI Enterprise means:

(1) A Small Business that has at least 50% of its employees or tangible assets located in LMI Zone(s) or in which at least 35% of the full-time employees have primary residences in LMI Zone(s), in either case determined as of the time of application for SBIC financing; or

(2) A Small Business that does not meet the requirements of paragraph (1) of this definition as of the time of application for SBIC financing but that certifies at such time that it intends to meet the requirements within 180 days after the closing of the SBIC financing. A Small Business qualifying under this paragraph (2) will no longer be an LMI Enterprise as of the 180th day after the closing of the SBIC financing unless, on or before such date, at least 50% of its employees or tangible assets are located in LMI Zones or at least 35% of its full-time employees have primary residences in LMI Zones.

LMI Investment means a financing of an LMI Enterprise, made after September 30, 1999, in the form of equity securities or debt securities that are junior to all existing or future secured borrowings of the business. The debt securities may be guaranteed and may be secured by the assets of the LMI Enterprise, but the guarantee may not be collateralized or otherwise secured.

LMI Zone means any area located within a HUBZone (as defined in 13 CFR 126.103), an Urban Empowerment Zone or Urban Enterprise Community (as designated by the Secretary of the Department of Housing and Urban Development), a Rural Empowerment Zone or Rural Enterprise Community (as designated by the Secretary of the Department of Agriculture), an area of Low Income or Moderate Income (as recognized by the Federal Financial Institutions Examination Council), or a county with Persistent Poverty (as classified by the Economic Research Service of the Department of Agriculture).

* * * * *

3. In § 107.610, add paragraph (e) to read as follows:

§ 107.610 Required Certifications for Loans and Investments.

* * * * *

(e) For each LMI Investment:

(1) A certification by the concern, dated as of the date of application for SBIC financing, as to the basis for its qualification as an LMI Enterprise,

(2) If the concern qualifies as an LMI Enterprise as defined in paragraph (2) of the definition of LMI Enterprise in § 107.50, an additional certification dated no later than the date 180 days after the closing of the LMI Investment, as to the location of the concern's employees or tangible assets or the principal residences of its full-time employees as of the date of such certification, and

(3) Certification(s) by the SBIC, made contemporaneously with the certification(s) of the concern, that the concern qualifies as an LMI Enterprise as of the date(s) of the concern's certification(s) and the basis for such qualification.

4. In § 107.835, redesignate paragraph (d) as paragraph (e) and add paragraph (d) to read as follows:

§ 107.835 Exceptions to minimum duration/term of Financing.

* * * * *

(d) An LMI Investment with a term of at least one year; or

* * * * *

5. In § 107.850, revise the introductory text of paragraph (a) to read as follows:

§ 107.850 Restrictions on redemption of Equity Securities.

(a) A Portfolio Concern cannot be required to redeem Equity Securities earlier than five years (or one year in the case of an LMI Investment) from the date of the first closing unless:

* * * * *

6. In § 107.855, add paragraph (g)(12) to read as follows:

§ 107.855 Interest rate ceiling and limitations on fees charged to Small Businesses (''Cost of Money'').

* * * * *

(g) *Charges excluded from the Cost of Money.* * * *

(12) Royalty payments received under any LMI Investment if the royalty is based on improvement in the performance of the Small Business after the date of the financing.

7. In § 107.865, remove the ''or'' at the end of paragraph (d)(3), replace the period at the end of paragraph (d)(4) with ''; or'', add paragraph (d)(5), and revise paragraph (e)(3) to read as follows:

§ 107.865 Restrictions on Control of a Small Business by a Licensee.

* * * * *

(d) *Temporary Control permitted.* * * *

(5) If your financing of the Small Business is an LMI Investment.

(e) *Control certification.* * * *

(3) Your agreement to relinquish Control within five years (although you may, under extraordinary circumstances, request SBA's approval of an extension beyond five years). In the case of an LMI Investment with a term of less than five years, you must agree to relinquish Control within the term of the financing.

* * * * *

Dated: May 27, 1999.

Aida Alvarez,

Administrator.

[FR Doc. 99–25244 Filed 9–29–99; 8:45 am]

BILLING CODE 8025–01–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 21

[Docket No. SW–006; Special Condition No. 29–006–SC]

Special Conditions: Garlick Helicopters, Inc. Model GH205A helicopters; 14 CFR Part 21.27(c), aircraft engines installed in surplus Armed Forces aircraft

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special condition; request for comments.

SUMMARY: This special condition is issued for Garlick Helicopters, Inc. Model GH205A helicopters. This model helicopter will have a novel or unusual design feature(s) associated with the aircraft engines installed in surplus Armed Forces aircraft. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. This special condition contains the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of this special condition is September 22, 1999. Comments must be received on or before November 29, 1999.

ADDRESSES: Comments on this special condition may be mailed in duplicate to: Federal Aviation Administration, Office of Regional Counsel, Attention: Rules Docket No. SW–006, 2601 Meacham Blvd., Fort Worth, Texas, 76137; or delivered in duplicate to the Office of the Regional Counsel at the above address. Comments must be marked: Docket No. SW–006. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Richard Monschke, Aerospace Engineer, FAA, Rotorcraft Directorate, Aircraft Certification Service, Fort Worth, Texas, 76193–0110, telephone (817) 222–5116, fax (817) 222–5961.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the approval design and thus delivery of the affected helicopter. In addition, the substance of this special condition has been subject to the public comment process in a prior instance. The FAA therefore finds that good cause exists for making this special condition effective upon issuance.

Comments Invited

Even though comments have been received on this engine special condition, interested persons are invited to submit such additional written data, views, or arguments as they may desire. Communications should identify the regulatory docket and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the FAA. This special condition may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this special condition must include a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. SW–006.'' The postcard will be date stamped and returned to the commenter.

Background

On December 9, 1993, Garlick Helicopters, Inc. applied for a transport category type certificate for their Model GH205A helicopters that contain military surplus T53-L–13 engines. The

Model GH205A helicopters are former U.S. Army Model UH–1H or UH–1V helicopters.

For engines sold to the civilian aviation industry as surplus, the Department of Defense, the initial source of Garlick Helicopters, Inc's. surplus military helicopter engines, makes no representation as to the compliance of its military engines with FAA airworthiness regulations. Once the engines enter military service, they are no longer subject to FAA operating limitations, surveillance, and quality assurance programs and, therefore, may not meet FAA standards or airworthiness requirements when released as surplus. Certain engine components may have exceeded the life limit or shelf life of the civil counterpart, may not have been produced under a FAA-approved quality system, or may lack documentation, operating records, or maintenance records.

Therefore, the FAA finds that the engine approval basis alone does not contain adequate or appropriate safety standards for engines installed in surplus military aircraft. 14 CFR § 21.27(e) permits the FAA to require an applicant to comply with special conditions or other airworthiness requirements necessary to ensure an adequate level of airworthiness of a 14 CFR 21.27 type design. Special conditions are airworthiness safety standards promulgated in accordance with § 11.28 and 21.16, which include public participation, and establishes a level of safety equivalent to that contained in the regulations.

General Discussion of Public Comments

On July 2, 1997, the FAA published in the **Federal Register** (62 FR 35872) a notice of proposed type certification basis. In that notice, the FAA requested public comments on this special condition. The FAA has carefully reviewed and considered all comments in the development of the type certification basis and the regulatory standards contained therein for Model GH205A helicopters. Comments relating to the special condition in that notice for the engine are addressed in this document. Because of the volume of comments, comments of a similar nature are answered as a group.

Discussion of Comments

Several commenters state that the military surplus Allied Signal (formerly Lycoming) T53–L–13 engines slated for use in the Model GH205A helicopters are unsuitable for civil use. The methodology by which the military tracks life-limited components differs from that required for the T5313B civil engine counterpart; the U.S. Army procured certain critical engine spare parts from non-FAA approved vendors (defined as breakout parts); insufficient maintenance history is available for surplused engines; certain engine fuel system components do not meet FAA airworthiness requirements; service history for early versions of the T53–L–13 is not satisfactory; and military spare parts could co-mingle with the civil inventory and become indistinguishable.

The FAA agrees that blanket approval of all surplus engines installed on military Model UH–1H and UH–1V helicopters is not appropriate. However, the FAA has determined that equivalent airworthiness standards required under FAR 21.27(c) can be demonstrated. For this type certification basis, the engine approval basis for the T53–L–13 engine includes not only the airworthiness rules in existence at the time the engine was qualified for military service, but also includes certain requirements imposed by later 14 CFR Part 33 amendments. Each engine proposed for use on the Model GH205A must be presented for FAA approval with the proper historical record documenting service usage, maintenance history, and complete status and assessment of all life-limited parts. Further, each of these engines must undergo a teardown and inspection per FAA-approved procedures to identify and remove all ''breakout'' and suspect parts; be reworked, as required, into an FAA-approved configuration; be overhauled to a baseline specification; and be re-identified to reflect its approval for civil use. This process will include compliance with all relevant FAA Airworthiness Directives and military equivalent technical orders.

One commenter endorses the proposed special condition set forth for engine approval. The commenter states that strict adherence to the proposed engine certification basis and special conditions will enhance the airworthiness of the engines installed on Model GH205A helicopters. In addition, the commenter recommends that all FAA approval involving engine part lives and other changes to the type design should be processed by the Aircraft Certification Office (ACO) responsible for the military T53–L–13 engine civil counterpart.

The FAA agrees that the airworthiness approval of the T53–L–13 engine for the Model GH205A helicopter is an engine certification, and will be administered by the accountable ACO with support from various FAA offices.

Two commenters state that the military T53–L–13 engine should comply with the requirements of 14 CFR 33.17, Amendment 6, Fire Prevention, which addresses fire resistant external lines. Unlike its civil counterpart, the military T53 series engines do not incorporate fire shielding on lines that contain or convey flammable fluid.

The FAA agrees that the engine for Model GH205A helicopters must comply with the fire prevention requirements, that is, the external lines which convey flammable fluids must be at least fire resistant; and that the possibility of fire hazard of flammable fluid carrying lines must be minimized by appropriate shielding. Section 13.202 of CAR 13 at Amendments 13–1 through 13–3, the type certificate basis for the Model GH205A engine, prescribes the above fire prevention requirements with which the applicant must comply.

Type Certification Basis

Under the provisions of 14 CFR 21.17, Garlick Helicopters, Inc. must show that each T53–L–13 surplus Armed Forces helicopter engine installed in the Model GH205A helicopter meets the applicable provisions of § 21.27(c), as amended by Amendment 21–59 in effect on March 9, 1987.

Specifically, in accordance with § 21.27(c), the Model GH205A helicopter engine approval basis is as follows:

- Part 13 of the Civil Air Regulations (CAR), effective August 12, 1957, as amended by Amendment 13–1;
- Part 13 of the CAR, effective May 17, 1958, as amended by Amendment 13–2;
- Part 13 of the CAR, effective October 1, 1959, as amended by Amendment 13–3;
- Part 33 of the Federal Aviation Regulations (FAR) as noted below:
- § 33.4 of the FAR, effective October 14, 1980, as amended by Amendment 33–9;
- § 33.14 of the FAR, effective March 26, 1984, as amended by Amendment 33–10; and
- Any special conditions required by the Administrator.

If the Administrator finds that the applicable airworthiness regulations of 14 CFR 21.27 do not contain adequate or appropriate safety standards for the Model GH205A helicopter engines because of a novel or unusual design feature, special conditions are prescribed under the provisions of §§ 21.16 and 21.27(e).

In addition to the applicable airworthiness regulations and special conditions, the Model GH205A helicopter must comply with the noise

certification requirements of 14 CFR part 36; and the FAA must issue a finding of regulatory adequacy pursuant to § 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

Special conditions, as appropriate, are issued in accordance with § 11.49, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.17.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

Novel or Unusual Design Features

Model GH205A helicopters will incorporate the following novel or unusual design features: a surplus Armed Forces helicopter engine installed in a transport category rotorcraft. 14 CFR 21.27(c) requires that the engines installed in surplus Armed Forces aircraft for which a type certificate is sought under this section must provide substantially the same level of airworthiness as would be provided if the engine were type certificated under Part 33 of the Federal Aviation Regulations. To provide the required level of airworthiness, in addition to the Model GH205A helicopter engine approval basis, the following areas require a special condition in order to provide substantially the same level of airworthiness as would be provided if the engines were type certificated under Part 33 in accordance with 14 CFR 21.27(c):

- Engine and maintenance records
- Military unique and breakout hardware
- Conformity
- Life limited engine parts
- Continued Airworthiness
- Identification marking
- Airworthiness Directives (AD's)
- Overhaul

Applicability

As discussed above, this special condition is applicable to Model GH205A helicopters. Should Garlick Helicopters, Inc. apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well under the provisions of § 21.101(a)(1).

Conclusion

This action affects only certain novel or unusual design features on one model of helicopter. It is not a rule of general applicability and affects only the applicant who applied to the FAA for approval of these features on the helicopter.

Under standard practice, the effective date of final special conditions would be 30 days after the date of publication in the **Federal Register**; however, as the certification date for the Garlick Helicopters, Inc. Model GH205A helicopter is imminent and the substance of these special conditions has been subjected to a comment period in a prior instance, the FAA finds that good cause exists to make this special condition effective upon issuance. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment.

List of Subjects in 14 CFR Part 21

Aircraft, Air transportation, Aviation safety, Rotorcraft, Safety.

The authority citation for these special conditions is as follows: 42 U.S.C. 7572; 49 U.S.C. 106(g), 40105, 40113, 44701–44702, 44709, 44711, 44713, 44715, 45303.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, in addition to the Model GH205A helicopter engine approval basis, the following special condition is issued as part of the type certification basis for the Garlick Helicopters, Inc. Model GH205A helicopter.

1. Engine and Maintenance Records

The following data is required:

(a) Records establishing that the engine, components, and parts that have been installed since original manufacture were produced under an FAA-approved production and inspection system.

(b) Complete historical records maintained by the military, the manufacturer, and any other prior owner(s) pertaining to inspection, modification, repair, alteration, maintenance, and operation of the engine from the time of acceptance by the military.

(c) A report that the engine has an equivalent level of airworthiness substantiated by the engine approval basis described previously. The report will be required to address the provisions of CAR 13 and applicable part 33 sections on a paragraph-by-paragraph basis.

2. Military Unique and Breakout Hardware

Military unique and breakout parts are engine parts for which the military utilized the manufacturer's design drawings and specifications, but the parts were produced specifically for the military by non FAA-approved manufacturers. All military unique and breakout parts must be replaced with parts made by FAA production approval holders.

3. Conformity

The applicant must substantiate that the engine conforms to the FAA-approved type design of its civil counterpart. The manufacturing records must include any deviation from the FAA-approved type design and quality control system that was in existence at the time of manufacture. With regard to maintenance, the applicant must establish that any alterations, modifications, or repairs were accomplished in compliance with FAA-approved data by maintenance facilities certificated by the FAA. When this cannot be established, the alterations or repairs must be appropriately substantiated in accordance with the applicable regulations and approved by the FAA, or the altered or repaired hardware must be removed. The operating records must show whether the engine was utilized outside of the operating envelope specified for the civil version engine including speed, temperature, torque, engine mount load, and other engine limits. In addition, the operational history records must show whether the engine has been subjected to other extreme operating conditions such as accidents, fire, or missile drone target shooting.

4. Life-limited Engine Parts

The military mission cycle, with or without the same type design, generally differs from civil aircraft mission cycles. As such, the life cycle limits for engine rotating parts (such as disks, spacers, hubs, and shafts of the compressors and turbines) and life-limited stationary engine components may not be directly transferable between military and civil engines having the same hardware. To perform an accurate cycle adjustment on a military life-limited engine part, there must be a record of operating hours, operating history, and mission profile. Unlike civil missions, many military operations subject engine hardware to a wide variance in strain range, thus subjecting these components to multiple partial cycles for each flight hour. The applicant must have a FAA-approved process for screening military engine

operating and maintenance records to insure their accuracy.

For engines lacking complete, accurate time-in-service (TIS) and operating records, the time remaining on life-limited parts is considered unknown, therefore, such parts are considered unairworthy and must be removed from service. For those engines having accurate TIS and service history records, the applicant must develop a conversion factor(s) to convert TIS of past engine usage in military service to the equivalent civil engine cycles which includes cumulative partial cycles. The procedure for such conversions must be submitted to and approved by the FAA. The applicant must use the published life limit in civil engine manuals for all life-limited engine hardware to establish the remaining cycles. If applicable, the applicant must also develop procedures approved by the FAA to account for anticipated additional life to be consumed from other aircraft operating modes, such as external load and repetitive heavy lift operations, that are not considered in the published life in the civil engine manuals.

5. Continued Airworthiness

The applicant will be required to provide Instructions for Continued Airworthiness in accordance with 14 CFR 33.4. The type certificate holder must report failures, malfunctions, and defects; support required design changes; and maintain records concerning the continued airworthiness of the engines in accordance with 14 CFR Parts 21, 33, and 43.

6. Identification Marking

The existing military identification marking (data plate) shall remain attached to the engine. A supplemental data plate, in compliance with the requirements of part 45, will be used to further identify the engine.

7. Airworthiness Directives (AD's)

The type certificate holder must comply with all FAA AD's pertaining to the equivalent civil engine and with certain military Time Compliance Technical Orders (i.e., the military equivalent to AD's) that are approved by the FAA for the engine.

8. Overhaul

The engine must be newly overhauled, in accordance with the current civil engine model overhaul manual(s), by a maintenance facility certificated by the FAA to perform such overhauls.

Issued in Fort Worth, Texas on September 22, 1999.

Henry A. Armstrong,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 99–25452 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98–SW–80–AD; Amendment 39–11342; AD 99–20–12]

RIN 2120–AA64

Airworthiness Directives; MD Helicopters Inc. Model 369D, D369E, 369FF, 500N, and 600N Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to MD Helicopters, Inc. Model 369D, 369E, 369FF, 500N, and 600 N helicopters, that requires replacing the oil cooler blower bracket (bracket). This amendment is prompted by three reports of cracked brackets. The actions specified by this AD are intended to prevent failure of a bracket, loss of cooling of engine oil and transmission oil, and subsequent forced landing.

EFFECTIVE DATE: November 4, 1999.

FOR FURTHER INFORMATION CONTACT: Bruce Conze, Aerospace Engineer, FAA, Los Angeles Aircraft, Certification Office, 3960 Paramount Blvd, Lakewood, California 90712, telephone (562) 627–5261, fax (562) 627–5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to MD Helicopters Inc. Model 369D, 369E, 369FF, 500N, and 600N helicopters was published in the **Federal Register** on June 23, 1999 (64 FR 33447). That action proposed to require replacing the bracket.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 100 helicopters of U.S. registry will be affected by this AD, that it will take approximately 2.5 work hours per helicopter to replace the bracket, and that the average labor rate is $60 per work hour. Required parts will cost approximately $225 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $37,500.

The regulations adopted therein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AD 99–20–12 MD Helicopters, Inc. (MDHI): Amendment 39–11342. Docket No. 98–SW–80–AD.

Applicability: Model 369D, 369E, 369FF, 500N, and 600N helicopters, with oil cooler blower bracket (bracket), part number (P/N)

369F5190–1, installed, certificated in any category.

Note 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required within 100 hours time-in-service, unless accomplished previously.

To prevent failure of a bracket, loss of cooling of engine oil and transmission oil, and a subsequent forced landing, accomplish the following:

(a) Remove the bracket, P/N 369F5190–1, and replace it with an airworthy bracket P/N 369F5194–1.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office. Operators shall submit their request through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Los Angeles Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this Ad, if any, may be obtained from the Los Angeles Aircraft Certification Office.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be accomplished.

(d) This amendment becomes effective on November 4, 1999.

Issued in Fort Worth, Texas, on September 22, 1999.

Henry A. Armstrong,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 99–25375 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

[TD 8825]

RIN 1545–AU33

Regulations Under Section 382 of the Internal Revenue Code of 1986; Application of Section 382 in Short Taxable Years and With Respect to Controlled Groups; Correction

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Correction to final regulations.

SUMMARY: This document contains corrections to TD 8825, which was published in the **Federal Register** on Friday, July 2, 1999 (64 FR 36175). These regulations relate to limitations on net operating loss carryovers and certain built-in losses following an ownership change of a corporation.

EFFECTIVE DATE: July 2, 1999.

FOR FURTHER INFORMATION CONTACT: Lee A. Kelley at (202) 622–7550 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

The final regulations that are the subject of these corrections are under section 382 of the Internal Revenue Code.

Need for Correction

As published, TD 8825 contains errors which may prove to be misleading and are in need of clarification.

Correction of Publication

Accordingly, the publication of the final regulations (TD 8825), which are the subject of FR Doc. 99–16163, is corrected as follows:

1. On page 36177, column 2, instructional paragraph 2, the language **"Par 2.** Section 382–1 is amended by'' is corrected to read **"Par. 2.** Section 1.382–1 is amended by:''.

2. On page 36177, column 3, the section heading ''§ 1.1382–2 [Amended]'' is corrected to read ''§ 1.382–2 [Amended]''.

Cynthia E. Grigsby,

Chief, Regulations Unit, Assistant Chief Counsel (Corporate).

[FR Doc. 99–25233 Filed 9–29–99; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF DEFENSE

DEPARTMENT OF TRANSPORTATION

Coast Guard

DEPARTMENT OF VETERANS AFFAIRS

38 CFR Part 21

RIN 2900–AI31

Advance Payments and Lump-Sum Payments of Educational Assistance; Miscellaneous Nonsubstantive Changes

AGENCIES: Department of Defense, Department of Transportation (Coast Guard), and Department of Veterans Affairs.

ACTION: Final rule.

SUMMARY: This document amends the educational assistance regulations dealing with the advance payment and lump-sum payment of educational assistance. We are amending these regulations by removing provisions that no longer apply and by making other changes for the purpose of clarification. This will make these regulations easier to use. In addition, this document makes nonsubstantive changes for the purpose of clarification in the educational assistance regulations concerning eligibility for the Montgomery GI Bill—Active Duty program.

DATES: *Effective Date:* September 30, 1999.

FOR FURTHER INFORMATION CONTACT: William G. Susling, Jr., Education Adviser, Education Service, Veterans Benefits Administration, 202–273–7187.

SUPPLEMENTARY INFORMATION: In the **Federal Register** of May 20, 1998 (63 FR 27701), the Department of Veterans Affairs (VA), the Department of Defense (DOD), and the Department of Transportation (Coast Guard) proposed amending the educational assistance regulations concerning advance payments and lump-sum payments of educational assistance. We proposed removing obsolete provisions and clarifying other provisions.

Interested persons were given 60 days in which to submit comments to VA. We received no comments. Based on the rationale set forth in the proposed rule and this document, the provisions of the proposed rule are adopted without change, except that nonsubstantive changes are made for the purpose of clarification and authority citations are changed.

DOD and VA are jointly issuing this final rule insofar as it relates to the Post-

Vietnam Era Veterans' Educational Assistance program. This program is funded by DOD and administered by VA. DOD, the Department of Transportation (Coast Guard), and VA are jointly issuing this final rule insofar as it relates to the Montgomery GI Bill—Selected Reserve. This program is funded by DOD and the Coast Guard, and is administered by VA. VA alone is issuing the remainder of this final rule.

Paperwork Reduction Act

The collection of information contained in this final rule in 38 CFR 21.4138(a) has been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501–3520) and has been assigned OMB control number 2900–0604. The collection of information implements a statutory provision that mandates that an individual who wishes to receive an advance payment of educational assistance must ask for it. We received no comments on the proposed collection of information.

OMB assigns a control number for each collection of information it approves. VA may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number assigned to the collection of information in this final rule is displayed at the end of the affected section of the regulations.

Administrative Procedure Act

Under 5 U.S.C. 553, there is a basis for dispensing with a 30-day delay of the effective date since the changes made by this final rule are nonsubstantive.

Executive Order 12866

This final rule has been reviewed by OMB under Executive Order 12866.

Regulatory Flexibility Act

The signers of this document hereby certify that this final rule will not have a significant economic impact on a substantial number of small entities as they are defined in the Regulatory Flexibility Act, 5 U.S.C. 601–612. The adoption of this final rule does not make substantive changes. It removes provisions that no longer apply and makes other changes for purposes of clarification.

The Catalog of Federal Domestic Assistance numbers for programs affected by this final rule are 64.117, 64.120, and 64.124. The final rule will also affect the Montgomery GI Bill—Selected Reserve for which there is no Catalog of Federal Domestic Assistance number.

List of Subjects in 38 CFR Part 21

Administrative practice and procedure, Armed forces, Civil rights, Claims, Colleges and universities, Conflict of interests, Defense Department, Education, Employment, Grant programs-education, Grant programs-veterans, Health care, Loan programs-education, Loan programs-veterans, Manpower training programs, Reporting and recordkeeping requirements, Schools, Travel and transportation expenses, Veterans, Vocational education, Vocational rehabilitation.

Approved: March 25, 1999.

Togo D. West, Jr.,

Secretary of Veterans Affairs.

Approved: April 29, 1999.

Curtis B. Taylor,

Colonel, U.S. Army, Principal Director, (Military Personnel Policy)

Department of Defense.

Approved: May 27, 1999.

F. L. Ames

Read Admiral, U.S. Coast Guard, Assistant Commandant For Human Resources.

For the reasons set out in the preamble, 38 CFR part 21 is amended as set forth below.

PART 21—VOCATIONAL REHABILITATION AND EDUCATION

Subpart D—Administration of Educational Assistance Programs

1. The authority citation for subpart D is revised to read as follows:

Authority: 10 U.S.C. 2141 note, ch. 1606; 38 U.S.C. 501(a), 38 U.S.C. chs. 30, 32, 34, 35, 36, unless otherwise noted.

2. In § 21.4138, the introductory text is removed; paragraphs (c) and (d) are removed and reserved; paragraphs (a) and (b) are revised; and a parenthetical is added to the end of the section, to read as follows:

§ 21.4138 Certifications and release of payments.

(a) *Advance payments.* (1) VA will make payments of educational assistance in advance when:

(i) The veteran, servicemember, reservist, or eligible person has specifically requested such a payment;

(ii) The student is enrolled for half time or more;

(iii) The educational institution at which the veteran, servicemember, reservist, or eligible person is accepted or enrolled has agreed to and can satisfactorily carry out the provisions of 38 U.S.C. 3680(d)(4)(B) and (C) and (5) pertaining to receipt, delivery, or return of checks and certifications of delivery and enrollment;

(iv) The Director of the VA field facility of jurisdiction has not acted under paragraph (a)(4) of this section to prevent advance payments being made to the veteran's, servicemember's, reservist's, or eligible person's educational institution;

(v) There is no evidence in the veteran's, servicemember's, reservist's, or eligible person's claim file showing that he or she is not eligible for an advance payment;

(vi) The period for which the veteran, servicemember, reservist, or eligible person has requested a payment either—

(A) Is preceded by an interval of nonpayment of 30 days or more; or

(B) Is the beginning of a school year that is preceded by a period of nonpayment of 30 days or more; and

(vii) The educational institution or the veteran, servicemember, reservist, or eligible person has submitted the certification required by § 21.7151.

(2) The amount of the advance payment to a veteran, reservist, or eligible person is the educational assistance for the month or fraction thereof in which the term or course will begin plus the educational assistance for the following month. The amount of the advance payment to a servicemember is the amount payable for the entire term, quarter, or semester, as applicable.

(3) VA will mail advance payments to the educational institution for delivery to the veteran, servicemember, reservist, or eligible person. The educational institution will not deliver the advance payment check more than 30 days in advance of the first date of the period for which VA makes the advance payment.

(4) The Director of the VA field station of jurisdiction may direct that advance payments not be made to individuals attending an educational institution if:

(i) The educational institution demonstrates an inability to comply with the requirements of paragraph (a)(3) of this section;

(ii) The educational institution fails to provide adequately for the safekeeping of the advance payment checks before delivery to the veteran, servicemember, reservist, or eligible person or return to VA; or

(iii) The Director determines, based on compelling evidence, that the educational institution has demonstrated its inability to discharge its responsibilities under the advance payment program.

(**Authority:** 10 U.S.C. 16136(b); 38 U.S.C. 3034, 3680(d))

(b) *Lump-sum payments.* A lump-sum payment is a payment of all educational assistance due for an entire quarter, semester, or term. VA will make a lump-sum payment to:

(1) A veteran or servicemember pursuing a program of education at less than the half-time rate under 38 U.S.C. chapter 30;

(2) A servicemember pursuing a program of education at the half-time rate or greater under 38 U.S.C. chapter 30, provided that VA did not make an advance payment to the servicemember for the term for which a lump-sum payment would otherwise be due; and

(3) An eligible person pursuing a program of education at less than the half-time rate under 38 U.S.C. chapter 35.

(**Authority:** 38 U.S.C. 3034(c), 3680(f))

* * * * *

(The Office of Management and Budget has approved the information collection requirements in this section under control number 2900–0604)

Subpart G—Post-Vietnam Era Veterans' Educational Assistance Under 38 U.S.C. Chapter 32

3. The authority citation for part 21, subpart G continues to read as follows:

Authority: 38 U.S.C. 501(a), chs. 32, 36, unless otherwise noted.

4. Section 21.5135 is revised to read as follows:

§ 21.5135 Advance payments.

VA will apply the provisions of § 21.4138(a) in making advance payments to veterans and servicemembers.

(Authority: 38 U.S.C. 3241, 3680)

Subpart K—All Volunteer Force Educational Assistance Program (Montgomery GI Bill—Active Duty)

5. The authority citation for part 21, subpart K continues to read as follows:

Authority: 38 U.S.C. 501(a), chs. 30, 36, unless otherwise noted.

6. The heading of § 21.7040 is revised to read as follows:

§ 21.7040 Categories of basic eligibility.

7. The heading of § 21.7042 and the parenthetical at the end of the section are revised to read as follows:

§ 21.7042 Basic eligibility requirements.

* * * * *

(The Office of Management and Budget has approved the information collection requirements in this section under control number 2900–0594)

8. In § 21.7140, paragraph (b) is removed; paragraphs (c), (d), (e), (f), and (g) are redesignated as paragraphs (b), (c), (d), (e), and (f), respectively; and paragraph (a) is revised, to read as follows:

§ 21.7140 Certifications and release of payments.

(a) *Advance payments and lump-sum payments.* VA will apply the provisions of § 21.4138(a) and (b) in making advance payments and lump-sum payments to veterans and servicemembers.

(Authority: 38 U.S.C. 3034 and 3680)

* * * * *

Subpart L—Educational Assistance for Members of the Selected Reserve

9. The authority citation for part 21, subpart L is revised to read as follows:

Authority: 10 U.S.C. ch. 1606; 38 U.S.C. 501(a), 512, ch. 36, unless otherwise noted.

10. In § 21.7640, the authority citations for paragraphs (b), (c), (e), and (f) are amended by removing ''; Pub. L. 98–525''; paragraph (e) is amended by removing ''paragraph (d) of this section'' and adding, in its place, ''§ 21.4138(a)''; and paragraph (d) is revised to read as follows:

§ 21.7640 Release of payments.

* * * * *

(d) *Advance payments.* VA will apply the provisions of § 21.4138(a) in making advance payments to reservists.

(Authority: 10 U.S.C. 16136(b); 38 U.S.C. 3680)

* * * * *

[FR Doc. 99–25284 Filed 9–29–99; 8:45 am]

BILLING CODE 8320–01–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA 198–0175a; FRL–6445–6]

Approval and Promulgation of Implementation Plans; California State Implementation Plan Revision, San Luis Obispo County Air Pollution Control District, South Coast Air Quality Management District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: EPA is taking direct final action on revisions to the California State Implementation Plan. The revisions concern the recision of rules from the San Luis Obispo County Air Pollution Control District (SLOCAPCD) and the South Coast Air Quality Management District (SCAQMD). The intended effect of this action is to bring the SLOCAPCD and the SCAQMD State Implementation Plans (SIP) up to date in accordance with the requirements of the Clean Air Act, as amended in 1990 (CAA or the Act). EPA is finalizing the approval of these recisions from the California SIP under provisions of the CAA regarding EPA action on SIP submittals, SIPs for national primary and secondary ambient air quality standards, and plan requirements for nonattainment areas.

DATES: This rule is effective on November 29, 1999, without further notice, unless EPA receives adverse comments by November 1, 1999. If EPA receives such comment, it will publish a timely withdrawal in the **Federal Register** informing the public that this rule will not take effect.

ADDRESSES: Written comments must be submitted to Andrew Steckel, Chief, Rulemaking Office, Air Division at the Region IX office listed below. Copies of the rule revisions and EPA's evaluation report for each rule are available for public inspection at EPA's Region IX office during normal business hours. Copies of the submitted rule revisions are available for inspection at the following locations:

Rulemaking Office (AIR–4), Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105

Environmental Protection Agency, Air Docket (6102), 401 ''M'' Street, S.W., Washington, D.C. 20460

California Air Resources Board, Stationary Source Division, Rule Evaluation Section, 2020 ''L'' Street, Sacramento, CA 95812

San Luis Obispo County Air Pollution Control District 3433 Roberto Court, San Luis Obispo, California 93401

South Coast Air Quality Management District, 21865 East Copley Drive, Diamond Bar, California 91765–4182

FOR FURTHER INFORMATION CONTACT: Julie A. Rose, Rulemaking Office, AIR–4, Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105, Telephone: (415) 744–1184.

SUPPLEMENTARY INFORMATION:

I. Applicability

The rules being approved for recision from the California SIP include: SLOCAPCD Rule 102, Compliance by Existing Installation, SLOCAPCD Rule 408, Gasoline Specifications, and SCAQMD Rule 432, Gasoline Specifications. The SLOCAPCD rule recisions were submitted by the California Air Resources Board (CARB)

to EPA on August 1, 1997 and the SCAQMD rule recision was submitted by CARB on September 29, 1998.

II. Background

The Clean Air Act of 1970 (CAA or the Act) requires the states to develop SIPs to enable local districts to attain and maintain the national ambient air quality standards. The rule recisions listed above will not directly affect emission reductions. The requirements of the rescinded rules have been adopted by the state or incorporated into other rules at the district.

The State of California submitted these rule recisions for incorporation into its SIP on August 1, 1997 and September 29, 1998. This document addresses EPA's direct-final action for SLOCAPCD Rule 102, Compliance by Existing Installation, SLOCAPCD Rule 408, Gasoline Specifications, and SCAQMD Rule 432, Gasoline Specifications. SLOCAPCD rescinded Rule 102 and Rule 408 on March 26, 1997 and SCAQMD rescinded Rule 432 on July 10, 1998. The recision of SLOCAPCD Rules 102 and 408 was found to be complete on September 30, 1997 and the recision of SCAQMD Rule 432 was found to be complete on January 26, 1999. These rule recisions were found complete pursuant to EPA's completeness criteria that are set forth in 40 CFR part 51, appendix V [1] and are being finalized for approval into the SIP.

SLOCAPCD Rule 102, Compliance by Existing Installation, was created to bring existing installations into conformity with the District rules and regulations as adopted in 1976. Since that time, Rule 202, Permits, was adopted and approved and is sufficient to achieve compliance with the SLOCAPCD rules and regulations and the previous goals of Rule 102. Because Rule 102 is no longer necessary and, therefore, redundant, the rule was rescinded by the district governing board.

SLOCAPCD Rule 408, Gasoline Specifications and SCAQMD, Rule 432, Gasoline Specifications prohibit the sale or supply of gasoline with a degree of unsaturation greater than Bromine Number 30. The California Legislature adopted a bill which delegates the authority to regulate and enforce fuel specifications to the California Air Resources Board (CARB). As a result of the legislation, the requirements of SLOCAPCD Rule 408 and SCAQMD Rule 432 are no longer in effect, therefore, these rules were repealed by their respective district governing boards.

III. EPA Evaluation and Action

EPA has evaluated all the appropriate background and submittal documentation for these recisions. EPA has determined that the recision of SLOCAPCD Rule 102 is approvable since the requirements for permit compliance are embodied in SLOCAPCD Rule 202.

EPA has also determined that the recision of SLOCAPCD Rule 408 and SCAQMD Rule 432 is approvable since the CARB now regulates fuel specifications.

The rule recisions are consistent with the CAA, EPA regulations, and EPA policy. Therefore, the recision of SLOCAPCD Rules 102 and 408 and SCAQMD Rule 432 are being approved under section 110(k)(3) of the CAA as meeting the requirements of section 110(a) and part D.

EPA is publishing this rule without prior proposal because the Agency views this as a noncontroversial amendment and anticipates no adverse comments. However, in the proposed rules section of this **Federal Register** publication, EPA is publishing a separate document that will serve as the proposal to approve the SIP revision should adverse comments be filed. This rule will be effective November 29, 1999, without further notice unless the Agency receives adverse comments by November 1, 1999.

If the EPA receives such comments, then EPA will publish a timely withdrawal in the **Federal Register** informing the public that the rule will not take effect. All public comments received will then be addressed in a subsequent final rule based on the proposed rule. The EPA will not institute a second comment period. Any parties interested in commenting on this rule should do so at this time. If no such comments are received, the public is advised that this rule is effective on November 29, 1999, and no further action will be taken on the proposed rule.

IV. Administrative Requirements

A. Executive Order 12866

The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order (E.O.) 12866, Regulatory Planning and Review.

B. Executive Order 12875

Under Executive Order 12875, Enhancing the Intergovernmental Partnership, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.'' Today's rule does not create a mandate on State, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this rule.

C. Executive Order 13045

Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be ''economically significant'' as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. This rule is not subject to E.O. 13045 because it does not involve decisions intended to mitigate environmental health or safety risks.

D. Executive Order 13084

Under Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds

[1] EPA adopted the completeness criteria on February 16, 1990 (55 FR 5830) and, pursuant to section 110(k)(1)(A) of the CAA, revised the criteria on August 26, 1991 (56 FR 42216).

necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.'' Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This final rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities. Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.,* v. *U.S. EPA,* 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated annual costs to State, local, or tribal governments in the aggregate; or to private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action promulgated does not include a Federal mandate that may result in estimated annual costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

G. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a ''major'' rule as defined by 5 U.S.C. 804(2).

H. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 29, 1999. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Hydrocarbons, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: September 14, 1999.

Keith Takata,

Acting Regional Administrator, Region IX.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

PART 52—[AMENDED]

1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart F—California

2. Section 52.220 is amended by adding paragraphs (c)(32)(iv)(F) and (35)(xii)(G) to read as follows:

§ 52.220 Identification of plan.

* * * * *

(c) * * *

(32) * * *

(iv) * * *

(F) Previously approved on June 14, 1978 and now deleted without replacement Rule 432.

* * * * *

(35) * * *

(xii) * * *

(G) Previously approved on August 4, 1978 and now deleted without replacement Rules 102 and 408.

* * * * *

[FR Doc. 99–25304 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[DC040–2016; FRL–6448–9]

Approval and Promulgation of Air Quality Implementation Plans; District of Columbia; GSA Central and West Heating Plants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: EPA is taking direct final action approving revisions to the District of Columbia State Implementation Plan (SIP). The revisions consist of portions of an

operating permit which reduce sulfur dioxide (SO_2) emissions from two steam-generating facilities located in the District of Columbia. The intent of this action is to approve, as SIP revisions, portions of the operating permit issued by the District of Columbia on October 17, 1997 to the General Services Administration (GSA) for its Central Heating and Refrigeration Plant and West Heating Plant in accordance with the requirements of the Clean Air Act (the Act).

DATES: This rule is effective on November 29, 1999 without further notice, unless EPA receives adverse written comment by November 1, 1999. If EPA receives such comments, it will publish a timely withdrawal of the direct final rule in the **Federal Register** and inform the public that the rule will not take effect.

ADDRESSES: Written comments should be mailed to Walter Wilkie, Acting Chief, Technical Assessment Branch, Mailcode 3AP22, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; the Air and Radiation Docket and Information Center, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; District of Columbia Department of Public Health, Air Quality Division, 51 N Street, N.E., Washington, DC 20002.

FOR FURTHER INFORMATION CONTACT: Denis Lohman (215) 814–2192, or by e-mail at lohman.denny@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On October 23, 1997, the District of Columbia submitted a formal revision to its SIP. The SIP revision consisted of an October 17, 1997 operating permit issued by the District of Columbia to GSA for its Central Refrigeration and Heating Plant (CHRP) and West Heating Plant (WHP). On December 16, 1998, the District submitted an amendment intended to clarify the scope of its of October 23, 1997 submittal. The amendment clarified that the District is only requesting that portions of the operating permit be approved and incorporated into the SIP. EPA is approving all of the portions of the permit requested by the District in its December 16, 1998 submittal. While the other provisions of the operating permit are federally enforceable pursuant to Title V of the Act, certain SO_2 provisions are being approved as SIP revisions because they are needed to ensure attainment of the annual National Ambient Air Quality Standards (NAAQS) set for SO_2.

II. Summary of SIP Revision

The operating permit imposes emission limits for SO_2 and establishes restrictions on fuel burning capabilities to minimize SO_2 from the plants. The operating permit requires the combustion of natural gas at all times at GSA's CHRP and WHP. There is, however, a provision for the use of No. 2 ''on-road Diesel'' fuel with a maximum sulfur content of five hundredths weight percent ($0.05\%_{wt}$) during periods of natural gas service interruption by the supplier. In addition to limiting the sulfur content of the fuel that may be combusted during periods of natural gas interruption, the permit also limits the total gallons per calendar year that may be combusted at each facility. These restrictions on fuel type and usage have significantly reduced the SO_2 emissions from these plants to the point where such emissions presents a negligible potential for impact on the surrounding area. Under the existing SIP, the average annual SO_2 emissions for CHRP and WHP were 523 and 626 tons per year, respectively, during the period of 1980 to 1990, inclusively. The provisions of the operating permit, which are the subject of this SIP revision, restrict annual SO_2 emissions to 17 tons per year at CHRP and 12 tons per year at WHP.

The permit provisions being approved as SIP revisions also require GSA to report the necessary information to ensure compliance with the annual emission limits. The principle compliance determination method is the use of continuous emissions monitoring when combusting natural gas or No. 2 ''on-road Diesel'' fuel. In addition, the District requires fuel analysis or fuel certification substantiating the maximum hydrogen sulfide and weight percent sulfur of the gas or oil consumed. GSA must submit quarterly reports for each boiler at CHRP and WHP including; hours of service, types and quantities of fuel combusted, fuel composition and heat content, service interruptions and total tons of SO_2 emitted on a monthly basis and on rolling 12 month basis. Monthly reports are to be prepared demonstrating GSA's maintenance of the NAAQS for SO_2 in the vicinity of the two facilities. Sulfur-in-fuel reports are due each month detailing specific information about fuel oil, if any, that was burned during the month. The level of reporting detailed above provides adequate assurance that the compliance status of GSA can be quickly and accurately tracked at all times.

EPA has determined that the portions of GSA's operating permit which the District of Columbia has requested be approved as SIP revisions serve to strengthen the District of Columbia SO_2 SIP, and EPA is therefore approving the District's request.

EPA is publishing this rule without prior proposal because the Agency views this as a noncontroversial amendment and anticipates no adverse comment. However, in the ''Proposed Rules'' section of today's **Federal Register**, EPA is publishing a separate document that will serve as the proposal to approve the District's SIP revision if adverse comments are filed. This rule will be effective on November 29, 1999 without further notice unless EPA receives adverse comment by November 1, 1999. If EPA receives adverse comment, EPA will publish a timely withdrawal in the **Federal Register** informing the public that the rule will not take effect. EPA will address all public comments in a subsequent final rule based on the proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting must do so at this time.

III. Final Action

EPA is approving, as a revision to the District of Columbia SIP, the District's December 16, 1998 submittal (amending its October 23, 1997 submittal) consisting of portions of the operating permit issued by the District on October 17, 1997 to GSA for its Central and West Heating Plants.

IV. Administrative Requirements

A. Executive Order 12866

The Office of Management and Budget (OMB) has exempted this regulatory action from review under E.O. 12866, entitled ''Regulatory Planning and Review.''

B. Executive Order 12875

Under E.O. 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a state, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If EPA complies by consulting, E.O. requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives

of affected state, local, and tribal governments, the nature of their concerns, copies of written communications from the governments, and a statement supporting the need to issue the regulation. In addition, E.O. 12875 requires EPA to develop an effective process permitting elected officials and other representatives of state, local, and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.'' Today's rule does not create a mandate on state, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this rule.

C. Executive Order 13045

E.O. 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that the EPA determines (1) is ''economically significant,'' as defined under E.O. 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to E.O. 13045 because it is not an economically significant regulatory action as defined by E.O. 12866, and it does not address an environmental health or safety risk that would have a disproportionate effect on children.

D. Executive Order 13084

Under E.O. 13084, EPA may not issue a regulation that is not required by statute, that significantly affects or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.'' Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. This action does not involve or impose any requirements that affect Indian Tribes. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This final rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the Clean Air Act does not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities. Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of a flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S. EPA*, 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated annual costs to State, local, or tribal governments in the aggregate; or to private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action promulgated does not include a Federal mandate that may result in estimated annual costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

G. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804, however, exempts from section 801 the following types of rules: rules of particular applicability; rules relating to agency management or personnel; and rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C. 804(3). EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability pertaining only to the General Services Administration's (GSA) Central Heating and Refrigeration Plant and West Heating Plant located in the District of Columbia.

H. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 29, 1999. Filing a petition for reconsideration by the Administrator of this final rule, pertaining to GSA's operating permit for its Central and West heating plants, does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action approving portions of the District's operating permit issued to GSA for its Central and West heating plants may not be challenged later in proceedings to

enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: September 20, 1999.

W. Michael McCabe,

Regional Administrator, Region III.

40 CFR part 52 is amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart J—District of Columbia

2. In Section 52.470, the entry for GSA permit-to-operate fuel-burning equipment in the ''EPA Approved District of Columbia Source-specific requirements'' table in paragraph (d) is added and the entry ''None'' is removed to read as follows:

§ 52.470 Identification of plan.

* * * * *

(d) EPA-Approved District of Columbia Source-Specific Requirements

EPA-APPROVED DISTRICT OF COLUMBIA SOURCE-SPECIFIC REQUIREMENTS

Name of Source	Permit number	State effective date	EPA approval date	Comments
General Services Administration Central Heating and Refrigeration Plant and West Heating Plant.	N/A—it is the operating permit issued to GSA by the District of Columbia on October 17, 1997.	Oct 17, 1997.	Sept 30, 1999 [page cite.].	The following portions of GSA's operating permit are not included in the SIP: The portion of Condition 3 referring to Table 1, Table 1, Condition 4, Table 3, and Condition 17.

[FR Doc. 99–25422 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[DE039–1026; FRL–6449–2]

Approval and Promulgation of Air Quality Implementation Plans; Delaware; Enhanced Motor Vehicle Inspection and Maintenance (I/M) Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving a State Implementation Plan (SIP) revision submitted by the State of Delaware. This revision establishes and requires the implementation of an enhanced motor vehicle inspection and maintenance (I/M) program in the counties of Kent and New Castle. The intended effect of this action is to approve the Delaware enhanced motor vehicle I/M program as a SIP revision under the Clean Air Act (the Act).

EFFECTIVE DATE: This final rule is effective on November 1, 1999.

ADDRESSES: Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; and Delaware Department of Natural Resources & Environmental Control, 89 Kings Highway, Dover, Delaware 19903.

FOR FURTHER INFORMATION CONTACT: Jill Webster, (215) 814–2033, or by e-mail at Webster.Jill@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On July 7, 1999 (64 FR 36635), EPA published a notice of proposed rulemaking (NPR) for the State of Delaware. The NPR proposed approval of revisions to the SIP for an enhanced motor vehicle I/M program. The formal SIP revision was submitted by the Delaware Department of Natural Resources and Environmental Control (DNREC) on June 16, 1998 and additional revisions were submitted on May 24, 1999. A description of Delaware's submittals and EPA's rationale for our proposed action were presented in the NPR and will not be restated here. No public comments were received on the NPR.

Additionally, EPA is not requiring the State of Delaware to implement section 40 CFR 51.356 (a)(4) dealing with federal installations within I/M areas at this time. The Department of Justice has recommended to EPA that these provisions of the federal I/M regulation be revised since it appears to grant states authority to regulate federal installations in circumstances where the federal government has not waived sovereign immunity. Federally owned vehicles operated in Delaware are required to meet the same requirements as Delaware registered vehicles, but it would not be appropriate to require compliance with this regulation if it is not constitutionally authorized. EPA will be revising these provisions in the future. EPA will review state I/M SIPs with respect to this issue when the revised rule is final. EPA is neither approving nor disapproving requirements which apply to federal facilities at this time.

EPA believes that approval of Delaware's I/M program was sufficiently proposed in the rulemaking process and that omitting its requirements pursuant to section 40 CFR 51.356(a)(4) from this approval would not warrant further comment, because responsibility for compliance with those requirements rests with the Federal government. For this reason, EPA invokes the ''good cause'' clause of the Administrative Procedure Act section 553(b)(B) to make this change in this final notice. It would be contrary to the public interest to take final action on these provisions which may be unconstitutional and which EPA is currently revising.

II. Final Action

EPA is approving Delaware's low enhanced I/M program as a revision to the Delaware SIP, with the exception of its provisions for federal facilities.

III. Administrative Requirements

A. Executive Orders 12866

The Office of Management and Budget (OMB) has exempted this regulatory action from review under E.O. 12866, entitled ''Regulatory Planning and Review.''

B. Executive Orders on Federalism

Under E.O. 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon

a state, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If EPA complies by consulting, E.O. requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected state, local, and tribal governments, the nature of their concerns, copies of written communications from the governments, and a statement supporting the need to issue the regulation. In addition, E.O. 12875 requires EPA to develop an effective process permitting elected officials and other representatives of state, local, and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.'' Today's rule does not create a mandate on state, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this rule.

On August 4, 1999, President Clinton issued a new executive order on federalism, Executive Order 13132, (64 FR 43255 (August 10, 1999), which will take effect on November 2, 1999. In the interim, the current Executive Order 12612, (52 FR 41685 (October 30, 1987), on federalism still applies. This rule will not have a substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 12612. The rule affects only one State, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act.

C. Executive Order 13045

E.O. 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that the EPA determines (1) is ''economically significant,'' as defined under E.O. 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. This final rule is not subject to E.O. 13045 because it is not an economically significant regulatory action as defined by E.O. 12866, and it does not address an environmental health or safety risk that would have a disproportionate effect on children.

D. Executive Order 13084

Under E.O. 13084, EPA may not issue a regulation that is not required by statute, that significantly affects or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.'' Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. This action does not involve or impose any requirements that affect Indian Tribes. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This final rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities. Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of a flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S. EPA*, 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated annual costs to State, local, or tribal governments in the aggregate; or to private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action promulgated does not include a Federal mandate that may result in estimated annual costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

G. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

H. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 29, 1999. Filing a petition for reconsideration by the Administrator of this final rule to approve the Delaware enhanced I/M SIP does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Hydrocarbons, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements.

Dated: September 20, 1999.

W. Michael McCabe,

Regional Administrator, Region III.

40 CFR part 52 is amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart I—Delaware

2. In Section 52.420, the table in paragraph (c) entitled ''EPA-Approved Regulations in the Delaware SIP'' is amended by revising the entry for Regulation 26—Motor Vehicle Emissions Inspections Program, and adding an entry for Regulation 31—Low Enhanced Inspection and Maintenance Program.

§ 52.420 Identification of plan.

* * * * *

(c) EPA approved regulations.

EPA-APPROVED REGULATIONS IN THE DELAWARE SIP

State citation	Title subject	State effective date	EPA approval date	Comments
*	*	*	*	*
Regulation 26 MOTOR VEHICLE EMISSIONS INSPECTION PROGRAM				
Section 1	Applicability and Definitions	4/1/90	1/06/92 57 FR 351	Regulation 26 provisions apply to Sussex County only, effective November 1, 1999.
Section 2	General Provisions	4/1/90	1/06/92 57 FR 351.	
Section 3	Registration Requirement	5/9/85	12/08/86 51 FR 44068	
Section 4	Exemptions	4/1/90	01/06/92 57 FR 351	
Section 5	Enforcement	7/6/82	10/17/83 48 FR 46986	
Section 6	Compliance, Waivers, Extensions of Time, and Repairs.	4/1/90	01/06/92 57 FR 351	
Section 7	Inspection Facility Requirements	7/6/82	10/17/83 48 FR 46986	
Section 8	Certification of Motor Vehicle Officers	7/6/82	10/17/83 48 FR 46986	
Section 9	Calibration and Test Procedures and Approved Equipment.	7/6/82	10/17/83 48 FR 46986	
Technical Memorandum 1.	Motor Vehicle Inspection and Maintenance Program Vehicle Test Procedure and Machine Calibration.	4/1/90	01/06/92 57 FR 351	
*	*	*	*	*
Regulation 31 Low Enhanced Inspection and Maintenance Program				
Section 1	Applicability	8/13/98	9/30/99	Provisions apply to New Castle and Kent Counties
Section 2	Low Enhanced I/M performance standard	8/13/98	9/30/99	
Section 3	Network type and program evaluation	6/11/99	9/30/99	
Section 4	Test Frequency and Convenience	6/11/99	9/30/99	
Section 5	Vehicle Coverage-except paragraph (4) which applies to federal facilities.	6/11/99	9/30/99	
Section 6	Test Procedures and Standards	6/11/99	9/30/99	
Section 7	Waivers and Compliance Via Diagnostic Inspection.	8/13/98	9/30/99	
Section 8	Motorist Compliance Enforcement	8/13/98	9/30/99	
Section 9	Enforcement Against Operators and Motor Vehicle Technicians.	8/13/98	9/30/99	
Section 10	Improving Repair Effectiveness	8/13/98	9/30/99	
Section 11	Compliance with Recall Notices	8/13/98	9/30/99	
Section 12	On-Road Testing	8/13/98	9/30/99	

EPA-APPROVED REGULATIONS IN THE DELAWARE SIP—Continued

State citation	Title subject	State effective date	EPA approval date	Comments
Section 13	Implementation Deadlines	6/11/99	9/30/99	
Appendix 1(d)	Commitment to Extend the I/M Program to the Attainment Date Letter from Secretary Tulou to EPA Administrator, W. Michael McCabe.	8/13/98	9/30/99	
Appendix 3 (a)(7)	Exhaust Emission Limits According to Model Year.	8/13/98	9/30/99	
Appendix 3(c)(2)	VMAS™ Test Procedure	6/11/99	9/30/99	
Appendix 4(a)	Sections from Delaware Criminal and Traffic Law Manual.	8/13/98	9/30/99	
Appendix 5(a)	Division of Motor Vehicles Policy on Out-of-State Renewals.	8/13/98	9/30/99	
Appendix 5(f)	Clean Screening Vehicle Exemption	6/11/99	9/30/99	
Appendix 6(a)	Idle Emissions Test Procedures	6/11/99	9/30/99	
Appendix 6(a)(5)	Vehicle Emission Repair Report Form	8/13/98	9/30/99	
Appendix 6(a)(8)	Evaporative System Integrity (Pressure) Test.	8/13/98	9/30/99	
Appendix 7(a)	Emission Repair Technician Certification Process.	8/13/98	9/30/99	
Appendix 8(a)	Registration Denial System Requirements Definition.	8/13/98	9/30/99	
Appendix 9(a)	Enforcement Against Operators and Inspectors.	8/13/98	9/30/99	

* * * * * * *

§ 52.424 [Amended]

3. In section 52.424, paragraph (b) is removed and reserved.

[FR Doc. 99–25424 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[TN 222–1–9928a; FRL–6448–3]

Approval and Promulgation of State Plans For Designated Facilities and Pollutants: Tennessee

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The United States Environmental Protection Agency (EPA) is approving the section 111(d) Plan submitted by the Tennessee Department of Environment and Conservation (DEC) for the State of Tennessee on January 8, 1999, for implementing and enforcing the Emissions Guidelines (EG) applicable to existing Municipal Solid Waste (MSW) Landfills.

DATES: This direct final rule is effective on November 29, 1999 without further notice, unless EPA receives significant, material, and adverse comment by November 1, 1999. If EPA receives adverse comment, we will publish a timely withdrawal of the direct final rule in the **Federal Register** and inform the public that the rule will not take effect.

ADDRESSES: You should address comments on this action to Steven M. Scofield at the EPA, Region 4 Air Planning Branch, 61 Forsyth Street, SW, Atlanta, Georgia 30303.

Copies of documents related to this action are available for the public to review during normal business hours at the locations below. If you would like to review these documents, please make an appointment with the appropriate office at least 24 hours before the visiting day. Reference file TN 222–1–9928a. The Region 4 office may have additional documents not available at the other locations.

Environmental Protection Agency, Region 4 Air Planning Branch, 61 Forsyth Street, SW, Atlanta, Georgia 30303. Steven M. Scofield, 404/562–9034.

Tennessee Department of Environment and Conservation, Division of Air Pollution Control, 9th Floor L & C Annex, 401 Church Street, Nashville, Tennessee 37243–1531, 615/532–0554.

FOR FURTHER INFORMATION CONTACT: Scott Davis at 404/562–9127 or Steven M. Scofield at 404/562–9034.

SUPPLEMENTARY INFORMATION:

I. Background

Under section 111(d) of the Clean Air Act (Act), EPA has established procedures whereby States submit plans to control certain existing sources of ''designated pollutants.'' Designated pollutants are defined as pollutants for which a standard of performance for new sources applies under section 111, but which are not ''criteria pollutants'' (i.e., pollutants for which National Ambient Air Quality Standards (NAAQS) are set pursuant to sections 108 and 109 of the Act) or hazardous air pollutants (HAPs) regulated under section 112 of the Act. As required by section 111(d) of the Act, EPA established a process at 40 CFR part 60, subpart B, which States must follow in adopting and submitting a section 111(d) plan. Whenever EPA promulgates a new source performance standard (NSPS) that controls a designated pollutant, EPA establishes EG in accordance with 40 CFR 60.22 which contain information pertinent to the control of the designated pollutant from that NSPS source category (i.e., the ''designated facility'' as defined at 40 CFR 60.21(b)). Thus, a State, local, or tribal agency's section 111(d) plan for a designated facility must comply with the EG for that source category as well as 40 CFR part 60, subpart B.

On March 12, 1996, EPA published EG for existing MSW landfills at 40 CFR part 60, subpart Cc (40 CFR 60.30c through 60.36c) and NSPS for new MSW Landfills at 40 CFR part 60, subpart WWW (40 CFR 60.750 through 60.759). (*See* 61 FR 9905–9944.) The

pollutants regulated by the NSPS and EG are MSW landfill emissions, which contain a mixture of volatile organic compounds (VOCs), other organic compounds, methane, and HAPs. VOC emissions can contribute to ozone formation which can result in adverse effects to human health and vegetation. The health effects of HAPs include cancer, respiratory irritation, and damage to the nervous system. Methane emissions contribute to global climate change and can result in fires or explosions when they accumulate in structures on or off the landfill site. To determine whether control is required, nonmethane organic compounds (NMOCs) are measured as a surrogate for MSW landfill emissions. Thus, NMOC is considered the designated pollutant. The designated facility which is subject to the EG is each existing MSW landfill (as defined in 40 CFR 60.32c) for which construction, reconstruction or modification was commenced before May 30, 1991.

Pursuant to 40 CFR 60.23(a), States were required to either: (1) Submit a plan for the control of the designated pollutant to which the EG applies; or (2) Submit a negative declaration if there were no designated facilities in the State within nine months after publication of the EG (by December 12, 1996).

EPA has been involved in litigation over the requirements of the MSW landfill EG and NSPS since the summer of 1996. On November 13, 1997, EPA issued a notice of proposed settlement in *National Solid Wastes Management Association* v. *Browner, et.al,* No. 96–1152 (D.C. Cir), in accordance with section 113(g) of the Act. *See* 62 FR 60898. It is important to note that the proposed settlement does not vacate or void the existing MSW landfill EG or NSPS. Pursuant to the proposed settlement agreement, EPA published a direct final rulemaking on June 16, 1998, in which EPA is amending 40 CFR part 60, subparts Cc and WWW, to add clarifying language, make editorial amendments, and to correct typographical errors. *See* 63 FR 32743–32753, 32783–32784. EPA regulations at 40 CFR 60.23(a)(2) provide that a State has nine months to adopt and submit any necessary State Plan revisions after publication of a final revised emission guideline document. Thus, States are not yet required to submit State Plan revisions to address the June 16, 1998, direct final amendments to the EG. In addition, as stated in the June 16, 1998, preamble, the changes to 40 CFR part 60, subparts Cc and WWW, do not significantly modify the requirements of those subparts. *See* 63 FR 32744. Accordingly, the MSW landfill EG published on March 12, 1996, was used as a basis by EPA for review of section 111(d) Plan submittals.

This action approves the section 111(d) Plan submitted by the Tennessee DEC for the State of Tennessee to implement and enforce subpart Cc.

II. Discussion

The Tennessee DEC submitted to EPA on January 8, 1999, in addition to a prior portion of the plan submitted on November 16, 1998, the following in their section 111(d) Plan for implementing and enforcing the emission guidelines for existing MSW landfills in the State of Tennessee: Statutory and Legal Authority; Enforceable Mechanisms; MSW Landfill Source and Emissions Inventory; Emission Limitations; Process for Review and Approval of Collection and Control System Design Plans; Testing, Monitoring, Recordkeeping, and Reporting; Compliance Schedule; Demonstration That the Public Had Adequate Notice and Public Hearing Record; Submittal of Progress Reports to EPA; Quality Assurance; and applicable State of Tennessee codes and Tennessee DEC Air Pollution Control regulations.

The approval of the Tennessee State Plan is based on finding that: (1) The Tennessee DEQ provided adequate public notice of public hearings for the proposed rulemaking and State Plan which allows the Tennessee DEC to implement and enforce the EG for MSW landfills; and (2) The Tennessee DEC also demonstrated legal authority to adopt emission standards and compliance schedules applicable to the designated facilities; enforce applicable laws, regulations, standards and compliance schedules; seek injunctive relief; obtain information necessary to determine compliance; require recordkeeping; conduct inspections and tests; require the use of monitors; require emission reports of owners and operators; and make emission data publicly available.

In the plan and appendix A, the Tennessee DEC cites the following reference demonstrating their legal authority: Tennessee Code Annotated 68–201–105. On the basis of these codes of the State of Tennessee, the State Plan is approved as being at least as protective as the Federal requirements for existing MSW landfills.

In the plan and appendix B, the Tennessee DEC cites the enforceable mechanism for implementing the EG for existing MSW landfills. The enforceable mechanisms are the state regulations adopted by the State of Tennessee in Tennessee Air Pollution Control Regulations, Paragraphs 1200–3–7–.07(7), (8), and (9). The State's regulations meet the Federal requirements for an enforceable mechanism and are approved as being at least as protective as the Federal requirements contained in subpart Cc for existing MSW landfills.

In the plan and appendix B, the Tennessee DEC cites all emission limitations for the major pollutant categories related to the designated sites and facilities. These limitations in Paragraph 1200–3–7–.07(7) are approved as being at least as protective as the Federal requirements contained in subpart Cc for existing MSW landfills.

The plan describes the process the Tennessee DEC will utilize for the review of site-specific design plans for gas collection and control systems. The process outlined in the Plan meets the Federal requirements contained in subpart Cc for existing MSW landfills.

In the plan, the Tennessee DEC cites the compliance schedules adopted in Paragraph 1200–3–7–.07(7)(c) for each existing MSW landfill to be in compliance within 30 months of the effective date of their State regulation (effective on December 28, 1998). These compliance times for affected MSW landfills address the required compliance time lines of the EG. This portion of the Plan has been reviewed and approved as being at least as protective as Federal requirements for existing MSW landfills.

In appendix E of the plan, the Tennessee DEC submitted a source and emission inventory of all designated pollutants for each MSW landfill in the State of Tennessee. This portion of the plan has been reviewed and approved as meeting the Federal requirements for existing MSW landfills.

The plan includes Tennessee's legal authority to require owners and operators of designated facilities to maintain records and report to their Agency the nature and amount of emissions and any other information that may be necessary to enable their Agency to judge the compliance status of the facilities. The Tennessee DEC also cites its legal authority to provide for periodic inspection and testing and provisions for making reports of MSW landfill emissions data, correlated with emission standards that apply, available to the general public. Tennessee Code 68-201–105, Paragraph 1200–3–7–.07(7), and Paragraph 1200–3–9–.02(11) support the requirements of monitoring, recordkeeping, reporting, and compliance assurance. These Tennessee regulations (appendices A, B, and C) have been reviewed and approved as being at least as protective as Federal

requirements for existing MSW landfills.

The Plan outlines how the Tennessee DEC will provide progress reports of Plan implementation updates to the EPA on an annual basis. These progress reports will include the required items pursuant to 40 CFR part 60, subpart B. This portion of the Plan has been reviewed and approved as meeting the Federal requirement for Plan reporting.

Consequently, EPA finds that the Tennessee State Plan meets all of the requirements applicable to such plans in 40 CFR part 60, subparts B and C. The Tennessee DEC did not, however, submit evidence of authority to regulate existing MSW landfills in Indian Country. Therefore, EPA is not approving this Plan as it relates to those sources.

III. Final Action

EPA is approving the State of Tennessee section 111(d) Plan, as submitted on January 8, 1999, for the control of landfill gas from existing MSW landfills, except for those existing MSW landfills located in Indian Country. As provided by 40 CFR 60.28(c), any revisions to the Tennessee State Plan or associated regulations will not be considered part of the applicable plan until submitted by the Tennessee DEC in accordance with 40 CFR 60.28(a) or (b), as applicable, and until approved by EPA in accordance with 40 CFR part 60, subpart B.

EPA is publishing this rule without prior proposal because the Agency views this as a noncontroversial amendment and anticipates no adverse comments. However, in the proposed rules section of this **Federal Register** publication, EPA is publishing a separate document that will serve as the proposal to approve the SIP revision should relevant adverse comments be filed. This rule will be effective November 29, 1999 without further notice unless the Agency receives relevant adverse comments by November 1, 1999.

If the EPA receives such comments, then EPA will publish a document withdrawing the final rule and informing the public that the rule will not take effect. All public comments received will then be addressed in a subsequent final rule based on the proposed rule. The EPA will not institute a second comment period. Only parties interested in commenting should do so at this time. If no such comments are received, the public is advised that this rule will be effective on November 29, 1999 and no further action will be taken on the proposed rule.

IV. Administrative Requirements

A. Executive Order 12866

The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order (E.O.) 12866, entitled ''Regulatory Planning and Review.''

B. Executive Order 12875

Under E.O. 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a state, local, or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If EPA complies by consulting, E.O. 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected state, local, and tribal governments, the nature of their concerns, copies of written communications from the governments, and a statement supporting the need to issue the regulation. In addition, E.O. 12875 requires EPA to develop an effective process permitting elected officials and other representatives of state, local, and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.''

Today's rule does not create a mandate on state, local or tribal governments. The rule does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of E.O. 12875 do not apply to this rule.

C. Executive Order 13084

Under E.O. 13084, EPA may not issue a regulation that is not required by statute, that significantly affects or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If EPA complies by consulting, E.O. 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. This action does not involve or impose any requirements that affect Indian Tribes. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

D. Executive Order 13045

Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be ''economically significant'' as defined under E.O. 12866, and (2) Concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to E.O. 13045 because it does not involve decisions intended to mitigate environmental health or safety risks.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This final rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities. Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base

its actions concerning SIPs on such grounds. *Union Electric Co.,* v. *U.S. EPA*, 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action promulgated does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

G. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

H. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 29, 1999. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 62

Environmental protection, Administrative practice and procedure, Air pollution control, Intergovernmental relations, Methane, Municipal solid waste landfills, Nonmethane organic compounds, Reporting and recordkeeping requirements.

Dated: July 28, 1999.

A. Stanley Meiburg,

Acting Regional Administrator, Region 4.

Part 62 of chapter I, title 40, Code of Federal Regulations, is amended as follows:

PART 62—[AMENDED]

1. The authority citation for part 62 continues to read as follows:

Authority: 42 U.S.C. 7401–76719.

Subpart RR—Tennessee

2. § 62.10626 is amended by adding paragraph (b)(3) to read as follows:

§ 62.10626 Identification of plan.

* * * * *

(b) * * *

(3) State of Tennessee Plan for Implementing the Municipal Solid Waste Landfill Emission Guideline Requirements of 40 CFR part 60, subpart Cc, submitted on January 8, 1999, by the Tennessee Department of Environment and Conservation.

[FR Doc. 99–25431 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[FRL–6447–7]

National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List

AGENCY: Environmental Protection Agency.

ACTION: Notice of Deletion for the Anchor Chemicals Superfund Site from the National Priorities List (NPL).

SUMMARY: The Environmental Protection Agency (EPA) Region 2 announces the deletion of the Anchor Chemicals Superfund Site, located at 500 West John Street, Hicksville, New York, from the National Priorities List (NPL). The NPL is a list of releases which are identified as Appendix B of 40 CFR Part 300, which is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA promulgated the NCP pursuant to Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended , (CERCLA). EPA and the State of New York have determined that all appropriate responses under CERCLA have been implemented. Moreover, EPA and NYSDEC have determined that the response activities, which have been conducted at the Site by the responsible parties, are protective of public health and the environment.

EFFECTIVE DATE: September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Mr. Thomas Taccone, Remedial Project Manager, U.S. Environmental Protection Agency, Region 2, 290 Broadway, 20th Floor, New York, New York 10007–1866. Mr. Taccone also may be reached by telephone at (212) 637–4281 or by electronic mail at ''Taccone.Tom@epamail.epa.gov.''

SUPPLEMENTARY INFORMATION: The Site to be deleted from the NPL is: Anchor Chemicals Site, Hicksville, New York.

A Notice of Intent to Delete for this Site was published in the **Federal Register** on August 12, 1999 (64 FR 43970). The closing date for comments on the Notice of Intent to Delete was September 13, 1999. EPA received no comments and therefore has not prepared a Responsiveness Summary.

EPA, through its listing of sites on the NPL, identifies sites that appear to present a significant risk to public health, welfare or the environment. Pursuant to § 300.425(e)(3) of the NCP, any site deleted from the NPL remains eligible for Fund financed action(s) in the unlikely event that conditions at the site warrant such future action. Deletion of a site from the NPL does not affect responsible party liability or impede agency efforts to recover costs associated with response efforts.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous substances, Hazardous waste, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: September 16, 1999.

William J. Muszynski,

Acting Regional Administrator, Region 2.

40 CFR part 300 is amended as follows:

PART 300—[AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601–9675; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp.; p. 351; E.O. 12580, 52 FR 2923, 3 CFR, 1987 Comp.; p. 193.

Appendix B—[Amended]

2. Table 1 of Appendix B to Part 300 is amended by removing the site for Anchor Chemicals, Hicksville, New York.

[FR Doc. 99–25435 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[FRL–6447–6]

National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List

AGENCY: Environmental Protection Agency.

ACTION: Notice of Deletion for the Vestal Water Supply Well 4–2 Superfund Site from the National Priorities List.

SUMMARY: The Environmental Protection Agency (EPA) announces the deletion of the Vestal Water Supply Well 4–2 (Vestal 4–2) Site in Vestal, Broome County, New York from the National Priorities List (NPL). The NPL is Appendix B of 40 CFR Part 300 which is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), which EPA promulgated pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended. EPA and the State of New York have determined that the Vestal 4–2 Site poses no significant threat to public health or the environment and, therefore, no further remedial measures pursuant to CERCLA are appropriate.

EFFECTIVE DATE: September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Lorenzo Thantu, Remedial Project Manager, U.S. Environmental Protection Agency, Region II, 290 Broadway, 20th Floor, New York, NY 10007, (212) 637–4240 or by electronic mail at *thantu.lorenzo@epamail.epa.gov*.

SUPPLEMENTARY INFORMATION: The Site to be deleted from the NPL is: Vestal Water Supply Well 4–2, Vestal, Broome County, New York.

A Notice of Intent to Delete for this Site was published in the **Federal Register** on August 11, 1999 (64 FR 43641). The closing date for comments on the Notice of Intent to Delete was September 10, 1999. EPA received no comments.

EPA identifies sites that appear to present a significant risk to public health, welfare or the environment and it maintains the NPL as the list of those sites. Sites on the NPL may be the subject of Hazardous Substance Response Trust (Fund)-financed remedial actions. Pursuant to 40 CFR 300.425(e)(3) of the NCP, any site deleted from the NPL remains eligible for Fund-financed remedial actions in the unlikely event conditions at the Site warrant such action. Deletion of a site from the NPL does not affect responsible party liability or impede agency efforts to recover costs associated with response efforts.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous substances, Hazardous waste, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: September 16, 1999.

William J. Muszynski,

Acting Regional Administrator, Region 2.

For reasons set out in the preamble, 40 CFR part 300 is amended as follows:

PART 300—[AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601–9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp.; p. 351; E.O. 12580, 52 FR 2923, 3 CFR, 1987 Comp.; p. 193.

Appendix B—[Amended]

2. Table 1 of Appendix B to Part 300 is amended by removing the site for Vestal Water Supply Well 4–2, Vestal, New York.

[FR Doc. 99–25434 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[FRL–6447–9]

National Oil and Hazardous Substances Contingency Plan; National Priorities List

AGENCY: Environmental Protection Agency (EPA).

ACTION: Deletion of the releases from the Taylor Borough Site (the Site) from the National Priorities List (NPL).

SUMMARY: The EPA Region III announces the deletion of the releases from the Taylor Borough Site in Taylor, Pennsylvania from the NPL. The NPL constitutes appendix B of 40 CFR part 300 which is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), which EPA promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA). EPA and the Pennsylvania Department of Environmental Protection (PADEP) have determined that all appropriate CERCLA response actions have been implemented and that no further cleanup by responsible parties is appropriate. Moreover, EPA and PADEP have determined that remedial activities conducted at the Site to date have been protective of public health, welfare and the environment.

EFFECTIVE DATE: September 30, 1999.

ADDRESSES: Comprehensive information on this release is available for viewing at the Site information repositories at the following locations:

U.S. EPA Region III, 1650 Arch Street, Philadelphia, PA 19103, 215–814–3199

Taylor Borough Municipal Building, 122 Union Street, Taylor, PA 18517.

FOR FURTHER INFORMATION CONTACT: Maria de los A. Garcia (3HS21), Remedial Project Manager, U.S. Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103, 215–814–3199.

SUPPLEMENTARY INFORMATION: The release to be deleted from the NPL is: Taylor Borough Site located in Taylor, Lackawanna County, Pennsylvania.

A Notice of Intent to Delete the releases from this Site was published on August 19, 1999 (64 FR 45224). The closing date for comments on the Notice of Intent to Delete the releases was August 18, 1999. EPA received two letters from citizens in regard to the notice during the comment period. One of the letters only requested that the

releases from the Site not be deleted from the NPL, however, no other information was included with this request. The other letter requested information about what happens once the releases from the Site are deleted from the NPL and expressed concerns about the effects of the Site on the health of people who live in the vicinity of the Site. A response letter was sent to each of these citizens and a responsiveness summary was prepared in regard to these two letters. A copy of the responsiveness summary is in the Site administrative record.

The EPA identifies releases which appear to present a significant risk to public health, welfare or the environment, and it maintains the NPL as the list of those sites. Releases on the NPL may be the subject of remedial actions financed by the Hazardous Substance Superfund Response Trust Fund (Fund). Pursuant to § 300.425(e)(e) of the NCP, any release deleted from the NPL remains eligible for Fund-financed remedial actions in the unlikely event that conditions at the Site warrant such action.

Deletion of a release from the NPL does not affect responsible party liability or impede agency efforts to recover cost associated with response efforts.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous substances, Hazardous waste, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: September 22, 1999.

W. Michael McCabe,

Regional Administrator, USEPA Region III.

For the reasons set out in the preamble, 40 CFR part 300 is amended as follows:

PART 300—[AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 33 U.S.C. 1321 (c)(2); 42 U.S.C. 9601–9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; E.O. 12580, 52 FR 2923, 3 CFR, 1987 Comp., p. 193.

Appendix B—[Amended]

2. Table 1 of appendix B to part 300 is amended by removing the site: Taylor Borough Dump, Taylor Borough, Pennsylvania.

[FR Doc. 99–25433 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–U

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Part 405

[HCFA–4121–FC]

RIN 0938–AG48

Medicare Program; Telephone Requests for Review of Part B Initial Claim Determinations

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Final rule with comment period.

SUMMARY: Currently, our regulations allow beneficiaries, providers, and suppliers (defined as physicians or other practitioners, or entities other than a provider), who are entitled to appeal Medicare Part B initial claim determinations, to request a review of the carrier's initial determination in writing. This final rule allows those review requests to be made by telephone and allows the carrier to conduct the review by telephone, if possible. The use of telephone requests supplements, and does not replace, the current written procedures for initiating appeals. This telephone option also improves carrier relationships with the beneficiary, provider, and supplier communities by providing quick and easy access to the appeals process. Carriers will make accommodations to enable a hearing impaired individual access to the telephone review process.

EFFECTIVE DATE: These regulations are effective on February 1, 2000.

Comment date: Comments will be considered if we receive them at the appropriate address, as provided below, no later than 5 p.m. on November 29, 1999.

ADDRESSES: Mail an original and 3 copies of written comments to the following address: Health Care Financing Administration, Department of Health and Human Services, Attention: HCFA–4121–FC, P.O. Box 9013, Baltimore, MD 21244–9013.

FOR FURTHER INFORMATION CONTACT: Rosalind Little, (410) 786–6972.

SUPPLEMENTARY INFORMATION:

I. Background

Under current Medicare regulations at 42 CFR Part 405, Subpart H, a party (a person enrolled under Part B of Medicare, his or her assignee, or other entity having standing to appeal the determination in question), that indicates dissatisfaction with a Part B initial claim determination by a carrier, is entitled to have a carrier review conducted in accordance with regulations set forth in § 405.807 (Review of initial determination) and section 12010 of the Medicare Carriers Manual (MCM). However, if the appellant is not a proper party or the request for appeal review is not filed timely, the appellant's request may be dismissed.

Currently, a request for the carrier review of an initial claim determination is to be made in writing and filed with us, at an office of the carrier, or at an office of the Social Security Administration (SSA). The carrier must provide a period of 6 months after the date of the notice of its initial determination within which a party may request review. The carrier may, upon request by the party affected, extend the period for requesting the review.

On July 10, 1995, we published a proposed rule in the **Federal Register** (60 FR 35544) that would change the Medicare regulations to allow a party to request the carrier review of its Part B initial claim determination by telephone or by electronic transmission, in addition to the current provisions for a written request.

II. Provisions of the Proposed Rulemaking

In the proposed rule, we stated that the reason for allowing parties to request the review of a carrier's initial claim determination by telephone or electronic transmission, in addition to submitting written requests, was that we recognized that both physicians and beneficiaries often call the carrier to dispute a determination, to ask for clarification, or to protest a denial. We also recognized that the current review process requiring a party to submit a written request for a review can take considerable time and effort. This is because at times it can be difficult to properly explain a problem or ask a question in writing. In addition, a written request provides no opportunity for the dialogue that allows parties to discuss the issues and provide detailed explanations.

The proposed rule stated that telephone or electronic requests for review of Health Maintenance Organizations (HMOs) and Peer Review Organizations (PROs) Part B initial determinations must be made in writing. This rule does not apply to HMO and PRO appeal determinations. A party can initiate an appeal of a determination by an HMO under 42 CFR 417.616 and a determination by a PRO under 42 CFR 473.18(a).

The July 10, 1995 rule proposed to limit electronic requests for review to those entities that electronically bill

their claims to a carrier system that has the capability to receive claims electronically and, therefore, would also be able to receive electronic requests for review.

We also proposed to change the current appeal period of 6 months to 180 days and to further provide a 150-day appeal period for telephone requests for review within that 180-day period. We made this proposal to allow an additional 30 days for the appellant to submit a written request for review in the event they were unable to reach the carrier by telephone.

The proposed rule also gave an overview of how we expected the telephone and electronic process to work.

III. Analysis of and Responses to Public Comments

In response to the July 10, 1995 proposed rule, we received 14 timely items of correspondence. The majority of the commenters supported our efforts to improve and expedite the review and appeals process. Six of the 14 comments received concerned, in part, the electronic request aspects of the proposed regulation. Since issuing the proposed rule, we have determined that technical circumstances beyond our control will not permit us to offer the option of electronically requesting reviews of initial claims determinations, and we are, therefore, withdrawing that provision of the proposed rule. In the future, however, we may consider offering providers, physicians, and suppliers the option of requesting a review of their intitial determnation electronically. In order to offer this option we would need to obtain an approved appeals data set from the ANSI X12 Committee which then would need to be adopted by the DHHS as a HIPAA data sandard. We are soliciting comments on the feasibility and benefit of providing this option. We would also like to know any cost you believe you would incur to use this option.

We are not responding in detail to specific comments relating to the electronic requests. However, we provide the following overview of those comments and our general response. Two commenters specifically supported our desire to offer this option. One commenter suggested that we should wait until the Medicare Transaction System comes online before making this option available. As noted, we are not offering this option due to technical circumstances beyond our control. There were three technical comments. One comment concerned the cost of processing electronic requests. The second comment concerned protecting the privacy of the beneficiary. The third comment concerned the complexity of handling non-assigned claims electronically.

With respect to the first comment, since we proposed to offer that option only to those providers that bill electronically and only where the carriers could receive and process claims electronically, there would have been no additional costs to the supplier, provider, or carrier. With respect to the second comment, we would protect the privacy of the beneficiary by maintaining the requirement to have either a letter signed by the beneficiary naming a representative, or an Appointment of Representative form signed by the beneficiary to be received by the carrier before any information could be released to someone other than that beneficiary. Finally, the same document used to verify assignment would have been required to be delivered to the carrier by courier, by mail, or by facsimile before any non-assigned claim would have been processed and before any Medicare payment would have been released.

The following is a summary of those comments received pertaining to telephone requests for reviews of initial claims determinations and our response.

Comment: One commenter questioned whether the rule included the Part B review process for Part A intermediaries.

Response: Yes, it does. For the purposes of 42 CFR part 405, Subpart H, the term ''carrier'' also refers to an ''intermediary'' that has entered into a contract with the Secretary under section 1816 of the Social Security Act (the Act) and is authorized to make determinations with respect to Part B provider or supplier services.

Comment: One commenter stated that currently HCFA determines the timeliness of filing a request for a Part B review by the postmark on the envelope of the written request and asked if timeliness of filing requests by telephone would be determined by a telephone log.

Response: Carriers may record requests for reviews received by telephone either in a manual log or in a computer database. The record will show the date of the incoming request and other pertinent information. The log date will be used to record whether the request was received within the 6-month period, and will show how long it took the carrier to complete the appeal.

Comment: One commenter recommended that the percentage of calls monitored be set at the carrier's discretion instead of the 10 to 15 percent level indicated in the proposed MCM instructions addressing this final rule that have been circulated to carriers.

Response: Issues dealing with how carriers will monitor telephone calls and what percentage of calls will be monitored each month will be included in forthcoming MCM instructions. When we issue the MCM instructions for the telephone review process, they will state the percentage of calls that must be monitored each month.

Comment: One commenter asked if we could outline what is considered a reasonable timeframe for the processing of an appeal.

Response: In many cases, telephone reviews will be handled at the time of the call. Some carriers do not have dedicated lines for telephone reviews. In these cases, when the parties call in, someone will take the information from the caller, then pass that information to the section that will return the call. When possible, the review will be performed at that time. When the telephone reviews are not handled during the initial call, we expect the return call to be processed within approximately 1 to 2 business days from the time of the initial call.

Comment: Several commenters asked if specific contractor performance evaluation (CPE) standards will be issued.

Response: We expect to establish CPE standards for telephone reviews. These standards will be included in the MCM instructions that will be issued at a later date.

Comment: One commenter asked how we will preserve confidentiality. Another asked, more specifically, how we will prevent someone who does not represent the provider from requesting a review.

Response: Carriers will be required to train their telephone reviewers to meet the requirements of the Privacy Act. For calls from individuals who purport to be the beneficiary involved or someone representing the beneficiary, each caller will be asked to verify his or her identity and, if necessary, his or her relationship to the beneficiary. An Appointment of Representative form or a signed letter from the beneficiary will be required when a caller purports to represent the beneficiary. For calls from practitioners or other suppliers regarding assigned claims, the carrier will verify the tax identification number, name, and telephone number. The carrier will give information only pertaining to the assigned claims of those practitioners or suppliers. On nonassigned claims, the only information the carrier will provide to

the physician or other supplier is the date the claim was processed, unless the physician or supplier can provide the carrier with a facsimile of a signed copy of the Appointment of Representative form or a copy of a letter signed by the beneficiary. Regarding the issue of preventing someone who does not represent the provider from making a request for review, other individuals may request a review on behalf of an appellant. The results of that review, however, will only be given to the party enrolled under Part B, their assignee, other entities having a standing to appeal the determination in question, or any individual appointed as his or her representative (unless the individual is disqualified or suspended from acting as a representative).

Comment: One commenter asked if the Appointment of Representative and Waiver of Right of Payment forms will be eliminated.

Response: We do not anticipate that the Appointment of Representative and Waiver of Right of Payment forms will be eliminated.

Comment: One commenter asked whether all providers and suppliers have the option of using telephone review procedures, or only those providers and suppliers who accept Medicare assignment.

Response: Normally, telephone reviews will be available only to providers and suppliers who accept assignment. That is, telephone reviews are limited to providers and suppliers on assigned claims, unless the beneficiary gives a nonparticipating supplier the right to represent him or her and the nonparticipating supplier provides the carrier with a signed copy of the Appointment of Representative form or a signed letter from the beneficiary designating the nonparticipating supplier to pursue the claim on behalf of the beneficiary. In those instances in which a nonparticipating supplier is required to refund any collected amount to the beneficiary in accordance with section 1842(l)(1)(A) of the Act, that supplier would have its own appeal rights. Otherwise, carriers may take information from nonparticipating suppliers, but cannot give any information concerning the result of the review to that caller.

Comment: One commenter asked whether the rule will require that the party who answers the telephone for the carrier be the primary receiver of calls and if that party will be required to give his or her name, if asked.

Response: Some carriers do not have dedicated lines for telephone reviews. In those instances, the party who answers the telephone call may only be obtaining certain information from the appellant (for example, completing a form) and then will forward the form to the party who will evaluate whether the request can be handled as a telephone review. If so, the reviewer will telephone the appellant and perform the review. We will also instruct the carriers to train their personnel to give their names to the callers, if asked. In addition, we will instruct the carriers that if the caller is requesting a telephone review, and the carrier verifies that the request is a request for a review, a confirmation number must be provided to the appellant at the end of the telephone call. Furthermore, we will instruct the carriers that their systems must record the date the appellant called as the date of the request for a review. Having the system annotate the date of the request and providing the appellant with a confirmation number will protect the appellant's appeal rights.

Comment: One commenter recommended that beneficiary eligibility and/or entitlement not be considered appropriate for telephone reviews. The commenter was also concerned that allowing beneficiaries access to the telephone review process will not be cost-effective since in most cases the beneficiary will not have the information needed for the review to be performed at the time of the review request.

Response: SSA handles all eligibility and/or entitlement issues. The only entitlement issue that a Medicare carrier could handle during a telephone review would be to advise the appellant that, as of a given date, the records show that he or she does not have entitlement. The forthcoming MCM instructions will list those issues we expect all carriers to be able to resolve during a telephone review. We believe that offering telephone reviews to beneficiaries will enhance customer service to the beneficiary community. Even if the review cannot be performed at the time that the telephone request is made, it is an opportunity for the carrier to explain to the beneficiary how the original claim was processed. Furthermore, we believe that with the information available to the carrier in its computer database, it will be able to effectively process many of the beneficiary requests for review.

Comment: Several commenters asked if the MCM instructions will impose a limit on the number of claims and reviews providers and suppliers could request for review by telephone.

Response: Carriers will be allowed to determine how many claims per review they can handle during each call. We anticipate that the carriers will evaluate their workloads and staffing to determine the number of claims their staff can handle. This self-imposed limit should restrict the time involved for each call and, as a result, give more appellants an opportunity to use the telephone review process.

Comment: One commenter asked if carriers should be required to have sufficient capacity to receive a reasonable volume of telephone review requests.

Response: As stated earlier, we will allow the carriers to determine the number of claims that they are able to handle on each call they receive so that the self-imposed limit will allow everyone to request a review by telephone. We, therefore, expect carriers to have sufficient staff to receive telephone requests for review. However, if we determine that there is a need for additional resources, some adjustments will be made. In addition, all parties will be informed about the telephone review process in advance to enable them to make effective use of this option.

Comment: One commenter questioned whether we intend for the carrier representative who receives a telephone request for an appeal to merely register the request, with the review itself occurring at a later date, or to actually conduct the review at the time of the call.

Response: As stated earlier, we expect many carriers will perform the review at the time of the initial call. There may be some carriers that do not have dedicated lines for telephone reviews. In those cases, parties will be informed in advance as to how that carrier will perform the telephone review.

Comment: One commenter asked that the secondary claim review (the commenter is referring to the first level of the appeal process) be performed by someone other than the party who made the initial determination.

Response: The original claim receives an initial determination. The initial determination is the first determination made by a carrier or intermediary following a request for Medicare payment for Part B claims under title XVIII of the Act. The notice of the initial determination informs each party of the determination and provides appropriate appeals information to the parties having standing to appeal. The first level of the Part B appeal is an independent review of the claim that is performed by someone other than the party who made the initial determination in accordance with current MCM instructions.

Comment: One commenter asked if we could modify existing Medicare regulations to require that the review be conducted by a ''qualified physician.''

Response: Reviews are conducted by contractor personnel who have expertise in resolving claims disputes. A physician may be consulted in an individual case. However, carriers do not normally employ physicians to conduct reviews because it is not cost-effective.

Comment: One commenter asked if we will establish a mechanism to guarantee that appellants initiating a telephone request for review are able to reach the carrier.

Response: This rule will require all carriers to implement a process by which they can receive telephone requests for review. We will require all carriers to ensure that they have sufficient staff to accommodate the number of calls they receive. If at any time it is determined that this is not the case, we expect the carrier to re-evaluate its process and take the necessary action to correct the deficiency.

Comment: One commenter expressed concern that if appellants are not limited by the number of appeals they can request per call, additional resources (such as a 24-hour appeals hotline) or additional staff should be provided.

Response: The forthcoming MCM telephone review instructions will give the carriers some instructions to guide them in determining how many claims can be appealed per call. The carrier will have to give some consideration to whether the actual appeal will take place during the initial call or whether the initial call will only be used to gather information and the appeal will be handled at a later time. Another issue that the carriers will have to consider is whether to set a limit on the number of appeals allowed per call or a time limit per call. We will not instruct the carriers to set a time limit, as this might be construed as limiting the party's right to a full review of his or her concerns. The carriers will inform the party in advance what the requirements or limitations are for requesting a review via telephone, as well as any limitations in those instances where the review is performed during the initial call. The carriers will inform the beneficiaries, providers, and suppliers via newsletters, stuffers, seminars, customer service representatives, beneficiary and physician advocacy groups, and others how the telephone process will work.

Comment: Several commenters asked about the specific documentation requirements.

Response: The information the carrier receives during the telephone review must be either: (1) documented on a review documentation form, or (2) logged and maintained on a computer system so that the information about the claim and request for review can be retrieved on an on-line basis. All documentation must be assigned a review control number (this can also be the confirmation number given to the appellant at the end of the review). The confirmation number that the carriers are required to provide an appellant can be their internal control number, correspondence number, or document control number. The carrier must be able to use the number to confirm the date of the appellant's call. Other documentation requirements will be established in the forthcoming MCM instructions.

Comment: One commenter stated that the rule does not indicate that reopening of initial claim determinations, as permitted under § 405.841, can be done by telephone appeals.

Response: This rule does not permit parties to request reopenings by telephone.

Comment: One commenter was concerned that, because carriers could be overwhelmed with requests for review sent in by facsimile, the option of submitting requests for review by facsimile should not be advertised.

Response: This rule does not permit parties to request reviews by facsimile. However, carriers may use facsimile machines to obtain additional documentation from an appellant or the appellant's representative. For example, carriers may use facsimile machines to obtain a copy of the Appointment of Representative form or other documentation.

Comment: One commenter asked whether, if the reviewer determines that additional written information is needed to complete the review, carriers have the option to suspend the review until that information is received.

Response: In those cases in which the provider or supplier needs to submit additional medical documentation and the information can be supplied (for example, by facsimile) during the telephone review, or within 24 hours of the telephone call, the carrier may suspend the telephone review. The carrier must inform the appellant that the telephone review will not be considered complete until the appellant provides the requested additional information. If the appellant is unable to provide the additional information during the telephone review, or within 24 hours of the telephone call, the carrier has the option to suspend the telephone review. If the information is not provided within the allowed time the carrier will conduct a written review or allow the appellant to call the carrier back when the additional information becomes available. In either situation, the carrier must provide the appellant with a confirmation number. If the appellant is a beneficiary who does not have the additional information on hand or does not have easy access to a facsimile machine, the carrier must advise the appellant that the request for review will be handled as a written review. In this instance also, the carrier must provide the appellant with a confirmation number.

Comment: Several commenters expressed concern about the feasibility and fairness of the 150-day limit for making requests for telephone reviews.

Response: In the proposed rule, we suggested establishing a 150-day timeframe after the date of the notice of the carrier's initial determination within which a party may request a telephone review, and a 180-day period for requesting reviews in writing, rather than the 6-month period currently allowed. The proposal was an attempt to give appellants, who we thought may be unsuccessful in their efforts to reach the carrier by telephone, an additional opportunity to initiate a request in writing before the time to appeal expired. We now believe that the proposed 150-day timeframe for requesting telephone reviews is confusing and that two different timeframes would not be cost-effective. Furthermore, based on a survey of our carriers regarding the timeframe within which they have been able to receive requests for review by telephone after they send out initial determinations, we believe that parties will not have difficulty reaching the carrier by telephone. Therefore, we will retain the currently-specified 6-month timeframe to request reviews of initial claims, regardless of the method used to make the request. We will instruct our carriers to advise parties, through their bulletins, workshops, and seminars to not wait until the last day of the 6-month period to request a review by telephone.

Comment: Several commenters were concerned that including details of the telephone review process on the Explanation of Medicare Benefits/Medicare Summary Notice (EOMB/MSN) and Remittance Advice forms will be confusing for the beneficiaries.

Response: Details about the telephone review process will not be provided on the EOMB/MSN or Remittance Advice forms; that information will be provided by other means, such as in newsletters,

seminars, and envelope stuffers. However, there will be a general statement on the EOMB/MSN form that informs the appellant that he or she can telephone the carrier to request a review.

Comment: One commenter was concerned that the requirement to advise the appellant of further appeal rights was redundant.

Response: We disagree. At the end of the review, the appellant should be given information about how to proceed in the event that he or she is still dissatisfied.

Comment: One commenter recommended that, if the telephone review is an affirmation, the review determination letter should be sent (following the telephone review) only when requested by the appellant.

Response: Whenever a review occurs, our current regulation at 42 CFR 405.811 requires the carrier to send a written notice of the review determination to a party that states the basis of the determination and advises the party of his or her appeal rights to a carrier hearing when the amount in controversy is $100 or more.

Comment: One commenter recommended that to ensure adequate notice of these new procedures, the notice sent with the carrier's initial determination should (in addition to those items noted in the proposed rule) clearly state that: (1) electronic transmissions may be submitted only by those who submit their claims electronically; (2) electronic transmission does not include facsimile transmissions; (3) if a request is made to an SSA or HCFA office (rather than to a carrier), the request must still be made in writing; (4) the carrier will resolve as many issues as possible during the telephone request, but parties have the opportunity to submit supporting documents; and (5) parties may request, and be granted, an extension of time for filing a review request if good cause is established by the carrier.

Response: As stated earlier, we are withdrawing the option of requesting reviews of initial claims determinations electronically (comment numbers (1) and (2)). With respect to comment (3), carriers will be required to describe the telephone review process to all beneficiaries, providers, and suppliers at least 30 days before implementation. We do not believe that it is necessary or cost-effective to describe in detail the telephone review procedures every time the carrier issues an initial determination. There are a number of ways the carrier can inform parties about the telephone review process, such as through bulletins, newsletters, beneficiary, provider, and supplier outreach seminars and meetings, or through contractor customer service and inquiry departments. The opportunity to submit supporting documentation (comment (4)) and the request for an extension of time for filing a review request (comment (5)) are covered by existing regulations. If circumstances warrant, parties will be advised of their opportunity to submit supporting documentation and be granted an extension of time.

Comment: Several commenters were concerned that requiring carriers to send a written response when they have reviewed a request and decided to pay a claim in full is an additional requirement.

Response: As stated earlier, whenever a review occurs, our current regulations at 42 CFR 405.811 require that a notice of review determination be sent to a party that states the basis for the determination and advises the party of his or her right to a carrier hearing when the amount in controversy is $100 or more. If the decision results in full payment, the EOMB/MSN or Remittance Advice notice is no longer sufficient unless it contains the basis of the determination and advises the party of his or her right to a carrier hearing.

Comment: One commenter asked if telephone inquiries would be screened to determine whether the party is requesting a review or is just requesting an explanation of the initial determination.

Response: The carriers will be required to train their customer service representatives and telephone reviewers to ask specific questions to determine whether the caller is only requesting an explanation of the initial determination or is requesting a review.

Comment: One commenter was concerned that, since payments as the result of a telephone review are not subject to the payment floor, the provider or supplier will be successful in receiving payment for these claims in less time than if they initially filed a correct claim.

Response: All payments are subject to the payment floor (the required waiting period that must occur before payment can be made) and cannot be paid before that time expires. This is true for initial claims, as well as for adjustments made as a result of a review. The waiting period for an electronic claim is 14 days after the claim is received, and the waiting period for a paper claim is 27 days after the claim is received. Therefore, a provider or supplier should not receive payment sooner, as the result of a telephone review, than he or she would have received payment for the initial claim; that is, either 14 days for an electronic claim or 27 days for a paper claim.

Comment: One commenter asked if our intent is to offer telephone reviews and electronic reviews as an option, or if our intent is to require telephone reviews and offer electronic reviews as an option.

Response: When this rule becomes effective, beneficiaries, providers, and suppliers will have the option of requesting a review by telephone or in writing. As stated earlier, we are withdrawing the option of requesting reviews of initial claims determinations electronically.

IV. Provisions of the Final Regulations

For the most part, this final rule reflects the provisions of the July 1995 proposed rule, except that we are withdrawing our proposals to allow a party to request a review of a carrier's Part B initial claim determination by electronic transmission and we are withdrawing the proposed 150-day time period for a party to request a telephone review.

In addition to establishing the provisions of the proposed rule, except as noted above, this final rule: (1) continues the 6-month time period currently in regulations for requesting a review of a carrier's initial claim determination; (2) revises § 405.805 of the regulations to make a technical correction by removing the reference to subparagraph ''(b)'' after § 405.802; and (3) revises § 405.807 of the regulations for consistency with the wording in § 405.821(a).

V. Regulatory Impact Statement

We have examined the impacts of this final rule as required by Executive Order 12866 and the Regulatory Flexibility Act (RFA) (Public Law 96–354). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects; distributive impacts; and equity). The RFA requires agencies to analyze options for regulatory relief for small businesses. For purposes of the RFA, carriers and beneficiaries are not considered to be small entities. For purposes of the RFA, most hospitals, and most other providers, physicians, and other health care suppliers are small entities, either by nonprofit status or by having revenues of $5 million or less annually.

Under this final rule, beneficiaries, providers, and suppliers may request a

review of an initial claim determination by telephone in addition to the current writing procedure. A telephone review is the first level of appeal for Part B claims and is performed by carrier staff who had no part in making the initial claim determination in accordance with current MCM instructions. A telephone review is considered to be less costly to all parties and is a more expeditious way of handling appeals than a written review.

Also, section 1102(b)(2) of the Act requires us to prepare a regulatory impact analysis for any final rule that may have a significant impact on the operations of a substantial number of small rural hospitals. Such an analysis must conform to the provisions of section 604 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside a Metropolitan Statistical Area and has fewer than 50 beds.

We are not preparing analyses for either the RFA or section 1102(b)(2) of the Act because we have determined and certify that this final rule will not have a significant economic impact on a substantial number of small entities or a significant impact on the operations of a substantial number of small rural hospitals.

In accordance with the provisions of Executive Order 12866, this final rule was reviewed by the Office of Management and Budget.

We have reviewed this notice under the threshold criteria of Executive Order 12612, Federalism. We have determined that it does not significantly affect the States rights, roles, and responsibilities.

List of Subjects in 42 CFR Part 405

Administrative practice and procedure, Health facilities, Health professions, Kidney diseases, Medicare, Reporting and recordkeeping requirements, Rural areas, X-rays.

For the reasons set forth in the preamble, 42 CFR chapter IV is amended as set forth below:

PART 405—FEDERAL HEALTH INSURANCE FOR THE AGED AND DISABLED

Subpart H—Appeals Under the Medicare Part B Program

1. The authority citation for part 405, subpart H is revised to read as follows:

Authority: Secs. 1102, 1842(b)(3)(C), 1869(b), and 1871 of the Social Security Act (42 U.S.C. 1302, 1395u(b)(3)(C), 1395ff(b), and 1395hh).

2. Section 405.805 is revised to read as follows:

§ 405.805 Parties to the initial determination.

The parties to the initial determination (see § 405.803) may be any party described in § 405.802.

3. Section 405.807 is revised to read as follows:

§ 405.807 Request for review of initial determination.

(a) *General.* A party to an initial determination by a carrier, that is dissatisfied with the initial determination and wants to appeal the matter, may request that the carrier review the determination. The request for review by the party to an initial determination must clearly indicate that he or she is dissatisfied with the initial determination and wants to appeal the matter. The request for review does not constitute a waiver of the party's right to a hearing (under § 405.815) after the review.

(b) *Place and method of filing a request.* A request by a party for a carrier to review the initial determination may be made in one of the following ways:

(1) In writing and filed at an office of the carrier, SSA, or HCFA.

(2) By telephone to the telephone number designated by the carrier as the appropriate number for the receipt of requests for review.

(c) *Time of filing request.* (1) The carrier must provide a period of 6 months after the date of the notice of the initial determination within which the party to the initial determination may request a review.

(2) The carrier may, upon request by the party, extend the period for requesting the review of the initial determination.

(Catalog of Federal Domestic Assistance Program No. 93.774, Medicare—Supplementary Medical Insurance Program)

Dated: October 6, 1998.

Nancy-Ann Min DeParle,

Administrator, Health Care Financing Administration.

Dated: February 22, 1999.

Donna E. Shalala,

Secretary.

Editorial Note: This document was received at the Office of the Federal Register September 27, 1999.

[FR Doc. 99–25477 Filed 9–29–99; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF DEFENSE

48 CFR Part 204

[DFARS Case 99–D011/98–D017]

Defense Federal Acquisition Regulation Supplement; Fiscal Year 2000 Contract Action Reporting Requirements; Correction

AGENCY: Department of Defense, (DoD).

ACTION: Correction to the final rule.

SUMMARY: DoD is issuing a correction to the final rule published at 64 FR 45197–45207 on August 19, 1999. The correction reflects the change in name of the ''Defense Fuel Supply Center'' to the ''Defense Energy Support Center''.

EFFECTIVE DATE: October 1, 1999.

FOR FURTHER INFORMATION CONTACT: Ms. Michele Peterson, (703) 602–0311.

Correction

In the issue of Thursday, August 19, 1999, on page 45198, in the first column, in 204.670–2(c)(7)(ii), in the first line, remove the words ''Fuel Supply'' and add in their place the words ''Energy Support''.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

[FR Doc. 99–25165 Filed 9–29–99; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF DEFENSE

48 CFR Parts 205, 206, 217, 219, 225, 226, 236, 252, and 253

[DFARS Case 98–D007]

Defense Federal Acquisition Regulation Supplement; Reform of Affirmative Action in Federal Procurement

AGENCY: Department of Defense (DoD).

ACTION: Final rule.

SUMMARY: The Director of Defense Procurement is adopting as final, with changes, an interim rule amending the Defense Federal Acquisition Regulation Supplement (DFARS) policy concerning programs for small disadvantaged business (SDB) concerns. The amendments conform to a Department of Justice (DoJ) proposal to reform affirmative action in Federal procurement, and are consistent with the changes made to the Federal Acquisition Regulation (FAR) in Federal Acquisition Circulars (FACs) 97–06 and 97–13. DoJ's proposal is designed to ensure compliance with the constitutional standards established by the Supreme Court in *Adarand*

Constructors, Inc. v. *Pena,* 115 S. Ct. 2097 (1995).

EFFECTIVE DATE: October 1, 1999.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Schneider, Defense Acquisition Regulations Council, PDUSD (A&T) DP (DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062. Telephone (703) 602–0326; telefax (703) 602–0350. Please cite DFARS Case 98–D007.

SUPPLEMENTARY INFORMATION:

A. Background

This rule finalizes, with changes, the interim rule published at 63 FR 41972 on August 6, 1998. The interim rule was issued to conform the DFARS to the interim FAR rule published in FAC 97–06, at 63 FR 35719 on June 30, 1998, pertaining to reform of affirmative action in Federal procurement. A final FAR rule on this subject was published in FAC 97–13, at 64 FR 36222 on July 2, 1999, and will become effective on October 1, 1999.

Two sources submitted comments on the interim DFARS rule published on August 6, 1998. All comments were considered in the development of the final rule. The final rule differs from the interim rule in that it (1) amends DFARS 226.7008(b) to remove language requiring use of the provision at FAR 52.226–2 when the clause at FAR 52.219–23 is used, since FAC 97–13 added this requirement to the FAR; and (2) removes the provision at 252.226–7001, since this provision duplicates the provision at FAR 52.226–2.

This rule was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993.

B. Regulatory Flexibility Act

DoD certifies that this final rule will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.,* because most of the changes merely conform the DFARS to the FAR rules in FACs 97–06 and 97–13. Two source selection considerations for SDB concerns currently in the DFARS, but not in the FAR, are amended by this rule to conform to the DoJ model: Leader company contracting (DFARS 217.401); and architect-engineer (A–E) services (DFARS 236.602). These two changes are not expected to have a significant economic impact on a substantial number of small entities, since (1) leader company contracting is infrequently used by DoD; and (2) the primary factor in A–E selection is the determination of the most highly qualified firm; the SDB consideration is one of several secondary source selection factors.

C. Paperwork Reduction Act

The Paperwork Reduction Act does not apply because the rule does not impose any information collection requirements that require the approval of the Office of Management and Budget under 44 U.S.C. 3501, *et seq.*

List of Subjects in 48 CFR Parts 205, 206, 217, 219, 225, 226, 236, 252, and 253

Government procurement.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

Interim Rule Adopted as Final With Changes

Accordingly, the interim rule amending 48 CFR parts 205, 206, 217, 219, 225, 226, 236, 252, and 253, which was published at 63 FR 41972 on August 6, 1998, and amended at 63 FR 64427 on November 20, 1998, is adopted as a final rule with the following changes:

1. The authority citation for 48 CFR parts 205, 206, 217, 219, 225, 226, 236, 252, and 253 continues to read as follows:

Authority: 41 U.S.C. 421 and 48 CFR Chapter 1.

PART 226—OTHER SOCIOECONOMIC PROGRAMS

2. Section 226.7008 is amended by revising paragraph (b) to read as follows:

226.7008 Solicitation provision and contract clause.

* * * * * * *

(b) Use the provision at FAR 52.226–2, Historically Black College or University and Minority Institution Representation, in solicitations set aside for HBCU/MIs.

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

252.226–7001 [Removed]

3. Section 252.226–7001 is removed.

[FR Doc. 99–25162 Filed 9–29–99; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF DEFENSE

48 CFR Parts 215, 217, 219, 226, 236, 252, and Appendix I to Chapter 2

[DFARS Case 98–D021]

Defense Federal Acquisition Regulation Supplement; Reform of Affirmative Action in Federal Procurement, Part II

AGENCY: Department of Defense (DoD).

ACTION: Final rule.

SUMMARY: The Director of Defense Procurement is adopting as final, without change, an interim rule amending the Defense Federal Acquisition Regulation Supplement (DFARS) policy concerning programs for small disadvantaged business (SDB) concerns. The amendments conform to a Department of Justice (DoJ) proposal to reform affirmative action in Federal procurement, and are consistent with the changes made to the Federal Acquisition Regulation (FAR) in Federal Acquisition Circulars (FACs) 97–07 and 97–13. DoJ's proposal is designed to ensure compliance with the constitutional standards established by the Supreme Court in *Adarand Constructors, Inc.* v. *Pena,* 115 S. Ct. 2097 (1995).

EFFECTIVE DATE: October 1, 1999.

FOR FURTHER INFORMATION CONTACT: Ms. Susan Schneider, Defense Acquisition Regulations Council, PDUSD(A&T)DP(DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062. Telephone (703) 602–0326; telefax (703) 602–0350. Please cite DFARS Case 98–D021.

SUPPLEMENTARY INFORMATION:

A. Background

This rule finalizes, without change, the interim rule published at 63 FR 64427 on November 20, 1998. The interim rule was issued to conform the DFARS to the interim FAR rule published in FAC 97–07, at 63 FR 36120 on July 1, 1998, pertaining to reform of affirmative action in Federal procurement. A final FAR rule on this subject was published in FAC 97–13, at 64 FR 36222 on July 2, 1999, and will become effective on October 1, 1999.

No comments were received in response to the interim DFARS rule published on November 20, 1998.

This rule was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993.

B. Regulatory Flexibility Act

DoD certifies that this final rule will not have a significant economic impact

on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.*, because most of the changes merely conform the DFARS to the FAR rule in FAC 97–07. Two source selection considerations for SDB concerns currently in the DFARS, but not in the FAR, are amended by this rule to conform to the DoJ model: Leader company contracting (DFARS 217.401); and architect-engineer (A–E) services (DFARS 236.602). These two changes are not expected to have a significant economic impact on a substantial number of small entities, since (1) leader company contracting is infrequently used by DoD; and (2) the primary factor in A–E selection is the determination of the most highly qualified firm; the SDB consideration is one of several secondary source selection factors.

C. Paperwork Reduction Act

The Paperwork Reduction Act does not apply because the rule does not impose any information collection requirements that require the approval of the Office of Management and Budget under 44 U.S.C. 3501, *et seq.*

List of Subjects in 48 CFR Parts 215, 217, 219, 226, 236, and 252

Government procurement.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

Interim Rule Adopted as Final Without Change

Accordingly, the interim rule amending 48 CFR parts 215, 217, 219, 226, 236, 252, and Appendix I to Chapter 2, which has published at 63 FR 64427 on November 20, 1998, is adopted as a final rule without change.

[FR Doc. 99–25163 Filed 9–29–99; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF DEFENSE

48 CFR Parts 222 and 252

[DFARS Case 97–D318]

Defense Federal Acquisition Regulation Supplement; Contractor Use or Nonimmigrant Aliens—Guam

AGENCY: Department of Defense (DoD).

ACTION: Final rule.

SUMMARY: The Director of Defense Procurement is adopting as final, with changes, an interim rule amending the Defense Federal Acquisition Regulation Supplement (DFARS). The rule addresses statutory prohibitions against the performance of work by nonimmigrant aliens under DoD contracts for military construction or base operations support on Guam.

DATES: September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Ms. Amy Williams, Defense Acquisition Regulations Council, PDUSD (A&T) DP (DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062. Telephone (703) 602–0288; telefax (703) 602–0350. Please cite DFARS Case 97–D318.

SUPPLEMENTARY INFORMATION:

A. Background

This rule finalizes, with changes, the interim rule published at 63 FR 31935 on June 11, 1998. The interim rule added a new DFARS Subpart 222.73 and a new contract clause at DFARS 252.222–7005 to implement Section 390 of the National Defense Authorization Act for Fiscal Year 1998 (Public Law 105–85). Section 390 provides that each DoD contract for base operations support to be performed on Guam must contain a condition that work under the contract may not be performed by any alien who is issued a visa or otherwise provided nonimmigrant status under Section 101(a) (15) (H) (ii) of the Immigration and Nationality Act (8 U.S.C. 1101(a) (15) (H) (ii)).

Four sources submitted comments on the interim rule. DoD considered all comments in the development of the final rule. The final rule differs from the interim rule in that it incorporates the similar restrictions of 10 U.S.C. 2864 pertaining to military construction contracts on Guam, and clarifies that the prohibition against performance of work by nonimmigrant aliens does not apply to lawfully admitted citizens of the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, or the Republic of Palau.

This rule was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993.

B. Regulatory Flexibility Act

DoD certifies that this final rule will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.*, because the rule applies only to military construction and base operations support contracts to be performed on Guam.

C. Paperwork Reduction Act

The Paperwork Reduction Act does not apply because the rule does not impose any information collection requirements that require the approval of the Office of Management and Budget under 44 U.S.C. 3501, *et seq.*

List of Subjects in 48 CFR Parts 222 and 252

Government procurement.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

Interim Rule Adopted as Final With Changes

Accordingly, the interim rule amending 48 CFR parts 222 and 252, which was published at 63 FR 31935 on June 11, 1998, is adopted as a final rule with the following changes:

1. The authority citation for 48 CFR Parts 222 and 252 continues to read as follows:

Authority: 41 U.S.C. 421 and 48 CFR Chapter 1.

PART 222—APPLICATION OF LABOR LAWS TO GOVERNMENT ACQUISITIONS

2. Subpart 222.73 is revised to read as follows:

Subpart 222.73—Limitations Applicable to Contracts Performed on Guam

Sec.
222.7300 Scope of subpart.
222.7301 Prohibition on use of nonimmigrant aliens.
222.7302 Exception.
222.7303 Contract clause.

222.7300 Scope of subpart.

(a) This subpart implements—

(1) 10 U.S.C. 2864; and

(2) Section 390 of the National Defense Authorization Act for Fiscal Year 1998 (Public Law 105–85).

(b) This subpart applies to—

(1) Contracts for military construction projects on Guam; and

(2) Contracts for base operations support on Guam that—

(i) Are awarded as a result of a competition conducted under OMB Circular A–76; and

(ii) Are entered into or modified on or after November 18, 1997.

222.7301 Prohibition on use of nonimmigrant aliens.

(a) Any alien who is issued a visa or otherwise provided nonimmigrant status under Section 101(a)(15)(H)(ii) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(15)(H)(ii)) is prohibited from performing work under a contract for—

(1) A military construction project on Guam; or

(2) Base operations support on Guam.

(b) Lawfully admitted citizens of the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, or the Republic of Palau are not subject to the prohibition in paragraph (a) of this section.

222.7302 Exception.

The prohibition in 222.7301(a)(1) does not apply to a military construction project if—

(a) There is no acceptable offer in response to a solicitation for the project;

(b) The Secretary concerned makes a determination that the prohibition is a significant deterrent to obtaining offers on the project; and

(c) Another solicitation is issued for the project.

222.7303 Contract clause.

Use the clause at 252.222–7005, Prohibition on Use of Nonimmigrant Aliens-Guam, in solicitations and contracts subject to this subpart, except those issued in accordance with 222.7302.

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

3. Section 252.222–7005 is revised to read as follows:

252.222–7005 Prohibition on Use of Nonimmigrant Aliens—Guam.

As prescribed in 222.7303, use the following clause:

PROHIBITION ON USE OF NONIMMIGRANT ALIENS—GUAM (SEP 1999)

The work required by this contract shall not be performed by any alien who is issued a visa or otherwise provided nonimmigrant status under Section 101(a)(15)(H)(ii) of the Immigration and Nationality Act (8 U.S.C. 1101(a)(15)(H)(ii)). This prohibition does not apply to the performance of work by lawfully admitted citizens of the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, or the Republic of Palau.

(End of clause)

[FR Doc. 99–25164 Filed 9–29–99; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF AGRICULTURE

Office of Procurement and Property Management

48 CFR Parts 401, 415, 437, and 452

[AGAR Case 96–04]

RIN 0599–AA07

Agriculture Acquisition Regulation; Part 415 Reorganization; Contracting by Negotiation

AGENCY: Office of Procurement and Property Management, USDA.

ACTION: Direct final rule.

SUMMARY: The Department of Agriculture (USDA) is amending the Agriculture Acquisition Regulation (AGAR) to revise and reorganize part 415, Contracting by Negotiation. USDA is revising and reorganizing part 415 to reflect changes in the content and structure of Federal Acquisition Regulation (FAR) part 15, Contracting by Negotiation. This amendment makes it easier for users to consult AGAR part 415 in tandem with FAR part 15.

DATES: This rule is effective November 29, 1999 without further action, unless we receive written adverse comments or written notice of intent to submit adverse comments on or before November 1, 1999. If we receive adverse comments, the Office of Procurement and Property Management will publish a timely withdrawal of the rule in the **Federal Register**.

ADDRESSES: Please submit any adverse comments, or a notice of intent to submit adverse comments, in writing to U.S. Department of Agriculture, Office of Procurement and Property Management, Procurement Policy Division, Stop 9303, 1400 Independence Avenue SW., Washington, DC 20250–9303.

FOR FURTHER INFORMATION CONTACT: Joseph J. Daragan, (202) 720–5729, or through the General Services Administration Relay Service, (800) 877–8339.

SUPPLEMENTARY INFORMATION:

I. Background
II. Dates
III. Procedural Requirements
A. Executive Order Nos. 12866 and 12988
B. Regulatory Flexibility Act
C. Paperwork Reduction Act
D. Small Business Regulatory Enforcement Fairness Act
IV. Electronic Access Addresses

I. Background

The AGAR implements the FAR (48 CFR chapter 1) where further implementation is needed, and supplements the FAR when coverage is needed for subject matter not covered by the FAR. In September 1997, FAR Part 15, Contracting by Negotiation, was rewritten to simplify the source selection process and to facilitate best value acquisition (62 FR 51224, September 30, 1997). FAR Part 15 also was restructured to facilitate use of the regulation. USDA is amending the AGAR to reflect changes made to FAR part 15. USDA also is reorganizing AGAR part 415, Contracting by Negotiation, to reflect the new structure of FAR Part 15. In this rulemaking document, USDA is amending the AGAR as a direct final rule, since the changes are non-controversial and unlikely to generate adverse comment. The changes are administrative in nature, and do not affect the public.

Rules that an agency believes are noncontroversial and unlikely to result in adverse comment may be published in the **Federal Register** as direct final rules. The Office of Procurement and Property Management published a policy statement in the **Federal Register** (63 FR 9158, February 24, 1998) to notify the public of its intent to use direct final rulemaking in appropriate circumstances.

This rule makes the following changes to the AGAR:

(a) We are amending section 401.106 to reflect the restructuring of AGAR part 415. We are changing a reference to AGAR segment 415.4 to read AGAR segment 415.2.

(b) We are removing sections 415.103, 415.408, 415.411, 415,607, 415.608 and 415.612. These sections supplemented FAR regulatory guidance which has been removed from the FAR. AGAR coverage is no longer required.

(c) We are removing paragraph (b) of subsection 415.413–2. This paragraph merely restates guidance included in the FAR.

(d) We are moving the following segments of AGAR part 415 to match the numbering structure of FAR part 15 following its revision:

(1) Subsection 415.406–1, Uniform contract format, is now section 415.204, Contract format;

(2) Section 415.407, Solicitation provisions, is now section 415.209, Solicitation provisions and contract clauses;

(3) Paragraphs (c) through (e) of subsection 415.413–2, Disclosure and use of information before award—Alternate II, are now paragraphs (a) through (c) of section 415.207, Handling proposals and information.

(4) Subpart 415.5, Unsolicited Proposals, is now subpart 415.6, Unsolicited Proposals;

(5) Subpart 415.9, Profit, is now subpart 415.4, Contract Pricing;

(6) Subpart 415.10, Preaward, Award, and Postaward Notifications, Protests and Mistakes, is now subpart 415.5, Preaward, Award, and Postaward Notifications, Protests and Mistakes.

(e) We are adding section 415.303, Responsibilities, to specify that the head of the contracting activity is authorized to appoint an individual other than the contracting officer as the source selection authority.

(f) We are adding section 415.305, Proposal evaluation, to authorize USDA contracting activities to establish procedures for release of cost information to technical evaluation teams.

(g) We are adding section 437.204, Guidelines for determining availability of personnel. This section authorizes heads of contracting activities to approve the use of non-Government evaluators in proposal evaluation. AGAR subsection 415.413–2 included a substantially similar authorization, which we adapted in drafting section 437.204.

(h) We are amending AGAR clause 452.215–71 to update a FAR reference in that clause and to delete clause Alternates I and II. These alternates provided for the use of standard forms which have been canceled and not replaced. Furthermore, guidance provided by the alternate clauses is provided by FAR clause 52.215–20.

(i) We are correcting prescriptions in sections 452.215–71, 452.215–72 and 452.215.73 to reflect updated AGAR section numbers based on reorganization of AGAR part 415.

II. Procedural Requirements

A. Executive Order Nos. 12866 and 12988

USDA prepared a work plan for this regulation and submitted it to the Office of Management and Budget (OMB) pursuant to Executive Order No. 12866. OMB determined that the rule was not significant for the purposes of Executive Order No. 12866. Therefore, the rule has not been reviewed by OMB. USDA has reviewed this rule in accordance with Executive Order No. 12988, Civil Justice Reform. The proposed rule meets the applicable standards in section 3 of Executive Order No. 12988.

B. Regulatory Flexibility Act

USDA reviewed this rule under the Regulatory Flexibility Act, 5 U.S.C. 601–611, which requires preparation of a regulatory flexibility analysis for any rule which is likely to have significant economic impact on a substantial number of small entities. The reorganization and revision of AGAR part 415 does not affect the way in which USDA conducts its acquisitions or otherwise interacts with the public. USDA certifies that this rule will not have a significant economic effect on a substantial number of small entities, and, therefore, no regulatory flexibility analysis has been prepared.

C. Paperwork Reduction Act

No new information collection or recordkeeping requirements are imposed on the public by this rule. Accordingly no OMB clearance is required by section 350(h) of the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.*, or OMB's implementing regulation at 5 CFR Part 1320.

D. Small Business Regulatory Enforcement Fairness Act

This rule has been submitted to each House of Congress and the Comptroller General in accordance with the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 801 *et seq.*

IV. Electronic Access Addresses.

You may send electronic mail (E-mail) to JDARAGAN@USDA.GOV, or contact us via fax at (202) 720–8972, if you would like additional information about this rule, or if you wish to submit comments.

List of Subjects in 48 CFR Parts 415 and 452

Government contracts, Government procurement.

For the reasons set out in the preamble, the Office of Procurement and Property Management amends 48 CFR Parts 401, 415, 437, and 452 as set forth below:

1. The authority citation for Part 401 continues to read as follows:

Authority: 5 U.S.C. 301 and 40 U.S.C. 486(c).

2. In section 401.106, remove ''415.4'' and add, in its place, ''415.2''.

3. Revise Part 415 to read as follows:

PART 415—CONTRACTING BY NEGOTIATION

Subpart 415.2—Solicitation and Receipt of Proposals and Information:

Sec.
415.204 Contract format.
415.207 Handling proposals and information.
415.209 Solicitation provisions and contract clauses.

Subpart 415.3—Source Selection

Sec.
415.303 Responsibilities.
415.305 Proposal evaluation.

Subpart 415.4—Contract Pricing

Sec.
415.404–4 Profit.

Subpart 415.5—Preaward, Award, and Postaward Notifications, Protests and Mistakes

Sec.
415.570 Post-award conference.

Subpart 415.6—Unsolicited Proposals

Sec.
415.604 Agency points of contact.
415.606 Agency procedures.

Authority: 5 U.S.C. 301 and 40 U.S.C. 486(c).

Subpart 415.2—Solicitation and Receipt of Proposals and Information:

415.204 Contract format.

The Senior Procurement Executive is authorized to exempt contracts from the uniform contract format.

415.207 Handling proposals and information.

(a) Throughout the source selection process, agency personnel and non-Government evaluators with access to proposal information shall disclose neither the number of offerors nor their identity except as authorized by FAR subpart 15.5. (See also FAR 5.403.)

(b) The contracting officer shall obtain the following written agreement from the non-Government evaluator prior to the release of any proposal to that evaluator.

AGREEMENT GOVERNING THE USE AND DISCLOSURE OF PROPOSALS

RFP _____

Offeror _____

21. To the best of my knowledge and belief, no conflict of interest exists that may diminish my capacity to perform an impartial and objective review of the offeror's proposal, or may otherwise result in a biased opinion or an unfair advantage. If a potential conflict of interest arises or if I identify such a conflict, I agree to notify the Government promptly concerning the potential conflict. In determining whether any potential conflict of interest exists, I agree to review whether my or my employer's relationships with other persons or entities, including, but not limited to, ownership of stocks, bonds, other outstanding financial interests or commitments, employment arrangements (past, present, or under consideration), and, to the extent known by me, all financial interests and employment arrangements of my spouse, minor children, and other members of my immediate household, may place me in a position of conflict, real or apparent, with the evaluation proceedings.

2. I agree to use proposal information only for evaluation purposes. I understand that any authorized restriction on disclosure placed upon the proposal by the prospective contractor or subcontractor or by the Government shall be applied to any reproduction or abstracted information of the proposal. I agree to use my best effort to safeguard such information physically, and not to disclose the contents of, or release any information relating to, the proposal(s) to anyone outside of the Source Evaluation Board or other panel assembled for this acquisition, the Contracting Officer, or other individuals designated by the Contracting Officer.

3. I agree to return to the Government all copies of proposals, as well as any abstracts, upon completion of the evaluation.

_____

(Name and Organization)

_____

(Date)

(End of provision)

(c) The release of a proposal to a non-Government evaluator for evaluation does not constitute the release of information for purposes of the Freedom of Information Act (5 U.S.C. 552).

(d) The contracting officer shall attach a cover page bearing the following notice: GOVERNMENT NOTICE FOR HANDLING PROPOSALS—This proposal shall be used and disclosed for evaluation purposes only. Attach a copy of this Government notice to every reproduction or abstract of the proposal. Any authorized restrictive notices which the submitter places on this proposal shall be strictly complied with. Disclosure of this proposal outside the Government for evaluation purposes shall be made only to the extent authorized by, and in accordance with, FAR 3.104–5, FAR 15.207, and AGAR 415.207.

415.209 Solicitation provisions and contract clauses.

(a) The provision at 452.215–71, Instructions for the Preparation of Technical and Business Proposals, may be used when offerors will be required to submit technical and business proposals. Contracting officers should tailor the clause to reflect the degree of information required for the specific acquisition.

(b) The contracting officer shall insert the provision at 452.215–72, Amendments to Proposals, in solicitations which require the submittal of lengthy, complex technical proposals.

Subpart 415.3—Source Selection

415.303 Responsibilities.

The head of the contracting activity (HCA) is authorized to appoint an individual other than the contracting officer as the source selection authority.

415.305 Proposal evaluation.

HCAs are responsible for establishing procedures regarding the release of cost information to the members of the technical evaluation team.

Subpart 415.4—Contract Pricing

415.404–4 Profit.

(a)(1) USDA will use a structured approach to determine the profit or fee prenegotiation objective in acquisition actions when price negotiation is based on cost analysis.

(2) The following types of acquisitions are exempt from the requirements of the structured approach, but the contracting officer shall comply with FAR 15.404–4(d) when analyzing profit for these contracts or actions:

(i) Architect-engineer contracts;

(ii) Construction contracts;

(iii) Contracts primarily requiring delivery of material supplied by subcontractors;

(iv) Termination settlements; and

(v) Cost-plus-award-fee contracts;

(b) Unless otherwise restricted by contracting activity procedures, the Contracting Officer may use another Federal agency's structured approach if that approach has been formalized and is maintained as part of that Agency's acquisition regulations (*i.e.*, included in that Agency's assigned chapter of Title 48 of the Code of Federal Regulations).

(c) The HCA is responsible for establishing procedures to ensure compliance with this subpart.

Subpart 415.5—Preaward, Award, and Postaward Notifications, Protests and Mistakes

415.570 Post-award conference.

If a postaward conference is necessary, the contracting officer shall insert clause 452.215–73, Post-Award Conference.

Subpart 415.6—Unsolicited Proposals

415.604 Agency points of contact.

HCAs are responsible for establishing procedures to ensure compliance with the requirements of FAR 15.604.

415.606 Agency procedures.

HCAs are responsible for establishing the procedures for control of unsolicited proposals required by FAR 15.606(a) and for identifying the contact points as required by FAR 15.606(b).

4. The authority citation for Part 437 continues to read as follows:

Authority: 5 U.S.C. 301 and 40 U.S.C. 486(c).

5. Add section 437.204 to read as follows:

437.204 Guidelines for determining availability of personnel.

The head of the contracting activity (HCA) is authorized to approve the use of non-Government evaluators in proposal evaluation. Each such decision shall be supported by a written determination in accordance with FAR 37.204.

6. The authority citation for Part 452 continues to read as follows:

Authority: 5 U.S.C. 301 and 40 U.S.C. 486(c).

7. Revise paragraphs (c) introductory text and (c)(1) and remove Alternates I and II of 452.215–71 to read as follows:

452.215–71 Instructions for the preparation of technical and business proposals.

As prescribed in 415.209(a), insert a provision substantially as follows:

INSTRUCTIONS FOR THE PREPARATION OF TECHNICAL AND BUSINESS PROPOSALS

(September 1999)

* * * * *

(c) *Business Proposal Instructions.*

(1) Cost Proposal.

In addition to any other requirements for cost/pricing information required in clause FAR 52.215–20, Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data (OCT 1997), the following is required:

(Contracting Officer shall identify additional information required if appropriate.)

* * * * *

8. In section 452.215–72, remove ''415.407(b)'' and add, in its place, ''415.209(b)''.

9. In section 452.215–73, remove ''415.1070'' and add, in its place, ''415.570''.

Done at Washington, DC, this 27th day of September, 1999.

W.R. Ashworth,

Director, Office of Procurement and Property Management.

[FR Doc. 99–25474 Filed 9–29–99; 8:45 am]

BILLING CODE 3410–XE–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Parts 13 and 17

RIN 1018–AD95

Safe Harbor Agreements and Candidate Conservation Agreements with Assurances

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule; correction.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), published a final rule on June 17, 1999, amending Part 13 and 17 of Title 50 of the Code of Federal Regulations (CFR). These regulations implemented two final policies issued by the Service and the National Marine Fisheries Service (NMFS) on June 17, 1999, pursuant to the Endangered Species Act (Act)—the Safe Harbor and the Candidate Conservation Agreements with Assurances policies. We are correcting certain errors that appeared in the final regulations implementing these policies. The correction is required in part 13 section 13.25(d) because the current version is unclear and could unduly confuse the public. In sections 17.22(d)(2)(v) and 17.32(d)(2)(v) the word ''not'' was inadvertently omitted after the word ''will.''

DATES: This correction is effective September 30, 1999.

ADDRESSES: You may obtain copies of the final rule or this correction, or you may obtain further information, by contacting the Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, 1849 C Street, NW (MS–420 ARLSQ), Washington, DC 20240 (Telephone 703/358–2171, Facsimile 703/358–1735).

FOR FURTHER INFORMATION CONTACT: Nancy Gloman, Chief, Division of Endangered Species (Telephone 703/358–2171, Facsimile 703/358–1735).

SUPPLEMENTARY INFORMATION: The Safe Harbor and Candidate Conservation Agreements with Assurances policies were published at 64 FR 32717 and 64 FR 32726, respectively, and the final implementing rule was published at 64 FR 32706. In the final rule, we committed editorial errors in part 13 section 13.25(d) and in part 17 sections 17.22(d)(2)(v) and 17.32 (d)(2)(v). We correct these errors in this rule.

List of Subjects

50 CFR part 13

Administrative practice and procedure, Exports, Fish, Imports, Plants, Reporting and recordkeeping requirements, Transportation, Wildlife.

50 CFR part 17

Endangered and threatened species, Export, Import, Reporting and recordkeeping requirements, Transportation.

PART 13—[Amended]

1. The authority citation for part 13 continues to read as follows:

Authority: 16 U.S.C. 668a; 704, 712; 742j–l; 1382; 1538(d); 1539, 1540(f); 3374; 4901–4916; 18 U.S.C. 42; 19 U.S.C. 1202; E.O. 11911, 41 FR 15683; 31 U.S.C. 9701.

2. Amend section 13.25 by revising paragraph (d) to read as follows:

§ 13.25 Transfer of permits and scope of permit authorization.

* * * * *

(d) In the case of permits issued under § 17.22(b)–(d) or § 17.32(b)–(d) of this subchapter to a State or local governmental entity, a person is under the direct control of the permittee where:

(1) The person is under the jurisdiction of the permittee and the permit provides that such person(s) may carry out the authorized activity; or

(2) The person has been issued a permit by the governmental entity or has executed a written instrument with the governmental entity, pursuant to the terms of the implementing agreement.

3. Amend section 17.22 by revising paragraph (d)(2)(v) to read as follows:

§ 17.22 Permits for scientific purposes, enhancements of propagation or survival, or for incidental taking.

* * * * *

(d) * * *

(2) * * *

(v) Implementation of the terms of the Candidate Conservation Agreement will not be in conflict with any ongoing conservation programs for species covered by the permit; and

* * * * *

4. Amend section 17.32 by revising paragraph (d)(2)(v) to read as follows:

§ 17.32 Permits—General.

* * * * *

(d) * * *

(2) * * *

(v) Implementation of the terms of the Candidate Conservation Agreement will not be in conflict with any ongoing conservation programs for species covered by the permit; and

* * * * *

Dated: September 24, 1999.

Donald J. Barry,

Assistant Secretary, Fish, Wildlife, and Parks, Department of the Interior.

[FR Doc. 99–25379 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 990304062–9062–01; I.D. 092499J]

Fisheries of the Exclusive Economic Zone Off Alaska; Pollock in Statistical Area 630 of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Inseason adjustment; request for comments.

SUMMARY: NMFS issues an inseason adjustment for managing directed fishing for pollock for the D fishing season in Statistical Area 630 of the Gulf of Alaska (GOA). This adjustment is necessary to authorize a closure at midnight. Current regulations specify that the time of all openings and closures of fishing seasons other than the beginning and end of the calendar fishing year is noon, A.l.t. Without this inseason adjustment, this fishery would close prematurely, thereby incurring underharvest of the directed fishing allowance and economic loss.

DATES: Effective 2400 hrs, Alaska local time (A.l.t.), September 24, 1999. Comments must be received at the following address no later than 4:30 p.m., A.l.t., October 12, 1999.

ADDRESSES: Comments may be mailed to Sue Salveson, Assistant Regional Administrator, Sustainable Fisheries Division, Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802–1668, Attn: Lori Gravel. Hand delivery or courier delivery of comments may be sent to the Federal Building, 709 West 9th Street, Room 453, Juneau, AK 99801.

FOR FURTHER INFORMATION CONTACT: Mary Furuness, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and

Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 1999 TAC of pollock in Statistical Area 630 of the GOA was established by the Final 1999 Harvest Specifications for Groundfish (64 FR 12094, March 11, 1999) as 30,520 metric tons (mt), determined in accordance with § 679.20(c)(3)(ii)

In accordance with § 679.20(d)(1)(i), the Administrator, Alaska Region, NMFS (Regional Administrator), has determined that the 1999 TAC for pollock in Statistical Area 630 will be reached. Therefore, the Regional Administrator is establishing a directed fishing allowance of 29,920 mt, and is setting aside the remaining 600 mt as bycatch to support other anticipated groundfish fisheries. In accordance with § 679.20(d)(1)(iii), the Regional Administrator finds that this directed fishing allowance has been reached. Consequently, NMFS is prohibiting directed fishing for pollock in Statistical Area 630 of the GOA.

Current information shows the catching capacity of vessels catching pollock in Statistical Area 630 is in excess of 4,000 mt per day.

Section 679.23(b) specifies that the time of all openings and closures of fishing seasons other than the beginning and end of the calendar fishing year is 1200 hrs, A.l.t. The Administrator, Alaska Region, NMFS, has determined that the pollock TAC would be underharvested if a 1200 hrs closure on September 24, 1999, were allowed to occur.

NMFS, therefore, in accordance with § 679.25(a)(1)(i), is adjusting the D fishing season for pollock in Statistical Area 630 of the GOA by prohibiting directed fishing at 2400 hrs, A.l.t., September 24, 1999. NMFS is taking this action to prevent the underharvest of the pollock TAC in Statistical Area 630 of the GOA as authorized by § 679.25(a)(2)(i)(C). In accordance with § 679.25(a)(2)(iii), NMFS has determined that closing the season at 2400 hrs on September 24, 1999, is the least restrictive management adjustment to harvest the pollock TAC in Statistical Area 630 of the GOA and will allow other fisheries to continue in noncritical areas and time periods.

Maximum retainable bycatch amounts may be found in the regulations at § 679.20(e) and (f).

Classification

The Assistant Administrator for Fisheries, NOAA, finds for

good cause that providing prior notice and public comment or

delaying the effective date of this action is impracticable and contrary to the public interest. Without this inseason adjustment, the pollock TAC in Statistical Area 630 of the GOA would be underharvested. Under § 679.25(c)(2), interested persons are invited to submit written comments on this action to the above address until October 12, 1999.

This action is required by §§ 679.20 and 679.25 and is exempt from review under E.O. 12866.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 24, 1999.

George H. Darcy,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25372 Filed 9–24–99; 4:05 pm]

BILLING CODE 3510–22–F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 990304063–9063–01; I.D. 092499N]

Fisheries of the Exclusive Economic Zone Off Alaska; Pollock by Vessels Catching Pollock for Processing by the Mothership Component in the Bering Sea Subarea

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is prohibiting directed fishing for pollock by vessels catching pollock for processing by the mothership component in the Bering Sea subarea of the Bering Sea and Aleutian Islands management area (BSAI). This action is necessary to prevent exceeding the 1999 B/C season pollock total allowable catch (TAC) specified to the mothership component in the Bering Sea subarea of the BSAI.

DATES: Effective 1200 hrs, Alaska local time (A.l.t.), September 27, 1999, until 1200 hrs, A.l.t., November 1, 1999.

FOR FURTHER INFORMATION CONTACT: Mary Furuness, 907–586-7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the BSAI according to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

In accordance with § 679.20(a)(5)(i)(C)(3) and section 206(b)(1) of the American Fisheries Act, the Final 1999 Harvest Specifications for Groundfish (64 FR 12103, March 11, 1999, and 64 FR 39087, July 21, 1999) specified the B/C season TAC of pollock as a directed fishing allowance for the mothership component in the Bering Sea subarea as 50,354 metric tons.

In accordance with § 679.20(d)(1)(iii), the Administrator, Alaska Region, NMFS, finds that this directed fishing allowance soon will be reached. Consequently, NMFS is prohibiting directed fishing for pollock by vessels catching pollock for processing by the mothership component in the Bering Sea subarea of the BSAI.

Maximum retainable bycatch amounts may be found in the regulations at § 679.20(e) and (f).

Classification

This action responds to the best available information recently obtained from the fishery. It must be implemented immediately in order to prevent exceeding the 1999 B/C season pollock TAC specified to the mothership component in the Bering Sea subarea of the BSAI. A delay in the effective date is impracticable and contrary to the public interest. NMFS finds for good cause that the implementation of this action can not be delayed for 30 days. Accordingly, under 5 U.S.C. 553(d), a delay in the effective date is hereby waived.

This action is required by § 679.20 and is exempt from review under E.O. 12866.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 24, 1999.

Bruce C. Morehead,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25412 Filed 9–27–99; 4:56 pm]

BILLING CODE 3510–22–F

Proposed Rules

Federal Register
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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF AGRICULTURE

Federal Crop Insurance Corporation

7 CFR Part 400

Farm Service Agency

7 CFR Part 780

Appeal Procedure Regulation

AGENCIES: Federal Crop Insurance Corporation and Farm Service Agency, USDA.

ACTION: Proposed rule.

SUMMARY: The Federal Crop Insurance Corporation (FCIC) and the Farm Service Agency (FSA) propose to amend general administrative regulations and appeal procedure regulations. The intended effect of the rule is to establish procedures for program participant appeals of adverse decisions made by the Risk Management Agency (RMA).

DATES: Written comments and opinions on this proposed rule will be accepted until close of business November 29, 1999, and will be considered when the rule is to be made final.

ADDRESSES: Interested persons are invited to submit written comments to Nancy Kreitzer, Appeals, Litigation and Legal Liaison Staff, Federal Crop Insurance Corporation, United States Department of Agriculture, 1400 Independence Avenue, S.W., Stop 0807, Washington, D.C. 20250–0807.

FOR FURTHER INFORMATION CONTACT: Nancy Kreitzer, Director, Appeals, Litigation and Legal Liaison Staff, Federal Crop Insurance Corporation, at the address listed above, telephone (202) 690–1683.

SUPPLEMENTARY INFORMATION:

Executive Order 12866

The Office of Management and Budget (OMB) has determined this rule to be exempt for the purposes of Executive Order 12866 and, therefore, this rule has not been reviewed by OMB.

Paperwork Reduction Act of 1995

This proposed rule does not constitute a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35).

Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), establishes requirements for Federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. This rule contains no Federal mandates (under the regulatory provisions of title II of the UMRA) for State, local, and tribal governments or the private sector. Therefore, this rule is not subject to the requirements of sections 202 and 205 of the UMRA.

Executive Order 12612

It has been determined under section 6(a) of Executive Order 12612, Federalism, that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. The provisions contained in this rule will not have a substantial direct effect on states or their political subdivisions, or on the distribution of power and responsibilities among the various levels of government.

Regulatory Flexibility Act

This regulation will not have a significant economic impact on a substantial number of small entities. This action does not increase the burden on any entity because this action merely clarifies and establishes provisions for producers to use in filing appeals of adverse decisions. The effect on small entities is the same as that for large entities. Therefore, this action is determined to be exempt from the provisions of the Regulatory Flexibility Act (5 U.S.C. 605) and no Regulatory Flexibility Analysis was prepared.

Federal Assistance Program

This program is listed in the Catalog of Federal Domestic Assistance under No. 10.450.

Executive Order 12372

This program is not subject to the provisions of Executive Order 12372, which require intergovernmental consultation with state and local officials. See the Notice related to 7 CFR part 3015, subpart V, published at 48 FR 29115, June 24, 1983.

Executive Order 12988

This proposed rule has been reviewed under the provisions of Executive Order 12988 on civil justice reform. The provisions of this rule will not have a retroactive effect prior to the effective date. The provisions of this rule will preempt State and local laws to the extent such State and local laws are inconsistent herewith. The administrative appeal provisions published at 7 CFR part 11 must be exhausted before any action for judicial review may be brought against FCIC.

Environmental Evaluation

This action is not expected to have a significant impact on the quality of the human environment, health, and safety. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

National Performance Review

This regulatory action is being taken as part of the National Performance Review Initiative to eliminate unnecessary or duplicative regulations and improve those that remain in force.

Background

The Federal Agriculture Improvement and Reform Act of 1996 (1996 Act) amended the Department of Agriculture Reorganization Act of 1994 (Reorganization Act) by creating an Office of Risk Management. The Secretary implemented this provision with Secretary's Memorandum 1010–2 issued on May 3, 1996, which established the Risk Management Agency (RMA). Among the functions of RMA is the administration of the crop insurance programs for FCIC, a function formerly assigned to the Farm Service Agency (FSA).

This proposed rule would amend FCIC and FSA informal appeal regulations to reflect the establishment of RMA and the reorganization of crop insurance functions. It does not reflect any response to comments received on the prior interim final rule for 7 CFR part 400, subpart J, or 7 CFR part 780 promulgated on December 29, 1995 (60 FR 67298).

List of Subjects in 7 CFR Parts 400 and 780

Administrative practice and procedure, Claims, Crop insurance, Fraud, Reporting and recordkeeping requirements.

Proposed Rule

For the reasons stated in the preamble, the Federal Crop Insurance Corporation proposes to amend 7 CFR part 400, subpart J, and the Farm Service Agency proposes to amend 7 CFR part 780 as follows:

PART 400—GENERAL ADMINISTRATIVE REGULATIONS

1. Revise 7 CFR part 400, subpart J, to read as follows:

Subpart J—Appeal Procedure

Sec.
400.90 Definitions.
400.91 Applicability.
400.92 Appeals.
400.93 Administrative review.
400.94 Mediation.
400.95 Time limitations for filing and responding to requests for administrative review.
400.96 Judicial review.
400.97 Reservations of authority.

Authority: 7 U.S.C. 1506(l), 1506(p)

§ 400.90 Definitions.

Act. The Federal Crop Insurance Act (7 U.S.C. 1501–1521).

Administrative review. A subsequent consideration of a prior decision by the same reviewing authority. A participant cannot request an administrative review of an adverse decision that resulted from a previous request for administrative review.

Adverse decision. See the definition in 7 CFR part 11.

Agency. RMA or FCIC, including the RSO, FOSD or any other division within the Agency with decision making authority.

Appellant. Any participant who appeals or requests mediation of an adverse decision of the Agency in accordance with this subpart. Unless otherwise specified in this subpart, the term ''appellant'' includes an authorized representative.

Authorized representative. Any person, whether or not an attorney, who has obtained a Privacy Act waiver and is authorized in writing by a participant to act for the participant in the appeal process.

Certified State. A State with a mediation program, approved by the Secretary of Agriculture, that meets the requirements of 7 CFR part 1946, subpart A, or a successor regulation.

FCIC. The Federal Crop Insurance Corporation, a wholly owned Government corporation within USDA.

FSA. The Farm Service Agency, an agency of USDA, or a successor agency.

FOSD. The Fiscal Operations and Systems Division established by the Agency for the purpose of making determinations of indebtedness of persons who are insured under contracts of insurance issued under the Act.

Mediation. A process in which a trained, impartial, neutral third party (the mediator), meets with the disputing parties, facilitates discussions, and works with the parties to resolve their disputes, narrow areas of disagreement, and improve communication.

NAD. The USDA National Appeals Division.

Non-certified State. A State that has either not applied for or has not been approved by the Secretary of Agriculture to participate in the USDA Mediation Program under 7 CFR part 1946, subpart A, or a successor regulation.

Participant. See the definition in 7 CFR part 11.

RSO. The Regional Service Offices established by the Agency for the purpose of providing program and underwriting services for private insurance companies reinsured by FCIC under the Act and for FCIC insurance contracts delivered through FSA offices.

Reinsured company. A private insurance company, including its agents, that has been approved and reinsured by FCIC to provide insurance to participants.

Reviewing authority. A person assigned the responsibility by the Agency of making a decision on a request for administrative review requested by the participant in accordance with this subpart.

RMA. The Risk Management Agency, an agency of USDA, or a successor agency.

Secretary. The Secretary of Agriculture.

USDA. United States Department of Agriculture.

§ 400.91 Applicability.

(a) This subpart applies to adverse decisions made by personnel of the Agency with respect to:

(1) Contracts of insurance insured by FCIC; and

(2) Contracts of insurance of private insurance companies and reinsured by FCIC under the provisions of the Act.

(b) This subpart is not applicable to any decision:

(1) Made by the Agency with respect to any matter arising under the terms of the Standard Reinsurance Agreement with the reinsured company; or

(2) Made by any private insurance company with respect to any contract of insurance issued to any producer by the private insurance company and reinsured by FCIC under the provisions of the Act.

(c) With respect to matters identified in § 400.91(a), participants may request an administrative review, mediation or appeal of adverse decisions by the Agency made with respect to:

(1) Denial of participation in a program;

(2) Compliance with program requirements;

(3) Issuance of payments or other program benefits to a participant in a program; and

(4) Issuance of payments or other benefits to an individual or entity who is not a participant in a program.

(d) Only a participant may seek an administrative review or mediation under this subpart.

§ 400.92 Appeals.

Nothing in this subpart prohibits a participant from filing an appeal of an adverse decision directly with NAD in accordance with the provisions of part 11 of this title without requesting administrative review or mediation under this subpart. However, if the participant has timely requested administrative review or mediation, the participant may not appeal to NAD until the adverse decision on such administrative review or mediation. The time for appeal to NAD is suspended from the date of receipt of a request for administrative review or mediation until the conclusion of the administrative review or mediation.

§ 400.93 Administrative review.

(a) An appellant may seek one administrative review of an adverse decision or seek mediation under § 400.94, but not both. If the appellant elects to seek administrative review, appellant must file a written request for administrative review with the reviewing authority that issued the adverse decision in accordance with § 400.95. The written request must state the basis upon which the appellant relies to show that:

(1) The decision was not proper and not made in accordance with applicable program regulations and procedures; or

(2) All material facts were not properly considered in such decision.

(b) The reviewing authority will issue a written decision that will not be subject to further reconsideration by the Agency.

§ 400.94 Mediation.

(a) Appellants have the right to seek mediation, instead of a administrative review under § 400.93, involving any adverse decision.

(b) All requests for mediation under this subpart must be made after issuance of the adverse decision and before the appellant has a hearing before a NAD hearing officer on the adverse decision.

(c) An appellant who chooses mediation must request mediation not later than 30 calendar days after the date written notice of the adverse decision is mailed or otherwise made known to the appellant.

(d) An appellant will have the balance of days remaining in the 30-day period to appeal to NAD if mediation is concluded without resolution unless a new adverse decision is issued as a result of mediation. Such new adverse decisions results in a new 30-day period for appeals to NAD.

(e) An appellant is responsible for contacting the Certified State Mediation Program in States where such mediation program exists. The State mediation program will make all arrangements for the mediation process.

(f) An appellant is responsible for making all necessary contacts to arrange for mediation in non-certified States or in certified States that are not currently offering mediation on specific Agency issues.

(g) An appellant needing mediation in States without a certified mediation program can request mediation by contacting the RSO, which will provide the participant with a list of acceptable mediators.

(h) An appellant may only mediate an adverse decision once.

(i) If the dispute is not resolved in mediation,

(1) The adverse decision that was the subject of the mediation remains in effect and becomes the adverse decision that is appealable to NAD or

(2) The adverse decision which may be modified as a result of the mediation process becomes the new adverse decision for appeals to NAD.

§ 400.95 Time limitations for filing and responding to requests for administrative review.

(a) A request for administrative review of a adverse decision must be filed within 30 days after the date written notice of the decision that is the subject of the request is mailed or otherwise made available to the appellant. A request for an administrative review will be considered to have been ''filed'' when personally delivered in writing to the appropriate decision maker or when the properly addressed request, postage paid, is postmarked. An adverse decision will become non-reviewable by the Agency unless a request for administrative review is timely filed.

(b) A request for administrative review may be accepted and acted upon even though it is not filed within the time prescribed in § 400.95(a) if, in the judgment of the appropriate reviewing authority, the circumstances warrant such action.

§ 400.96 Judicial Review.

(a) A participant must exhaust administrative remedies before seeking judicial review of an adverse decision. This requires the participant to appeal an Agency adverse decision to NAD in accordance with 7 CFR part 11.

(b) If the adverse decision involves a matter determined by the Agency to be not appealable, the appellant must request a determination of non-appealability from the Director of NAD prior to seeking judicial review.

(c) A participant with a contract of insurance reinsured by the Agency may bring suit against the Agency in a Federal district court after exhaustion of administrative remedies as provided in paragraphs (a) and (b) of this section. Nothing in this section can be construed to create privity of contract between the Agency and a participant.

§ 400.97 Reservations of authority.

(a) Representatives of the Agency may correct all errors in entering data on program contracts and other program documents, and the results of computations or calculations made pursuant to the contract.

(b) Nothing contained in this subpart precludes the Secretary, the Manager of FCIC, or the Administrator of RMA, or a designee, from determining at any time any question arising under the programs within their respective authority or from reversing or modifying any adverse decision.

PART 780—APPEAL REGULATIONS

2. The authority citation for 7 CFR part 780 continues to read as follows:

Authority: 5 U.S.C. 301; 15 U.S.C. 714b and 714c; 16 U.S.C. 590h.

3. Amend § 780.1 to remove the definition of ''Regional Service Office'' and the terms ''FCIC'' and ''the FCIC Regional Service Office'' in the definitions of ''agency'' and ''final decision.''

4. In § 780.2:

a. Revise paragraphs (a)(1)(iii) and (iv) to read as set forth below:

b. Amend paragraph (a)(2) to remove the initials ''FCIC'' wherever they appear.

c. Remove paragraph (a)(3).

§ 780.2 Applicability.

(a) * * *

(1) * * *

(iii) Decisions made by personnel of FSA with respect to contracts of insurance insured by FCIC and the noninsured crop disaster assistance program;

(iv) Decisions made by personnel of FSA with respect to contracts of insurance provided by private insurance carriers and reinsured by FCIC under the provisions of the Federal Crop Insurance Act; and

* * * * *

5. Amend § 780.7(b), (c) and (e), to remove the phrase ''or the Regional Service Office'' wherever it may appear.

6. Amend § 780.11 to remove the words ''FCIC'' and ''the Manager of FCIC'' wherever they may appear.

Signed in Washington, D.C., September 11, 1999.

Kenneth D. Ackerman,

Manager, Federal Crop Insurance Corporation.

Keith Kelly,

Administrator, Farm Service Agency.

[FR Doc. 99–24819 Filed 9–29–99; 8:45 am]

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DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

9 CFR Part 130

[Docket No. 97–058–1]

RIN 0579–AA87

Import/Export User Fees

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Proposed rule.

SUMMARY: We propose to change our user fees for import- and export-related services that we provide for animals, animal products, birds, germ plasm, organisms, and vectors. We propose increases for fiscal years 2000 through 2004 for standard annual increases in expenses. We have determined that the fees must be adjusted annually to reflect the anticipated cost of providing these services each year. By publishing the annual user fee changes in advance, users can incorporate the fees into their budget planning. The user fees pay for the actual cost of providing these services. We also propose to make some editorial changes to make the regulations easier to read and eliminate duplication.

DATES: We invite you to comment on this docket. We will consider all comments that we receive by November 29, 1999.

ADDRESSES: Please send your comment and three copies to: Docket No. 97–058–1, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road, Unit 118, Riverdale, MD 20737–1238.

Please state that your comment refers to Docket No. 97–058–1.

You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue, SW., Washington DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690–2817 before coming.

APHIS documents published in the **Federal Register**, and related information, including the names of organizations and individuals who have commented on APHIS rules, are available on the Internet at http://www.aphis.usda.gov/ppd/rad/webrepor.html.

FOR FURTHER INFORMATION CONTACT: For information concerning services provided for animals, animal products, birds, germ plasm, organisms, and vectors, contact Dr. Gary Colgrove, Chief Staff Veterinarian, National Center for Import and Export, VS, APHIS, 4700 River Road Unit 38, Riverdale, MD 20737–1231; (301) 734–8364; or e-mail: Gary.S.Colgrove@usda.gov.

For information concerning program operations, contact Ms. Louise Lothery, Director, Management Support Staff, VS, APHIS, 4700 River Road Unit 44, Riverdale, MD 20737–1231; (301) 734–7517; or e-mail: Louise.R.Lothery@usda.gov.

For information concerning user fees or rate development, contact Ms. Donna Ford, Section Head, Financial Systems and Services Branch, BASE, APHIS, 4700 River Road Unit 54, Riverdale, MD 20737–1232; (301) 734–8351; or e-mail: Donna.J.Ford@usda.gov.

SUPPLEMENTARY INFORMATION:

Background

The regulations in 9 CFR part 130 (referred to below as the ''regulations'') list user fees for import- and export-related services provided by the Animal and Plant Health Inspection Service (APHIS) for animals, animal products, birds, germ plasm, organisms, and vectors. We propose to amend the user fees for these import- and export-related services to reflect the increased cost of service and to include additional cost components.

These user fees are authorized by section 2509(c)(1) of the Food, Agriculture, Conservation, and Trade Act of 1990, as amended (21 U.S.C. 136a). APHIS is authorized to establish and collect fees that will cover the cost of providing import- and export-related services for animals, animal products, birds, germ plasm, organisms, and vectors.

Since fiscal year (FY) 1992, APHIS has received no directly appropriated funds to provide import- and export-related services for animals, animal products, birds, germ plasm, organisms, and vectors. Our ability to provide these services depends on user fees. We change our user fees through the standard rulemaking process of publishing the proposed changes for public comment in the **Federal Register**, considering the comments, publishing the final changes in the **Federal Register**, and making the new user fees effective 30 days after the final rule is published. This rulemaking process can be lengthy. As a result, our user fees may not reflect our current cost of providing services. Since implementing these user fees in 1992, we have only adjusted them four times. While a few user fees were adjusted as recently as 1998, most of the user fees have not been adjusted since 1996.

For our user fees to cover our costs so that we can continue to provide services and to inform our customers of user fees in time for advance planning, we propose to set user fees for our services in advance for fiscal years 2000 through 2004. The proposed user fees are based on our costs of providing import- and export-related services in FY 1999, plus anticipated annual increases in the salaries of employees who provide the services, plus adjustments for inflation. We used estimated pay increases of 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through FY 2004 published by the U.S. Treasury Department to calculate increases in the direct labor costs each year. We estimated inflation at 2.3 percent a year based on the Consumer Price Index (CPI). The estimated CPI is published in the Economic Assumptions table of the Budget for the U.S. Government each year.

We propose to list the user fees for fiscal years 2000 through 2004 in the regulations. We also plan to publish a notice in the **Federal Register** prior to the beginning of each fiscal year to remind or notify the public of the user fees for that particular fiscal year. We would continue to charge the user fees proposed for fiscal year 2004 until new user fees are in effect. Therefore, the user fee tables in this document do not specify an end date for user fees that would become effective on October 1, 2003 (the beginning of fiscal year 2004).

User Fee Components

We calculated our user fees to cover the full cost of providing the services for which we charge the fee. The cost of providing a service includes direct labor and direct material costs. It also includes administrative support, agency overhead, and departmental charges.

Direct labor costs are the costs of employee time spent specifically to provide the service. For example, at APHIS's Animal Import Centers, animal caretakers and veterinarians prepare for the arrival of animals or birds to be quarantined in the Center, care for them (feed, water, clean cages or stalls) while they are quarantined, observe them while they are quarantined, release them from quarantine, and clean the quarantine area afterwards. If the service is inspecting an animal, the direct labor costs include the time spent by the inspector to conduct the inspection. Direct labor costs vary with the type of service provided.

Direct material costs include the cost of any materials needed to supply the service. For example, among other things, animals in quarantine need feed, water, bedding, disinfectants, and medicine. Direct material costs are different for different services.

Administrative support costs include local clerical and administrative activities; indirect labor hours; travel and transportation for personnel; supplies, equipment, and other necessary items; training; general office supplies; rent; equipment capitalization; billings and collections expenses; utilities; chemicals and glassware; and contractual services. Indirect labor hours include supervision of personnel and time spent doing work that is not directly connected with the service but which is nonetheless necessary, such as repairing equipment. Rent is the cost of using the space we need to perform import- or export-related work. If space is used for import- or export-related work and other Agency work, only that portion of the costs associated with the import- or export-related work is included in the user fees. Equipment capitalization is the cost per year to replace equipment. We determine this by establishing the life expectancy, in years, of equipment we use to provide a service and by establishing the cost to replace the equipment at the end of its useful life. We subtract any money we anticipate receiving for selling used equipment. Then we divide the

resulting amount by the life expectancy of the equipment. The result is the annual cost to replace equipment. Billing costs are the costs of managing user fee accounts for our customers who wish to receive monthly invoices for the services they receive from APHIS. Collections expenses include the costs of managing customer payments and accurately reflecting those payments in our accounting system. Utilities include water, telephone, electricity, gas, heating and oil. Contractual services include security service, maintenance, trash pickup, etc. The type, amount, and cost of administrative support vary with the type of service provided.

Agency overhead is the pro-rata share, attributable to a particular service, of the agency's management and support costs. Management and support costs include the costs of providing budget and accounting services, regulatory services, investigative and enforcement services, debt-management services, personnel services, public information services, legal services, liaison with Congress, and other general program and agency management services provided above the local level.

Departmental charges are APHIS's share, expressed as a percentage of the total cost, of services provided centrally by the Department of Agriculture (Department). Services the Department provides centrally include the Federal Telephone Service; mail; National Finance Center processing of payroll, and other money management; unemployment compensation; Office of Workers Compensation Programs; and central supply for storing and issuing commonly used supplies and Department forms. The Department notifies APHIS how much the agency owes for these services. We have included a pro-rata share of these departmental charges, as attributable to a particular service, in our fee calculations.

We have added an amount that would provide for a reasonable balance, or reserve, in the Veterinary Services user fee account. We have determined that a reasonable reserve would be approximately 25 percent of the annual cost of the Import/Export Program. All user fees will contribute to the reserve proportionately. The reserve would ensure that we have sufficient operating funds in cases of bad debt, customer insolvency, and fluctuations in activity volumes. We intend to monitor the balance closely and propose adjustments in our fees as necessary to ensure a reasonable balance.

An outline of the basic process is shown below. The actual components, quantities, and costs used to calculate the fee are different for each service. The basic steps in the calculation, for each particular service, are:

1. Determine the following costs:
   direct labor;
   direct material;
   pro-rata share of administrative support;
   pro-rata share of agency overhead;
   pro-rata share of Departmental charges; and
   pro-rata share of reserve;
2. Add all costs; and
3. Round up to the next $0.25 for all fees less than $10 or round up or down to the nearest $1 for all fees greater than $10.

The result of these calculations is the total cost to provide a particular service one time.

As is the case with all APHIS user fees, we intend to review, at least annually, activities, programs, and fee assumptions for the user fees proposed in this document. We will publish any necessary adjustments in the **Federal Register**.

Hourly Rate User Fees and Minimum Fees for Import and Export Veterinary Services

Several sections of the regulations contain hourly and premium hourly rates for import- and export-related service we provide. Section 130.5 of the regulations lists the hourly and premium hourly rate user fees that we provide for animals quarantined in privately owned quarantine facilities. Section 130.9 of the regulations lists the hourly and premium hourly rate fees for miscellaneous import or entry services. Section 130.21 of the regulations lists the hourly and premium hourly rate user fees charged for inspection and supervision services we provide within the United States for the export of animals, birds, and animal products. Sections 130.3 and 130.10 also, contain hourly rate user fees for services we provide in connection with animals quarantined at APHIS Animal Import Centers and pet birds quarantined at APHIS-owned or supervised quarantine facilities, respectively.

In each case, the same hourly and premium hourly rate user fee applies. Therefore, we propose to consolidate all the hourly and premium hourly rate user fees for import and export services into one new section § 130.30. We believe this reorganization would make the hourly and premium hourly rates easier for our customers to locate and eliminate duplication.

Sections 130.3, 130.5, 130.6, 130.7, 130.9, 130.10, and 130.21 all list a minimum user fee. This minimum fee ensures our basic costs are always covered. In § § 130.3, 130.5, 130.9, 130.10, and 130.21, the minimum user fee applies to the hourly and premium hourly rate user fee. In § § 130.6 and 130.7, the minimum user fee covers the cost of handling unusually small importations at ports of entry. In each case, the same minimum user fee applies. Therefore, we propose to list the minimum user fee in newly proposed § 130.30 and eliminate duplication.

The table below shows the proposed hourly rate, premium hourly rate, and minimum user fees for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

HOURLY USER FEES (PROPOSED § 130.30)

	Current user fee	Hourly user fee				
		Oct. 1, 1999–Sept. 30, 2000	0ct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Hourly rate:						
Per hour	$56.00	$76.00	$76.00	$80.00	$84.00	$84.00
Per quarter hour	14.00	19.00	19.00	20.00	21.00	21.00
Per service minimum fee	16.50	22.00	23.00	24.00	24.00	25.00
Overtime rates (Outside the employee's normal tour of duty)						
Premium hourly rate Monday through Saturday and holidays:						

	Current user fee	Hourly user fee				
		Oct. 1, 1999–Sept. 30, 2000	0ct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Per hour	65.00	88.00	88.00	92.00	96.00	100.00
Per quarter hour	16.25	22.00	22.00	23.00	24.00	25.00
Premium hourly rate for Sundays:						
Per hour	74.00	100.00	104.00	104.00	108.00	112.00
Per quarter hour	18.50	25.00	26.00	26.00	27.00	28.00

User Fees for Animals in APHIS Animal Import Centers (9 CFR 130.2)

Section 130.2 lists user fees charged for services we provide for animals quarantined in APHIS Animal Import Centers.

We charge a daily user fee for each animal quarantined in an Animal Importer Center. Different user fees reflect the varying costs of quarantining different animals. The user fee for each category of animal includes water, standard feed, housing, care, and handling. A separate user fee applies for birds or poultry that require nonstandard feed, housing, care, or handling.

The tables below list the proposed user fees for animal and bird quarantine services for fiscal year 2000 through 2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR INDIVIDUAL ANIMALS AND CERTAIN BIRDS QUARANTINED IN APHIS ANIMAL IMPORT CENTERS (§ 130.2(a))

Animal or bird	Current user fee	Daily user fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Birds (excluding ratites and pet birds imported in accordance with Part 93 of this subchapter):						
0–250 grams	$1.00	$1.50	$1,50	$1.50	$1.50	$1.75
251–1,000 grams	3.25	5.00	5.25	5.25	5.50	5.75
Over 1,000 grams	7.50	12.00	12.00	13.00	13.00	13.00
Domestic or zoo animals (excluding equines, birds, and poultry):						
Bison, bulls, camels, cattle, or zoo animals	56.50	93.00	95.00	97.00	100.00	102.00
All other, including, but not limited to alpacas, llamas, goats, sheep, and swine	15.00	24.00	25.00	26.00	26.00	27.00
Equines (including zoo equines, but excluding miniature horses):						
1st through 3rd day (fee per day)	149.50	245.00	251.00	257.00	264.00	270.00
4th through 7th day (fee per day)	108.25	177.00	182.00	186.00	191.00	195.00
8th and subsequent days (fee per day)	91.75	150.00	154.00	158.00	162.00	166.00
Miniature horses	40.25	56.00	57.00	58.00	60.00	61.00
Poultry (including zoo poultry):						
Doves, Pigeons, and quail	2.00	3.00	3.25	3.25	3.25	3.50
Chickens, ducks, grouse, guinea fowl, partridges, pea fowl, and pheasants	3.50	5.75	6.00	6.00	6.26	6.25
Large poultry and large waterfowl, including, but not limited to game cocks, geese, swans, and turkeys	8.25	13.00	14.00	14.00	14.00	15.00
Ratites:						
Chicks (less than 3 months old)	5.75	8.50	8.75	9.00	9.00	9.25
Juveniles (3 months through 10 months old)	8.00	13.00	13.00	13.00	14.00	14.00
Adults (11 months old and older)	16.25	24.00	25.00	26.00	26.00	27.00

USER FEES FOR BIRDS OR POULTRY QUARANTINED IN APHIS ANIMAL IMPORT CENTERS AND HOUSED IN NONSTANDARD HOUSING OR RECEIVING NONSTANDARD CARE AND HANDLING (§ 130.2(b))

Bird or poultry (nonstandard housing, care, or handling)	Current user fee	Daily user fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Birds 0–250 grams and doves, pigeons, and quail	$3.25	$5.00	$5.25	$5.25	$5.50	$5.75
Birds 251–1,000 grams and poultry such as chickens, ducks, grouse, guinea fowl, partridge, pea fowl, and pheasants	7.50	12.00	12.00	13.00	13.00	13.00
Birds over 1,000 grams and large poultry and large waterfowl, including, but not limited to game cocks, geese, swans, and turkeys	14.00	23.00	24.00	24.00	25.00	25.00

User Fees for Exclusive Use of Space at APHIS Animal Import Centers (§ 130.3)

Section 130.3 lists user fees charged with an importer uses an entire quarantine building at an Animal Import Center. If the space is available and the importer has enough animals to fill one of the full building spaces, then a single user fee applies. Depending upon the number and type of animals in the importation, the single user fee for the entire building may be less than the total user fee that would have been charged per animal under § 130.2

Section 130.3 of the regulations lists the location of the spaces, the square footage of those spaces, and the user fees for exclusive use of those spaces. The fees in § 130.3 cover all costs of the quarantine except feed. The importer either provides the fee or pays for it on an actual cost basis, including the cost of delivery.

The table in § 130.3 currently lists the user fees for the exclusive use of the Miami, FL, and Newburgh, NY, Animal Import Centers. The Miami Animal Import Center is not being used as an exclusive use quarantine facility. We do not anticipate any requests for the exclusive use of space at the Miami Animal Import Center. Therefore, we propose to remove user fees for the exclusive use of the Miami Animal Import Center from the listing in § 130.3. The spaces at Newburgh, NY, would continue to be available for exclusive use.

The importer determines the species, sizes, and ages of the animals or birds in the importation, calls for a reservation, and requests the use of an entire building. At that time we determine, and inform the importer of, the maximum number of animals and birds we would permit. We limit the number of animals or birds to the maximum number which can be cared for without jeopardizing their health. In determining the maximum number, the veterinarian in charge of the Animal Import Center considers the species, size and age of the animals, animal husbandry needs, sanitation, ability to conduct tests, inspections, and support procedures.

The table below lists the proposed user fees for the exclusive use of space at APHIS Animal Import Centers for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor cost adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR EXCLUSIVE USE OF SPACE FOR ANIMALS QUARANTINED IN APHIS ANIMAL IMPORT CENTERS (§ 130.3)

Animal import center	Current user fee	Monthly user fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Newburgh, NY:						
Space A 5,396 sq. ft. (503.1 sq. m.)	$43,102	$53,037	$54,523	$56,054	$57,630	$59,254
Space B 8,903 sq. ft. (827.1 sq. m.)	71,118	87,508	89,959	92,484	95,085	97,764
Space C 905 sq. ft. (84.1 sq. m.)	7,229	8,895	9,144	9,401	9,666	9,938

User Fees for Inspection of Animals at Ports of Entry

Sections 130.6 and 130.7 list user fees we charge for inspecting animals imported into the United States. We inspect the animals to minimize the risk that they could introduce a foreign animal disease into the United States. We provide inspection services at U.S. border ports, airports, and ocean ports.

We charge the user fee per animal or per load, depending on whether the animals are handled individually or as a group. The user fees vary with the location and type of animal. Different types of animals require different amounts and types of services. User fees for services at the United States-Mexico

border are listed in § 130.6. User fees for services at other ports of entry are listed in § 130.7.

The tables below list the proposed user fees for inspection of animals at ports of entry for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR INSPECTION OF ANIMALS AT LAND BORDER PORTS ALONG THE UNITED STATES-MEXICO BORDER (§ 130.6(a))

Type of live animal	Current user fee	Per head user fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning October 1, 2003
Any ruminants not listed below	$6.00	$8.00	$8.25	$8.50	$8.75	$9.00
Feeder	1.75	2.25	2.25	2.25	2.50	2.50
Horses, other than slaughter	29.25	39.00	41.00	42.00	43.00	44.00
In-bond or in-transit	3.75	5.25	5.25	5.50	5.50	5.75
Slaughter	2.50	3.50	3.50	3.50	3.75	3.75

USER FEES FOR INSPECTION OF ANIMALS AT LAND BORDER PORTS AT ALL OTHER PORTS OF ENTRY (§ 130.7(a))

Type of live animal	Unit	Current user fee	User fee				
			Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Animals being imported into the United States							
Breeding animals (grade animals, except horses):							
Sheep and goats	per head	$0.50	$0.50	$0.50	$0.50	$0.50	$0.50
Swine	per head	0.50	0.75	0.75	0.75	0.75	0.75
All others	per head	2.25	3.00	3.00	3.25	3.25	3.25
Feeder animals:							
Cattle (not including calves)	per head	$1.00	$1.50	$1.50	$1.50	$1.50	$1.50
Sheep and calves	per head	0.25	0.50	0.50	0.50	0.50	0.50
Swine	per head	0.25	0.25	0.25	0.25	0.25	0.25
Horses, other than slaughter and in-transit.	per head	19.00	25.00	26.00	27.00	28.00	29.00
Poultry (including eggs), imported for any purpose.	per load	33.00	44.00	46.00	47.00	48.00	50.00
Registered animals, all types	per head	4.00	5.25	5.50	5.50	5.75	6.00
Slaughter animals, all types	per load	16.50	22.00	23.00	24.00	24.00	25.00
Animals transiting[1] the United States							
Cattle	per head	1.00	1.25	1.25	1.50	1.50	1.50
Horses and all other animals	per head	4.50	6.00	6.25	6.50	6.75	6.75
Sheep and goats	per head	0.25	0.25	0.25	0.25	0.25	0.25
Swine	per head	0.25	0.25	0.25	0.25	0.25	0.25

[1] The user fee in this section will be charged for in-transit authorizations at the port where the authorization services are performed. For additional services provided by APHIS, at any port, the hourly user fee rate in § 130.30 will apply.

User Fees for Other Services (§ 130.8)

Section 130.8 lists the user fees we charge for a variety of other services we provide related to the importation into or exportation from the United States of animals, animals products, birds, germ plasm, organisms, and vectors.

The table below lists the proposed user fees for these services for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR OTHER SERVICES (§ 130.8(a))

Service	Unit	Current user fee	User fee				
			Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Embryo collection center inspection and approval (all inspections required during the year for facility approval).	per year	$278.50	$337.00	$347.00	$358.00	$369.00	$380.00
Germ plasm being exported: [1]							

USER FEES FOR OTHER SERVICES (§ 130.8(a))—Continued

Service	Unit	Current user fee	User fee				
			Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Embryo:							
Up to 5 donor pairs	per certificate	54.75	74.00	76.00	79.00	81.00	83.00
Each additional group of donor pairs, up to 5 pairs per group, on the same certificate.	per group of donor pairs	24.75	33.00	34.00	35.00	36.00	37.00
Semen	per certificate	33.50	45.00	46.00	48.00	49.00	51.00
Germ plasm being imported:[2]							
Embryo	per load	39.50	54.00	55.00	57.00	58.00	60.00
Semen	per load	39.50	54.00	55.00	57.00	58.00	60.00
Import compliance assistance:							
Simple (2 hours or less)	per release	51.25	62.00	64.00	66.00	68.00	70.00
Complicated (more than 2 hours)	per release	131.75	159.00	164.00	169.00	174.00	180.00
Inspection for approval of slaughter establishment:							
Initial approval (all inspections)	per year	246.50	332.00	342.00	352.00	362.00	373.00
Renewal (all inspections)	per year	213.50	288.00	296.00	305.00	314.00	323.00
Inspection of approved establishments, warehouses, and facilities under 9 CFR parts 94 through 96:							
Approval (compliance agreement) (all inspections for first year of 3-year approval).	per year	262.75	354.00	365.00	375.00	386.00	398.00
Renewed approval (all inspections for second and third years of 3-year approval).	per year	152.00	205.00	211.00	217.00	223.00	230.00
Pet birds (except pet birds of U.S. origin entering the United States from Canada):							
Which have been out of the United States more than 60 days.	per lot	169.75	229.00	236.00	243.00	250.00	257.00
Which have been out of the United States 60 days or less.	per lot	71.25	96.00	99.00	102.00	105.00	108.00
Processing VS form 16–3, ''Application for permit to Import Controlled Material/Import or Transport Organisms or Vectors'':							
For permit to import fetal bovine serum when facility inspection is required.	per application	208.50	275.00	283.00	292.00	300.00	309.00
For all other permits	per application	27.50	35.00	36.00	37.00	38.00	39.00
Amended application	per amended application	11.50	14.00	15.00	15.00	16.00	16.00
Application renewal	per application	15.00	19.00	19.00	20.00	21.00	21.00
Release from export agricultural hold:							
Simple (2 hours or less)	per release	51.25	62.00	64.00	66.00	68.00	70.00
Complicated (more than 2 hours)	per release	131.75	159.00	164.00	169.00	174.00	180.00

[1] This user fee includes a single inspection and resealing of the container at the APHIS employee's regular tour of duty station or at a limited port. For each subsequent inspection and resealing required, the hourly user fee in § 130.30 will apply.2

[2] For inspection of empty containers being imported into the United States, the hourly user fee in § 130.30 will apply, unless a user fee has been assessed under 7 CFR part 354.3.

User Fees for Pet Birds (§ 130.10)

Section 130.10 lists user fees charged for services we provide for pet birds that must be quarantined in an APHIS owned or supervised quarantine facility.

In accordance with 9 CFR part 93, pet birds are normally quarantined for 30 days. We charge a daily user fee. The user fee applies per isolette and varies based on the number of pet birds in the isolette. That is, all the birds quarantined in one isolette are covered by one fee, which is assessed daily for the duration of the quarantine.

This user fee recovers all costs of feeding, housing, handling, and caring for the birds. The user fee does not recover the costs of testing the birds, for which separate user fees apply.

The table below lists the proposed user fees for pet birds quarantined in APHIS owned or supervised quarantine facilities for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR PET BIRDS QUARANTINED IN APHIS OWNED OR SUPERVISED QUARANTINE FACILITIES (§ 130.10)

Number of birds in isolette	Daily user fee					
	Current user fee	Oct. 1, 1999-Sept. 30, 2000	Oct. 1, 2000-Sept. 30, 2001	Oct. 1, 2001-Sept. 30, 2002	Oct. 1, 2002-Sept. 30, 2003	Beginning Oct. 1, 2003
1	$6.50	$8.25	$8.50	$8.75	$9.00	$9.25
2	7.75	10.00	10.00	11.00	11.00	11.00
3	9.28	12.00	12.00	13.00	13.00	13.00
4	10.75	14.00	14.00	15.00	15.00	15.00
5 or more	12.00	16.00	16.00	17.00	17.00	18.00

User Fees for Endorsing Export Certificates (§ 130.20)

Section 130.20 lists user fees we charge for endorsing certificates for animals or animal products exported from the United States. The importing countries often require these certificates to show that an animal has tested negative to specific animal diseases or that an animal or animal product has not been exposed to specific animal diseases.

These user fees are intended to cover all of the costs associated with endorsing the certificates. The steps associated with endorsing an export certificate may include reviewing supporting documentation; confirming that the importing country's requirements have been met; verifying laboratory test results for each animal if tests are required; reviewing any certification statements required by the importing country; and endorsing, or

signing, the certificates. Because importing countries often require these certificates for animals, animal products, and other products, we are proposing to change the references in the regulations from ''export health certificates'' to ''export certificates.''

The tables below list the proposed user fees for endorsing these certificates for fiscal years 2000–2004. As explained above, the proposed user fees are based on FY 1999 costs and include direct labor costs adjusted by 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through 2004 to cover increases in employee pay, and adjustments for inflation at 2.3 percent each year. The percentage changes in the user fees from one fiscal year to the next vary based on rounding.

USER FEES FOR ENDORSING EXPORT CERTIFICATES (§ 130.20(a))

Certificate categories	Current user fee	User fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Animal products	$21.50	$29.00	$30.00	$30.00	$31.00	$32.00
Hatching eggs	21.00	27.00	28.00	28.00	29.00	30.00
Nonslaughter horses to Canada	26.25	34.00	35.00	36.00	37.00	38.00
Poultry (including slaughter poultry)	21.00	27.00	28.00	28.00	29.00	30.00
Slaughter animals, of any type, moving to Canada or Mexico	24.50	31.00	32.00	33.00	34.00	35.00
Other endorsements or certifications	16.50	21.00	22.00	22.00	23.00	24.00

USER FEES FOR ENDORSING EXPORT CERTIFICATES WHEN THE IMPORTING COUNTRY REQUIRES TESTS (§ 130.20(b)(1))

Number of tests or vaccinations and Number of animals or birds on the certificate	Current user fee	User fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
1–2 tests or vaccinations:						
First animal	$52.50	$68.00	$70.00	$72.00	$74.00	$76.00
Each additional animal	3.00	4.00	4.00	4.00	4.25	4.25
3–6 tests or vaccinations:						
First animal	64.75	84.00	86.00	88.00	91.00	94.00
Each additional animal	5.00	6.50	6.75	7.00	7.00	7.25
7 or more tests or vaccinations:						
First animal	75.75	98.00	100.00	103.00	106.00	109.00
Each additional animal	6.00	7.75	8.00	8.25	8.25	8.50

Executive Order 12866 and Regulatory Flexibility Act

This proposed rule has been reviewed under Executive Order 12866. The rule has been determined to be significant for the purposes of Executive Order 12866 and, therefore, has been reviewed by the Office of Management and Budget.

Below is a summary of the economic analysis for the changes in APHIS user fees proposed in this document. The economic analysis provides a cost-benefit analysis as required by Executive Order 12866 and an analysis of the potential economic effects on small entities as required by the Regulatory Flexibility Act. A copy of the full economic analysis, which includes comparisons of the change in collections for each user fee, is available for review at the location listed in the **ADDRESSES** section at the beginning of this document.

We do not have enough data for a comprehensive analysis of the economic effects of this proposed rule on small entities. Therefore, in accordance with 5 U.S.C. 603, we have performed an Initial Regulatory Flexibility Analysis for this proposed rule. We are inviting comments about this proposed rule as it relates to small entities. In particular, we are interested in determining the number and kind of small entities who may incur benefits or costs from implementation of this proposed rule and the economic impact of those benefits or costs.

These user fees are authorized by section 2509(c)(1) of the Food, Agriculture, Conservation, and Trade Act of 1990, as amended (21 U.S.C. 136a). APHIS is authorized to establish and collect fees that will cover the cost of providing import- and export-related services for animals, animal products, birds, germ plasm, organisms, and vectors.

Since FY 1992, APHIS has received no directly appropriated funds to provide import- and export-related services for animals, animal products, birds, germ plasm, organisms, and vectors. Our ability to provide these services depends on user fees. We change our user fees through the standard rulemaking process of publishing the proposed changes for public comment in the **Federal Register**, considering the comments, publishing the final changes in the **Federal Register**, and making the new user fees effective 30 days after the final rule is published. This rulemaking process can be lengthy. As a result, our user fees may not reflect our current cost of providing services.

For our user fees to cover our costs so that we can continue to provide services and to inform our customers of user fees in time for advance planning, we propose to set user fees for our services in advance for fiscal years 2000 through 2004. The proposed user fees are based on our costs of providing import- and export-related services in FY 1999, plus anticipated annual increases in the salaries of employees who provide the services, plus adjustments for inflation. We used estimated pay increases of 4.4 percent for FY 2000 and 3.9 percent for FY 2001 through FY 2004 published by the U.S. Treasury Department to calculate increases in the direct labor costs each year. We estimated inflation at 2.3 percent a year based on the Consumer Price Index (CPI). The estimated CPI is published in the

Economic Assumptions table of the Budget for the U.S. Government each year.

Since the rulemaking process can be lengthy, it is difficult to estimate when proposed user fee changes may become effective. For analysis purposes, we based projected collections on calculations using an estimated effective date of April 1, 2000 for the proposed FY 2000 user fees. Our goal is to implement the proposed user fees in a timely fashion. In the final rule, we will show revised projections of user fee collections based on the effective date of the proposed user fees.

The following summary table shows annual expenses for providing import- and export-related services, current collections, increases in collections from the proposed user fee changes, and projected reserve amounts.

Calendar dates	Estimated current annual [1]	FY 2000 [2]	FY 2001	FY 2002	FY 2003	FY 2004	Total FY 2000 FY 2004
Operating reserve, start of year	$382,142	$382,142	$0	$1,083,957	$2,040,005	3,072,364	.....
Annual income:							
Current collections [3]	11,940,080	11,940,080	11,940,080	11,940,080	11,940,080	11,940,080	71,640,480
Proposed collections	0	2,303,817	5,005,404	5,391,637	5,999,739	6,451,365	25,151,962
Total income	11,940,080	14,243,897	16,945,484	17,331,717	17,939,819	18,391,445	96,792,442
Annual expenses [4]	11,940,080	14,626,039	15,861,527	16,375,669	16,907,460	17,457,533	93,168,308
Income, less expenses	0	(382,142)	1,083,957	956,048	1,032,359	933,912	
Operating reserve, end of year	382,142	0	1,083,957	2,040,005	3,072,364	4,006,276	
Months (no.)	0.00	0.00	0.82	1.49	2.18	2.75	

[1] Current annual estimates are based on FY 1998.

[2] FY 2000 estimates are based on an estimated implementation date for the proposed user fees of April 1, 2000. When the estimated implementation date changes, we will recalculate the projections using that date.

[3] Projections for FY 2000–2004 are based on FY 1998 volumes. When FY 1999 volumes are available, we will recalculate the projections using FY 1999 volumes. Increases in volumes in the outyears would increase income and expenses proportionately.

[4] The annual expenses shown in the table in the estimated current annual column and in the FY 2000 column reflect expenses constrained by income from user fee collections. Our user fees are not high enough to provide the level of service delivery requested for import- and export-related activities. Our current user fees are approximately $2.5 million below the performance level of services requested. Even with the proposed user fee increases, using an estimated effective date of April 1, 2000 for the proposed FY 2000 user fees, we anticipate that in FY 2000 our user fee collections would be over $1 million below the level of anticipated service requests. To constrain expenses down to equal income, we would be required to restrict services until user fee increases can be implemented. Adoption of the proposed user fees would allow us to meet customer demand and build an adequate reserve. Therefore, once implemented, service restrictions would no longer be required.

Effects on Small Entities

Proposed user fee changes could affect some importers and exporters of live animals, animal products, birds, germ plasm, organisms, and vectors. Any of these importers or exporters whose annual sales total less than $5 million is a small entity according to the Small Business Administration (SBA). We do not have adequate information to determine the number of entities who import or export live animals and qualify as a small entity. Data from the 1995 Bureau of Census indicates that the majority of agricultural entities who deal in less valuable animals, such as feeding or slaughter animals, can be considered small. This may not be the case for entities dealing exclusively in more valuable animals. While there is a wide range in the sizes of entities who use our import- and export-related services, our experience shows that as many as 50 percent may be considered large.

The profit margins of some entities could decline as user fees for import-or export-related services are increased. However, the proposed increases are generally small in dollar value. Over the 5 years, more than 57 percent of the individual user fee increases are $1.00 or less, and more than 88 percent are less than $10.00. In addition, the proposed user fees represent a small fraction of the value of the affected animals. Purchase and import costs for importing a breeding grade animal into the United States can range between $1500 and $5000 per head. Therefore, the proposed increases are not generally expected to reduce profits or impede imports or exports. Indeed, entities directly effected by this proposed rule are not likely to bear the full burden of the user fee increases, as some of the cost increases are expected to be passed on to the purchasers of these imported or exported animals or animal products.

Alternatives

One alternative to this proposed rule would be to make no changes to the current user fees. We do not consider making no changes to the current user fees a reasonable alternative because we would not recover the full cost of providing the import-and export-related services. Since 1992, Congress has not appropriated funds for these services; these services have been paid for through user fees charged to the customer or reimbursable agreements. Therefore, if we had chosen this alternative and not proposed changes to the current user fees, funds would not be available to continue to provide services at a level sufficient to meet customer demand.

Another alternative to this proposed rule would be to either exempt small businesses from these user fees or establish a different user fee structure for small businesses. APHIS cannot exempt certain classes of users, such as small businesses, from the user fees, and cannot charge user fees that recover less than the full cost of providing the service. In addition, every business, including small businesses, using a government service needs to pay the cost of that service, rather than having other businesses pay a disproportionate share or passing those costs on to the general public, who are not the primary beneficiary of the service. Therefore, we do not consider exempting small businesses from these user fees or establishing a different user fee structure for small businesses as viable options.

Another alternative to the user fee changes proposed in this rule would be to calculate the increases for the five year period and then spread the changes evenly in annual increments. The largest change from the current user fees to the proposed FY 2000 user fee comes from the additional administrative support cost components: Rent, billing costs and collections expenses, and

equipment capitalization. APHIS is already incurring these costs, therefore we need to recover these costs through user fees. If we had proposed these increases phased in over the 5 year period, it would benefit users in FY 2000 because they would not pay a large increase in the first year. However, most of these user fees have not been changed since FY 1996 and the current user fees no longer reflect the cost of providing import- and export-related services. Therefore, if we implemented this alternative, the user fees would still not accurately reflect the costs in FY 2000 and we would not recover the costs of providing import- or export-related services, so this option is not viable. Our intent of offering a multi-year plan so that businesses can include these revised user fees in their operating program will be effective once these proposed user fees become effective and businesses will know what the annual changes will be to incorporate them into their budgetary plans. The alternative would be to continue as we have with occasional large increases instead of the initial increase to bring the user fees up to the cost of providing services and implementing annual changes as we have proposed in this document.

Cost Benefit Analysis

The benefit of user fees is the shift in the payment of services from taxpayers as a whole to those persons who are receiving the government services. While taxes may not change by the same amount as the change in user fee collections, there is a related shift in the appropriations of taxes to government programs, which allows those tax dollars to be applied to other programs which benefit the public in general. Therefore, there could be a relative savings to taxpayers as a result of the proposed changes in user fees.

The administrative cost involved in obtaining these savings would be minimal. APHIS already has a user fee program and a mechanism for collecting user fees in place. This proposal would update existing user fees in the system. Therefore, increases in administrative costs would be small. Because the savings are sufficiently large, and the administrative costs would be small, it is likely that the net gain in reducing the burden on taxpayers as a whole would outweigh the cost of administering the revisions of the user fees.

This proposed rule contains no new information collection or recordkeeping requirements.

Executive Order 12988

This proposed rule has been reviewed under Executive Order 12988, Civil Justice Reform. If this proposed rule is adopted: (1) All State and local laws and regulations that are inconsistent with this rule will be preempted; (2) no retroactive effect will be given to this rule; and (3) administrative proceedings will not be required before parties may file suit in court challenging this rule.

Paperwork Reduction Act

This proposed rule contains no new information collection or recordkeeping requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

List of Subjects in 9 CFR Part 130

Animals, Birds, Diagnostic reagents, Exports, Imports, Poultry and poultry products, Quarantine, Reporting and recordkeeping requirements, Tests.

Accordingly, we propose to amend 9 CFR part 130 as follows:

PART 130—USER FEES

1. The authority citation for part 130 would be revised to read as follows:

Authority: 5 U.S.C. 5542; 7 U.S.C. 1622; 19 U.S.C. 1306; 21 U.S.C. 102–105, 111, 114, 114a, 134a, 134c, 134d, 134f, 136, and 136a; 31 U.S.C. 3701, 3716, 3717, 3719, and 3720A; 7 CFR 2.22, 2.80, and 371.2(d).

2. Section 130.2 would be amended as follows:

a. In paragraph (a), by revising the table to read as set forth below.

b. In paragraph (b), by revising the table to read as set forth below.

§ 130.2 User fees for individual animals and certain birds quarantined in APHIS Animal Import Centers.

(a) * * *

Animal or bird	Daily user fee				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Birds (excluding ratites and pet birds imported in accordance with Part 93 of this subchapter):					
0–250 grams	$1.50	$1.50	$1.50	$1.50	$1.75
251–1,000 grams	5.00	5.25	5.25	5.50	5.75
Over 1,000 grams	12.00	12.00	13.00	13.00	13.00
Domestic or zoo animals (except equines, birds, and poultry):					
Bison, bulls, camels, cattle, or zoo animals	93.00	95.00	97.00	100.00	102.00
All others, including, but not limited to, alpacas, llamas, goats, sheep, and swine	24.00	25.00	26.00	26.00	27.00
Equines (including zoo equines, but excluding miniature horses):					
1st through 3rd day (fee per day)	245.00	251.00	257.00	264.00	270.00
4th through 7th day (fee per day)	177.00	182.00	186.00	191.00	195.00
8th and subsequent days (fee per day)	150.00	154.00	158.00	162.00	166.00
Miniature horses	56.00	57.00	58.00	60.00	61.00
Poultry (including zoo poultry):					
Doves, pigeons, quail	3.00	3.25	3.25	3.25	3.50
Chickens, ducks, grouse, guinea fowl, partridge, pea fowl, pheasants	5.75	6.00	6.00	6.25	6.25
Large poultry and large waterfowl, including, but not limited to game cocks, geese, swans, and turkeys	13.00	14.00	14.00	14.00	15.00
Ratites:					
Chicks (less than 3 months old)	8.50	8.75	9.00	9.00	9.25
Juveniles (3 months through 10 months old)	13.00	13.00	13.00	14.00	14.00
Adults (11 months old and older)	24.00	25.00	26.00	26.00	27.00

(b) * * *

Bird or poultry (nonstandard housing, care, or handling)	Daily user fee				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Birds 0–250 grams and doves, pigeons, and quail	$5.00	$5.25	$5.25	$5.50	$5.75
Birds 251–1,000 grams and poultry such as chickens, ducks, grouse, guinea fowl, partridge, pea fowl, and pheasants	12.00	12.00	13.00	13.00	13.00
Birds over 1,000 grams and large poultry and large waterfowl, including, but not limited to game cocks, geese, swans, and turkeys	23.00	24.00	24.00	25.00	25.00

* * * * *

3. Section 130.3 would be amended as follows:

a. In paragraph (a)(1), the table would be revised to read as set forth below.

b. By revising paragraph (c)(3) to read as set forth below.

§ 130.3 User fees for exclusive use of space at APHIS Animal Import Centers.

(a)(1) * * *

Animal import center	Monthly user fee				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Newburgh, NY:					
Space A 5,396 sq. ft. (503.1 sq. m.)	$53,037	$54,523	$56,054	$57,630	$59,254
Space B 8,903 sq. ft (827.1 sq. m.)	87,508	89,959	92,484	95,085	97,764
Space C 905 sq. ft. (84.1 sq. m.)	8,895	9,144	9,401	9,666	9,938

* * * * *

(c) * * *

(3) If the importer requests additional services, then the user fees for those services will be calculated at the hourly rate user fee listed in § 130.30, for each employee required to perform the service.

* * * * *

4. Section 130.5 would be revised to read as follows:

§ 130.5 User fees for services at privately operated permanent and temporary import quarantine facilities.

(a) User fees for each animal quarantined in a privately operated permanent or temporary import quarantine facility will be calculated at the hourly user fee rate listed in § 130.30, for each employee required to perform the service. The person for whom the service is provided and the person requesting the service are jointly and severally liable for payment of these user fees in accordance with §§ 130.50 and 130.51.

(b) [Reserved]

(Approved by the Office of Management and Budget under control number 0579–0094)

5. Section 130.6 would be revised to read as follows:

§ 130.6 User fees for inspection of live animals at land border ports along the United States-Mexico border.

(a) User fees for live animals presented for importation into or entry into the United States through a land border port along the United States-Mexico border are listed in the following table. The minimum user fee for this service is listed in § 130.30. The person for whom the service is provided and the person requesting the service are jointly and severally liable for payment of these user fees in accordance with §§ 130.50 and 130.51.

Type of live animal	Per head user fee				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Any ruminants not covered below	$8.00	$8.25	$8.50	$8.75	$9.00
Feeder	2.25	2.25	2.25	2.50	2.50
Horses, other than slaughter	39.00	41.00	42.00	43.00	44.00
In-bond or in-transit	5.25	5.25	5.50	5.50	5.75
Slaughter	3.50	3.50	3.50	3.75	3.75

(b) [Reserved]

(Approved by the Office of Management and Budget under control numbers 0579–0055 and 0579–0094)

6. Section 130.7 would be revised to read as follows:

§ 130.7 User fees for inspection of live animals at all other ports of entry.

(a) User fees for live animals presented for importation into or entry into the United States through any port of entry, other than a land border port along the border between the United States and Mexico, are listed in the following table. The minimum user fee for this service is listed in § 130.30. The person for whom the service is provided and the person requesting the service are jointly and severally liable for payment of these user fees in accordance with §§ 130.50 and 130.51.

Type of live animal	Unit	User fee				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Animals being imported into the United States:						
Breeding animals (Grade animals, except horses):						
Sheep and goats	per head	$0.50	$0.50	$0.50	$0.50	$0.50
Swine	per head	0.75	0.75	0.75	0.75	0.75
All others	per head	3.00	3.00	3.25	3.25	3.25
Feeder animals:						
Cattle (not including calves)	per head	1.50	1.50	1.50	1.50	1.50
Sheep and calves	per head	0.50	0.50	0.50	0.50	0.50
Swine	per head	0.25	0.25	0.25	0.25	0.25
Horses, other than slaughter and in-transit.	per head	25.00	26.00	27.00	28.00	29.00
Poultry (including eggs), imported for any purpose.	per load	44.00	46.00	47.00	48.00	50.00
Registered animals, all types	per head	5.25	5.50	5.50	5.75	6.00
Slaughter animals, all types	per load	22.00	23.00	24.00	24.00	25.00
Animals transiting[1] the United States:						
Cattle	per head	1.25	1.25	1.50	1.50	1.50
Horses and all other animals	per head	6.00	6.25	6.50	6.75	6.75
Sheep and goats	per head	0.25	0.25	0.25	0.25	0.25
Swine	per head	0.25	0.25	0.25	0.25	0.25

[1] The user fee in this section will be charged for in-transit authorizations at the port where the authorization services are performed. For additional services provided by APHIS, at any port, the hourly user fee rate in § 130.30 will apply.

(b) [Reserved]

(Approved by the Office of Management and Budget under control numbers 0579–0055 and 0579–0094)

7. Section 130.8 would be revised to read as follows:

§ 130.8 User fees for other services.

(a) User fees for other services that are not specifically addressed elsewhere in part 130 are listed in the following table. The person for whom the service is provided and the person requesting the service are jointly and severally liable for payment of these user fees in accordance with §§ 130.50 and 130.51.

Service	Unit	User fee—				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Embryo collection center inspection and approval (all inspections required during the year for facility approval).	Per year	$337.00	$347.00	$358.00	$369.00	$380.00
Germ plasm being exported:[1]						
Embryo:						
Up to 5 donor pairs	Per certificate	74.00	76.00	79.00	81.00	83.00
Each additional group of donor pairs, up to 5 pairs per group, on the same certificate.	Per group of donor pairs.	33.00	34.00	35.00	36.00	37.00
Semen	Per certificate	45.00	46.00	48.00	49.00	51.00
Germ plasm being imported:[2]						
Embryo	Per load	54.00	55.00	57.00	58.00	60.00
Semen	Per load	54.00	55.00	57.00	58.00	60.00
Import compliance assistance:						
Simple (2 hours or less)	Per release	62.00	64.00	66.00	68.00	70.00
Complicated (more than 2 hours).	Per release	159.00	164.00	169.00	174.00	180.00
Inspection for approval of slaughter establishment:						
Initial approval (all inspections)	Per year	332.00	342.00	352.00	362.00	373.00
Renewal (all inspections)	Per year	288.00	296.00	305.00	314.00	323.00
Inspection of approved establishments, warehouses, and facilities under 9 CFR parts 94 through 96:						
Approval (compliance agreement) (all inspections for first year of 3-year approval).	Per year	354.00	365.00	375.00	386.00	398.00

Service	Unit	User fee—				
		Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Renewed approval (all inspections for second and third years of 3-year approval).	Per year	205.00	211.00	217.00	223.00	230.00
Pet birds (except pet birds of U.S. origin entering the United States from Canada):						
Which have been out of the United States more than 60 days.	Per lot	229.00	236.00	243.00	250.00	257.00
Which have been out of the United States 60 days or less.	Per lot	96.00	99.00	102.00	105.00	108.00
Processing VS form 16–3, ''Application for Permit to Import Controlled Material/Import or Transport Organisms or Vectors'':						
For permit to import fetal bovine serum when facility inspection is required.	Per application	275.00	283.00	292.00	300.00	309.00
For all other permits	Per application	35.00	36.00	37.00	38.00	39.00
Amended application	Per amended application.	14.00	15.00	15.00	16.00	16.00
Application renewal	Per application	19.00	19.00	20.00	21.00	21.00
Release from export agricultural hold:						
Simple (2 hours or less)	Per release	62.00	64.00	66.00	68.00	70.00
Complicated (more than 2 hours).	Per release	159.00	164.00	169.00	174.00	180.00

[1] This user fee includes a single inspection and resealing of the container at the APHIS employee's regular tour of duty station or at a limited port. For each subsequent inspection and resealing required, the hourly user fee in § 130.30 will apply.

[2] For inspection of empty containers being imported into the United States, the hourly user fee in § 130.30 will apply, unless a user fee has been assessed under 7 CFR part 354.3.

(b) [Reserved]

(Approved by the Office of Management and Budget under control numbers 0579–0015, 0579–0040, 0579–0055 and 0579–0094)

§ 130.9 [Removed and Reserved]

8. Section 130.9 would be removed and reserved.

9. Section 130.10 would be amended as follows:

a. In paragraph (a), by revising the table to read as set forth below.

b. By revising paragraph (c) to read as set forth below.

§ 130.10 User fees for pet birds quarantined at APHIS-owned or supervised quarantine facilities.

(a) * * *

Number of birds in isolette	Daily user fee—				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
1	$8.25	$8.50	$8.75	$9.00	$9.25
2	10.00	10.00	11.00	11.00	11.00
3	12.00	12.00	13.00	13.00	13.00
4	14.00	14.00	15.00	15.00	15.00
5 or more	16.00	16.00	17.00	17.00	18.00

* * * * *

(c) If the importer requests additional services, then the user fees for those services will be calculated at the hourly rate user fee listed in § 130.30, for each employee required to perform the service.

(Approved by the Office of Management and Budget under control number 0579–0094)

10. Section 130.20 would be amended as follows:

a. By revising the section heading to read as set forth below.

b. In paragraph (a), by revising the table to read as set forth below.

c. In paragraph (b)(1), by revising the table to read as set forth below.

§ 130.20 User fees for endorsing export certificates.

(a) * * *

Certificate categories	User fee—				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Animal products	$29.00	$30.00	$30.00	$31.00	$32.00

Certificate categories	User fee—				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Hatching eggs	27.00	28.00	28.00	29.00	30.00
Nonslaughter horses to Canada	34.00	35.00	36.00	37.00	38.00
Poultry (including slaughter poultry)	27.00	28.00	28.00	29.00	30.00
Slaughter animals, of any type, moving to Canada or Mexico	31.00	32.00	33.00	34.00	35.00
Other endorsements or certifications	21.00	22.00	22.00	23.00	24.00

(b)(1) * * *

Number of tests or vaccinations and Number of animals or birds on the certificate	User fee—				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
1–2 tests or vaccinations:					
First animal	$68.00	$70.00	$72.00	$74.00	$76.00
Each additional animal	4.00	4.00	4.00	4.25	4.25
3–6 tests or vaccinations:					
First animal	84.00	86.00	88.00	91.00	94.00
Each additional animal	6.50	6.75	7.00	7.00	7.25
7 or more tests or vaccinations:					
First animal	98.00	100.00	103.00	106.00	109.00
Each additional animal	7.75	8.00	8.25	8.25	8.50

* * * * *

§ 130.21 [Removed and Reserved]

11. Section 130.21 would be removed and reserved.

12. A new § 130.30 would be added to read as follows:

130.30 Hourly rate user fees.

(a) User fees for import-or export-related veterinary services listed in paragraphs (a)(1) through (a)(10) of this section will be calculated at the hourly rate listed in the following table for each employee required to perform the service. The person for whom the service is provided and the person requesting the service are jointly and severally liable for payment of these user fees in accordance with §§ 130.50 and 130.51.

	Hourly user fee				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Hourly rate:					
Per hour	$76.00	$76.00	$80.00	$84.00	$84.00
Per quarter hour	19.00	19.00	20.00	21.00	21.00
Per service minimum fee	22.00	23.00	24.00	24.00	25.00

(1) Conducting inspections, including laboratory and facility inspections, required to obtain permits, either to import animal products, aquaculture products, organisms or vectors, or to maintain compliance with import permits.

(2) Obtaining samples required to be tested, either to obtain import permits or to ensure compliance with import permits.

(3) Providing services for imported birds or ratites that are not subject to quarantine.

(4) Supervising the opening of in-bond shipments.

(5) Providing services for in-bond or in-transit animals to exit the United States.

(6) Inspecting an export isolation facility and the animals in it.

(7) Supervising animal or bird rest periods prior to export.

(8) Supervising loading and unloading of animals or birds for export shipment.

(9) Inspecting means of conveyance used to export animals or birds.

(10) Conducting inspections under part 156 of this chapter.

(11) Inspecting and approving an artificial insemination center or a semen collection center or the animals in it.

(12) Providing other import-or export-related veterinary services for which there is no flat rate user fee specified elsewhere in this part.

(b) When do I pay an additional amount for employee(s) working overtime? You must pay an additional amount if you need an APHIS employee to work on a Sunday, on a holiday, or at any time outside the normal tour of duty of that employee. Instead of paying the hourly rate user fee, you pay the rate listed in the following table for each employee needed to get the work done.

Overtime rates (outside the employee's normal tour of duty)	Premium rate user fee—				
	Oct. 1, 1999–Sept. 30, 2000	Oct. 1, 2000–Sept. 30, 2001	Oct. 1, 2001–Sept. 30, 2002	Oct. 1, 2002–Sept. 30, 2003	Beginning Oct. 1, 2003
Premium hourly rate Monday through Saturday and holidays:					
Per hour	$88.00	$88.00	$92.00	$96.00	$100.00
Per quarter hour	22.00	22.00	23.00	24.00	25.00
Premium hourly rate for Sundays:					
Per hour	100.00	104.00	104.00	108.00	112.00
Per quarter hour	25.00	26.00	26.00	27.00	28.00

(Approved by the Office of Management and Budget under control numbers 0579–0055 and 0579–0094)

13. In § 130.50, paragraph (b)(3)(ii) would be revised to read as follows:

§ 130.50 Payment of user fees.

* * * * *

(b) * * *

(3) * * *

(ii) What additional amount do I pay if I receive an hourly rate user fee service? Instead of paying the hourly rate user fee, you pay the rate listed in § 130.30(b) for each employee needed to get the work done.

* * * * *

Done in Washington, DC, this 24th day of September 1999.

Bobby R. Acord,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 99–25425 Filed 9–29–99; 8:45 am]

BILLING CODE 3410–34–P

NATIONAL CREDIT UNION ADMINISTRATION

12 CFR Part 701

Organization and Operations of Federal Credit Unions

AGENCY: National Credit Union Administration (NCUA).

ACTION: Proposed rule.

SUMMARY: NCUA is proposing to amend its lending regulation to permit federal credit unions to advance money to members to cover account deficits without having a credit application from the member on file if the credit union has a written overdraft policy.

DATES: The NCUA must receive comments on or before November 29, 1999.

ADDRESSES: Direct comments to Becky Baker, Secretary of the Board. Mail or hand-deliver comments to: National Credit Union Administration, 1775 Duke Street, Alexandria, Virginia 22314–3428, or you may fax comments to (703) 518–6319. *Please send comments by one method only.*

FOR FURTHER INFORMATION CONTACT: Michael J. McKenna, Senior Staff Attorney, or Regina M. Metz, Staff Attorney, in the Division of Operations, Office of General Counsel, at the above address or telephone: (703) 518–6540.

SUPPLEMENTARY INFORMATION:

A. Background

The Federal Credit Union Act does not specifically address a federal credit union's (FCU's) authority to pay or honor a share draft written that will result in an overdrawn account. NCUA's longstanding position has been that an FCU's payment of an overdraft as a financial accommodation to a member constitutes a loan or line of credit to a member.

When an FCU pays a member's overdraft, the FCU uses its money to pay a member's third party obligations. The overdraft is a debt that the FCU expects the member to repay. Because the FCU is making a loan, it must comply with the NCUA's lending regulation requiring a credit application to be on file for each borrower supporting the decision to make a loan or establish a line of credit. 12 CFR 701.21(c)(3).

A number of federal credit unions and trade associations contend that federal credit unions are at a competitive disadvantage because they are unable to cover a member's overdrafts absent a prearranged, written agreement for the extension of credit. The NCUA Board believes this argument has merit although there may be some safety and soundness concerns with extending credit to a member without a written lending agreement. Overdrafts which are unsupported by an agreement and for which there is no credit analysis represent an unsecured obligation of the member to the credit union. In general, a credit union undertakes a greater level of risk with this activity than with a loan which has undergone a thorough credit analysis. However, after careful review, the NCUA Board is proposing to amend § 701.21(c)(3) to permit a credit union to advance money to a member to cover his or her account deficit without having a credit application from the borrower on file if the credit union has a written overdraft policy. The NCUA Board believes that a written overdraft policy will offset safety and soundness concerns and prevent insider abuses. The Board is proposing that a credit union's written overdraft policy must: (1) Address how the credit union will honor overdrafts; (2) set a cap on the total dollar amount of all overdrafts the credit union will honor; (3) establish a time limit not to exceed ten business days for a member either to deposit funds or obtain an approved loan from the credit union to cover each overdraft; (4) limit the number and dollar amount of overdrafts the credit union will honor per member; and (5) establish the fee and interest rate, if any, the credit union will charge members for honoring overdrafts.

The NCUA Board requests comments from the public on whether the regulation should impose additional restrictions on overdrafts by credit union employees or officials. The NCUA Board also requests comments on whether NCUA should set limits on the total dollar amount a credit union can lend to honor overdrafts as well as the total dollar amount per member. The NCUA Board is also requesting comments on whether the regulation should require a federal credit union to have in its overdraft policy a certain number of days after which it will write off any overdraft for which the member has not either repaid the credit union or obtained an approved loan. Finally, the NCUA Board requests comments on whether the ten-day requirement for the member to cover the overdraft is appropriate. The risk of nonpayment of an overdraft that is not covered by the member within such a time period increases dramatically.

While the proposed regulation is under consideration, the NCUA intends to continue its current supervisory approach to overdrafts that are paid as

an accommodation to members. The approach has been that it will not take exception to FCUs that permit overdrafts as long as there are no safety and soundness concerns or evidence that the practice is being abused or otherwise used as a means of circumventing other regulatory requirements or giving preferential treatment to insiders.

Finally, in proposing this rule, NCUA is not directing or encouraging credit unions to replace using written overdraft agreements with members with a written overdraft policy. In fact, because written overdraft agreements function essentially as a lending agreement that becomes operational in the event of an overdraft, they are a preferable way of addressing the safety and soundness concerns presented by overdrafts.

B. Regulatory Procedures

Regulatory Flexibility Act

The Regulatory Flexibility Act requires NCUA to prepare an analysis to describe any significant economic impact any proposed regulation may have on a substantial number of small entities (primarily those under $1 million in assets). The NCUA has determined and certifies that this proposed rule, if adopted, will not have a significant economic impact on a substantial number of small credit unions. Accordingly, the NCUA has determined that a Regulatory Flexibility Analysis is not required.

Paperwork Reduction Act

The NCUA Board has determined that the proposed notice and disclosure requirements in § 701.21 constitute a collection of information under the Paperwork Reduction Act. NCUA is submitting a copy of this proposed rule to the Office of Management and Budget (OMB) for its review.

The proposed rule requires a federal credit union that advances money to a member to cover his or her account deficit without having the member's credit application on file to have a written overdraft policy. The policy must: (1) Address how the credit union will honor overdrafts; (2) set a cap on the total dollar amount of all overdrafts the credit union will cover; (3) establish time limits for a member to deposit funds to cover each overdraft; (4) limit the number and dollar amount of overdrafts the credit union will honor per member; and (5) establish the fee and interest rate, if any, the credit union will charge members for covering overdrafts.

The written policy requirement is necessary to insure safety and soundness in the credit union industry and protect the interests of credit union members where a federal credit union provides overdraft protection to a member without having his or her credit application on file.

The NCUA Board estimates that it will take an average of four hours to comply with this written policy requirement. The NCUA Board also estimates that 1000 federal credit unions will write overdraft policies so the total annual collection burden is estimated to be approximately 4000 hours.

The Paperwork Reduction Act of 1995 and OMB regulations require that the public be provided an opportunity to comment on information collection requirements, including an agency's estimate of the burden of the collection of information. The NCUA Board invites comment on: (1) Whether the collection of information is necessary; (2) the accuracy of NCUA's estimate of the burden of collecting the information; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of collection of information. Comments should be sent to: OMB Reports Management Branch, New Executive Office Building, Room 10202, Washington, D.C. 20503; Attention: Alex T. Hunt, Desk Officer for NCUA. Please send NCUA a copy of any comments you submit to OMB.

Executive Order 12612

Executive Order 12612 requires NCUA to consider the effect of its actions on state interests. This proposed rule makes no significant changes with respect to state credit unions and therefore, will not materially affect state interest.

C. Agency Regulatory Goal

NCUA's goal is clear, understandable regulations that impose a minimal regulatory burden. We request your comments on whether the proposed amendment is understandable and minimally intrusive if implemented as proposed.

List of Subjects in 12 CFR Part 701

Credit, Credit unions, Reporting and recordkeeping requirements

By the National Credit Union Administration Board on September 16, 1999.

Becky Baker,

Secretary of the Board.

For the reasons set forth in the preamble, the National Credit Union Administration proposes to amend 12 CFR part 701 as follows:

PART 701—ORGANIZATION AND OPERATION OF FEDERAL CREDIT UNIONS

1. The authority citation for part 701 continues to read as follows:

Authority: 12 U.S.C. 1752(5), 1755, 1756, 1757, 1759, 1761a, 1761b, 1766, 1767, 1782, 1784, 1787, and 1789.

Section 701.6 is also authorized by 15 U.S.C. 3717.

Section 701.31 is also authorized by 15 U.S.C. 1601 *et seq.*; 42 U.S.C. 1981 and 3601–3610.

Section 701.35 is also authorized by 42 U.S.C. 4311–4312.

2. Amend § 701.21 by revising paragraph (c)(3) to read as follows:

§ 701.21 Loans to members and lines of credit to members.

* * * * *

(c) * * *

(3) *Credit applications and overdrafts.* Consistent with policies established by the board of directors, the credit committee or loan officer shall ensure that a credit application is kept on file for each borrower supporting the decision to make a loan or establish a line of credit. A credit union may advance money to a member to cover an account deficit without having a credit application from the borrower on file if the credit union has a written overdraft policy. The policy must: address how the credit union will honor overdrafts; set a cap on the total dollar amount of all overdrafts the credit union will honor consistent with the credit union's ability to absorb losses; establish a time limit not to exceed ten business days for a member either to deposit funds or obtain an approved loan from the credit union to cover each overdraft; limit the number and dollar amount of overdrafts the credit union will honor per member; and establish the fee and interest rate, if any, the credit union will charge members for honoring overdrafts.

* * * * *

[FR Doc. 99–25397 Filed 9–29–99; 8:45 am]

BILLING CODE 7535–01–U

COMMODITY FUTURES TRADING COMMISSION

17 CFR Part 146

Privacy Act of 1974; Implementation

AGENCY: Commodity Futures Trading Commission.

ACTION: Proposed rule.

SUMMARY: The Commission proposes to adopt a rule to exempt a new system of records, concerning, *inter alia*, complaints of sexual harassment, from

Sections 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I) and (f) of the Privacy Act of 1974 on the basis that the system is investigatory material compiled for law enforcement purposes. The name of the system of records is the Exempted Informal Employment Complaint Files and it is designated CFTC–7.

DATES: Comments must be received on or before November 1, 1999.

ADDRESSES: Comments should be addressed to Jean A. Webb, Secretary, Commodity Futures Trading Commission, Three Lafayette Centre, 1152 21st Street NW., Washington, DC 20581. Comments may also be sent by facsimile to number (202) 418–5221 or by electronic mail to secretary@cftc.gov. Refer to ''Sexual harassment files.''

FOR FURTHER INFORMATION CONTACT: Stacy Dean Yochum, Counsel to the Executive Director, (202) 418–5157, Glynn L. Mays, Office of the General Counsel, (202) 418–5140, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street, NW., Washington, DC 20581.

SUPPLEMENTARY INFORMATION: In September 1998 the Commission adopted a Sexual Harassment Policy that enabled persons who believed they were victims of harassment to invoke certain informal procedures. The Policy requires all supervisors, managers, and members of the Commission to report instances of sexual harassment witnessed by them or reported to them to the Commission's EEO Director. Remedies under the Policy include methods for informal resolution of complaints between a complainant and the person she or he believes has engaged in harassment and also for investigations under the aegis of the Executive Director to determine whether discriplinary action is warranted. Records of complaints, reports, investigations, and dispositions will be maintained by the Executive Director. The purposes of the records system include centralization information on this workplace issue and the Commission's response to it, identification of repeat offenders, and support for disciplinary action. Neither the Policy nor the system of records is part of the EEOC's Federal Sector Complaint Processing system. *See* 29 CFR part 1614. Both the policy and maintenance of the system of records are, however, consistent with the EEOC's mandate to federal agencies to ''maintain a continuing affirmative program to promote equal opportunity and to identify and eliminate discriminatory practices and policies.'' 29 CFR 1614.102(a).

In the Commission's view, the materials in this system of records are investigatory materials compiled for law enforcement purposes within the meaning of Privacy Act Section 552a(k)(2), 5 U.S.C. 552a(k)(2). Individual access to these files could impair the effectiveness and orderly conduct of the Commission's program to combat illegal workplace discrimination and discipline those responsible.

Accordingly the Commission is proposing to amend its rules under the Privacy Act, 17 CFR 146.12, to exempt this system of records from the requirements of Privacy Act sections 552a(c)(3) [availability of accounting of disclosures]; (d) [individual access to records]; (e)(1) [relevancy of records]; (e)(4)(G) [request of an individual whether a system of records contains a record pertaining to him or her]; (e)(4)(H) [notification of access and contest procedures]; (e)(4)(I) [publication of categories of sources of records in the system]; and (f) [adoption of rules relating, *inter alia*, to individual access to his or her records in the system].

List of Subjects in 17 CFR Part 146

Privacy.

For the reasons stated above, the Commodity Futures Trading Commission proposes to amend 17 CFR part 146 as follows:

PART 146—RECORDS MAINTAINED ON INDIVIDUALS

1. The authority citation for part 146 continues to read as follows:

Authority: Pub. L. 93–579, 88 Stat. 1896 (5 U.S.C. 552a), Pub. L. 93–463, 88 Stat. 1389 (7 U.S.C. 40(j)) unless otherwise noted.

2. Amend § 146.12 *Exemptions, by revising the last sentence* of paragraph (a) to read as follows:

§ 146.12 Exemptions.

(a) * * * Materials exempted under this paragraph are contained in the system of records entitled ''Exempted Investigatory Records,'' ''Exempted Informal Employment Complaint Files,'' and/or in the system of records entitled ''Exempted Closed Commission Meetings.''

* * * * *

Issued in Washington, DC, on September 22, 1999.

Jean A. Webb,

Secretary of the Commission.

[FR Doc. 99–25189 Filed 9–29–99; 8:45 am]

BILLING CODE 6351–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 210, 211, 820, and 1271

[Docket No. 97N–484S]

Suitability Determination for Donors of Human Cellular and Tissue-Based Products

AGENCY: Food and Drug Administration, HHS.

ACTION: Proposed rule.

SUMMARY: The Food and Drug Administration (FDA) is proposing new regulations to require manufacturers of human cellular and tissue-based products to screen and test the donors of cells and tissue used in those products for risk factors for and clinical evidence of relevant communicable disease agents and diseases. Human cellular and tissue-based products are products that contain or consist of human cells or tissues and that are intended for implantation, transplantation, infusion, or transfer. As part of this regulatory action, the agency is proposing to amend the current good manufacturing practice (CGMP) regulations that apply to human cellular and tissue-based products regulated as drugs, medical devices, and/or biological products to incorporate the new donor-suitability procedures into existing good manufacturing practice (GMP) regulations. The agency is taking this action to provide more appropriate oversight for the wide spectrum of human cellular and tissue-based products that are marketed now or may be marketed in the future. The agency's action would improve protection of the public health and increase public confidence in new technologies, while permitting significant innovation and keeping regulatory burden to a minimum.

DATES: Submit written comments on the proposed rule on or before December 29, 1999. Submit written comments on the information collection provisions on or before November 1, 1999.

ADDRESSES: Submit written comments to the Dockets Management Branch (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852. Submit written comments on the information collection provisions to the Office of Information and Regulatory Affairs, OMB, New Executive Office Bldg., 725 17th St. NW., Washington, DC 20503, Attn: Wendy Taylor, Desk Officer for FDA.

FOR FURTHER INFORMATION CONTACT: Paula S. McKeever, Center for Biologics Evaluation and Research (HFM–17), Food and Drug Administration, 1401 Rockville Pike, suite 200N, Rockville, MD 20852–1448, 301–827–6210.

SUPPLEMENTARY INFORMATION:

I. Introduction

FDA is in the process of establishing a comprehensive new system of regulating human cellular and tissue-based products. The term ''human cellular and tissue-based products'' encompasses an array of medical products derived from the human body and used for repair, reproductive, replacement, or other therapeutic purposes. Skin, tendons, bone, heart valves, and corneas have long been used as replacements for damaged or diseased tissues. Semen, ova, and embryos are transferred for reproductive purposes. Currently, some human cellular and tissue-based products are being developed for new therapeutic uses. For example, scientists are studying the use of manipulated human cells to treat viral infections, Parkinson's disease, and diabetes, among other conditions and diseases. FDA's new regulatory program will cover all of these products, including those currently regulated as ''human tissue intended for transplantation'' under part 1270 (21 CFR part 1270). (The proposed regulatory definition of a human cellular or tissue-based product, and exceptions from the definition, will be discussed in greater detail later in this document.)

In February 1997, the agency announced its regulatory plans in two documents: ''Reinventing the Regulation of Human Tissue'' and ''A Proposed Approach to the Regulation of Cellular and Tissue-Based Products'' (hereinafter referred to as the ''proposed approach document''). FDA requested written comments on its proposed approach and, on March 17, 1997, held a public meeting to solicit information and views from the interested public (62 FR 9721, March 4, 1997).

In the **Federal Register** of May 14, 1998 (63 FR 26744), FDA proposed an establishment registration and product listing system for manufacturers of human cellular and tissue-based products (hereinafter referred to as the ''proposed registration rule.'') The proposed registration rule was the first in a series of rules that the agency intends to propose to implement its new approach to these products. The proposed registration rule would require manufacturers of human cellular and tissue-based products to register with the agency, to list their products, and to submit regular updates. The rule defines ''human cellular and tissue-based product,'' sets out exceptions to this definition, e.g., vascularized human organs and certain minimally manipulated bone marrow, and describes certain types of establishment that would not be subject to the registration and listing requirement. In addition, the rule proposes criteria for regulation of a human cellular or tissue-based product solely under section 361 of the Public Health Service Act (the PHS Act) (42 U.S.C. 264), rather than as a drug, device, and/or biological product. Relevant portions of the proposed registration rule are discussed in this proposed rule as necessary, and the definitions contained in the proposed registration rule are reprinted in their entirety in section III.B.1 of this document.

As another step toward accomplishing its regulatory objectives, the agency recently issued a request for proposed standards and supporting data relating to certain stem-cell products (63 FR 2985, January 20, 1998).

FDA now proposes to require manufacturers of certain human cellular and tissue-based products to screen and test the donors of cells and tissues used in those products for risk factors for and clinical evidence of relevant communicable disease agents and diseases. The proposed regulations are intended as safeguards to prevent the transmission of communicable diseases that may occur with the use of cells and tissues from infected donors.

In acting to increase the safety of the nation's supply of human cellular and tissue-based products, FDA is also seeking to avoid unnecessary regulation. Thus, consistent with the proposed approach document, the agency has tailored the proposed testing and screening requirements to the degree of communicable disease risk associated with the various types of human cellular and tissue-based products. The testing and screening for donors of cells and tissues that pose a high degree of communicable disease risk will be more extensive than for donors of cells and tissues with lesser risk. Where the risk is quite low (e.g., cells or tissues used autologously), FDA will recommend testing and screening, but will not require them; however, certain labeling will be required.

As outlined in the proposed approach document, the agency is implementing its regulatory plan for human cellular and tissue-based products in a step-by-step fashion. Following the publication of this proposed rule, the agency intends to propose current good tissue practice ''CGTP'' regulations to address concerns about the proper handling, storage, and processing of human cellular and tissue-based products. The donor-suitability regulations now being proposed would be placed in new part 1271, along with the regulations covering registration, CGTP, and other areas, e.g., establishment inspection and enforcement. Proposed part 1271 will eventually supersede part 1270, which contains current regulations governing infectious-disease testing, donor screening, and recordkeeping for human tissue intended for transplantation. At the completion of the rulemaking process, FDA intends to revoke part 1270.

II. Donor Suitability

A. Part 1270 and the Need for Expanded Donor-Suitability Requirements

In the early 1990's, serious issues arose about the safety of human tissue used for transplantation. Concern focused on the potential for disease transmission through the transplantation of tissues from donors infected with the human immunodeficiency virus (HIV) or one of the hepatitis viruses. In 1993, FDA acted in response to this immediate need to protect the public health by issuing an interim rule requiring the donors of human tissue intended for transplantation to be screened and tested for HIV types 1 and 2, hepatitis B (HBV), and hepatitis C (HCV) (58 FR 65514, December 14, 1993). That rule, codified at part 1270, covered human tissue that was not regulated as a human drug, biological product, or medical device; reproductive tissue and several other categories of products were also excluded (§ 1270.3(j)). In response to comments submitted on the interim rule, FDA modified and clarified the requirements. In the **Federal Register** of July 29, 1997 (62 FR 40429), FDA issued a final rule replacing the interim rule (hereinafter referred to as the ''tissue final rule'').

When it issued the regulations in part 1270, FDA envisioned replacing them, at a future date, with more extensive requirements with respect to infectious-disease control (58 FR 65514 at 65516). Consistent with these intentions, the agency is now proposing regulations that would expand on the current testing and screening requirements in two ways. First, the proposed regulations would increase the number of products covered by the screening and testing requirements. Second, the proposed regulations would require screening and testing for additional diseases. (The present rulemaking affects only the screening and testing

components of part 1270. Other requirements will be the subject of future rulemaking, e.g., the requirement in § 1270.31 for written procedures and the enforcement provisions in part 1270 subpart D.)

Because of their nature as derivatives of the human body, all human cellular and tissue-based products pose a potential risk of transmitting communicable diseases. For example, HIV, HBV, and HCV have been detected in human tissue, including bone, skin, corneas, and semen. In proposing to establish a unified regulatory approach for human cellular and tissue-based products, the agency is responding to the concern about communicable disease transmission that is common to all such products. The proposed testing and screening provisions would be applicable to human cellular and tissue-based products that are regulated under section 201 of the Federal Food, Drug, and Cosmetic Act (the act) (21 U.S.C. 321 *et. seq.*) and/or section 351 of the PHS Act (42 U.S.C. 262) as medical devices, drugs, and/or biological products. The proposed testing and screening provisions would also apply to human cellular products and products containing human reproductive cells or tissues, including some products not currently subject to Federal regulation. In addition, tissues currently regulated under part 1270 would be brought under the scope of the new regulations.

When part 1270 was issued as an interim rule, FDA was acting swiftly to counter the transmission of three serious disease agents, HIV, HBV, and HCV, by the transplantation of human tissue. In this rulemaking, the agency seeks to establish a more comprehensive system for preventing the spread of those and other diseases transmissible by implantation, transplantation, infusion, or transfer of human cellular and tissue-based products. The proposed regulation would require, except in certain limited situations, screening and testing for all ''relevant'' communicable disease agents and diseases. (The criteria for considering a disease to be ''relevant'' are discussed later in section III.C.1 of this document.) For example, FDA is now proposing to require that donors of tissue and cells be tested for syphilis and screened for transmissible spongiform encephalopathies (TSE) including Creutzfeldt–Jakob Disease (CJD). In addition, donors of viable, leukocyte-rich cells or tissues would be tested for human T-cell lymphotrophic virus type I and type II (HTLV–I/II) and Cytomegalovirus (CMV), which are considered ''cell-associated viruses.'' FDA is proposing to require that donors of reproductive cells and tissue be tested for *Neisseria gonorrhea* and *Chlamydia trachomatis*, which have been transmitted through artificial insemination, and screened for sexually transmitted and genitourinary diseases that could contaminate reproductive cells and tissue during recovery and then be transmitted to the recipient of those cells or tissues and/or to the fetus.

B. Legal Authority

FDA is proposing to issue these new regulations under the authority of section 361 of the PHS Act. Under that section, FDA may make and enforce regulations necessary to prevent the introduction, transmission, or spread of communicable diseases between the States or from foreign countries into the States. (See sec. 1, Reorg. Plan No. 3 of 1966 at 42 U.S.C. 202 for delegation of section 361 authority from the Surgeon General to the Secretary, Health and Human Services; see 21 CFR 5.10(a)(4) for delegation from the Secretary to FDA.) Intrastate transactions may also be regulated under section 361 of the PHS Act. (See *Louisiana* v. *Mathews*, 427 F. Supp. 174, 176 (E.D. La. 1977).)

Certain diseases are transmissible through the implantation, transplantation, infusion, or transfer of human cellular or tissue-based products derived from donors infected with those diseases. In order to prevent the introduction, transmission, and spread of such diseases, FDA considers it necessary to take appropriate measures to prevent the use of cells or tissues from infected donors. Thus, the agency is proposing that, prior to the use of most human cellular or tissue-based products, the manufacturer would be required to determine the suitability of the donor of cells or tissues based on the results of screening and testing for relevant communicable diseases. Under the proposed regulations, a donor who tests repeatedly reactive for a particular disease agent, or who possesses clinical evidence of or risk factors for such a disease, would be considered unsuitable, and cells and tissues from that donor would not ordinarily be used.

FDA's directive, under section 361 of the PHS Act, is to prevent the introduction, transmission, and spread of communicable diseases. Specifically, these regulations are intended to prevent the transmission of communicable disease through the implantation, transplantation, infusion, or transfer of human cellular or tissue-based products. However, as discussed in the proposed registration rule, all human cellular and tissue-based products pose some risk of carrying pathogens that could cause disease in recipients and family members or other close contacts of recipients, health care personnel, and other handlers of tissue. This broader concern for the spread of communicable disease is reflected in certain labeling requirements proposed in these regulations and in the criteria for identifying a relevant communicable disease. Although FDA recognizes that regulations exist that are specifically designed to protect employees who may come in contact with infectious materials (see 29 CFR 1910.1030, 42 CFR 72.6, and 49 CFR 171.180), the agency does not consider its proposed regulations to be in conflict with those other regulations currently in effect. However, the agency has made an effort to be consistent with the terminology used in these other regulations, e.g., ''Infectious Substances'' and Biohazard legend.

Authority for the enforcement of section 361 of the PHS Act is provided by section 368 of the PHS Act (42 U.S.C. 271). Under section 368(a), any person who violates a regulation prescribed under section 361 of the PHS Act may be punished by imprisonment for up to 1 year, a fine of not more than $1,000, or both (42 U.S.C. 271(a)). In addition, Federal District Courts have jurisdiction to enjoin individuals and organizations from violating regulations implementing section 361 of the PHS Act.

Under sections 501(a)(2)(B) and (h) and 520(f)(1) of the act (21 U.S.C. 351(a)(2)(B) and (h) and 360j(f)(1)), drugs and devices are subject to CGMP requirements designed to ensure, among other things, product safety. Currently, no specific CGMP regulations exist with respect to human cellular and tissue-based products regulated as drugs or devices that delineate testing and screening procedures for communicable diseases. (See parts 210 *et seq.* and 820 (21 CFR parts 210 and 820).) Nevertheless, FDA considers communicable disease testing and screening to be steps in the manufacturing process that are crucial to the safety of such products. As a result, FDA proposes to amend the existing CGMP regulations for drugs in parts 210 and 211 (21 CFR part 211) and the quality system regulations for devices in part 820 (21 CFR part 820), which include CGMP requirements, to incorporate the testing and screening provisions of proposed part 1271 subpart C. In proposing these amendments, FDA is relying on the authority provided by section 361 of the PHS Act to issue regulations to prevent the spread of communicable disease, as well as its authority under the act to

issue CGMP regulations (21 U.S.C. 351(a)(2)(B) and (h) and 360j(f)(1)).

Under proposed § 210.1(c), the manufacturer of a human cellular or tissue-based product regulated as a drug or biological drug would be required to comply with the donor-suitability procedures in proposed part 1271, subpart C. Likewise, under proposed § 820.1, the manufacturer of a human cellular or tissue-based product regulated as a device would be required to comply with the same procedures. (Existing regulations and policy determine whether a product is a drug, biological product, and/or device). If the manufacturer failed to follow the CGMP or quality system requirements, including the testing and screening procedures in proposed part 1271, the product would be adulterated under the act.

Section 375 of the PHS Act provides for Federal oversight of the nation's Organ Procurement and Transplantation Network and section 379 of the PHS Act authorizes the National Bone Marrow Donor Registry. The Health Resources and Services Administration (HRSA) currently administers both of these programs. Given HRSA oversight in these areas, vascularized human organs and minimally manipulated bone marrow (as defined in proposed § 1271.3(e)) for unrelated allogeneic use are specifically excluded from the proposed and final regulations on human cellular and tissue-based products.

III. Summary of the Proposed Regulation

A. Purpose and Scope (Proposed § 1271.1)

FDA is proposing that donor-suitability regulations would apply to all establishments covered by the proposed registration rule. In the proposed registration rule, FDA discussed its proposed system for regulating human cellular and tissue-based products. In particular, the agency proposed to distinguish between two groups of human cellular and tissue-based products: those that would be regulated solely under the authority of section 361 of the PHS Act (''361 products''), and those regulated under the act and/or section 351 of the PHS Act as drugs, medical devices and/or biological products as well as section 361 of the PHS Act.

Section 1271.1 of the proposed registration rule states that manufacturers of both 361 products and products regulated as drugs or devices and/or biological products under the act and/or section 351 of the PHS Act would be required to comply with the proposed registration and listing procedures. The criteria for regulation of a human cellular or tissue-based product as a 361 product are set out in § 1271.10 of the proposed registration rule. Section 1271.20 of the proposed registration rule sets out exceptions from the registration and listing requirements.

FDA is now making several modifications to proposed §§ 1271.1, 1271.10, and 1271.20 as they appeared in the proposed registration rule and is proposing a new § 1271.15. To improve clarity, FDA has divided section 1271.1 into separate paragraphs on scope and purpose and has added cross-references to other pertinent regulations. FDA has also changed the heading of proposed § 1271.10 to ''Establishments subject to this part; criteria for regulation of human cellular and tissue-based products solely under section 361 of the PHS Act.'' The phrase ''nontissue or noncellular'' has been removed from proposed § 1271.10(c). Proposed § 1271.10(d) has been reorganized, although its meaning has not changed. Proposed § 1271.10 now describes human cellular and tissue-based products regulated solely under section 361 of the PHS Act as those products that: Are minimally manipulated, are not promoted or labeled for any use other than a homologous use, are not combined with or modified by the addition of any component that is a drug or a device; and either do not have a systemic effect or have a systemic effect and are for autologous use, are for a family-related allogeneic use, or are for reproductive use. FDA expects that comments on the four criteria in proposed § 1271.10 will be submitted in response to the proposed registration rule, and foresees that each of the four criteria will be modified for greater clarity. For example, the agency is considering clarifying or modifying the term ''systemic effect'' in proposed § 1271.10(d) because of potential ambiguities. FDA is concerned that products that have local metabolic effects, e.g., neurons used to replace or supplement neurons in the brain, warrant regulation under the act and/or section 351 of the PHS Act. The agency invites comments on whether ''systemic effect'' adequately characterizes those products that warrant the more stringent level of regulation or whether another term or terms would more accurately describe such products.

FDA is proposing a new § 1271.15 to describe those products that would be regulated under the act and/or section 351 of the PHS Act and to reference the subparts of part 1271 that will be applicable to those products.

FDA is also modifying proposed §§ 1271.1, 1271.10, and 1271.20 so that they refer not simply to registration and product listing requirements but to all of the requirements that will be contained in part 1271 when rulemaking for the entire part is complete. With these changes, the regulatory framework that was described in the proposed approach document and developed in the proposed registration rule would be extended, as intended, to cover donor-suitability requirements now being proposed as well as other requirements to be proposed later. The agency is seeking to craft the modifications to these sections to obviate the need for further adjustments in later rulemaking. To that end, the new language refers to compliance ''with the other requirements contained in this part.''

FDA intends that the procedures in part 1271 that would apply to human cellular and tissue-based products regulated as drugs, devices and/or biological products are the proposed registration and listing procedures, the donor-suitability procedures now being proposed, and the CGTP procedures to be proposed in the future. Therefore, the agency is now proposing to modify proposed § 1271.1 to add the statement that manufacturers of human cellular and tissue-based products regulated under the act and/or section 351 of the PHS Act are required to comply with the donor-suitability procedures and the CGTP procedures in part 1271 in addition to all other applicable regulations.

B. Definitions (Proposed § 1271.3)

1. Definitions Contained in the Proposed Registration Rule

Section 1271.3(a) through (h) of the proposed registration rule contain definitions of terms used in the registration and listing regulations. Because some of the terms defined in the proposed registration rule are used in the donor-suitability regulations now being proposed, the agency is reprinting proposed § 1271.3(a) through (h) as follows to facilitate understanding of the rule now being proposed.

(a) *Autologous use* means the implantation, transplantation, infusion, or transfer of a human cellular or tissue-based product back into the individual from whom the cells or tissue comprising such product were removed.

(b) *Establishment* means a place of business under one management, at one general physical location, that engages in the manufacture of human cellular or tissue-based products. The term includes, among others, facilities that engage in contract

manufacturing services for a manufacturer of human cellular or tissue-based products. The term also includes any individual, partnership, corporation, association, or other legal entity engaged in the manufacture of human cellular or tissue-based products, except that an individual engaged solely in the procurement or recovery of cells or tissues or under contract to a registered establishment is not required to independently register.

(c) *Family-related allogeneic use* means the implantation, transplantation, infusion, or transfer of a human cellular or tissue-based product into a first-degree blood relative of the individual from whom cells or tissue comprising such product were removed.

(d) *Homologous use* means the use of a cellular or tissue-based product for replacement or supplementation and:

(1) For structural tissue-based products, occurs when the tissue is used for the same basic function that it fulfills in its native state, in a location where such structural function normally occurs; or

(2) For cellular and nonstructural tissue-based products, occurs when the cells or tissue is used to perform the function(s) that they perform in the donor.

(e) *Human cellular or tissue-based product* means a product containing human cells or tissues or any cell or tissue-based component of such a product. The following products are not considered human cellular or tissue-based products and establishments that manufacture only one or more of the following would not be subject to the registration or listing provisions of this part:

(1) Vascularized human organs for transplantation;

(2) Whole blood or blood components or blood derivative products subject to listing under part 607 of this chapter;

(3) Secreted or extracted human products, such as milk, collagen, and cell factors;

(4) Minimally manipulated bone marrow;

(5) Ancillary products used in the propagation of cells or tissues; or

(6) Cells, tissues or organs derived from animals.

(f) *Manufacture* means, but is not limited to, any or all steps in the recovery, screening, testing, processing, storage, labeling, packaging, or distribution of any human cellular or tissue-based product.

(g) *Minimal manipulation* means: (1) For structural tissue, processing that does not alter the original relevant characteristics of the tissue relating to the tissue's utility for reconstruction, repair, or replacement; and

(2) For cells or nonstructural tissues, processing that does not alter the relevant biological characteristics of cells or tissues.

(h) *Transfer* means the placement of human reproductive cells or tissues into a human recipient.

Since proposing the previous definitions, FDA has reconsidered the definition in proposed § 1271.3(e) of ''human cellular or tissue-based product,'' and has determined that it is too broad. For example, the definition might be construed to include many in vitro diagnostic products. The agency is adding language to the proposed definition to clarify that the products covered by the definition (and thus by these proposed regulations) are those that are intended for implantation, transplantation, infusion, or transfer into a human recipient. The agency is also adding language to specifically exclude in vitro diagnostic products as defined in 21 CFR 809.3(a) from the definition of human cellular or tissue-based product. In addition, the agency is deleting the reference in § 1271.3(e) to the registration and listing provisions of part 1271. Minimally manipulated bone marrow has been clarified by adding ''for homologous use and not combined with or modified by the addition of any component that is a drug or a device.'' Also, the agency is clarifying that, although secreted or extracted human products such as milk, collagen, and cell factors are not considered to meet the definition of human cellular or tissue-based product, semen is considered a human cellular or tissue-based product because it contains germ cells. The definition also contains several other minor clarifications and corrections.

2. New Definitions

The agency is now proposing to define additional terms and to list them in § 1271.3(i) through (ee). The agency intends to place all definitions relevant to proposed part 1271 in proposed § 1271.3. Thus, in subsequent rulemakings, the agency may propose to define more terms in that section.

Many of the terms now proposed to be defined in proposed § 1271.3 are currently defined in § 1270.3. In several instances, the definition now being proposed is the same as that in § 1270.3 or is only modified slightly for clarity, e.g., ''donor'' and ''responsible person'' in proposed § 1271.3(n) and (w), respectively. Although the proposed definitions of colloid and crystalloid remain substantially the same as in § 1270.3(c) and (e), the agency specifically requests comments on the appropriateness of these definitions, including whether it is appropriate to define these terms in the regulations.

The definitions of some other terms (e.g., donor medical history interview and physical assessment) have been significantly modified to accommodate the broader range of infectious diseases covered by this proposed regulation. Additional terms are newly defined in proposed § 1271.3 (Biohazard legend, directed donor, embryo, gamete, relevant communicable disease agent or disease, urgent medical need, xenotransplant, and close contact). Where relevant, proposed definitions are discussed as follows, with the requirements to which the defined terms relate.

The definition of ''summary of records'' in proposed § 1271.3(x) is a modification of the definition of the same term in § 1270.3(w). As in § 1270.3(w), the agency proposes to define ''summary of records'' as containing a list of all tests performed for relevant communicable disease agents and the results of those tests, and the name and address of the establishment that made the donor-suitability determination. However, FDA has recently received comments from manufacturers of human tissue intended for transplantation on other aspects of the definition of ''summary of records'' in § 1270.3(w). These comments assert that, because a processor or distributor may use multiple testing laboratories, the requirement in § 1270.3(w) that a summary of records contain the identity of the testing laboratory is unduly burdensome; similar objections were raised to the requirement for listing all relevant medical records reviewed. Such information, it was asserted, would be available from the establishment that made the donor-suitability determination. FDA has considered these concerns, and is proposing a new, less burdensome definition. Under the proposed definition, the summary of records would be redefined as: (1) A statement that communicable disease testing was performed by a laboratory or laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA); (2) a listing and interpretation of the results of all communicable disease tests performed; (3) a statement describing the types of records which may have been reviewed as part of the relevant medical records; and (4) the name and address of the establishment determining the suitability of the donor of cells or tissues. Upon request by FDA, or other interested persons, the establishment that made the donor-suitability determination will be expected to promptly furnish the name and address of the testing laboratory and a list of all relevant medical records reviewed.

C. General Requirements

1. Determination of Donor Suitability (Proposed § 1271.50)

Proposed § 1271.50 sets out the fundamental requirement of these proposed regulations: The donor-suitability determination. Except in certain specified situations, a human cellular or tissue-based product may not be implanted, transplanted, infused, or

transferred until the donor of the cells or tissue for the product has been determined to be suitable.

The determination of whether a donor is suitable or unsuitable would be made by a responsible person, as defined in proposed § 1271.3(w), and would be based on the results of required donor screening and testing. ''Donor screening'' refers to a review of the donor's relevant medical records, as defined in proposed § 1271.3(v), for information about the donor that might indicate past or present infection or risk factors for a relevant communicable disease agent or disease. ''Donor testing'' refers to performing laboratory tests on a specimen collected from the donor, generally a blood sample, to determine whether the donor has been exposed to or is infected with a relevant communicable disease agent.

Both aspects of the donor-suitability determination are vital. A donor may be determined to be suitable only if test results are negative or nonreactive and screening shows the donor to be free from risk factors for and clinical evidence of infection due to relevant communicable disease agents and diseases. Conversely, if either donor screening or donor testing indicates the presence of a relevant infectious agent, or risk factors therefor, then the potential donor must be determined to be unsuitable.

Proposed § 1271.3(y) contains a two-part definition of the term ''relevant communicable disease agent or disease.'' Section 1271.3(y)(1) lists those disease agents and diseases that are specifically identified in §§ 1271.75 and 1271.85 as relevant communicable disease agents and diseases for which the agency is proposing to require donor screening and/or testing. These are: HIV, types 1 and 2; HBV; HCV; TSE; *Treponema pallidum*; HTLV, types I and II; CMV; *Chlamydia trachomatis* and *Neisseria gonorrhea*. In some instances, FDA has identified a disease agent or disease as relevant for a particular type of cells or tissue-based product; this distinction is reflected in the proposed testing and screening requirements in proposed §§ 1271.75 and 1271.85.

The second part of the definition describes the criteria for a communicable disease agent or disease to be considered ''relevant,'' and covers diseases not specifically listed in § 1271.3(y)(1). First, for a communicable disease agent or disease to be ''relevant,'' its prevalence among donors would have to be sufficient to warrant screening or testing of all donors. Second, there would need to be a risk of transmission of the disease agent or disease by a human cellular or tissue-based product, either to the recipient of the product or to those people who may handle or otherwise come in contact with the product, such as medical personnel. Third, the health risks, measured by morbidity and mortality, posed by the disease would need to be significant. For example, HIV, HBV, HCV, and *Treponema pallidum*, which are listed in § 1271.3(y)(1), all pose significant health risks. In contrast, although *Ureaplasma urealyticum*, *Mycoplasma hominis*, and Streptococci are organisms that have been transmitted through artificial insemination procedures, they exist in a great number of healthy, sexually active adults and their pathogenicity to the recipient of reproductive cells or tissue is of questionable clinical significance. Thus, FDA does not consider them to be relevant communicable diseases or disease agents at this time for the purpose of this regulation. Finally, for a disease or disease agent to be considered ''relevant,'' appropriate screening measures would need to have been developed and/or an appropriate FDA-licensed, approved, or cleared screening test for donor specimens would need to be available.

Should a new relevant communicable disease agent or disease arise or be identified, the agency would consider manufacturers to be required, under proposed § 1271.75(a), to screen donors for the disease and, under proposed § 1271.80(a), to test donor specimens for the disease agent, even if the disease agent or disease is not specified in proposed §§ 1271.3(y), 1271.75, or 1271.85. The agency intends to issue guidance in the future to interpret the term ''relevant communicable disease agent or disease,'' when additional agents or diseases arise or are identified that meet the definition under proposed § 1271.3(y).

2. Records of Donor Suitability Determination (Proposed § 1271.55)

Proposed § 1271.55 incorporates requirements that are now found in (§§ 1270.21(e) and 1270.33(d) and (f)). Additional recordkeeping requirements based on other regulations in part 1270 will be proposed in the future, as part of CGTP's.

Under proposed § 1271.55, manufacturers would be required to ship a human cellular or tissue-based product accompanied by documentation of the donor-suitability determination. This requirement would apply to a human cellular or tissue-based product from a donor determined to be suitable as well as to a product from a donor determined to be unsuitable and made available for use under the provisions of proposed § 1271.65(b), (c), or (d). Manufacturers would be required to include in the documentation a copy of the donor's relevant medical records, as defined in proposed § 1271.3(v), results of testing required under §§ 1271.80 and 1271.85, and the name and address of the establishment that made the donor-suitability determination. Alternatively, the documentation may consist of a summary of records, as defined in proposed § 1271.3(x). Additional required documentation would include a statement whether, based on a review of the results of donor screening and testing, the donor has been determined to be suitable or unsuitable. In the interest of confidentiality, the agency is proposing to require that the donor's name be deleted from the documentation of the donor's suitability determination that accompanies the product.

FDA recognizes the potentially sensitive nature of information about a human cell or tissue donor that may be contained in the donor's relevant medical records. Nothing in this proposed rule is intended to modify any currently applicable Federal, State, or local regulations regarding confidentiality. With respect to the agency's handling of personal medical information, the regulations in part 20 (21 CFR part 20) will continue to apply (see § 20.63).

Proposed § 1271.55(b) would impose record-retention requirements on the establishment that generates records used in determining donor suitability and on the establishment that makes the donor-suitability determination. These records must be made available for authorized inspection by or upon request from FDA. Records that can be readily retrieved from another location by electronic means would be considered ''retained.'' FDA envisions that various methods of recordkeeping could be employed to meet the terms of § 1271.55(b), so long as suitable reader and photocopying equipment were readily available. For example, records might be retained electronically, as original paper records, or as true copies, such as photocopies, microfiche, or microfilm.

Proposed § 1271.55(b) would require that records be retained at least 10 years after the date of implantation, transplantation, infusion, or transfer of the product. If that date is not known, however, then records would be retained at least 10 years after the product's distribution, disposition, or expiration, whichever is latest.

The agency notes that, given concerns about TSE transmission from dura

mater, it may be prudent to hold records relating to donations of dura mater for longer than 10 years, although the optimal period is not known at this time. The latency period between receipt of a dura mater graft and onset of TSE has been reported to be as long as 16 years (Morbidity and Mortality Weekly Report, 46:1066, November 14, 1997). If new information should be obtained in the future about TSE, then review of the original screening and testing information about dura mater donors could be invaluable. The agency requests comments on whether records relating to donors of dura mater should be required to be held for a period longer than 10 years and what that period should be.

3. Quarantine Pending Determination of Donor Suitability (Proposed § 1271.60)

In order to prevent the use of human cellular and tissue-based products prior to a donor-suitability determination, § 1271.60 proposes requirements for quarantine. ''Quarantine'' is defined in proposed § 1271.3(t) as ''the storage or identification of a human cellular or tissue-based product, in order to prevent improper release, in a physically separate area clearly identified for such use, or through use of other procedures, such as automated designation.''

As provided in proposed § 1271.60, manufacturers would be required to keep human cellular and tissue-based products in quarantine, and clearly identify such products as being in quarantine, until completion of the donor-suitability determination. A manufacturer who ships a product before it is available for release or distribution (as in the case of shipment by the procurer to the processor) would be required to ship the product under quarantine and accompanied by records identifying the donor, indicating that the donor-suitability determination has not been completed, and stating that the product may not be implanted, transplanted, infused, or transferred until completion of the donor-suitability determination. Donor identification may be accomplished by assigning a donor number.

4. Quarantine and Disposition of Human Cellular or Tissue-based Product From an Unsuitable Donor (Proposed § 1271.65)

If a donor is determined to be unsuitable, then under proposed § 1271.65 the manufacturer would be required to keep in quarantine any human cellular or tissue-based product from that donor. In this situation, quarantine would require physical separation of the product from all other products until it is destroyed, or until it is used under the provisions of proposed § 1271.65(b), (c), or (d).

Proposed § 1271.65 (b) sets out the limited circumstances in which the proposed regulations would not bar the implantation, transplantation, infusion, or transfer of human cellular and tissue-based products from unsuitable donors. In three situations, the agency is proposing that the recipient and his or her physician may decide whether to use the human cellular or tissue-based product.

The first exception is for family-related allogeneic use. Family-related allogeneic use is defined in § 1271.3(c) of the proposed registration rule as the implantation, transplantation, infusion, or transfer of a human cellular or tissue-based product into a first-degree blood relative of the individual from whom cells or tissue comprising such product were removed. Under the second exception, a person could choose to receive a product containing reproductive tissue from a directed donor who had been determined to be unsuitable. (Proposed § 1271.3(m) defines ''directed donor'' as a living person who is the source of cells or tissue designated for a specific potential recipient of a human cellular or tissue-based product.) The third exception is for cases where an urgent medical need exists and is documented. Urgent medical need is defined in proposed § 1271.3(z) as the situation where no comparable human cellular or tissue-based product from a suitable donor is available and, without the product, the recipient is likely to suffer serious morbidity.

However, use in each of these circumstances is conditioned on compliance with certain safeguards. First, in order to protect those people who may handle the product, the manufacturer would be required to label such products with a Biohazard legend. (A Biohazard legend is shown in proposed § 1271.3(i) and is used to mark products that present ''a known or suspected relevant communicable disease risk.'') Second, the manufacturer of the product would be responsible for documenting that: (1) The physician using the product was notified of the results of testing and screening, (2) the physician authorized the use of the product, (3) the physician agreed to explain the communicable disease risks associated with the product to the recipient or the recipient's legally authorized representative, and (4) the physician agreed to obtain from the recipient or the recipient's legally authorized representative consent to use the product. In proposing these exceptions that would not prohibit, in certain cases, the use of products from an unsuitable donor, it is FDA's intention to delegate to the potential recipient and his or her physician the responsibility for comparing the relative risks and benefits. The agency specifically seeks comment on the scope of the exceptions and the proposed safeguards that FDA has crafted. For example, does the exception for directed reproductive tissue donors provide a reasonable accommodation for a woman who wishes to choose the genetic father of her child? Should the exception be further broadened to permit a woman to select an anonymous donor with a known high risk behavior or, conversely, does the exception provide sufficient protection for the woman and her potential child?

FDA recognizes that, just as there may be urgent medical situations that might justify the use of a human cellular or tissue-based product from an unsuitable donor, so the need may arise to use a human cellular or tissue-based product before the donor-suitability determination has been completed. Proposed § 1271.65(c) sets out the limited, emergency circumstances in which the proposed regulations would not prohibit the implantation, transplantation, infusion, or transfer of such a product. The emergency provisions of § 1271.65(c) are similar to those in § 1271.65(b), with some modifications appropriate to the different characteristics of the situation. In particular, a product made available for use pending completion of the donor-suitability determination must be accompanied by information on the status of the required screening and testing. In addition, § 1271.65(c) includes the requirement that the donor-suitability determination be completed during or after the use of the product, and that the manufacturer inform the physician of the results of that determination.

Under proposed § 1271.65(d), nonclinical uses of a human cellular or tissue-based product from an unsuitable donor would not be prohibited, e.g., use for educational or research purposes. A manufacturer would be required to label a product used under the provisions of § 1271.65(c) as ''For Nonclinical Use Only'' and with the Biohazard legend shown in proposed § 1271.3(i).

D. Donor Screening (Proposed § 1271.75)

The determination of donor-suitability is based on the results of two different evaluations: Screening and testing. Donor screening involves the review of a variety of possible sources

of information about the donor that might indicate that the donor is at risk for or exhibits clinical evidence of infection due to a relevant communicable disease.

1. General Requirements

The requirements for donor screening are in proposed § 1271.75. Under proposed § 1271.75(a), the manufacturer would be required to review the relevant medical records of a donor of cells or tissue for a human cellular or tissue-based product for risk factors for and clinical evidence of relevant communicable disease agents and diseases. Relevant medical records are defined in proposed § 1271.3(v) as a collection of documents that includes a current donor medical history interview as defined in proposed § 1271.3(o); a current report of the physical assessment as defined in proposed § 1271.3(r) of a cadaveric donor or a physical examination of a living donor; and, if available, laboratory test results, medical records, coroner and autopsy reports, and records or other information received from any source pertaining to risk factors for relevant communicable disease. (The proposed definitions for ''relevant medical records,'' ''donor medical history interview,'' and ''physical assessment'' have been broadened to refer not only to HIV and hepatitis but instead to ''relevant communicable disease;'' in other respects, except as otherwise noted, these definitions are substantially the same as those currently in § 1270.3.)

Under proposed § 1271.3(v), risk factors for communicable disease may include social behavior, clinical signs and symptoms of a relevant communicable disease, and treatments related to medical conditions suggestive of risk for a relevant communicable disease. Consistent with the approach taken in part 1270, the proposed regulations do not specify risk factors, as these may change as knowledge of communicable diseases grows. FDA, together with CDC, is reviewing the risk factors for transmission of relevant communicable diseases in light of current scientific knowledge. Based on the results of the review, FDA plans to specifically describe in a guidance document risk factors and screening information to assist manufacturers in complying with the regulation. A notice announcing the availability of a draft guidance document for public comment will be published in the **Federal Register**. The notice will provide instructions for obtaining copies of the draft guidance document by mail, facsimile, and the Internet using the World Wide Web. FDA plans to issue a final guidance document on or about the time of issuance of the final rule.

Under proposed § 1271.75(d), an abbreviated screening procedure may be used for a living donor who returns to make subsequent donations and who has already been screened under § 1271.75(a) and (b). This abbreviated screening would determine whether any changes had occurred in the donor's medical history since the previous donation that would make the donor unsuitable, and would require documentation of those changes. A complete donor-suitability determination procedure would be required at least once every 6 months.

Under proposed § 1271.3(o), a ''donor medical history interview'' means a documented dialogue with the donor, if the donor is living. If the donor is not living or is unable to participate in the interview, the interview takes place with an individual or individuals who are knowledgeable about the donor's medical history and relevant social behavior, such as the donor's next of kin, the nearest available relative, a member of the donor's household, an individual with an affinity relationship, and/or the primary treating physician. With respect to relevant social behavior, the definition states that the interview includes questions about whether or not the donor met certain descriptions or engaged in activities or behaviors considered to place the donor at increased risk for a relevant communicable disease.

The current regulations on human tissue intended for transplantation contain an exception from the requirement for a donor medical history interview for corneas obtained under legislative consent; i.e., in accordance with a State law that allows the medical examiner or coroner to procure corneal tissue without the consent of the donor's next of kin (§ 1270.21(g)). In response to numerous comments and discussions about the tissue interim rule, FDA acknowledged the need for flexibility in the procurement of corneal tissue under legislative consent, and modified the regulations to accept as sufficient a physical assessment of the donor in the absence of a donor medical history interview (62 FR 40429 at 40437).

The regulations now being proposed do not contain an exception from the donor medical history interview for corneas procured under legislative consent. FDA recognizes that, when corneal tissue is procured without the consent of the donor's next of kin, a donor medical history interview with the donor's next of kin does not necessarily occur. However, the agency notes that the proposed definition of donor medical history interview would permit the interview to be conducted with an individual knowledgeable about the donor's medical history and relevant social behavior (e.g., primary treating physician) and would not require an interview with the next of kin. For this reason, FDA considers that the proposed regulation and State laws on legislative consent may coexist, and does not intend at this time to preempt those laws. The agency requests that affected parties submit specific, detailed comments on any potential conflicts that might make it impossible to comply with both this regulation and State laws on legislative consent.

Requiring a donor medical history interview for corneas obtained under legislative consent is necessary to ensure that the risk of communicable disease transmission is appropriately assessed. To prevent the transmission of communicable disease, adequate donor screening measures are necessary, even when approved tests are available.

The necessity of adequate screening for TSE illustrates the importance of the donor medical history interview. The regulations now being proposed would require TSE screening for all cell and tissue donors and, in the case of dura mater donors, a post-mortem physical assessment for TSE. (In contrast, current regulations on human tissue intended for transplantation contained in part 1270 do not require screening or testing for TSE.) Two recent possible transmissions of TSE by corneal tissue have been reported in Japan and Germany. In addition, three potential CJD transmissions have been reported in the United Kingdom, where corneas and sclera from a donor subsequently determined to have CJD were transplanted into, and then removed from, three recipients (Ref. 20). Recent cognitive changes and abnormalities in speech and gait are possible indications of TSE. These and other behavioral changes that a cell or tissue donor might exhibit prior to donation would be expected to be uncovered in the donor medical history interview, but would be less likely to turn up during other parts of the screening process.

2. Specific Communicable Disease Screening Requirements

Proposed § 1271.75(a)(1) states that the relevant medical records for a cell or tissue donor shall be reviewed for risk factors for and clinical evidence of infection due to relevant communicable disease agents and diseases. Proposed § 1271.75(a)(1) specifically lists HIV, HBV, HCV, and TSE as relevant communicable disease agents and

diseases for which such screening is required. These four disease agents and diseases are listed as the ''minimum'' for which screening would be required; should a new relevant communicable disease arise or be identified, the agency would consider manufacturers to be required, under proposed § 1271.75(a)(1), to screen for the new disease as well.

Special concerns arise with respect to donors of reproductive cells or tissue, when those cells or tissue are recovered through methods that could lead to the transmission of sexually transmitted and genitourinary diseases. Accordingly, under proposed § 1271.75(b), if those methods are used, donor screening would be required for risk factors for and clinical evidence of infection due to sexually transmitted and genitourinary diseases. Certain methods of recovery, e.g., laparoscopy to recover oocytes, are not directly connected with the transmission of sexually transmitted and genitourinary diseases, and would not trigger this requirement.

Special concerns also arise with respect to potential donors who have received xenotransplants. Xenotransplantation is the transplantation of live cells, tissues, and/or organs between different species, such as from a baboon or pig to a human. Because transplantation necessitates disruption of the recipient's usual protective physical immunologic barriers, xenotransplantation may facilitate transmission of known and as yet unrecognized agents to humans. These can include unknown retroviruses, which may remain latent for a period of time before causing clinically recognized disease. Concerns about the potential infectious disease and public health risks associated with xenotransplantation have been discussed at two recent FDA meetings (Xenotransplantation Advisory Subcommittee of the Biologic Response Modifier Advisory Committee, December 17, 1997, and Blood Products Advisory Committee, March 19, 1998).

Cells or tissue from a xenotransplant recipient could potentially contain infectious agents transmitted by the xenotransplant. In addition, the cells or tissues of a person who has been a close contact of a xenotransplant recipient could contain infectious agents originating from the xenotransplant. Because of the potential severity of the risk associated with these situations, the agency is proposing to require, in § 1271.75(a)(2), that medical records be reviewed to determine whether a potential donor of cells or tissue has received a xenotransplant or has been a close contact of a xenotransplant recipient. If so, the donor would be determined to be unsuitable under proposed § 1271.75(c).

FDA is proposing to define ''xenotransplantation'' in § 1271.3(aa) as any procedure that involves the use of live cells, tissues, or organs from a nonhuman animal source, transplanted or implanted into a human, or used for ex vivo contact with human body fluids, cells, tissues, or organs that are subsequently given to a human recipient. Nonliving biological products or materials from animals, such as porcine heart valves, porcine insulin, and bovine serum albumin, have been used clinically for decades and would not be considered xenotransplantation products for purposes of these regulations. ''Close contacts'' of a xenotransplant recipient would be defined in proposed § 1271.3(bb) as household members and others with whom the recipient participates in activities that could result in exchanges of bodily fluids.

E. Donor Testing

In addition to donor screening, the analysis of donor test results is necessary for a donor-suitability determination. Laboratory tests conducted on specimens collected from a cell or tissue donor can indicate whether the donor has evidence of infection due to a relevant communicable disease agent or disease. Proposed § 1271.80 sets out the general requirements for donor testing. Disease- and product-specific requirements are in proposed § 1271.85.

FDA notes that the proposed regulations employ the word ''screening'' in two different contexts. In proposed §§ 1271.80 and 1271.85, ''screening test'' refers to a laboratory test to determine exposure to or presence of a relevant communicable disease agent. The agency has used the term ''screening test'' in the past, e.g., § 1270.21, and considers it to be the generally recognized term in the industry and medical community for this type of initial test. Other sections of the proposed regulations, e.g., proposed § 1271.75, use the term ''donor screening'' to refer to the review of the donor's relevant medical records, as defined in proposed § 1271.3(v). This use of ''donor screening'' is consistent with part 1270 and with usage by the industry and medical community.

1. General Requirements (Proposed § 1271.80)

FDA proposes in § 1271.80(a) to require that a donor specimen be tested for evidence of infection due to relevant communicable disease agents and diseases, which would include, at a minimum, those specified in proposed § 1271.85. Proposed § 1271.80(a) states that a specimen from the mother of a fetal or neonatal donor would be acceptable for testing. The proposed regulation also specifically notes that the purpose of testing is to adequately and appropriately reduce the risk of transmission of relevant communicable diseases.

Proposed § 1271.80(b) addresses the timing of the collection of a donor specimen for testing. The agency proposes to require that the donor specimen be collected at the time of recovery of cells or tissue from the donor or within 48 hours after recovery. The agency is concerned that a specimen collected prior to donation may not accurately reflect the donor's actual exposure to a relevant communicable disease at the time of donation. However, the agency recognizes that there may be certain instances in which it would be preferable to analyze a donor specimen to determine donor suitability in advance of recovery of cells or tissue. For that reason, the agency proposes that, for living donors, a specimen may be collected up to 7 days prior to recovery if: (1) Recovery of the cells or tissue involves invasive procedures or substantial risk to the donor; (2) implantation, transplantation, infusion, or transfer of the recovered cells or tissue is necessary before results of testing performed on a specimen collected at the time of recovery or post recovery would be available; or (3) extensive processing of the recovered cells or tissue is necessary before results of testing performed on a specimen collected at the time of recovery or post recovery would be available.

The agency recognizes that its proposed requirement on the timing of collection of donor specimens differs from testing practices currently followed by various industry members, and specifically requests comments on this proposal. Any comments that propose an alternative time period should explain how the proffered alternative balances the agency's concern about the spread of communicable disease with the practical concerns relating to the coordination of donor testing and donation.

Under proposed § 1271.80(c), testing would be required to be performed using FDA-licensed, approved, or cleared donor screening tests in accordance with the manufacturer's instructions, to adequately and appropriately reduce the risk of

transmission of relevant communicable disease agents or diseases. Proposed § 1271.80(c) contains a proviso with respect to *Chlamydia trachomatis* and *Neisseria gonorrhea*, for which testing of certain donors of reproductive cells and tissues would be required under proposed § 1271.85(c). At this time there are no FDA-licensed, approved, or cleared donor screening tests available for those two disease agents. However, the agency considers that testing for the disease agents is essential to prevent their spread, and that the use of tests labeled for the detection of those organisms in an asymptomatic, low-prevalence population would be adequate and appropriate until screening tests are available. Thus, until such time as appropriate FDA-licensed, approved, or cleared donor screening tests are available for these disease agents, the required testing would be performed using tests labeled for detection of the organisms.

Under proposed § 1271.80(d), a donor whose specimen tests repeatedly reactive or positive on a test required under proposed § 1271.85 must be determined to be unsuitable. (Repeatedly reactive means initially reactive, then reactive in at least one of two duplicate tests with the same manufacturer's test kit.) Proposed § 1271.80(d)(1)(i) and (d)(1)(ii) set out two exceptions to this general rule. Under the first exception, a repeatedly reactive test for CMV will not make a donor unsuitable unless additional testing shows the presence of an active infection. This exception is being proposed because, although a donor with active CMV poses a risk of CMV transmission, a donor's past infection with the virus does not necessarily present such a risk. The results of CMV testing would accompany the product, under proposed § 1271.55(a)(1)(i), or would be contained in the summary of records that accompanies the product, and should be reviewed by the physician prior to use of the product. The agency believes that the provision of information on CMV status in the materials accompanying the product will be sufficient to allow physicians to make informed decisions about the use of the product in particular patients' circumstances. The agency specifically requests comments on this approach.

The second exception is for a donor whose specimen has tested repeatedly reactive on a non-Treponemal screening test for syphilis and negative on a specific Treponemal confirmatory test. FDA is proposing this exception because it recognizes that non-Treponemal screening tests, which do not test directly for the disease agent, frequently provide false-positive results. Negative results from a Treponemal confirmatory test, which is more specific and, thus, more accurate, will be considered to override an initial false positive.

Blood loss from a potential donor, followed by transfusion or infusion, may result in plasma dilution that affects test results. Plasma dilution is defined in proposed § 1271.3(s) as a decrease in the concentration of the donor's plasma proteins and circulating antigens or antibodies resulting from the transfusion of blood or blood components and/or infusion of fluids. Proposed § 1271.80(d)(2) sets out the requirements for assessing whether a specimen from a donor from whom blood loss has occurred is acceptable. (In the absence of an acceptable specimen, a donor must be determined to be unsuitable.) A specimen taken after blood loss but before the transfusion or infusion is acceptable. In addition, in certain instances an established procedure to calculate dilution (an algorithm) may be used. Proposed § 1271.80(d)(2) is based closely on § 1270.20(h)(2) and (h)(3). FDA discussed the provisions of § 1270.20(h)(2) and (h)(3) in the tissue final rule (see 62 FR 40429 at 40435 through 40436), and the guidance document that accompanied that rule contains information on plasma dilution and algorithms.

2. Specific Requirements (Proposed § 1271.85)

Proposed § 1271.85 sets out specific requirements with respect to donor testing. Proposed § 1271.85(a), (b), and (c) identify the minimum relevant communicable disease agents for which testing is required. Proposed § 1271.85(d) contains retesting requirements for donors of certain reproductive cells or tissues.

The proposed requirements in § 1271.85(a) cover all cells and tissues that are not subject to a regulatory exception from the testing requirement. Under proposed § 1271.85(a), a specimen from a donor of viable or nonviable cells or tissue would be required to be tested for evidence of infection due to: HIV type 1, HIV type 2, HBV, HCV, and *Treponema pallidum*.

In addition to the testing required under proposed § 1271.85(a), a donor of viable, leukocyte-rich cells or tissues would be required under proposed § 1271.85(b) to be tested for evidence of infection due to: HTLV types I and II, and CMV. The agency is proposing to make the distinction between cells and tissues that are rich in leukocytes and those that are not, because the transmission of certain disease agents, such as HTLV types I and II, and CMV, depends on the presence of viable leukocytes. Stem cells and reproductive cells and tissue, e.g., semen, are examples of leukocyte-rich cells or tissue. In contrast, FDA does not consider corneas, skin, heart valves, dura mater, bone, tendons, ligaments, or cartilage to be leukocyte-rich. The agency specifically requests comments on whether the term ''leukocyte-rich'' needs additional clarification.

Proposed § 1271.85(c) would require testing for donors of reproductive cells or tissue, in addition to those required by proposed § 1271.85(a) and (b). Proposed § 1271.85(c)(1) identifies *Chlamydia trachomatis* and *Neisseria gonorrhea* as relevant genitourinary disease agents for which testing would be required. However, testing for *Chlamydia trachomatis* and *Neisseria gonorrhea* would not be required if the reproductive cells or tissue are procured by a method that ensures freedom from contamination of the cells or tissue by infectious disease organisms that may be present in the genitourinary tract. FDA is requesting comments and supporting data on whether other genitourinary disease agents should be considered relevant.

Proposed § 1271.85(a), (b), and (c) specify that the purpose of testing is to adequately and appropriately reduce the risk of transmission of relevant communicable diseases. Thus, any test performed under proposed § 1271.85 must be chosen with this purpose in mind. The regulation specifies that testing shall be performed using FDA-licensed, approved, or cleared screening tests in accordance with the manufacturers' instructions.

The following list represents FDA's current thinking on the appropriate FDA-licensed, approved, or cleared screening tests that should be used to adequately and appropriately reduce the risk of transmission of relevant communicable disease agents or diseases:

(1) HIV, type 1: FDA-licensed screening test for anti-HIV–1:

(2) HIV, type 2: FDA-licensed screening test for anti-HIV–2:

(3) HBV: FDA-licensed screening test for hepatitis B surface antigen (HBsAg);

(4) HCV: FDA-licensed screening test for anti-HCV;

(5) *Treponema pallidum*: FDA-cleared serological test for syphilis;

(6) Human T-lymphotropic virus, types I and II: FDA-licensed screening test for anti-HTLV I/II; and

(7) Cytomegalovirus: FDA-cleared test for anti-CMV.

In the case of HBV, there are two types of screening test: A test for the surface antigen and a test for the core antibody. Currently, the appropriate test to reduce the possibility of transmission of HBV to a recipient is the surface antigen test because it is a marker of infectivity. Thus, ''FDA-licensed screening test for HBsAg'' appears on the previous list as an example of a test to be performed for the HBV virus. Testing for the core antibody alone would not accurately evaluate the donor for the possibility of transmission, because the core antibody test could be negative and the donor could still be infectious. Active infection at the time of donation can only be adequately evaluated with the use of the surface antigen screening test, which, if repeatedly reactive, indicates early or chronic HBV infection.

It should be noted that, if the establishment determining the suitability of the donor is aware of any repeatedly reactive screening test for a relevant communicable disease agent that indicates the possible presence of a relevant communicable disease, whether or not the test is the one best suited to adequately and appropriately reduce the risk of disease transmission, then the donor of the cellular or tissue-based product must be determined to be unsuitable under proposed § 1271.80(d)(1). For example, a repeatedly reactive core antibody test for HBV, although not required, would make the donor unsuitable.

Proposed § 1271.80(d) would require retesting of the donor at least 6 months after the date of donation of reproductive cells or tissues that can reliably be stored. Cells or tissues that can reliably be stored are those that maintain function and integrity during storage; some examples include spermatozoa and sperm progenitor cells. The retesting requirement is designed to address the ''window period'' between the time of infection and the presence of detectable levels of antibodies to communicable diseases and agents such as HCV. Testing would not be complete, and thus a donor-suitability determination could not be made, until the completion of the second round of tests. Under proposed § 1271.60(a), quarantine for these products would last a minimum of 6 months, until completion of testing. For donors of reproductive cells and tissues that can be reliably stored, FDA considers HBV core antibody screening test to be the most adequate and appropriate retest for HBV.

For all other banked tissue and cells from living donors, FDA recommends but does not propose to require that, where appropriate and feasible, all donors (or mothers of fetal or neonatal donors) be retested 6 months after donation and that the banked cells and tissue be kept in quarantine pending retesting.

3. Dura Mater

CJD, a type of TSE, is a rare, but invariably fatal, degenerative disease of the central nervous system characterized by progressive dementia. Recent reports link the transmission of CJD to recipients of human cadaveric dura mater, particularly allografts manufactured by one company prior to 1987. Thus, FDA proposes to require, in § 1271.85(e), that an assessment be performed for donors of dura mater to detect evidence of TSE.

On March 27, 1997, the World Health Organization (WHO) recommended a ban on the use of human dura mater as an implant because of reports of CJD in a limited number of recipients. Since FDA had established safeguards and guidelines in 1990 to minimize the possibility of such infections, the agency announced on March 31, 1997, that it would not restrict the distribution of FDA-cleared dura mater allografts.

On October 6, 1997, FDA's Transmissible Spongiform Encephalopathy Advisory Committee (TSEAC) discussed the existing safeguards and additional safeguards that needed to be in place to prevent the transmission of CJD by human cadaveric dura mater. The TSEAC's recommendations were transmitted to industry through an FDA letter to manufacturers on March 6, 1998. After comments were received, FDA revisited the issues with TSEAC on April 16, 1998. Based upon the recommendations of the TSEAC at this meeting, the following represent proposed procedures for complying, at the present time, with the testing requirements of proposed § 1271.85(e) and the screening requirements of proposed § 1271.75(a)(4).

After the dura mater has been removed, a full brain autopsy of the donor of dura mater, including gross and histological examination, should be performed by a qualified neuropathologist, to identify evidence of TSE changes. Testing to detect protease-resistant prion protein (PrP–RES) either by immunohistochemistry or Western Blot, is currently a research (investigational use) tool, as there is no FDA-approved or validated test for screening TSE in brain tissue. However, a negative test is considered significant in increasing the level of confidence that the brain and the dura mater are free of TSE. FDA encourages validation of this test. Manufacturers should continue to monitor scientific developments and should incorporate this test if and when it becomes approved for this intended use.

Donors of dura mater should be subject to a consistent screening protocol, including a donor medical history interview that includes questions relevant to TSE risk, as mentioned in the human tissue guidance.

FDA intends to address other recommendations of the TSEAC in future proposed regulations on CGTP's. These include a standard protocol for procuring dura mater, prevention of cross-contamination, use of either a NaOH protocol or other procedure that has been validated to reduce infectivity while preserving clinical utility, archiving of a sample of brain and dura mater tissues, and recordkeeping and tracking requirements.

4. Corneal Tissue

The possibility that corneal tissue may transmit TSE is discussed in section III.D.1 of this document. Although the agency is proposing to require that, for donors of dura mater, an assessment designed to detect evidence of TSE be performed, the recommended method of accomplishing this assessment involves a full brain autopsy, including gross and histological examination, and definitive results are not available for several weeks. At present, this type of testing does not appear feasible for cornea donors, because under present conditions of storage in the United States, corneas must be transplanted within days of procurement in order to maintain their integrity and function. The agency requests comment on the feasibility of testing for TSE in donors of corneal tissue.

F. Exceptions (Proposed § 1271.90)

1. Exceptions From the Requirement for a Donor Suitability Determination

Proposed § 1271.90(a) identifies two situations in which a determination of donor suitability would not be required. In the case of banked cells and tissues for autologous use, cells and tissues are removed from a patient and stored for later use in the same patient. Because the risk of the patient's contracting a new communicable disease from cells or tissues taken from his or her own body is extremely low, FDA is not requiring communicable disease testing or screening. (Any handling and storage requirements for such cells or tissue may be addressed later, in the proposed CGTP regulation.) However, as a general safety measure, FDA recommends that

autologous donors be subjected to the same testing and screening as proposed under §§ 1271.75, 1271.85, and 1271.90 for allogeneic donors of comparable human cellular or tissue-based products.

The second situation in which FDA is recommending but not requiring testing is for reproductive cells or tissue donated by a sexually intimate partner of the recipient. In this case, the recipient will likely have been routinely exposed to the donor's semen or other body fluids. Although some screening and testing of the donor and recipient may be appropriate, FDA believes that this should be the responsibility of the attending physician and the donor and the recipient.

2. Labeling Requirements

Although screening and testing would not be required in the two above situations, FDA is proposing certain labeling requirements.

In order to protect those people who may handle the human cellular or tissue-based product, the manufacturer would be required to label a product as ''NOT EVALUATED FOR INFECTIOUS SUBSTANCES'' unless all donor screening and testing applicable to a comparable human cellular or tissue-based product under proposed §§ 1271.75, 1271.80, and 1271.85 are performed. Thus, if screening and testing results are negative, but not all of the testing and screening that would be required under proposed §§ 1271.75, 1271.80, and 1271.85 are performed, then the product would be labeled ''NOT EVALUATED FOR INFECTIOUS SUBSTANCES.'' However, if any screening or testing is performed, and the results indicate the presence of relevant communicable disease agents, or risk factors for and/or clinical evidence of relevant communicable disease, then the product would be labeled with the Biohazard legend shown in proposed § 1271.3(i).

In addition, the manufacturer would be required to label autologous banked cells and tissues as ''FOR AUTOLOGOUS USE ONLY.'' Such a label would help prevent inadvertent allogeneic administration.

G. Drug and Device Amendments (§§ 210.1, 210.2, 211.1, 820.1)

As discussed in section I of this document, FDA proposes to require that manufacturers of human cellular or tissue-based products regulated as drugs, medical devices, and/or biological products comply with the donor-suitability procedures now being proposed. In a future proposed rulemaking, the agency plans to propose CGTP's that would be applicable to these products, as well. The donor-suitability and CGTP procedures would be considered part of CGMP requirements for drugs and the Quality System for devices. In order to incorporate these new procedures, FDA is proposing to amend parts 210 and 211 with respect to human cellular and tissue-based products regulated as drugs and/or biological products and part 820 with respect to human cellular and tissue-based products regulated as devices.

FDA proposes to amend § 210.1 by adding new paragraph (c), which would contain the requirement for compliance with the donor-suitability procedures proposed in part 1271 subpart C and the current CGTP procedures to be proposed in part 1271 subpart D as part of the GMP requirements, and which would state that failure to comply with those or other CGMP's would adulterate the product. (References to the requirements in proposed part 1271 are also proposed to be added to §§ 210.2 and 211.1, to bring those regulations in conformity with the changes in § 210.1.) Comparable amendments are being proposed for § 820.1 to achieve the same result with respect to human cellular and tissue-based products regulated as devices.

IV. Analysis of Economic Impacts

FDA has examined the impacts of the proposed rule under Executive Order 12866, under the Regulatory Flexibility Act (5 U.S.C. 601–612), and under the Unfunded Mandates Reform Act (Public Law 104–4). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The Regulatory Flexibility Act requires agencies to analyze whether a rule may have a significant impact on a substantial number of small entities and, if it does, to analyze regulatory options that would minimize the impact. The Unfunded Mandates Reform Act requires that agencies prepare a written statement under section 202(a) of anticipated costs and benefits before proposing any rule that may result in an expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million (adjusted annually for inflation in any one year).

The agency believes that this final rule is consistent with the principles identified in Executive Order 12866. OMB has determined that the final rule is a significant regulatory action as defined by the Executive Order and so is subject to review. Because the rule does not impose mandates on State, local, or tribal governments, or the private sector, that will result in an expenditure in any one year of $100 million or more, FDA is not required to perform a cost-benefit analysis according to the Unfunded Mandates Reform Act.

The Regulatory Flexibility Act requires agencies to prepare a Regulatory Flexibility Analysis for each rule unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. As explained in section IV.C of this document, the agency believes that most of the facilities would not be significantly affected by the proposed rule because they are already performing the infectious disease screening and testing and recordkeeping that is being proposed. However, FDA does not have sufficient data to characterize the size distribution and other relevant features of small entities involved in reproductive tissue and the impact on these entities is uncertain. FDA has therefore prepared an Initial Regulatory Flexibility Analysis.

A. Objectives and Basis of the Proposed Action

FDA is proposing this action as the next step in the regulation of the rapidly evolving industry of human cellular and tissue-based products. This proposed rule focuses on the first of three general areas of regulation proposed in the approach to cellular and tissue-based products, i.e., preventing unwitting use of contaminated tissues with the potential for transmitting infectious diseases such as AIDS and hepatitis. While acting to increase the safety of the nation's supply of human cellular and tissue-based products, FDA is proposing regulations that would avoid unnecessary requirements. The agency has designed the screening and testing regulations for the specific type and use of each cellular or tissue-based product that would minimize regulatory burden while maintaining safety.

In this rulemaking, the agency is proposing to broaden its regulatory oversight over all human cellular and tissue-based products, including reproductive cells and tissue. This action is focused on the prevention of diseases transmitted by specific cellular or tissue-based products by implantation, transplantation, infusion, or transfer of any cellular or tissue-based product. For example, FDA is

now proposing to require cell and tissue donors to be tested for syphilis and screened for TSE. Donors of viable, leukocyte-rich cells or tissue would also be tested for HTLV types I and II, and CMV. Because communicable disease agents can be transmitted by semen and other genitourinary secretions, FDA is proposing to require that donors of reproductive cells and tissue be screened and tested for sexually transmitted diseases. FDA proposes to amend the existing CGMP regulations for drugs and devices to incorporate the screening and testing requirements in proposed part 1271 subpart C. FDA is relying on the authority provided by section 361 of the PHS Act to issue regulations to prevent the spread of communicable disease, as well as its authority under the act to issue CGMP regulations (21 U.S.C. 351(a)(2)(B) and (h) and 360j(f)(1)). FDA has reviewed related Federal rules and has not identified any rules that duplicate, overlap, or conflict with the proposed rule.

B. The Type and Number of Entities Affected

The proposed rule would require manufacturers of human cellular and tissue-based products, including human tissue intended for transplantation, to screen and test donors of cells and tissue used in those products. The rule would require that donors be screened and tested for risk factors for and clinical evidence of relevant communicable disease agents and diseases. The proposed rule would apply to a range of activities conducted at facilities such as tissue banks, blood banks, eye banks, semen banks, infertility treatment facilities, and cord blood banks. However, the number of entities that would be required to comply with this proposal is difficult to ascertain because the agency has not previously regulated certain human cellular and tissue-based products. Although the agency has proposed to require manufacturers of human cellular and tissue-based products to register and list their products and to identify their manufacturer steps, this information will not be available for some time. Consequently, the agency's estimates rely heavily on information obtained from various trade organizations related to the human cellular and tissue-based industry.

As shown in Table 1 of this document, the estimated numbers of facilities affected by the proposed rule are derived from varied industry sources. The Eye Bank Association of America (EBAA) represents about 108 eye banks, which are estimated to be about 95 percent of eye banks in the United States. The American Association of Tissue Banks (AATB) lists approximately 60 accredited tissue banks and projects an additional 40 to 60 members not accredited. As of May 1998, CBER has record of 132 registered blood bank facilities listing ''stem cell'' as a type of product or establishment. The National Marrow Donor Program (NMDP), which includes establishments that recover peripheral blood stem cells, lists approximately 101 donor centers (these establishments are associated with the American Association of Blood Banks (AABB) or the Foundation for the Accreditation of Hematopoietic Cell Therapy (FAHCT)). Although there is no single national organization that keeps track of the number of facilities for umbilical cord blood banking, FDA estimates that there are approximately 25 cord blood banks currently operating in the United States. These facilities would also seek accreditation through FAHCT or AABB.

In addition, the proposed rule would apply to facilities involved with reproductive tissue, primarily fertility centers and sperm banks that collect and process donor oocytes or donor sperm. The American Society of Reproductive Medicine (ASRM) has a membership of approximately 300 fertility centers, about 280 of which have provided reports to the 1995 Society for Assisted Reproductive Technology (SART) registry. The ASRM also has a 1996 list of approximately 110 sperm banks operating in the United States. Although ASRM has published guidelines for donor screening and other aspects of oocyte donation, and for therapeutic donor insemination, ASRM does not exercise oversight or provide accreditation of facilities that collect donor tissue or use these tissue products in infertility treatment.

C. Nature of the Impact

The proposed rule includes requirements for donor screening, donor testing, recordkeeping and quarantine of cells and tissue. Donor screening would involve the review of relevant medical records to include a medical history interview (particularly pertaining to communicable disease risk), a current report of a physical assessment for cadaveric donors, and a physical examination for living donors. For living repeat donors, a complete donor-suitability determination procedure would be required at least once every 6 months. The proposed rule would require that a donor specimen be tested for evidence of infection due to relevant communicable disease agents and diseases, with testing conducted within a specified time of recovery of cells or tissue. In general, a donor may be determined suitable if free from risk factors for and clinical evidence of infection due to relevant communicable disease agents and diseases, and if the required testing is negative or nonreactive.

The proposed rule would also require recordkeeping of donor-suitability determinations. Manufacturers would be required to ship human cellular and tissue-based products accompanied by documentation of donor-suitability status, including a copy of the donor's relevant medical records, results of required testing and the name and address of the establishment that made the suitability determination. The proposed rule requires that establishments that generate records used in donor-suitability determinations retain those records for at least 10 years after the date of the product's use or distribution. The proposed rule would also require that cell and tissue-based products be quarantined until a determination of donor suitability is made, and that products be clearly labeled as under quarantine during that period. The rule would hold manufacturers responsible for the appropriate labeling and documentation of cells or tissue from a donor who is found to be unsuitable.

The extent of the economic impact is expected to be minor for most of these establishments, because the leading industry associations have already established standards for screening that, in most cases, meet or exceed the criteria specified in the proposed rule; and because existing FDA regulations already apply to certain human tissue intended for transplantation (see part 1270). Table 1 of this document lists the types of donor cells and tissue that will be affected by the proposed rule and the associated facilities that collect and bank these tissue products. Table 1 also provides estimates of the number of establishments affected by the proposed rule and the estimated percentage of establishments already in compliance with current industry standards for donor screening and testing. The lists of specific donor screening and testing requirements proposed by FDA can be compared with those currently required by the industry associations.

TABLE 1.—TYPE AND NUMBER OF ESTABLISHMENTS AFFECTED AND PERCENTAGE ALREADY IN COMPLIANCE WITH INDUSTRY STANDARDS FOR DONOR SUITABILITY SCREENING AND TESTING

Type of Human Donor Tissue	Type of Entities Affected (and Estimated Total Number)	Relevant Industry Association Standards Compared to FDA Proposed Regulations	Estimated Percent Entities in Compliance with Industry Standards
Nonreproductive Tissue			
Eye tissue	Eye banks 108 EBAA members (114 total)	21 CFR part 1270 and FDA proposed (s1,s2,s3)[1] (t1,t2,t3,t5)[2] EBAA (s1 through s3)[1] (t1 through t3)[2]	100%
Pericardium, dura mater, heart valves, skin allograft, bone allograft, other viable	Tissue banks 60 AATB members (110 total)	21 CFR part 1270 and FDA proposed (s1 through s3)[1] (t1,t2,t3,t5)[2] AATB (s1 through s3)[1] (t1 through t5)[2]	100%
Stem cells; peripheral blood	Marrow donor centers 132 FDA registered facilities donor centers (101 total) collection centers (114 total)	FDA proposed (s1 through s3)[1] (t1 through t6)[2] AABB/FAHCT (s1 through s3)[1] (t1 through t6)[2]	100%
Stem cells; umbilical cord blood	Cord blood banks (25 total)	FDA proposed (s1 through s3)[1] (t1 through t6)[2] AABB/FAHCT (s1 through s3)[1] (t1 through t6)[2]	100%
Reproductive Tissue			
Donor oocyte, embryos	ART facilities & associated labs 281 in 1995 SART report (300 total)	FDA proposed (s1 through s3)[1] (t1,t2,t3,t5)[2] ASRM, CAP (s1)[1] (t1,t2,t3,t5)[2]	Unknown
Donor sperm	Sperm banks 4 in 1996 AATB survey (110 total)	FDA proposed (s1 through s3)[1] (t1 through t8)[2] AATB (s1 through s3)[1] (t1 through t8)[2] ASRM (s1)[1] (t1,t2,t3,t5,t7,t8)[2]	10% Unknown

[1] Screening for: s1: HIV, s2: hepatitis, s3: CJD
[2] Laboratory Tests: t1: anti-HIV–1–2, t2: anti-HCV, t3: HBsAg, t4: anti-HTLV–1, t5: syphilis, t6: CMV, t7: *Neisseria gonorrhea,* t8: *Chlamydia trachomatis*

Based on communications with representatives of several industry associations and facility managers, FDA estimates that the number of facilities currently in compliance with industry standards for donor screening and testing approaches 100 percent for several affected types of tissue product. Facilities handling reproductive tissue are the primary exception to this finding, and also represent the greatest area of uncertainty for this analysis. There is currently no single reliable source of information on fertility center or sperm bank compliance with AATB standards or ASRM guidelines. A small percentage of sperm banks are members of the AATB and are known to comply with that organization's requirements for screening and testing, but little is known about the standards for screening used at other facilities. Because this information is essential for the estimation of economic impact, FDA requests detailed industry comment on current donor screening and testing practices in these facilities.

In addition to the proposed donor screening and testing, the proposed rule is expected to require facility staff time to align current quarantine, sample labeling and recordkeeping systems with the requirements of the proposed rule. As shown in Table 2 of this document, all of the industry associations already specify requirements for these procedures. With the exception of facilities handling reproductive tissue, the current industry standards adopted by most facilities are at least as stringent as those included in the proposed rule.

TABLE 2.—CORRESPONDENCE OF FDA-PROPOSED REQUIREMENTS TO CURRENT INDUSTRY STANDARDS FOR SPECIMEN QUARANTINE, LABELING, AND RECORDKEEPING

FDA-Proposed	AATB Current	EBAA Current	AABB Current	FAHCT Current	ASRM Current
Quarantine	X[1]	X[1]	X[1]	X[1]	Donor sperm; not oocyte
Labeling	X[1]	X[1]	X[1]	X[1]	X[1]
Record Retention	X[1]	X[1]	X[1]	X[1]	Recommended; not required

[1] "X" means corresponds.

Due to the disparity in the amount of available information and the potential impact of the rule on nonreproductive versus reproductive tissue establishments, these two broad categories of tissue establishments are treated separately in the impact analysis that follows.

1. Impact on Nonreproductive Tissue Establishments

(a) *Impact of donor screening and testing.* As summarized in Table 1 of this document, most nonreproductive tissue establishments are already in compliance with the proposed FDA donor screening and testing requirements, as a result of following their own industry association standards and FDA current regulations. The cost of compliance with these provisions will be minimal for these establishments.

(b) *Impact of recordkeeping and tissue quarantine.* The burden of recordkeeping and tissue quarantine requirements will reflect the staff time needed to compare current recordkeeping and facility procedures with those required by the proposed standard and to make modifications where needed in current facility procedures. Such changes are expected to be minor for most nonreproductive tissue establishments.

FDA estimates that it would take approximately 8 to 40 hours to compare the proposed regulations against a facility's current standards. This process would be performed by a staff person who acts as a regulatory reviewer, a supervisor, or a manager of quality assurance. Assuming a labor cost of $40 per hour, this standards reconciliation effort would result in a one-time cost per facility ranging from $320 to $1,600. Applying this range of cost per facility to the approximately 380 nonreproductive tissue facilities yields a potential impact that ranges from $121,600 to $608,000.

2. Impact on Reproductive Tissue Establishments

(a) *Impact of donor screening and testing.* As indicated in Table 1 of this document, the current rate of compliance with industry standards is unknown among reproductive tissue establishments. Thus, FDA cannot develop a precise estimate of regulatory costs. As an upper bound figure, however, FDA assumed that 100 percent of facilities involved with oocyte donation and 80 percent of sperm banks would need additional screening and testing. Although the out-of-compliance sperm banks constitute a majority of the firms in that industry, they are primarily small operations that are estimated to serve only 5 percent of all sperm donors.

(i) *Oocyte Donor Screening and Testing.* The estimated impact of the proposed rule on establishments involved in oocyte donation is based on 1995 data reported by SART, an organization of assisted reproductive technology providers affiliated with ASRM. Approximately 70 percent of ART centers reporting in 1995 had performed at least one cycle of ART with donor eggs. In 1995, donor eggs were used in approximately 8 percent of all 59,800 ART cycles, or 4,783 cycles. (Although 78 percent of those cycles used fresh embryos, the proposed quarantine rules would likely necessitate the use of frozen embryos in all donor cycles, with some potential associated reduction in the success rate per donor in vitro fertilization (IVF) cycle (Ref. 1). FDA believes that all infertility treatment centers already conduct medical exams and history-taking and perform some laboratory testing prior to egg retrieval for any potential oocyte donor. Compliance with the proposed standard, however, may entail adding some additional blood testing and screening questions to the interview.

The cost of additional blood work (including HIV 1-2, hepatitis B, hepatitis C, and syphilis) is estimated at about $123 per donor (Ref. 2). The additional time to interview and record information in donor screening is estimated to cost about $37, based on the assumption that approximately half of the required screening is already being done, and the estimated cost of a full health history interview is $75 ($37~ $75/2) (Ref. 3). Thus, the additional cost per donation is estimated at $160 ($123 + 37). Based on a reported cost of $11,868 (Ref. 4) per donor oocyte cycle, this cost translates to a 1.3 percent increase (($160 +$11,868)/$11,868) in the cost of therapy per cycle.

The cost of screening egg donors will depend on the number of donor cycles attributable to each screened donor. If each donor contributes eggs for only one cycle, and the rejection rate is low (assumed to be 0.57 percent, which is the estimated prevalence rate of HBSAG positivity among parturient women) (Ref. 5), the number of donors to be tested would be 4,810 (4783/(1–0.0057)). If each donor contributes eggs for two donor cycles, the number of donors to be screened would be 2,405. These alternative assumptions imply a total cost to U.S. facilities involved in oocyte donation of from $386,000 to $772,000 per year, as shown in Table 3 of this document.

TABLE 3.—ALTERNATIVE OOCYTE DONATION SCENARIOS AND ASSOCIATED DONOR SCREENING COSTS

Screen/Test Cost Per Donor	2 ART Cycles Per Donor = 2,405	1 ART Cycle Per Donor = 4,810 Donors
$123.40 + $37.00 = $160.40	$386,000 ($160.40 x 2,405 = $385,762)	$772,000 ($160.40 x 4,810 =$771,524)

(ii) *Sperm donor screening and testing.* The agency has conducted an extensive search for current information on the extent of infectious disease screening for sperm donors, but has found little current information available. The Congressional Office of Technology Assessment (OTA) conducted a survey of establishments involved in sperm donation in 1987, and found that all commercial banks surveyed performed routine screening and testing for HIV, but only 45 percent of private physicians included this screening. The most recently available data includes a list of approximately 110 commercial sperm banks developed by ASRM in 1996, and a 1996 registration survey of the AATB that includes data for 4 sperm banks. The agency is aware that some sperm banks that have applied, but are not yet accredited members of AATB, are nonetheless following AATB standards. It is also likely that some other facilities have informally adopted AATB standards. This analysis assumes that all sperm banks currently perform HIV screening and testing, as reported by OTA in 1987, and a smaller percentage of facilities additionally follow all AATB screening and testing standards.

Based on recent conversations with sperm banking industry experts, FDA estimates that the largest 20 sperm banks account for approximately 95 percent of the commercial production of donor sperm, and that these facilities are compliant with AATB standards for donor screening and testing. The agency analysis therefore assumes that the 20 largest facilities, which account for most industry production, will experience minimal impact; while the remaining 90 facilities, which have extremely small volumes of production, will be more significantly affected. The very small sperm banks are described by an industry expert as typically functioning within a physician office practice (e.g., that of an obstetrician or gynecologist). The sperm banking in these facilities is generally offered as an additional service to patients receiving fertility treatment, and is not the primary line of business within these establishments.

The total estimated cost of the proposed screening and testing procedures for sperm banking facilities is based on the number of sperm donors who would require screening and testing, and their respective unit costs. Due to the lack of data on the actual number of sperm donors, the agency estimated the number based on projected therapeutic donor insemination TDI demand. The level of TDI demand has likely changed over time, with advances in treatment for male factor infertility. For example, the development of intracytoplasmic sperm injection ISCI used in conjunction with in vitro fertilization has enabled some couples to forego TDI in favor of ISCI using the male partner's sperm (Ref. 6). In 1985, an estimated 70,000 women per year received TDI (Ref. 7), compared to an estimated 171,000 women who reported ever receiving artificial insemination with donor sperm, in the National Survey of Family Growth (NSFG) conducted in 1995. If the NSFG respondents referred only to experience over the past 5 years, this would translate to approximately 34,200 women receiving TDI per year. Assuming an average of three cycles of therapy per patient per year, these data yield an estimated demand for TDI donor units of approximately 102,600 units per year. This figure is consistent with an industry expert estimate of current U.S. TDI production of 100,000 units per year.

Clinical literature indicates that most sperm donor attrition occurs prior to the blood testing stage of donor screening. For example, in one study of donor recruitment in which the clinic followed AATB and ASRM standards, of the total of 199 potential donors initially recruited, 174 were rejected; 172 of whom were rejected before blood testing, with only 2 (1 percent) rejected based on the blood test results (Ref. 8). Based on these findings, the agency assumes that the number of donors who will require infectious disease testing is approximately equal to the number of donors needed to supply the level of demand for TDI. Thus, FDA's estimate is based on the previous TDI unit demand combined with the maximum number of births per donor suggested in ASRM guidelines (Ref. 9), the average delivery rate per cycle of intrauterine insemination, an assumed 10 donated specimens per donor per year, and 4 donation units per donor specimen (Ref. 10). These factors yield an estimated 2,565 donors required per year. Assuming that the number of donors already screened and tested is proportionate to the volume of production accounted for by facilities compliant with AATB standards, FDA estimates that approximately 5 percent of all donors (0.05 x 2,565 = 128), or 128 donors per year, may need to be newly screened and tested to meet the requirements of the proposed rule.

The screening cost per donor is assumed to include an initial medical history and physical, a 6-month followup exam, and an abbreviated screening at the time of each donation. Based on rates published on the Internet (Ref. 3), the agency estimates that a full medical exam may cost $175, a less extensive followup exam will cost approximately $75 (a published fee for a health history review), and the abbreviated screening at the time of each donation will cost approximately $15 (i.e., one-fifth of the time required for a full history review). One repeat donor visit per year is assumed. Thus, the total cost of this screening is estimated to be $265 per year per donor.

The lab tests for prospective donors include those listed in Table 1 of this document, with 6-month followup blood tests for hepatitis B and C, HTLV–1, and syphilis. The cost of additional testing, based on screening test fees published on the Internet (Ref. 2), is $230.16 for initial complete blood testing, plus $123.40 for followup blood testing after a 6-month quarantine period, plus $113.30 for bacterial testing. The total cost of the additional lab work is estimated to be $467 per donor per year ($230.16 + $123.40 + $113.30 = $466.86). Because these estimates are based on charges to facility clients, they are likely to represent an upper bound on actual facility costs. Using these figures, the estimated total industry cost per year is approximately $94,000 (128 x ($265 + $467) = $93,696).

(b) *Impact of donor recordkeeping and tissue quarantine.* The impact of recordkeeping and tissue quarantine for reproductive tissue establishments will reflect the staff time required for: (1) A one-time review and modification of current recordkeeping and facility procedures to bring them into alignment with the proposed standard, and (2) on-going, expanded practices for each donor who undergoes screening and testing to meet the requirements of the proposed rule.

FDA estimates that the one-time review and alignment of current facility procedures will require approximately 8 to 40 hours at each facility. As with nonreproductive tissue facilities, this process would be performed by a regulatory affairs analyst, a supervisor, or a manager of quality assurance. Assuming a labor cost of $40 per hour, this standards reconciliation effort would result in a one-time cost per facility ranging from $320 to $1,600. This estimate corresponds to a total one-time cost for all reproductive tissue facilities that ranges from $131,200 ($320 x (300 + 110)) to $656,000 ($1,600 x (300 + 110)).

The recurring requirements for tissue quarantine, labeling, recordkeeping and record retention at reproductive tissue facilities are based on the estimated staff time needed to create and retain records of medical history, screening information, and lab testing for each

prospective donor from whom specimens are collected. The records must comply with the information requirements of the proposed rule and are estimated to require approximately 4 hours per donor per year of clerical staff time, with an assumed labor cost of $24 per hour for clerical staff ($96 per donor per year). Table 4 of this document summarizes the potential range of recurring costs for all reproductive tissue facilities. As shown, the estimated costs range from $243,000 to $474,000, depending on the assumed number of donors.

TABLE 4.—RANGE OF RECURRING COSTS FOR REPRODUCTIVE TISSUE

128 sperm donors 1 cycle per egg donor	$243,000 ((128 + 2,405) x $96 = $243,168)
128 sperm donors 2 cycles per egg donor	$474,000 ((128 + 4,810) x $96 = $474,048)

The size and range of these estimates reflects the agency's current lack of information about typical donor practices for reproductive tissue. If a higher rate of donation per donor is typically achieved by facilities, compared to that assumed in this analysis, the additional cost burden may be much lower than these estimates would indicate. More generally, if the current level of facility donor screening and recordkeeping is more stringent among reproductive tissue facilities than assumed in this analysis, the overall cost of compliance with the proposed rule will be lower than these preliminary estimates suggest.

Uncertainty about current practice and the level of compliance results in range estimates of the cost impact of the proposed rule. However, because most industry sectors already follow industry standards requiring donor testing and screening, the overall impact is expected to be small. Table 5 of this document provides a summary of the impacts across the different industry sectors included in the analysis. The total annualized cost for the 380 nonreproductive tissue facilities is estimated to range from $17,000 to $87,000, reflecting agency uncertainty about the extent of effort devoted to one-time review and alignment of existing standard operating procedures with the proposed donor screening rule provisions. This translates to an average cost of $45 to $229 per facility.

The annualized cost of compliance for the ART industry ranges from approximately $631,000 to $1.302 million, reflecting current uncertainty about the number of oocyte donors and the number of donations per donor per year. These costs translate to an average cost of approximately $2,103 ($631,000/300) to $4,340 ($1,302,000/300) per facility per year. In general, assumed higher rates of donation per year, or a lower number of total donor oocyte cycles per year, will result in lower industry costs. By the same token, lower rates of donation per donor, or higher total donor cycles performed per year, will result in higher donor screening costs.

The total annualized cost impact on the sperm banking industry is based on an estimated TDI demand of approximately 102 thousand units per year, and assumed current compliance of the top 20 commercial banks, which account for approximately 95 percent of industry production. The total annualized costs range from approximately $111,000 to $131,000. These industry totals yield an average annualized cost range of $1,234 ($111,000/(110–20)) to $1,456 ($131,000/(110–20)) per facility estimated to be noncompliant with the proposed standard.

TABLE 5.—DONOR SUITABILITY COST ANALYSIS SUMMARY TABLE[1]

Type of Facility	Total One-time Cost	Total Recurring Cost	Total Annualized Cost[2]
Nonreproductive Tissue—Eye Tissue, Conventional Tissue, and Stem Cell			
(a) Donor screening and testing	Minimal	Minimal	Minimal
(b) Recordkeeping and tissue quarantine	$121,600 to $608,000	Minimal	$17,000 to $87,000
Reproductive Tissue—ART Facilities			
(a) Donor screening and testing	Minimal	$386,000 to $772,000	$386,000 to $772,000
(b) Recordkeeping and tissue quarantine	$96,000 to $480,000	$231,000 to $462,000	$245,000 to $530,000
ART subtotal	$96,000 to $480,000	$617,000 to $1,234,000	$631,000 to $1,302,000
Reproductive Tissue—Sperm Banks			
(a) Donor screening and testing	Minimal	$94,000	$94,000
(b) Recordkeeping and tissue quarantine	$35,200 to $176,000	$12,000	$17,000 to $37,000
Sperm subtotal	$35,200 to $176,000	$106,000	$111,000 to $131,000

TABLE 5.—DONOR SUITABILITY COST ANALYSIS SUMMARY TABLE[1]—Continued

Type of Facility	Total One-time Cost	Total Recurring Cost	Total Annualized Cost[2]
Total Tissue Industry			
Total	$252,800 to $1,264,000	$723,000 to $1,340,000	$759,000 to $1,520,000

[1] Rounded to the nearest thousand
[2] At 7% interest rate over 10 years

D. Estimated Benefits of Proposed Rule

The proposed action would provide oversight for the full spectrum of human cellular and tissue-based products that are now marketed and may be marketed in the future. This action is intended to improve protection of the public health and increase public confidence in new technologies, while permitting significant innovation and imposing minimal regulatory burden. An important benefit of the rule will be the establishment of a consistent standard of safety to help ensure equivalent protection from transmissible diseases for all recipients of therapy involving cellular and tissue-based products, regardless of the health condition for which they are being treated. The proposed rule would help minimize risk to all patients of exposure to several life-threatening, in some cases incurable, diseases including HIV, HBV, HCV, CJD and others. These risks would be minimized through validated screening procedures, lab tests, and adequate labeling to avoid unwitting use of unsafe specimens. Each of the infectious diseases screened (see Table 1 of this document) will provide added patient safety protection and public health benefit.

The risks of disease transmission vary by type of cellular and tissue-based product. Donor screening, testing, and other measures to reduce the risks of transmission for various types of tissue will correspondingly yield a different relative reduction in disease risk. For example, expansion of blood donor screening and improved laboratory tests have dramatically reduced the risk of blood transfusion-transmitted disease. The risk of HIV infection has dropped from a reported 1 in 100 units in some U.S. cities to approximately 1 in 680,000 units. The risk of transmission of HBV has been reduced from 1 in 2,100 to 1 in 63,000 units, and the transmission risk for HCV has been lowered from 1 in 200 units in the early 1980's to the current level of 1 in 100,000 units (Ref. 11). These levels of risk reduction based on blood donors, offer an illustration of the kind of improvements in safety that might be achieved through improved and expanded screening of donors.

As described earlier, most nonreproductive tissue establishments are assumed to be already compliant with the proposed rule and therefore have already achieved the level of intended risk reduction. The discussion of benefits resulting from the proposed rule will therefore focus on some key areas of risk and potential benefit of the proposed requirements for reproductive tissue recipients. The discussion that follows will consider the risks of sexual transmission of disease that will be reduced through expanded screening among reproductive tissue donors, focusing on the reduced risk of two life-threatening chronic diseases that can be transmitted through donor tissue: HBV and HCV.

The expansion of screening among reproductive tissue donors is expected to produce important reductions in disease risk, as evidenced by the apparent reductions in HIV risk that have already been achieved through screening. The risk of HIV transmission through TDI appears to be much lower since screening for HIV was recommended by the Center for Disease Control and Prevention (CDC) in 1985. A total of six documented and two possible cases have been reported to the CDC as of December 1996 (Ref. 7).

The risks of transmitting HBV and HCV through reproductive tissue should be substantially reduced as a result of donor screening, based on the significance of self-reported risk factors as predictors of the findings of blood screening for HBV and HCV (Ref. 12). Compared to HCV, HBV presents a higher risk of sexual transmission. In 1991, heterosexual activity is reported to account for 41 percent of all cases of HBV (Ref. 13). HBV transmission has also been reported by use of TDI; in 1982 a physician used semen from an unscreened donor (later found to carry HBsAg) to inseminate several women, one of whom later developed HBV (Ref. 14).

HBV-infected mothers can transmit the disease to their infants. Forty-two percent of infants born to women with HBsAg positivity (adjusted for HBeAg status) are at risk of HBV infection, and an additional 30 percent of infants born to HBsAg-positive mothers become infected between 1 and 5 years of age. Prospective studies of infected infants or young children, indicate that 25 percent will die from primary hepatocellular carcinoma (PHC) or cirrhosis as adults. The lifetime medical cost per case of PHC and cirrhosis is estimated to be $96,500 (Ref. 15). An analysis of the cost-effectiveness of prenatal screening and testing of mothers, with vaccination for positive screens, estimates that such screening and intervention would prevent 69 percent of the chronic HBV infections acquired perinatally or later in life (Ref. 16). This rate of effectiveness may provide an indication of the potential benefit of HBV screening in the proposed rule.

The risk of sexual transmission is estimated to be lower for HCV, compared to HBV. The CDC estimates the rate of transmission from female to male partners, and the rate of transmission from mother to child, to each be approximately 5 percent. However, there is no vaccine intervention available for HCV, although interferon-alpha therapy has been found effective in eliminating the virus for at least some patients and drug combinations (e.g., Interferon and Ribovirus) may be even more effective. Although most patients infected with HCV are relatively healthy during most of their lives, an estimated 30 percent of those infected will eventually die of liver-related causes; an estimated 8,000 patients per year (Ref. 15). The average cost of care per year for persons with liver disease from chronic HCV is estimated to range from $24,600 for patients without interferon-alpha therapy to $26,500 per year for those receiving a 12-month course of therapy. The latter is estimated to provide patients with an additional 0.37 quality-adjusted life-years (Ref. 16).

Screening third-party tissue donors is expected to significantly reduce the excess morbidity and mortality caused by hepatitis B and C. As noted earlier, there are an estimated 2,405 to 4,810 oocyte donors and 2,565 sperm donors

per year. If these populations experience recently reported prevalence rates for HVC (9.8 percent) and HBV (27.6 percent) (Ref. 12), then screening for significant risk factors and disease markers will result in reduced HBV and HCV exposures for the patient population at risk. The population at risk each year is estimated to include 1,600 to 4,700 women undergoing IVF with donor eggs, and 1,300 newborns delivered as a result of this therapy[1]; and 34,200 to 70,000 women receiving TDI, and 8,800 newborns delivered as a result of that therapy.

E. Initial Regulatory Flexibility Analysis

FDA's objectives and authority for issuing the proposed rule are described in section II of this document. Based on its initial analysis, FDA finds that a substantial number of the establishments required to comply with this proposed rule may be small business entities, particularly facilities involved with reproductive tissue products. The Small Business Administration defines a small business in this SIC industry sector to be an establishment with $5 million or less in annual receipts (Ref. 17). The economic impact analysis presented in section IV.C of this document includes estimates of the number of entities to which the proposed rule will apply. Each set of facilities involved in the tissue banking sectors includes some facilities that would be classified as small business entities.

A 1995 study of conventional tissue banks (Ref. 18) reports average annual revenues of $1.23 million per facility. Most nonreproductive tissue facilities are assumed to have a comparable level of average revenues. Reproductive tissue experts estimate that 65 percent of ART facilities have average revenues of approximately $2.5 million per year and the remaining 35 percent have average revenues of $11.5 million per year. Industry experts also estimate that 19 of the 20 largest sperm banks have average annual revenues of approximately $2 million per year, and 1 of the 20 largest facilities has annual revenues greater than $5 million. Thus, the majority of tissue facilities are small entities. Nevertheless, as noted in the preceding cost analysis, most of these facilities would not be significantly impacted by the proposed rule, because they are already performing the proposed infectious disease screening and recordkeeping.

Table 6 of this document presents estimates of the average cost per facility as a percentage of average annual revenues. In addition to facility revenues Table 6 presents the estimated annual practice income for Ob/Gyn practices, because some operate a small donor sperm bank as an additional service to patients, but may not currently comply with the screening and testing requirements of the proposed rule. The estimated annual revenue of $252,000 per year for individual physician practices is based on the mean physician income of $215,000 after expenses and before taxes for the Ob/Gyn specialty category reported in the 1992 American Medical Association survey (Ref. 19), adjusted to 1998 assuming an average annual wage inflation of 2.7 percent, based on yearly rates reported by the Bureau of Labor Statistics.

TABLE 6.—ESTIMATED ANNUALIZED COST PER FACILITY AS A PERCENTAGE OF ESTIMATED ANNUAL REVENUE

Number of Facilities That May Be Classified as Small Entities	Average Annualized Cost per Facility	Average Annual Revenue per Facility	Annualized Cost as Percentage of Annual Revenue
Nonreproductive Tissue—Eye Tissue, Conventional Tissue and Stem Cell			
380-all potentially small	$45 to $229	$1.2 million	0.004 to 0.019%
Reproductive Tissue—ART Facilities			
195 (65% of 300 facilities)	$2,103 to $4,340	$2.5 million	0.08 to 0.17%
Reproductive Tissue—Sperm Banks			
19-larger commercial banks	$1,234 to $1,456	$2.0 million	0.06 to 0.08%
90-physician practice-based banks	$1,234 to $1,456	$252,000	0.5 to 0.6%

As noted in Table 6 of this document, the greatest cost will be incurred by facilities involved with reproductive tissue. Nevertheless, the estimated impact on most small facilities does not appear to be significant. The expected increase in cost per facility ranges up to 0.6 percent of annual revenues. However, if current practices actually involve a much lower level of infectious disease screening than assumed in this analysis, the impact of the proposed screening and testing requirements would be higher than expected. Because accurate information on current industry practices is essential for a valid assessment of economic impact, FDA requests detailed industry comment on its estimate of the number of affected small facilities and their current donor screening, testing, tissue quarantine, and recordkeeping practices.

Although the proposed rule would impose some costs on small entities involved in the manufacture of cellular and tissue-based products, the agency believes that the proposed approach represents an effective means of protecting patient safety and public health in the collection of donor cells and tissue for manufacture. The less burdensome alternatives to the proposed approach involve fewer requirements for small entities (the vast majority of facilities in this industry), but fail to provide fundamental aspects of product safety. For example, reliance on published FDA guidance for donor suitability screening and testing, rather than establishing a regulatory requirement, would provide the agency with no basis for ensuring compliance. Thus, agency guidance may have no greater influence than current industry voluntary standards, which have similar provisions, but have failed to persuade all facilities to adopt comprehensive screening and testing practices. FDA's guidance, alone, therefore, would not be expected to provide adequate public protection from the safety risks

[1] The range of 1,600 to 4,700 IVF patients is based on a reported 4,783 cycles of IVF with donor egg reported for 1995, varying the assumed number of cycles of therapy per patient. The number of newborns is based on an assumed average delivery rate of 19.6 percent per cycle.

associated with infected donor-derived products.

Another alternative would involve the waiving of some of the donor screening and testing requirements for small facilities. However, as noted previously, nearly all facilities in this industry are small. Moreover, this alternative would increase tissue product safety risks, if small facilities that currently screen and test donors on a voluntary basis choose to discontinue this practice due to an FDA-granted waiver. For example, waiving a requirement for donor screening would eliminate an extremely cost-effective first-tier level of safety protection because prospective donors deferred or disqualified at this stage need not undergo further testing. Similarly, waiving the proposed requirements for blood testing would expose patients, as well as tissue facility and medical staff, to avoidable risks of infectious disease that may be undocumented in a patient's medical history, or be unknown to, or not mentioned by the living donor or donor family during screening.

A waiver of the requirements for tissue quarantine to allow for the window period of donor infectivity prior to detection through blood tests would expose product recipients and the public to risks of infectious disease agents that cannot be immediately detected through most currently available blood tests (e.g., tests for HIV and HCV). Recordkeeping for donor screening and testing is also critical to product recipient and public safety. Adequate documentation and record retention ensure that cellular and tissue-based products can be tracked to their source in the event of infection or other adverse reactions that result from donor tissue characteristics.

In summary, the agency believes that abridged requirements for donor screening and testing, based on voluntary standards or facility size criteria, would provide inadequate protection against the risk of infectious disease. Most notably, the absence of regulation allows reproductive tissue facilities to omit the proposed screening and testing of tissue donors that is routinely completed for other cellular and tissue-based products, thus exposing infertility patients to a disproportionate risk of several life-threatening infectious disease agents.

To alleviate the impact on small entities while continuing to protect public health, the agency is proposing to recommend, but not require, that manufacturers follow screening and testing procedures for relevant communicable disease agents and diseases when a cellular or tissue-based product is used in the same person from whom it is obtained, or in a sexually intimate partner of a reproductive-tissue donor. A recommendation is considered adequate in this instance because the risk of disease transmission from such activities is believed minimal.

Under the proposed rule, small entities involved with reproductive tissue will be required to meet the same safety and quality standards as large reproductive tissue facilities and other cellular and tissue-based product manufacturers, regardless of size. The specific requirements for donor screening and testing, the required recordkeeping, and the required types of professional skills are described in the economic analysis provided previously. This analysis includes an accounting of all major cost factors, with the exception of the reduced potential liability currently encountered by those reproductive tissue facilities that fail to provide the level of protection from infectious disease that is considered a standard of good practice in other sectors of the tissue-based product industry. The relevant Federal rules that are related to the proposed rule are discussed in section II of this document. This economic analysis provides a summary of the private industry standards that overlap the proposed Federal standard, but as discussed, there is no current regulation of reproductive tissue that would duplicate the proposed rule. Consequently, FDA finds that the proposed regulation would enhance both public health and public confidence in the safety and utility of transplanted cells and tissues, while imposing only a minimum burden on the affected industry sectors.

V. The Paperwork Reduction Act of 1995

This proposed rule contains information collection provisions that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (the PRA) (44 U.S.C. 3501–3520). A description of these provisions is shown as follows with an estimate of the annual reporting and recordkeeping burden. Included in the estimate is the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each collection of information.

FDA invites comments on: (1) Whether the proposed collection of information is necessary for the proper performance of FDA's functions, including whether the information will have practical utility; (2) the accuracy of FDA's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques, when appropriate, and other forms of information technology.

Title: Documentation and Reporting of Suitability Determination for Donors of Human Cellular and Tissue-based Products.

Description: Under the authority of section 361 of the PHS Act, FDA is proposing new regulations to require manufacturers of human cellular and tissue-based products to screen and test the donors of cells and tissues used in those products for risk factors for and clinical evidence of relevant communicable disease agents and diseases. FDA is proposing that donor suitability determination regulations apply to all establishments covered by the proposed registration rule. The determination of whether a donor is suitable or unsuitable would be made by a responsible person and would be based on the results of required donor screening and testing. Manufacturers would be required to ship a human cellular or tissue-based product accompanied by documentation of the donor suitability determination. This requirement would apply to a human cellular or tissue-based product from a donor determined to be suitable as well as to a product from a donor determined to be unsuitable and made available for use under certain provisions. The accompanying documentation would contain a copy of the donor's relevant medical records, results of testing, the name and address of the establishment that made the donor suitability determination, and a statement whether, based on the results of the screening and testing of the donor, the donor has been determined to be suitable or unsuitable. With the use of a product from an unsuitable or incompletely tested donor, documentation by the manufacturer would be required showing that the recipient's physician was notified of the screening and testing results, the physician authorized the use of the product after determining there is an urgent medical need, the recipient or the recipient's legal representative was informed of the communicable disease risk, and the recipient or the recipient's legal representative consented to use of the product.

The agency proposes to require that records be retained at least 10 years instead of the current 5 years. This

increase in retention time is necessary because certain cellular and tissue-based products have storage periods longer than 5 years. In addition, advances in medical technology have created opportunities for diagnosis and therapy for up to 10 years after recipient exposure to a donor later determined to be at risk for communicable disease agents or diseases.

These proposed provisions are intended as safeguards to prevent the transmission of communicable diseases that may occur with the use of cells and tissues from infected donors. Through this action FDA will improve its ability to protect the public health by controlling the spread of communicable disease.

Description of Respondents: Manufacturers of cellular and tissue-based products.

Based upon recent information from trade organizations related to the manufacturing of products utilizing cells and tissues and the agency's experience, FDA has estimated the following burden for each provision that describes a collection of information.

In the proposed registration rule, the agency proposed § 1271.10 and estimated the burden of collection of information under that provision. In this proposed rule, the agency is modifying proposed § 1271.10. Consequently, a revised estimate for the reporting burden is provided as follows. Although the modifications to proposed § 1271.10 do not effect the original burden estimates, new information from trade associations supports an increase in the estimate of affected manufacturers from 680 to 806. Under proposed § 1271.10 each manufacturer would be required to update its product listings twice a year. For each update, the agency estimates approximately 0.75 hours to complete.

Under proposed § 1271.55(a), approximately 857 manufacturers (224 manufacturers of conventional and eye tissue, 157 manufacturers of peripheral and cord blood stem cell products, 410 manufacturers of reproductive tissue, and 66 manufacturers of products regulated under the act and/or section 351 of the PHS Act) would be required to provide a summary of records. An estimated total of 523,231 cells and tissues (approximately 309,000 conventional tissue products, 86,000 eye tissue products, 6,031 stem cell products, and 122,200 reproductive cells and tissue products) are manufactured into products per year. The agency estimates that for each product, a manufacturer will expend approximately 0.5 hours to prepare the summary of records. Manufacturers of conventional and eye tissue are currently required to provide a summary of records under § 1270.33(d), which proposed § 1271.55(a) would replace.

Under proposed § 1271.65(c)(2), when a cellular or tissue-based product is used prior to completion of screening and testing due to an urgent medical need, a manufacturer would provide a list of the completed and incomplete results with the product. This would be a new practice for 731 manufacturers. Out of 791 manufacturers who could be affected by this provision, approximately 60 manufacturers follow this procedure as usual and customary practice under AATB standards and would not be affected by this proposed section. The agency believes that the use of a product from an unsuitable or incompletely tested donor when there is an urgent medical need may occur approximately once a year and that each listing should result in approximately 0.25 hours to complete.

Under proposed § 1271.50(b), documentation of donor suitability would be required for the first time for approximately 410 manufacturers. Out of a total of 791 manufacturers of cellular and tissue-based products, there would be no added burden for approximately 381 manufacturers who document donor suitability as usual and customary practice under the trade organization standards. In table 5 of this document, FDA estimates that § 1271.50(b) would impose a new collection of information requirement on 410 manufacturers of reproductive cellular and tissue-based products, each of which would document the suitability of an estimated 11 donors per year, or 4,640 donors, expending approximately 5 hours per document for a total of 55 hours per manufacturer per year.

Under proposed § 1271.55(b), manufacturers would be required to retain records for 10 years. The requirement would affect 410 manufacturers of reproductive cells and tissues. Three hundred and eighty-one of a total 791 manufacturers already retain records for a minimum of 10 years as usual and customary practice under trade organization standards. FDA estimates 0.5 hours per manufacturer to annually retain records. This estimate reflects an average of time that would be necessary to create records for retention from advanced methods of recordkeeping, such as electronic formatting which can improve the ability of manufacturers to more easily retain and retrieve records, to copying records onto microfiche.

Under proposed §§ 1271.65(b)(3) and (c)(3), when a product that is unsuitable or not fully screened or tested is used, approximately 791 manufacturers of cellular and tissue-based products would be required to document notice of the results of testing and screening to the physician, the authorization from the physician after determining there is an urgent medical need, the agreement from the physician to explain the risk to the recipient, and to obtain consent from the recipient before using the product. The agency estimates that such documentation would occur approximately once annually per manufacturer and that each manufacturer would expend approximately 2.0 hours to create such document.

TABLE 7.—ESTIMATED ANNUAL REPORTING BURDEN[1]

21 CFR Section	No. of Respondents	Annual Frequency per Response	Total Annual Responses	Hours per Response	Total Hours
1271.10	806	2	1,612	0.75	1,209
1271.55(a)	857	610.5	523,231	0.5	261,615.5
1271.65(c)(2)	731	1	731	0.25	183
Total					263,007.5

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 8.—ESTIMATED ANNUAL RECORDKEEPING BURDEN[1]

21 CFR Section	No. of Recordkeepers	Annual Frequency per Recordkeeping	Total Annual Records	Hours per Recordkeeper	Total Hours
1271.50(b)	410	11	4,640	55	22,550
1271.55(b)	410	11	4,640	5.5	2,255
1271.65(b)(3) and (c)(3)	791	1	791	0.5	395.5
Total					25,200.5

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

The agency estimates that there will be no new or significant increase in maintenance costs for the maintenance of records for the proposed 10-year period instead of the current 5-year retention period, because modern storage technology has markedly reduced the space needed to store records.

Under section 1320.3(c)(2) of the PRA the labeling requirements in proposed §§ 1271.65(c)(2) and (d), and 1271.90(b) and (c) do not constitute collection of information because information required to be on the labeling is originally supplied by FDA to the manufacturers for the purpose of disclosure to the public to help ensure a safe product supply and protect public health.

The reporting of screening and testing results to the consignee in proposed § 1271.65(c)(4) does not constitute collection of information burden because it is the customary and usual practice or procedure of all manufacturers to conduct screening and testing and provide the results to the consignee.

In compliance with section 3507(d) of the PRA of 1995 (44 U.S.C. 3507(d)), the agency has submitted a copy of this proposed rule to OMB for review of the information collection provisions.

VI. Environmental Impact

The agency has determined under 21 CFR 25.30(h) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

VII. Request for Comments and Proposed Effective Date

Interested persons may, on or before December 29, 1999, submit to the Dockets Management Branch (address above) written comments regarding this proposal, except that comments regarding information collection provisions should be submitted in accordance with the instructions in section V of this document. Two copies of any comments on issues other than information collection are to be submitted, except that individuals may submit one copy. Comments are to be identified with the docket number found in brackets in the heading of this document. Received comments may be seen in the office above between 9 a.m. and 4 p.m., Monday through Friday.

FDA is proposing to delay the compliance date of all final rules implementing the proposed regulatory approach to human cellular and tissue-based products until the concluding final rule for registration, donor suitability, and CGTP has been published in the **Federal Register**. FDA will announce the compliance date for the final rules in a future issue of the **Federal Register**.

VIII. References

The following references have been placed on display in the Dockets Management Branch (address above) and may be seen by interested persons between 9 a.m. and 4 p.m., Monday through Friday.

1. CDC, 1995 *ART Fertility Clinic Reports* at ''www.cdc.gov/nccdphp/drh/arts/introduc.htm''.

2. Published fee for blood testing, including Hepatitis B and Hepatitis C, HIV 1–2, HTLV–1, and syphilis, reported for direct donor screening by The Sperm Bank of California, at ''www.thespermbankofca.org/fees96.htm''.

3. The Sperm Bank of California at ''www.thespermbankofca.org/fees96.htm''.

4. Van Voorhis, B. J., A. E. T. Sparks, B. D. Allen, et al. ''Cost-effectiveness of Infertility Treatments: A Cohort Study,'' *Fertility and Sterility*, vol. 67, No. 5, May 1997, pp. 830–836.

5. Margolis, H. S., P. J. Coleman, R. E. Brown, E. E. Mast, S. H. Sheingold, and J. A. Arevalo, ''Prevention of Hepatitis B Virus Transmission by Immunization: An Economic Analysis of Current Recommendations,'' *Journal of the American Medical Association*, vol. 274, No. 15, 1995, pp. 1201–1208.

6. The National Summary of CDC 1995 *ART Fertility Clinic Reports* estimates that 11 percent of the ART therapy performed included ICSI at ''www.cdc.gov/nccdphp/drh/arts/introduc.htm''.

7. Wortley, P. M., T. A. Hammett, and P. L. Fleming, ''Donor Insemination and Human Immunodeficiency Virus Transmission,'' *Obstetrics & Gynecology*, vol. 91, No. 4, 1998, pp. 515–518.

8. Sidhu, R. S., R. K. Sharma, S. Kachoria, C. Curtis, and A. Agarwal, ''Reasons for Rejecting Potential Donors from a Sperm Bank Program,'' *Journal of Assisted Reproduction and Genetics*, vol.14, No. 6, 1997, pp. 354–360.

9. The American Fertility Society, ''Guidelines for Therapeutic Donor Insemination: Sperm,'' *Fertility and Sterility*, vol. 62, No. 5, November 1994, pp. 101s–104s.

10. Government Accounting Office, *Human Tissue Banks: FDA Taking Steps to Improve Safety, but Some Concerns Remain*, GAO/HEHS–98–25.

11. AuBuchon, J. P., J. D. Birkmeyer, and M. P. Busch, ''Safety of the Blood Supply to the United States: Opportunities and Controversies,'' *Annals of Internal Medicine*, vol. 127, No. 10, November 1997, vol. 127, No. 10.

12. Kaur, S., L. Rybicki, B. R. Bacon, J. L. Gollan, V. K. Rustgi, W. D. Carey and the National Hepatitis Surveillance Group, ''Performance Characteristics and Results of a Large–Scale Screening Program for Viral Hepatitis and Risk Factors Associated with Exposure to Viral Hepatitis B and C: Results of the National Hepatitis Screening Survey,'' *Hepatology*, vol. 24, No. 5, 1996, pp. 979–986.

13. Kane, M., ''Epidemiology of Hepatitis B Infection in North America,'' *Vaccine*, vol. 13, Supplement 1: 1995, pp. s16–s17.

14. Guinan, M. E., ''Artificial Insemination by Donor: Safety and Secrecy,'' *Journal of the American Medical Association*, vol. 173, No. 11, March 1995, pp. 890–891.

15. U.S. Centers for Disease Control and Prevention, 1997.

16. Kim, W. R., J. J. Poterucha, J. E. Hermans, T. M. Therneau, E. R. Dickson, R. W. Evans, and J. B. Gross, Jr., ''Cost-effectiveness of 6 and 12 Months of Interferon-α Therapy for Chronic Hepatitis C,'' *Annals of Internal Medicine*, vol. 127, No. 10, November 1997.

17. U.S. Small Business Administration, Table of Size Standards, March 1, 1996, Major Group 80—Health Services.

18. Prottas, J., ''A study of the Tissue Procurement and Distribution System of the United States,'' Brandeis University, FDA/HRSA contract No. 240–090–0048, October 1995.

19. American Medical Association, *Socioeconomic Characteristics of Medical Practice*, Table 47, p. 150, 1994.

20. Hogan, R. N. et al., ''Risk of Prion Disease Transmission From Ocular Donor

Tissue Transplantation,'' *Cornea*, vol. 18, No. 1, pp. 2–11, 1999.

List of Subjects

21 CFR Part 210

Drugs, Packaging and containers.

21 CFR Part 211

Drugs, Labeling, Laboratories, Packaging and containers, Prescription drugs, Reporting and recordkeeping requirements, Warehouses.

21 CFR Part 820

Medical devices, Reporting and recordkeeping requirements.

21 CFR Part 1271

Human cellular and tissue-based products, Communicable diseases, HIV/AIDS, Reporting and recordkeeping requirements.

Therefore, under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act, and under authority delegated to the Commissioner of Food and Drugs, it is proposed to amend 21 CFR Chapter I as follows:

I. Parts 210, 211, and 820 are amended as follows:

PART 210—CURRENT GOOD MANUFACTURING PRACTICE IN MANUFACTURING, PROCESSING, PACKING, OR HOLDING OF DRUGS; GENERAL

1. The authority citation for 21 CFR part 210 is revised to read as follows:

Authority: 21 U.S.C. 321, 351, 352, 355, 360b, 371, 374; 42 U.S.C. 216, 262, 263a, 264.

2. Section 210.1 is amended by adding paragraph (c) to read as follows:

§ 210.1 Status of current good manufacturing practice regulations.

* * * * *

(c) Owners and operators of establishments engaged in the recovery, screening, testing, processing, storage, labeling, packaging or distribution of human cellular or tissue-based products, as defined in § 1271.3(e) of this chapter, that are regulated as drugs under the act and/or biological products under section 351 of the Public Health Service Act are subject to the donor suitability and current good tissue practice procedures set forth in part 1271 subparts C and D of this chapter, in addition to the regulations in this part and in parts 211 through 226 of this chapter. Failure to comply with any regulation set forth in this part, in parts 211 through 226 of this chapter, in part 1271 subpart C of this chapter, or in part 1271 subpart D of this chapter shall render such a human cellular or tissue-based product adulterated under section 501(a)(2)(B) of the act, and such product, as well as the person who is responsible for the failure to comply, shall be subject to regulatory action.

3. Section 210.2 is revised to read as follows:

§ 210.2 Applicability of current good manufacturing practice regulations.

(a) The regulations in this part and in parts 211 through 226 of this chapter as they may pertain to a drug, in parts 600 through 680 of this chapter as they may pertain to a biological product for human use, and in part 1271 of this chapter as they may pertain to a human cellular or tissue-based product that is regulated as a drug and/or biological product shall be considered to supplement, not supersede, each other, unless the regulations explicitly provide otherwise. In the event that it is impossible to comply with all applicable regulations in these parts, the regulations specifically applicable to the drug in question shall supersede the more general.

(b) If a person engages in only some operations subject to the regulations in this part, in parts 211 through 226 of this chapter, in parts 600 through 680 of this chapter, and in part 1271 of this chapter, and not in others, that person need only comply with those regulations applicable to the operations in which he or she is engaged.

PART 211—CURRENT GOOD MANUFACTURING PRACTICE FOR FINISHED PHARMACEUTICALS

4. The authority citation for 21 CFR part 211 is revised to read as follows:

Authority: 21 U.S.C. 321, 351, 352, 355, 360b, 371, 374; 42 U.S.C. 216, 262, 263a, 264.

5. Section 211.1 is amended by revising paragraph (b) to read as follows:

§ 211.1 Scope.

* * * * *

(b) The current good manufacturing practice regulations in this chapter as they pertain to drug products, in parts 600 through 680 of this chapter, as they pertain to biological products for human use, and in part 1271 of this chapter, as they pertain to human cellular or tissue-based products that are regulated as drugs and/or biological products shall be considered to supplement, not supersede, the regulations in this part unless the regulations explicitly provide otherwise. In the event it is impossible to comply with applicable regulations both in this part and in other parts of this chapter, in parts 600 through 680 of this chapter, or in part 1271 of this chapter, the regulation specifically applicable to the drug product in question shall supersede the regulation in this part.

* * * * *

PART 820—QUALITY SYSTEM REGULATION

6. The authority citation for 21 CFR part 820 is revised to read as follows:

Authority: 21 U.S.C. 351, 352, 360, 360c, 360d, 360e, 360h, 360i, 360j, 360l, 371, 374, 381, 383; 42 U.S.C. 216, 262, 263a, 264.

7. Section 820.1 is amended by adding two sentences to the end of paragraph (a)(1) and by revising the second sentence in paragraph (c) to read as follows:

§ 820.1 Scope.

(a) *Applicability*. (1) * * * Manufacturers of human cellular or tissue-based products, as defined in § 1271.3(e) of this chapter, that are regulated as medical devices under the act are subject to this part and are also subject to the donor-suitability procedures set forth in part 1271 subpart C of this chapter and current good tissue practice procedures in part 1271 subpart D of this chapter. In the event that it is impossible to comply with all applicable regulations in parts 820 and 1271 of this chapter, the regulations specifically applicable to the device in question shall supersede the more general.

* * * * *

(c) * * * The failure to comply with any applicable provision in this part or in part 1271 subpart C or D of this chapter renders a device adulterated under section 501(h) of the act. * * *

* * * * *

II. Part 1271 as proposed in the Federal Register of May 14, 1998 (63 FR 26744) is amended as follows:

PART 1271—HUMAN CELLULAR AND TISSUE–BASED PRODUCTS

1. The authority citation for 21 CFR part 1271 is revised to read as follows:

Authority: 42 U.S.C. 216, 243, 263a, 264, 271.

2. The heading for part 1271 is revised to read as set forth above.

3. Section 1271.1 is revised to read as follows:

§ 1271.1 Purpose and scope.

(a) *Purpose*. The purpose of this part, in conjunction with §§ 207.20(f), 210.1(c), 210.2, 807.20(e), and 820.1(a) of this chapter, is to establish procedures to prevent the introduction, transmission, and spread of communicable diseases and to create a

unified registration and product listing system for establishments that manufacture human cellular and tissue-based products.

(b) *Scope.* Manufacturers of human cellular and tissue-based products regulated solely under the authority of section 361 of the Public Health Service Act (the PHS Act) are required by this part to register and list their products with the Food and Drug Administration's (FDA's) Center for Biologics Evaluation and Research, and to comply with the other requirements contained in this part. Under §§ 207.20(f) and 807.20(e), manufacturers of human cellular and tissue-based products regulated under section 351 of the PHS Act and/or the Federal Food, Drug, and Cosmetic Act (the act) are required to register and list their products following the procedures in subpart B of this part; under §§ 210.1(c), 210.2, 211.1(b), and 820.1(a), manufacturers of those products are required to comply with the donor-suitability procedures in subpart C of this part and current good tissue practice procedures in subpart D of this part in addition to all other applicable regulations.

4. Section 1271.3 is amended by revising paragraph (e), and by adding paragraphs (i) through (ee) to read as follows:

§ 1271.3 Definitions.

* * * * *

(e) *Human cellular or tissue-based product* means a product containing or consisting of human cells or tissues that is intended for implantation, transplantation, infusion, or transfer into a human recipient, e.g., cadaveric ligament, skin, dura mater, heart valve, cornea, hematopoietic stem cells derived from peripheral and cord blood, manipulated autologous chondrocytes, and spermatozoa. The following products are not considered human cellular or tissue-based products:

(1) Vascularized human organs for transplantation;

(2) Whole blood or blood components or blood derivative products subject to listing under parts 607 and 207 of this chapter, respectively;

(3) Secreted or extracted human products, such as milk, collagen, and cell factors; except that semen is considered a human cellular or tissue-based product;

(4) Minimally manipulated bone marrow for homologous use and not combined with or modified by the addition of any component that is a drug or a device;

(5) Ancillary products used in the manufacture of cellular or tissue-based products;

(6) Cells, tissues, and organs derived from animals other than humans; and

(7) In vitro diagnostic products as defined in § 809.3(a) of this chapter.

* * * * *

(i) *Biohazard legend* appears on packaging as follows and is used to mark products that present a known or suspected relevant communicable disease risk.

BIOHAZARD

(j) *Blood component* means any part of human blood separated by physical or mechanical means.

(k) *Colloid* means:

(1) A protein or polysaccharide solution, such as albumin, dextran, or hetastarch, that can be used to increase or maintain osmotic (oncotic) pressure in the intravascular compartment; or

(2) Certain blood components such as plasma and platelets.

(l) *Crystalloid* means a balanced salt and/or glucose solution used for electrolyte replacement or to increase intravascular volume, such as saline solution, Ringer's lactate solution, or 5 percent dextrose in water.

(m) *Directed donor* means a living person who is the source of cells or tissue designated for a specific potential recipient of a human cellular or tissue-based product.

(n) *Donor* means a person, living or dead, who is the source of cells or tissue for a human cellular or tissue-based product.

(o) *Donor medical history interview* means a documented dialogue with the donor, if living or, if the donor is not living or is unable to participate in the interview, with an individual or individuals knowledgeable about the donor's medical history and relevant social behavior, such as the donor's next-of-kin, the nearest available relative, a member of the donor's household, an individual with an affinity relationship, and/or the primary treating physician. With respect to relevant social behavior, the interview includes questions about whether or not the donor met certain descriptions or engaged in activities or behaviors considered to place the donor at increased risk for a relevant communicable disease.

(p) *Embryo* means the product from fertilization of the oocyte to the 8th week of development.

(q) *Gamete* means a male or female germ cell; i.e., spermatocyte or oocyte.

(r) *Physical assessment* means a limited autopsy or recent antemortem or postmortem physical examination of the donor to assess for signs or symptoms of a relevant communicable disease and for signs or symptoms suggestive of any risk factor for such disease.

(s) *Plasma dilution* means a decrease in the concentration of the donor's plasma proteins and circulating antigens or antibodies resulting from the transfusion of blood or blood components and/or infusion of fluids.

(t) *Quarantine* means the storage or identification of a human cellular or tissue-based product, in order to prevent improper release, in a physically separate area clearly identified for such use, or through use of other procedures, such as automated designation.

(u) *Reconstituted blood* means the blood produced by the extracorporeal resuspension of a blood unit labeled as ''Red Blood Cells'' through the addition of colloids and/or crystalloids to produce a product with a hematocrit in the normal range.

(v) *Relevant medical records* means a collection of documents that includes a current donor medical history interview; a current report of the

physical assessment of a cadaveric donor or the physical examination of a living donor; and, if available, the following:

(1) Laboratory test results (other than results of testing for relevant communicable disease agents required under this subpart);

(2) Medical records;

(3) Coroner and autopsy reports; and

(4) Records or other information received from any source pertaining to risk factors for relevant communicable disease (e.g., social behavior, clinical signs and symptoms of relevant communicable disease, and treatments related to medical conditions suggestive of risk for relevant communicable disease).

(w) *Responsible person* means a person who is authorized to perform designated functions for which he or she is trained and qualified.

(x) *Summary of records* means a condensed version of the records of required screening and testing and contains:

(1) A statement that the communicable disease testing was performed by a laboratory or laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA);

(2) A listing and interpretation of the results of all communicable disease tests performed;

(3) A statement describing the types of records which may have been reviewed as part of the relevant medical records; and

(4) The name and address of the establishment determining the suitability of the donor of cells or tissues.

(y) *Relevant communicable disease agent or disease* means:

(1) One of the following disease agents or diseases:

(i) Human immunodeficiency virus, types 1 and 2;

(ii) Hepatitis B virus;

(iii) Hepatitis C virus;

(iv) Human transmissible spongiform encephalopathies, icluding Creutzfeldt–Jakob disease;

(v) *Treponema pallidum*;

(vi) Human T-lymphotropic virus, types I and II;

(vii) Cytomegalovirus;

(viii) *Chlamydia trachomatis*; and

(ix) *Neisseria gonorrhea*.

(2) A disease agent or disease not listed in paragraph (z)(1) of this section:

(i) That is sufficiently prevalent among potential donors to warrant screening or testing of all donors;

(ii) For which there is a risk of transmission by a human cellular or tissue-based product, either to the recipient of the product or to those people who may handle or otherwise come in contact with the product, such as medical personnel;

(iii) That poses significant health risks, as measured by morbidity and mortality; and

(iv) For which appropriate screening measures have been developed and/or an appropriate screening test for donor specimens has been licensed, approved, or cleared for such use by FDA and is available.

(z) *Urgent medical need* means that no comparable human cellular or tissue-based product is available and the recipient is likely to suffer serious morbidity without the product.

(aa) *Xenotransplantation* means any procedure that involves the use of live cells, tissues, or organs from a nonhuman animal source, transplanted or implanted into a human, or used for ex vivo contact with human body fluids, cells, tissues, or organs that are subsequently given to a human recipient.

(bb) *Close contacts* means household members and others with whom the recipient participates in activities that could result in exchanges of bodily fluids.

(cc) *Act* means the Federal Food, Drug, and Cosmetic Act.

(dd) *PHS Act* means the Public Health Service Act.

(ee) *FDA* means the Food and Drug Administration.

5. Section 1271.10 is revised to read as follows:

§ 1271.10 Establishments subject to this part; criteria for regulation of human cellular and tissue-based products solely under section 361 of the PHS Act.

The owner or operator of an establishment, foreign or domestic, that manufactures a human cellular or tissue-based product, whether or not the product enters into interstate commerce, is required under this part to register with FDA, to submit to the agency a list of each human cellular or tissue-based product manufactured, and to comply with the other requirements of this part, if the product:

(a) Is minimally manipulated;

(b) Is not promoted or labeled for any use other than a homologous use;

(c) Is not combined with or modified by the addition of any component that is a drug or a device; and

(d)(1) Either does not have a systemic effect; or

(2) Has a systemic effect, and—

(i) Is for autologous use;

(ii) Is for a family-related allogeneic use; or

(iii) Is for reproductive use.

6. Section 1271.15 is added to read as follows:

§ 1271.15 Criteria for regulation of human cellular and tissue-based products under the act and/or section 351 of the PHS Act.

Human cellular or tissue-based products that are regulated as drugs, devices and/or biological products under the act and/or section 351 of the PHS Act, and the establishments that manufacture those products, are subject to all applicable regulations in title 21, chapter 1. In conjunction with those regulations, the procedures in part 1271, subparts B, C, and D shall be followed, as specified in §§ 207.20(f), 210.1(c), 210.2, 211.1(b), 807.20(e), and 820.1(a) of this chapter. A human cellular or tissue-based product is regulated under the act and/or section 351 of the PHS Act if it:

(a) Is more than minimally manipulated;

(b) Is promoted or labeled for any use other than a homologous use;

(c) Is combined with or modified by the addition of any component that is a drug or a device; or

(d) Has a systemic effect and—

(1) Is not for autologous use;

(2) Is not for a family-related allogeneic use; and

(3) Is not for reproductive use.

7. Section 1271.20 is revised to read as follows:

§ 1271.20 Establishments not required to comply with the requirements of this part.

The following establishments are not required to register, list, or meet the other requirements of this part:

(a) Establishments that use human cellular or tissue-based products solely for nonclinical scientific or educational purposes;

(b) Establishments that remove human cellular or tissue-based products from an individual and implant such cells or tissues into the same individual during the same surgical procedure;

(c) Carriers who accept, receive, carry, hold, or deliver human cellular or tissue-based products in the usual course of business as carriers;

(d) Establishments that do not, recover, screen, test, process, label, package, or distribute, but only receive or store human cellular or tissue-based products solely for pending scheduled implantation, transplantation, infusion, or transfer within the same facility.

8. Subpart C, consisting of §§ 1271.50 through 1271.90, is added to read as follows:

Subpart C—Donor Suitability

Sec.
1271.50 Determination of donor suitability.
1271.55 Records of donor suitability determination.

1271.60 Quarantine pending determination of donor suitability.
1271.65 Quarantine and disposition of human cellular or tissue-based product from a donor determined to be unsuitable.
1271.75 Donor screening.
1271.80 Donor testing; general requirements.
1271.85 Donor testing; specific requirements.
1271.90 Exceptions from the requirement of donor suitability determination; labeling requirements.

Subpart C—Donor Suitability

§ 1271.50 Determination of donor suitability.

(a) Except as provided under §§ 1271.65 and 1271.90 of this subpart, a human cellular or tissue-based product shall not be implanted, transplanted, infused, or transferred until the donor of the cells or tissue for the product has been determined to be suitable. In the case of an embryo, donor suitability shall be determined for both the oocyte donor and the sperm donor.

(b) Donor suitability shall be determined and documented by a responsible person as defined in § 1271.3(w).

(c) A determination that a donor is suitable or unsuitable shall be based upon the results of donor screening in accordance with § 1271.75 and donor testing in accordance with §§ 1271.80 and 1271.85.

(d) A donor may be determined to be suitable if:

(1) The results of donor screening in accordance with § 1271.75 indicate that the donor is free from risk factors for and clinical evidence of infection due to relevant communicable disease agents and diseases and is neither a xenotransplant recipient nor a close contact of a xenotransplant recipient; and

(2) The results of donor testing for relevant communicable disease agents in accordance with §§ 1271.80 and 1271.85 are negative or nonreactive.

§ 1271.55 Records of donor suitability determination.

(a) A human cellular or tissue-based product from a donor determined to be suitable or from a donor determined to be unsuitable and made available for use under the provisions of § 1271.65(b), (c), or (d) shall be accompanied by documentation of the donor-suitability determination required by § 1271.50 from which the donor's name has been deleted. This documentation shall include:

(1)(i) A copy of the donor's relevant medical records, as defined in § 1271.3(v), results of testing required under §§ 1271.80 and 1271.85, and the name and address of the establishment that made the donor-suitability determination; or

(ii) A summary of records, as defined in § 1271.3(x); and

(2) A statement whether, based on the results of donor screening and testing, the donor has been determined to be suitable or unsuitable.

(b) The establishment that generates records used in determining donor suitability and the establishment that makes the donor-suitability determination shall retain such records and shall make them available for authorized inspection by or upon request from FDA. Records that can be readily retrieved from another location by electronic means are considered ''retained.'' Records shall be retained at least 10 years after the date of implantation, transplantation, infusion, or transfer of the product, or if the date of implantation, transplantation, infusion, or transfer is not known, then records shall be retained at least 10 years after the date of the product's distribution, disposition, or expiration, whichever is latest.

§ 1271.60 Quarantine pending determination of donor suitability.

(a) A human cellular or tissue-based product shall be kept in quarantine, as defined in § 1271.3(t), until completion of the donor-suitability determination required by § 1271.50. For reproductive cells and tissues that can reliably be stored, quarantine shall last until completion of the testing required under § 1271.85(d).

(b) A human cellular or tissue-based product in quarantine pending completion of a donor-suitability determination shall be clearly identified as in quarantine and shall be easily distinguishable from products that are available for release and distribution.

(c) A human cellular or tissue-based product shipped before it is available for release or distribution shall be kept in quarantine and shall be accompanied by records identifying the donor (e.g., by donor number), stating that the donor-suitability determination has not been completed, and stating that the product may not be implanted, transplanted, infused, or transferred until completion of the donor-suitability determination.

§ 1271.65 Quarantine and disposition of human cellular or tissue-based product from a donor determined to be unsuitable.

(a) If the donor of the cells or tissue for a human cellular or tissue-based product is determined to be unsuitable based on the results of required testing and/or screening, the product shall be kept in quarantine and physically separated from all other products until destruction or other disposition in accordance with paragraph (b) or (c) of this section is accomplished.

(b)(1) Except as provided in paragraph (b)(4) of this section, a human cellular or tissue-based product from a donor who has been determined to be unsuitable, based on the results of required testing and/or screening, is not prohibited by this subpart C of this part from use for implantation, transplantation, infusion, or transfer under the following circumstances:

(i) The product is for family-related, allogeneic use, as defined in § 1271.3(c);

(ii) The product contains reproductive tissue from a directed donor, as defined in § 1271.3(m); or

(iii) There is a documented urgent medical need as defined in § 1271.3(aa).

(2) A human cellular or tissue-based product made available for use under the provisions of paragraph (b)(1) of this section shall be labeled with the Biohazard legend shown in § 1271.3(i).

(3) The manufacturer of a human cellular or tissue-based product used under the provisions of paragraph (b)(1) of this section shall document that:

(i) The physician using the product was notified of the results of testing and screening;

(ii) The physician authorized the use of the product;

(iii) The physician agreed to explain the communicable disease risks associated with the use of the product to the recipient or the recipient's legally authorized representative; and

(iv) The physician agreed to obtain from the recipient or the recipient's legally authorized representative consent to use the product.

(4) A human cellular or tissue-based product from a donor who is identified under § 1271.75(a)(2) as either having received a xenotransplant or having been a close contact of a xenotransplant recipient shall not be made available for use under the provisions of paragraph (b)(1) of this section.

(c)(1) A human cellular or tissue-based product from a donor for whom the donor-suitability determination has not yet been completed is not prohibited by this subpart C from use for implantation, transplantation, infusion, or transfer if there is a documented urgent medical need as defined in § 1271.3(z).

(2) A human cellular or tissue-based product made available for use under the provisions of paragraph (c)(1) of this section shall be labeled ''NOT EVALUATED FOR INFECTIOUS SUBSTANCES'' and shall be accompanied by a statement of:

(i) The results of donor screening required under § 1271.75, if complete;

(ii) The results of any testing required under § 1271.80 or § 1271.85 that has been completed; and

(iii) A list of any testing required under § 1271.80 or § 1271.85 that has not yet been completed.

(3) The manufacturer of a human cellular or tissue-based product used under the provisions of paragraph (c)(1) of this section shall document that:

(i) The physician using the product was notified that the testing and screening were not complete;

(ii) The physician authorized the use of the product after determining there is an urgent medical need;

(iii) The physician agreed to explain the communicable disease risks associated with the use of the product to the recipient or the recipient's legally authorized representative; and

(iv) The physician agreed to obtain from the recipient or the recipient's legally authorized representative consent to use the product.

(4) In the case of a human cellular or tissue-based product used under the provisions of paragraph (c)(1) of this section, the donor-suitability determination shall be completed during or after the emergency use of the product, and the manufacturer shall inform the physician of the results of the determination.

(d) A human cellular or tissue-based product from a donor who has been determined to be unsuitable, based on the results of required testing and/or screening, is not prohibited by this subpart C of this part from use for nonclinical purposes, provided that it is labeled:

(1) ''For Nonclinical Use Only''; and

(2) With the Biohazard legend shown in § 1271.3(i).

§ 1271.75 Donor screening.

(a)(1) Except as provided under § 1271.90, the relevant medical records of a donor of cells or tissue for a human cellular or tissue-based product shall be reviewed for risk factors for and clinical evidence of relevant communicable disease agents and diseases including, at a minimum, the following:

(i) Human immunodeficiency virus;

(ii) Hepatitis B virus;

(iii) Hepatitis C virus; and

(iv) Human transmissible spongiform encephalopathies including Creutzfeldt–Jakob disease.

(2) Except as provided under § 1271.90, the relevant medical records of a donor of cells or tissue for a human cellular or tissue-based product shall be reviewed to determine whether the donor has received a xenotransplant or has been a close contact of a xenotransplant recipient.

(b) Except as provided under § 1271.90, the relevant medical records of a donor of reproductive cells or tissue shall be reviewed for risk factors for and clinical evidence of infection due to relevant sexually transmitted and genitourinary diseases that can be transmitted with the recovery of the reproductive cells or tissue including at a minimum *Chlamydia trachomatis* and *Neisseria gonorrhea*, in addition to the relevant communicable disease agents and diseases for which screening is required under paragraph (a) of this section.

(c) A donor who is identified as having risk factors for or clinical evidence of any of the relevant communicable disease agents or diseases for which screening is required under paragraph (a)(1) or (b) of this section, or is identified under paragraph (a)(2) of this section as either a xenotransplant recipient or a close contact of a xenotransplant recipient, shall be determined to be unsuitable.

(d) An abbreviated donor screening procedure that determines and documents any changes in the donor's medical history including relevant social behavior since the previous donation that would make the donor unsuitable may be used for a living donor of human cellular and tissue-based products on subsequent donations. An abbreviated donor screening procedure may be used only when a complete donor screening procedure has been performed within the previous 6 months.

§ 1271.80 Donor testing; general requirements.

(a) To adequately and appropriately reduce the risk of transmission of relevant communicable diseases, and except as provided under § 1271.90, a donor specimen shall be tested for evidence of infection due to relevant communicable disease agents in accordance with paragraph (c) of this section. At a minimum, testing shall be performed for those relevant communicable disease agents specified in § 1271.85. In the case of a fetal or neonatal donor, a specimen from the mother is generally acceptable for testing.

(b) Except as provided in paragraphs (d)(2) and (d)(3) of this section, the donor specimen shall be collected at the time of recovery of cells or tissue from the donor or within 48 hours after recovery, except that the specimen from a living donor may be collected up to 7 days prior to recovery if:

(1) Recovery of the cells or tissue involves invasive procedures or substantial risk to the donor;

(2) Implantation, transplantation, infusion, or transfer of the recovered cells or tissue is necessary before results of testing performed on a specimen collected at the time of recovery or post recovery would be available; or

(3) Extensive processing of the recovered cells or tissue is necessary before results of testing performed on a specimen collected at the time of recovery or post recovery would be available.

(c) Testing shall be performed using appropriate FDA-licensed, approved, or cleared donor screening tests in accordance with the manufacturer's instructions to adequately and appropriately reduce the risk of transmission of relevant communicable disease agents or diseases; provided that, until such time as appropriate FDA-licensed, approved, or cleared donor screening tests for *Chlamydia trachomatis* and for *Neisseria gonorrhea* are available, FDA-licensed, approved, or cleared tests labeled for the detection of those organisms in an asymptomatic, low-prevalence population shall be used. Tests specifically labeled for cadaveric specimens shall be used instead of a more generally labeled test when applicable and when available. Testing shall be performed by a laboratory certified to perform testing on human specimens under the CLIA.

(d) The following donors shall be determined to be unsuitable:

(1) A donor whose specimen tests repeatedly reactive or positive on a test for a relevant communicable disease agent in accordance with § 1271.85, except for:

(i) A donor whose specimen tests repeatedly reactive for cytomegalovirus (CMV) and additional testing does not show the presence of an active infection, or

(ii) A donor whose specimen tests reactive on a non-Treponemal screening test for syphilis and negative on a specific Treponemal confirmatory test;

(2) A donor from whom blood loss is known or suspected to have occurred and who received a transfusion or infusion of more than 2,000 milliliters (mL) of blood (i.e., whole blood, reconstituted blood, or red blood cells) or colloids within 48 hours, or more than 2,000 mL of crystalloids within 1 hour, or any combination thereof prior to the collection of a specimen from the donor for testing, unless:

(i) A specimen taken from the donor after blood loss but before the transfusion or infusion is available for

relevant communicable disease testing; or

(ii) An algorithm designed to ensure that plasma dilution sufficient to affect test results has not occurred is utilized to evaluate the volumes administered in the 48 hours prior to collecting the specimen from the donor;

(3) A donor who is 12 years of age or younger and has received any transfusion of blood, colloids, and/or crystalloids prior to the recovery of the cells or tissue, unless:

(i) A specimen taken from the donor before the transfusion or infusion is available for relevant communicable disease testing; or

(ii) An algorithm designed to ensure that plasma dilution sufficient to affect test results has not occurred is utilized to evaluate the volumes administered in the 48 hours prior to collecting the specimen from the donor.

§ 1271.85 Donor testing; specific requirements.

(a) To adequately and appropriately reduce the risk of transmission of relevant communicable diseases, and except as provided under § 1271.90, a specimen from a donor of viable or nonviable cells or tissue for a human cellular or tissue-based product shall be tested for evidence of infection due to relevant communicable disease agents including, at a minimum, the communicable disease agents listed as follows.

(1) Human immunodeficiency virus, type 1;

(2) Human immunodeficiency virus, type 2;

(3) Hepatitis B virus;

(4) Hepatitis C virus; and

(5) Treponema pallidum.

(b) To adequately and appropriately reduce the risk of transmission of relevant communicable diseases, and except as provided under § 1271.90, a specimen from a donor of viable, leukocyte-rich cells or tissue shall be tested for evidence of infection due to the relevant cell-associated communicable disease agents including, at a minimum, the communicable disease agents listed as follows, in addition to the relevant communicable disease agents for which testing is required under paragraph (a) of this section.

(1) Human T-lymphotropic virus, type I;

(2) Human T-lymphotropic virus, type II; and

(3) Cytomegalovirus.

(c) To adequately and appropriately reduce the risk of transmission of relevant communicable diseases, and except as provided under § 1271.90, a specimen from a donor of reproductive cells or tissue shall be tested for evidence of infection due to relevant genitourinary disease agents. Testing shall include, at a minimum, the communicable disease agents listed in paragraphs (c)(1) and (c)(2) of this section, in addition to the relevant communicable disease agents for which testing is required under paragraphs (a) and (b) of this section. However, if the reproductive cells or tissue are procured by a method that ensures freedom from contamination of the cells or tissue by infectious disease organisms that may be present in the genitourinary tract, then tests for the communicable disease agents listed in paragraphs (c)(1) and (c)(2) of this section are not required. Minimum testing for genitourinary disease agents include:

(1) *Chlamydia trachomatis*; and

(2) *Neisseria gonorrhea*.

(d) Except as provided under § 1271.90, at least 6 months after the date of donation of reproductive cells or tissue that can be reliably stored, a new specimen shall be taken from the donor and retested for evidence of infection due to the relevant communicable disease agents for which testing is required under paragraphs (a), (b), and (c) of this section.

(e) For donors of dura mater, an assessment designed to detect evidence of transmissible spongiform encephalopathy shall be performed.

§ 1271.90 Exceptions from the requirement of donor suitability determination; labeling requirements.

(a) For the following human cellular and tissue-based products, a determination of donor suitability under § 1271.50 is not required, and donor screening under § 1271.75, and testing under §§ 1271.80 and 1271.85 are recommended but not required:

(1) Banked cells and tissues for autologous use;

(2) Reproductive cells or tissue donated by a sexually-intimate partner of the recipient for reproductive use.

(b) If all screening and testing applicable to a comparable human cellular or tissue-based product under §§ 1271.75, 1271.80, and 1271.85 are not performed on the donor of a human cellular or tissue-based product listed in paragraph (a) of this section, the product shall be labeled ''NOT EVALUATED FOR INFECTIOUS SUBSTANCES.'' If any screening or testing is performed on a donor of a human cellular or tissue-based product listed in paragraph (a) of this section, and the results indicate the presence of relevant communicable disease agents and/or risk factors for or clinical evidence of relevant communicable disease agents or diseases, the product shall be labeled with the Biohazard legend shown in § 1271.3(i).

(c) Banked cells and tissues for autologous use shall be labeled ''FOR AUTOLOGOUS USE ONLY.''

Dated: February 19, 1999.

Jane E. Henney,

Commissioner of Food and Drugs.

Dated: August 29, 1999.

Donna E. Shalala,

Secretary of Health and Human Services.

[FR Doc. 99–25378 Filed 9–29–99; 8:45 am]

BILLING CODE 4160–01–F

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Parts 100, 110, and 165

[CGD05–99–068]

OPSAIL 2000, Port of Hampton Roads, VA

AGENCY: Coast Guard, DOT.

ACTION: Advanced notice of proposed rulemaking; request for comments.

SUMMARY: The Coast Guard requests public comment on the temporary establishment of several exclusion areas and anchorage grounds before, during, and after OPSAIL 2000 in the Port of Hampton Roads, Virginia, from June 14 through June 20, 2000. The Coast Guard anticipates rulemaking establishing Special Local Regulations to control vessel traffic within the Port of Hampton Roads 2 days prior to the event on June 14 and 15, 2000; establishing several exclusion areas; establishing new and/or assigning currently designated Anchorage Grounds for participating/spectator vessels; and establishing temporary safety zones for fireworks displays.

DATES: Comments must be received on or before November 15, 1999.

ADDRESSES: Comments may be mailed to the Port Operations Department (CGD05–99–068), Coast Guard Marine Safety Office Hampton Roads, 200 Granby Street, Norfolk, Virginia 23510, or delivered to the 7th floor at the same address between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The Port Operations Department of Marine Safety Office Hampton Roads maintains the public docket for this rulemaking. Comments, and documents as indicated in this preamble, will become part of this docket and will be available for inspection or copying at the Coast Guard Marine Safety Office

Hampton Roads, between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Lieutenant Commander S. Moody or Lieutenant L. Greene, Port Operations Department, Coast Guard Marine Safety Office Hampton Roads (757) 441–3294, between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Request for Comments

The Coast Guard encourages interested persons to participate in the early stages of this rulemaking by submitting written data, views, or arguments. Please explain your reasons for each comment so that we can carefully weigh the consequences and impacts of any future requirements we may propose. Persons submitting comments should include their names and addresses, identify this rulemaking (CGD05–99–068) and the specific section of this document to which each comment applies. Please submit two copies of all comments and attachments in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. Persons wanting acknowledgment of receipt of comments should enclose stamped, self-addressed postcards or envelopes. The Coast Guard will consider all comments received during the comment period.

The Coast Guard plans no public hearing. Persons may request a public hearing by writing to the Port Operations Department at the address under **ADDRESSES.** The request should include the reasons why a hearing would be beneficial. If it determines that the opportunity for oral presentations will aid this rulemaking, the Coast Guard will hold a public hearing at a time and place announced by a later notice in the **Federal Register**.

Background and Purpose

Opsail 2000 is sponsoring the OPSAIL 2000 Parade of Tall Ships, as well as a fireworks display. These events are scheduled to take place on June 16 and 17, 2000 respectively, in the Port of Hampton Roads, on the waters of Chesapeake Bay and the Elizabeth River. The Coast Guard expects a minimum of 10,000 spectator craft for this event. The anticipated rulemaking will provide specific guidance on temporary anchorage regulations, vessel movement controls, safety and security zones that will be in effect at various times in those waters during the period June 14—20, 2000. The Coast Guard may seek to establish additional regulated areas, Anchorage Grounds, and safety or security zones once confirmation of the exact number of vessels and dignitaries that will be participating in OPSAIL 2000 becomes available.

Schedule of Events

At the current time, marine related events will include the following:

1. June 15 and 16, 2000: The arrival of more than 200 Tall Ships and character vessels at Lynnhaven Anchorage.
2. June 16, 2000: Parade of approximately 200 Tall Ships and character vessels from Cape Henry to Town Point Park, Downtown Norfolk.
3. June 17, 2000: Fireworks display scheduled to take place adjacent to the Norfolk and Portsmouth Seawalls.
4. June 20, 2000: Scheduled departure for the majority of the vessels.

Discussion

The Coast Guard estimates there will be over 10,000 spectator craft and commercial vessels (passenger vessels and charter boats) in the area during June 16 through 20, 2000. The safety of parade participants and spectators will require that spectator craft be kept at a safe distance from the parade route. The Coast Guard intends to establish multiple limited access areas for the vessel parade, and to temporarily modify existing anchorage areas within the port area to provide for maximum spectator viewing areas and traffic patterns for deep draft and barge traffic.

The most severe traffic restrictions will be in place during the Parade of Sail, which will begin the morning of June 16 and end that evening. These restrictions will affect all vessels. The only other restriction anticipated for commercial deep draft and barge traffic will be during the fireworks display on Saturday night, June 17. The Coast Guard anticipates having vessels available on request to escort deep draft and barge traffic through congested areas of Town Point Reach during all other periods of June 16–20, 2000.

Regulatory Evaluation

At this early stage in what is still just a potential rulemaking, the Coast Guard has not determined whether any future rulemaking may be considered a significant regulatory action under section 3(f) of Executive Order 12866 or the regulatory policies and procedures of the Department of Transportation (DOT) (44 FR 11040; February 26, 1979).

The Coast Guard expects the economic impact of any future rulemaking to be minimal. Although the Coast Guard anticipates restricting traffic from transiting a portion of the Elizabeth River, Newport News channel and some anchorages during the vessel parade, the effect of any future rulemaking will be minimized because of the limited duration of the event and the extensive advance notifications that will be made to the maritime community via the Local Notice to Mariners, facsimile, the internet, marine information broadcasts, Hampton Roads Maritime Association meetings, and Hampton Roads area newspapers, so mariners can adjust their plans accordingly. The Coast Guard anticipates that the majority of the maritime industrial activity in the Port of Hampton Roads will continue, relatively unaffected by any future rulemaking.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard must consider whether any potential rulemaking, if it led to an actual rule, would have a significant economic impact on a substantial number of small entities. ''Small entities'' include small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

The Coast Guard does not anticipate that its potential rulemaking will have anything but a minimal impact upon small entities, but expects that comments received on this advance notice will help it determine the number of potentially affected small entities and in weighing the impacts of various regulatory alternatives for the purpose of drafting any rules.

Assistance for Small Entities

In accordance with section 213(a) of the Small Business Regulatory Enforcement Act of 1996 [Pub. L. 104–121], the Coast Guard wants to assist small entities in understanding this advance notice so that they can better evaluate the potential effects of any future rulemaking on them and participate in the rulemaking. If you believe that your small business, organization, or agency may be affected by any future rulemaking, and if you have questions concerning this notice, please consult the Coast Guard point of contact designated in **FOR FURTHER INFORMATION CONTACT.** The Coast Guard is particularly interested in how any future rulemaking may affect small entities. If you are a small entity and believe that you may be affected by such a rulemaking, please tell how, and what flexibility or compliance alternatives the Coast Guard should consider to minimize the burden on small entities while promoting port safety.

Collection of Information

The Coast Guard anticipates that any future rulemaking will not provide for a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Federalism

The Coast Guard has analyzed this advanced notice under the principles and criteria contained in Executive Order 12612. From the information available at this time, the Coast Guard cannot determine whether this potential rulemaking would have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Unfunded Mandates

Under the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4), the Coast Guard must consider whether this potential rulemaking will result in an annual expenditure by state, local, and tribal governments, in the aggregate of $100 million (adjusted annually for inflation). If so, the Act requires that a reasonable number of regulatory alternatives be considered, and that from those alternatives, the least costly, most cost-effective, or least burdensome alternative that achieves the objective of the rule be selected. The Coast Guard does not anticipate that any future rulemaking will result in such expenditures, but welcomes comments addressing the issue from interested parties.

Environment

The Coast Guard anticipates that any potential rulemaking would be categorically excluded from further environmental documentation in accordance with Commandant Instruction M16475.1C. Any such rulemaking would be designed to minimize the likelihood of maritime disasters with their attendant environmental consequences and to enhance the safety of participants, spectators, and other maritime traffic. Therefore, any potential rulemaking should have no environmental impact. The Coast Guard invites comments addressing possible effects that any such rulemaking may have on the human environment or addressing possible inconsistencies with any Federal, State, or local law or administrative determinations relating to the environment. It will reach a final determination regarding the need for an environmental assessment after receipt of relevant comments.

J.E. Schrinner,

Captain, U.S. Coast Guard, Captain of the Port Hampton Roads.

[FR Doc. 99–25448 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–15–U

POSTAL RATE COMMISSION

39 CFR Part 3001

[Docket No. RM98–2; Order No. 1263]

Revisions To Library Reference Rule; Further Changes

AGENCY: Postal Rate Commission.

ACTION: Supplementary notice of proposed rule.

SUMMARY: This document addresses comments on a previous proposal to revise rules on the use of library references. It also presents another set of revisions for comment. The revisions are intended to improve administrative aspects of the library reference practice.

DATES: File comments by October 20, 1999.

ADDRESSES: Send comments on this proposal to Margaret P. Crenshaw, Secretary of the Commission, Postal Rate Commission, 1333 H Street, NW., Suite 300, Washington, DC 20268–0001.

FOR FURTHER INFORMATION CONTACT: Stephen L. Sharfman, General Counsel, 202–789–6820.

SUPPLEMENTARY INFORMATION:

Regulatory History

On September 8, 1998, the Commission published order no. 1219 in the **Federal Register** (63 FR 47456) setting forth its initial proposal to revise rule 31(b) (39 CFR 3001.31(b)). The Commission received eight sets of comments on the proposal. In order no. 1223 (issued December 24, 1999), the Commission proposed further revisions. These were published in the **Federal Register** on December 24, 1998 (63 FR 71251). The Commission received three sets of comments on the amended version of the rule. Comments on both orders are available for public inspection in the Commission's docket section. They also can be accessed electronically at www.prc.gov. The Commission issued this order (no. 1263) proposing further revisions on September 23, 1999. It directed interested parties are invited to submit comments following publication of this proposal in the **Federal Register** (see Dates for the deadline) and directed the Secretary to cause this order to be published in the **Federal Register**, in accordance with all applicable regulations of the Office of the Federal Register.

Introduction

This is the third order the Commission has issued in a rulemaking revising rule 31(b) provisions on the practice of filing library references. It briefly describes previous proposals, addresses various comments, and presents further proposed revisions. The proposed changes reflect the same focus on limited administrative improvements as the earlier proposals, but place greater emphasis on the role of the notice in providing relevant information. Inclusion of a detailed preface or summary, which had been proposed as a mandatory requirement, is made optional. New provisions, based on a Postal Service analysis, identify six categories of library references. The proposal also clarifies when library references may be filed and when special requests for service can be made. The rule has been reorganized and renumbered to reflect these changes (consistent with Office of the Federal Register style.) Minor editorial revisions also have been made.

I. Summary of Initial Proposal (Order No. 1219)

The initial set of provisions issued in this rulemaking listed the circumstances when material could be filed as a library reference. The list reflected the practice that had grown up around the existing rule. It included the following independent considerations: When physical characteristics (such as bulk or volume) make service of the material unduly burdensome; when the material is of limited interest to the entire service list; when the material qualifies as a secondary source; when reference to the material is made easier or otherwise facilitated; or when otherwise justified by circumstances, as determined by the Commission or presiding officer.

The initial proposal also required those who file library references (''filers'') to provide detailed information and related disclosures about the material in both an accompanying motion and in a preface or summary contained in the library reference. This represented a change in practice, as the long-standing rule has required only a notice with minimal information. The proposal also required submission of an electronic version of material.

II. Second Proposal (Order No. 1223)

A. Summary of Provisions

The second set of revisions eliminated the motion requirement. It reinstated the notice, specifying that it include the same type of information and disclosures the motion would have had to provide. It retained the separate preface requirement. The proposal limited the circumstances justifying submission of a library reference by requiring consideration of the material's physical characteristics (as they relate to service) in conjunction with one of the other long-recognized circumstances. It also clarified requirements for the contents of the notice; increased the number of hard copies required to be filed from one to two; and limited special requests for service.

B. Summary of Comments

The Commission received comments from the Postal Service, the Office of the Consumer Advocate (OCA) and David Popkin (Popkin) on the second version of the rule. Further Comments of the United States Postal Service (February 1, 1999); Renewed Request for Informal Conference and OCA Comments in Response to Order No. 1223 on Proposed Revisions to Commission Rules on Library References (February 1, 1999); and Correspondence of David B. Popkin (January 23, 1999). (Hereafter, ''Postal Service Comments,'' ''OCA Comments,'' and ''Popkin Comments.'')

C. Commenters' Positions in General

The Postal Service's position. The Service provides this perspective on its practice with respect to library references:

> In past general rate cases, the Postal Service typically has not filed as a 'library reference' material it intended to be admitted directly into the evidentiary record. Rather, such material has been filed as testimony. In Docket No. R97–1, however, this historical practice may have become obscured. As a result of the events of that proceeding, the Postal Service now anticipates (and would even in the absence of this rulemaking) that more material of the type that in the past may have been submitted as library references will simply be filed as testimony.

Postal Service Comments at 9 (footnotes omitted).

The Commission believes that the Service's representations regarding future filings provide a sound basis for assuming that the most serious problems associated with library references in Docket No. R97–1 will not recur. At the same time, the Commission finds that improvements in the basic administration of the library reference practice are still needed. In particular, the Commission wants to insure that the notice accompanying each library reference provides information that adequately identifies the contents and discloses how it relates to an issue or may be used in a case. Also, the Commission believes the practice of filing library references should be limited to appropriate circumstances and categories of material.

Other concerns. The Service objects to the proposal's across-the-board application to all library references, as well as to many specific provisions. It claims further revisions are needed if the Commission's apparent objectives are to be achieved without unduly burdening the Postal Service. The Service renews its request for an informal conference, but says the focus could be narrower than originally proposed. In support of this approach, the Service claims (without detailed explanation) that problems and solutions could be explored more efficiently in a conference than through the written comment-and-reply process.

The Service also notes that it has identified six categories of library references, and suggests that these groupings could serve as a basis for discussion at the conference. However, it further states that it believes five of the six categories—all but ''All Other Material''—should be exempt from the proposed requirements (as amended to reflect other concerns the Service raises). The Service's rationale is that to the extent there was legitimate controversy over library references in Docket No. R97–1, all of the material at issue was within proposed Category 6 (All Other Material). Postal Service Comments at 1–2.

The OCA's position. The OCA generally asserts that the Commission's proposal is not sufficiently thorough. It urges further amendments incorporating some of the suggestions it offered in its initial comments. These include a comprehensive cross-walk or ''road map'' linking library references to witnesses; a continuing obligation to update the cross-walk; and production of survey data at the time survey results are filed, along with specific relief if such data are not contemporaneously filed. OCA Comments at 1–3.

The OCA asks that the Commission provide an avenue of relief if the new requirements are ignored or abused and seeks clarification of the circumstances under which a library reference can be filed. Id. at 2. It notes that it continues to believe that adjustments that are closely, but not necessarily directly related to, the library reference practice could be included in this rulemaking. Id. The OCA also questions the adequacy of the Commission's explanation of how it balanced the burdens associated with the library reference practice. Id. at 5–6. It emphasizes that reviewers shoulder a considerable burden, especially if the Commission does not require the Service to provide (and update) a cross-walk between testimony and library references. Id. at 6.

Mr. Popkin's position. Mr. Popkin raises a concern about his ability to participate in an economical and effective manner, given that he does not work or reside in the Washington, DC area. In particular, he emphasizes the need for requiring the filer to provide a detailed description of the contents of library references. He also supports extending the right to make a special request for service to all library references. Popkin Comments at 1.

D. Commission Response

Response to the Service's general concerns. The Commission has considered the Service's request for a conference, but is not convinced that this approach would be a more efficient way of developing improvements. The Service has not presented persuasive reasons why the issues under consideration are not suited to the notice-and-comment format traditionally used for changes of this nature. It is also not clear that a conference would elicit any more (or better informed) participation than the notice-and-comment approach. Therefore, the Commission plans to proceed with the rulemaking format.

In response to the Service's concern over the rule's ''one-size fits all'' approach, the Commission notes that the underlying proposal assumed that participants would avail themselves of the opportunity to seek waiver of all or part of the proposed provisions (under rule 22) whenever appropriate. To make clear that waiver is an option, the Commission is adding a provision similar to that in rule 54(r). The proposed language reads as follows:

> Upon the filing of a motion showing good cause, the Commission may waive one or more of the provisions relating to library references. Motions seeking waiver may request expedited consideration and may seek waiver for categories of library references.

The Commission considers this approach preferable to the Service's suggestion, which sets up a structure for categorizing library references, only to exempt all but one category from application of the rule. The Commission nevertheless believes the proposed categories have considerable utility for a

number of purposes, including as a frame of reference when requests for waiver are filed or when special requests for copies are made. Therefore, the proposed rule identifies and defines them essentially as suggested by the Service.

Response to OCA's general concerns. The OCA requests more extensive cross-referencing to library references than the Commission has proposed and wants survey data to be provided when the survey results are initially filed. In the rule proposed here, the Commission is not including the requested approach to survey data, as it believes this expands the rulemaking beyond the limits established early on. However, the Commission is adopting a limited cross-referencing requirement. The Commission does agree with the basic OCA premise that the rule should clearly set out the current expectation that testimony and exhibits presented in Commission proceedings should contain adequate citation for specifically referenced source material. Therefore, language is added to rule 31(b) to make current expectations more explicit. See rules 31(k) and 54(o).

With respect to the adequacy of the explanation of burden, the Commission assumed it was clear that complying with the new provisions would fall most heavily on the Service, as it generally files the most library references. Eliminating mandatory motion practice was one means of reducing burden on the Service. Increasing the amount of information provided in the notice was a way of reducing a reviewer's burden.

A comprehensive cross-walk linking testimony and library references would further assist a reviewer, but the Commission is not convinced that the job of preparing one, at least on the scale required for omnibus cases, is as simple as the OCA asserts. There are complexities associated with the Service's preparation of a formal request, and the Commission does not seek to add to them unnecessarily by mandating preparation of a cross-walk, unless it becomes apparent that this is essential as a matter of due process. However, should the Service prepare even a limited or partial cross-walk in the course of organizing its filing, the Commission hopes this document (and any updates) would be made available to the entire service list on a voluntary basis. Additionally, discovery requests for such information are permissible.

The elimination of the motion requirement, as the OCA notes, also eliminates an explicit avenue for relief, should the notice be deficient (or not filed at all). The Commission has considered the need for providing a specific enforcement mechanism in its revised proposal to address other situations, but has concluded that an aggrieved reviewer can seek redress either informally (preferably by asking the filer to provide any missing information) or by seeking special relief from the Commission.

Response to Popkin. The retention of requirements specifying that certain information and disclosures be made in the notice addresses Popkin's concerns about a reviewer's ability to determine the contents of a library reference. The Commission continues to believe that opportunities to make a special request for service of material filed as a library reference should be limited. In maintaining this position, the Commission notes its expectation that the Service (and other filers) will be including in testimony and exhibits much of the type of information that has been filed as a library reference in the past.

III. The Service's Proposed Library Reference Categories

The Service has grouped the library references it filed in Docket No. R97–1 into six categories. The categories are Reporting Systems Material (Category 1); Witness Foundational Material (Category 2); Pure Reference Material (Category 3); Material Provided in Response to Discovery (Category 4); Disassociated Material (Category 5); and All Other Material (Category 6). *See generally* Postal Service Comments at 16–27.

Under the Service's approach, Category 1 consists of library references relating to the Service's statistical cost and revenue reporting systems and their primary outputs. The Service notes that this category could be further subdivided into two groups, with one consisting of documentation (such as handbooks and manuals) and the other consisting of data generated by the reporting systems, related reports, or any data compilations generated in the process of producing final reports. Id. at 16–17.

Category 2 (Witness Foundational Material) consists of material relating to the testimony of specific witnesses. The Service says this material provides access to the information identified by rule 31 as necessary to the establishment of a proper foundation for receiving into evidence the results of studies and analyses. It also notes that much of this information is typically provided, at least in part, in electronic format. Id. at 20.

Category 3 (Pure Reference Material) consists of previously published material provided for the convenience of the reader. The Service says this category includes materials such as entire books, portions of books, articles, reports, manuals, handbooks, and contracts. Id. at 22. Category 4 (Material Provided in Response to Discovery) consists of material provided in response to discovery requests. Id. at 23. Category 5 (Disassociated Material) consists of material provided by a party, at the request of another, from which the filing party wishes to be disassociated. The Service characterizes this as material filed ''under protest,'' when the filing party wishes to make clear that it is neither vouching for, nor in any way sponsoring, the material that is provided. Id. at 26. Category 6 (All Other Material) consists of library references not fitting any of the other categories. Id. at 27.

IV. Section-by-Section Summary

The following discussion assumes that the changes referred to are being made to the second set of rules issued in Order No. 1223 (also referred to here as the underlying proposal). Numbering reflects Office of Federal Register style preferences.

A. Paragraph (b)(1) of Section 31

General introduction to provisions on documentary material. The underlying proposal left this provision unchanged from the version currently in effect, except for minor editorial and organizational changes. These included changing the heading from ''Documentary'' to ''Documentary material—(1) General.'' Also, the last two sentences of this provision (which address the evidentiary status of material contained in library references) were relocated to a separate paragraph under section 31(b)(2) and captioned ''Status of library references.''

Commenters positions. No commenter addresses the minor changes the Commission proposed in this subsection, but the OCA asks that a sentence be added to emphasize the need for specific references in all testimony and exhibits. The proposed language reads: ''Exhibits prepared for Commission proceedings shall cite with specificity the page and, if necessary for comprehension, the line number, of specific portions of testimony, exhibits, library references or other referenced material.'' OCA Comments at 8.

Commission response. The Commission supports adequate citation to sources in all filings, and adopts a variation on the OCA's proposal.

B. Underlying Paragraph (b)(2) of Section 31—General Presentation of Provisions on Library References

To reduce the need for extensive renumbering of succeeding provisions in the Commission's rules of practice, both of the previous versions organized the provisions on library references into a newly-designated paragraph 31(b)(2). This approach is retained in the set of rules proposed here. Further changes affecting the numerical designation of internal subdivisions are identified below.

C. Underlying Paragraph 31(b)(2)(i)

Definition of library reference; recognition of related practice; circumstances for filing. In the underlying proposal, the first sentence stated that a library reference is a generic term or label that may be used to identify or refer to certain documents or things filed with the Commission's document room. The second sentence stated that the practice of filing library references is authorized primarily as a convenience to filing participants and the Commission. The third sentence identified the situations or circumstances when a library reference may be filed. These included when the physical characteristics make compliance with service requirements burdensome and any one of the following factors exist: limited interest; status as a secondary source; when reference to the material would be facilitated; or when otherwise justified by circumstances.

The formulation of the first sentence generated no opposition. It appears in the version presented here as it did in the underlying version. Following this sentence, the Commission is adding a new provision identifying and describing six categories of library references. The wording closely tracks the Postal Service's suggestions. This addition (paragraph (b)(2)(i) of section 31) reads as follows:

Participants are encouraged to identify and refer to library reference material in terms of the following categories:

Category 1—Reporting Systems Material (consisting of library references relating to the Postal Service statistical cost and revenue reporting systems, and their primary outputs); Category 2—Witness Foundational Material (consisting of material relating to the testimony of specific witnesses, primarily that which is essential to the establishment of a proper foundation for receiving into evidence the results of studies and analyses); Category 3—Reference Material (consisting of previously published material provided for the convenience of the reader, such as books, chapters or other portions of books, articles, reports, manuals, handbooks, guides, and contracts); Category 4—Material Provided in Response to Discovery (consisting of material submitted in answer to discovery requests); Category 5—Disassociated Material (consisting of material provided at the request of another, from which the filing party disassociates itself, especially in terms of vouching for or sponsoring the material); Category 6—All Other Material (consisting of library references not fitting any of the other categories).

Because of the addition of this language, the second sentence in the underlying version is redesignated as paragraph (b)(2)(ii) of section 31. The Commission has considered, but rejected, a change in the wording of this sentence based on the Postal Service's observation that in some instances, such as when it complies with a request for production of documents under rule 26, filing material as a library reference may be a convenience for the requesting party. The Commission notes that the reference to convenience is qualified with the term ''primarily.'' This leaves open other possibilities, such as the situation the Service raises; therefore, this provision is not revised.

D. Underlying Paragraph (b)(2)(i)(A)–(E) of Section 31

Circumstances under which a library reference may be filed. The OCA points out that the Commission's revision links physical characteristics that presumably make service unduly burdensome with one of the circumstances enumerated in the following subsections. The OCA contends that this is contrary to the sense of the initial proposal, and asserts that this restricts the filing of library references to documents too burdensome to serve. OCA Comments at 12.

Commission response. The presentation in the underlying version was based on the Commission's assessment that the practice of filing library references should be limited, in accordance with the original intent of the rule. (The size of a document in terms of number of pages was a major concern when the rule was originally promulgated.) It also recognized that as the ability to produce material in electronic format increases, there are likely to be fewer instances when material is too voluminous to serve in the traditional hard-copy sense.

The Commission is retaining the more limited approach of the underlying version in the accompanying set of rules, but is revising it in two respects. First, the provision for filing when otherwise justified by circumstances—which now appears as paragraph (b)(2)(i)(E) of section 31—is established as a consideration independent of physical characteristics. It appears as paragraph (b)(2)(iii) of section 31. Second, a provision is added as paragraph (b)(2)(ii) of section 31 to recognize that a filer may seek to comply with a discovery request for production of documents or things by making the material available as a library reference, without the need for special approval or waiver.

Special requests. In the underlying version, the Commission proposed limiting special requests to situations meeting the terms of section 31(b)(2)(i)(A) and (B)—when the physical characteristics of the material would make service unduly burdensome and the material was of limited interest. The filer was to provide a copy of the requested material within three days or, in the alternative, inform the requesting participant of certain matters, including when the material would be available. The Commission's commentary noted that absence of a specific authorization for special requests in other instances did not automatically foreclose a participant from making a request.

The Service observes, with respect to special requests, that it ''has serious concerns about any draft provision which might be construed to entitle parties to copies of substantial portions of the set of library references filed with the case.'' Postal Service Comments at 6–7. It says: ''In this respect, directly limiting application of the 'extra copy' provisions of the proposed procedures by reference to the categories suggested by the Postal Service * * * would likely be more effective.'' Id. at 8.

Mr. Popkin notes that he has had a problem in the past with obtaining material that has been filed as a library reference. It appears that the material in question may have been filed in response to a request for production of documents (under rule 26). As the Service notes, the terms of rule 26 direct the responding party to make the material available for inspection and copying, but do not require service.

Special requests are a challenging issue. The Commission continues to oppose an across-the-board allowance for special requests. It also believes that the growing ability to produce and distribute most material in an electronic format reduces the need for participants to make special requests for hard-copy service. Also, the Commission believes that exposing the filer of a library

reference to the potential for repeated requests for service diminishes the extent to which the practice of filing a library reference is a convenience.

Based on further consideration of these points and others raised by the commenters, the Commission proposes a separate provision on special requests. This provision sets out the basic policy that special requests for service are not encouraged and that no blanket requests for service of library reference material may be made. It further provides that special requests must be made in the form of a detailed motion.

E. Underlying Paragraph (b)(2)(ii) of Section 31—Filing Procedure

In the underlying version, this paragraph states that library references are to be accompanied by a contemporaneous notice, and specifies that two hard copies of the material are to be filed. It also outlines the information that is to be included in the notice. The filer must describe what the material consists of or represents; how the material relates to the participant's case or to issues in the proceeding; and whether the material contains a survey or survey results. Filers must also address certain matters related to the material's potential use as evidence and its relationship to other documents. These include disclosing whether the participant anticipates seeking admission of the material into evidence; identifying authors or others who make a material contribution; identifying related documents; identifying portions of the material that may be entered into evidence; and identifying the expected sponsor. A companion provision, in underlying paragraph 31(b)(2)(iii), requires library references to include a preface, and sets out the information and disclosures that must be presented therein.

Commenters' positions. The Postal Service acknowledges that it opposed the motion requirement, but says it is not satisfied with the Commission's notice alternative because it does nothing to lessen the burden on the Postal Service. Instead, the Service says it ''merely substitutes what amounts to virtually the same content requirements for the required notice as were initially proposed for the motion.'' Postal Service Comments at 2–3.

The OCA says it does not seek reinstatement of the motion requirement, but raises a concern that there is no clear avenue of relief for those who believe a filing participant has failed to satisfy the new requirements. It asks that the Commission explicitly provide one. OCA Comments at 1–2.

Commission response. Given the minimal information that has been provided in many notices, adoption of almost any new requirements would entail more effort from the Service or any other participant filing a library reference. However, the Commission believes that most of its proposed requirements are sound, and retains many of them in the final version. However, as discussed below, it is eliminating the preface as a mandatory item in library references.

Contents of the required notice. The Service supports requiring a description of the contents of the library reference and an explanation of how it relates to other material in the case. However, it asserts that requiring the filing party to state whether the material contains a survey or survey results, can ''safely be omitted'' because it is unclear why a special provision should be devoted exclusively to an indication of this nature. Postal Service Comments at 12.

The Service also claims that certain other requirements are ''of mixed utility.'' For example, it notes that the notice is to set forth the reason why the material is being designated as a library reference. The Service observes that while wanting to know why the library reference is being submitted is understandable in the abstract, the reasons are usually fairly obvious in practice, especially for those involving entire categories the Service requests be exempted from the rules. Id. The Service also questions the provision requiring identification of authors or others materially contributing to the preparation of the library reference. Id. As an example, it cites the production of a spreadsheet, and questions why the filer must provide the identity of individuals who only assist in its preparation. Id. at 13.

The underlying version also includes a requirement that the filing participant disclose whether the material contains survey results. Both the Service and the OCA address this provision, but their interests are significantly different. The OCA's concern is that the Commission's proposal is not an adequate substitute for its original request that the Commission require survey data to be filed at the time the survey results are submitted. The Service, on the other hand, asks why this requirement is included, since it expects this information would be provided in the required description.

Commission response. Although the Service asserts that the reason for filing a library reference is ''usually fairly obvious,'' the Commission continues to believe that the notice would be of more assistance to reviewers if this information is provided. The underlying version required filers to address this in terms of the circumstances set out in the rule. Given the addition of the list of categories, the Commission proposes that filers identify the category of the material as well.

The Commission believes the Service reads too much into the requirement for identification of ''authors or others materially contributing to the preparation of the library reference.'' The rule does not require filing participants to list those providing clerical, secretarial, or related administrative assistance in connection with the material. The ''others'' referred to should be presumed to stand in essentially the same relationship to the material as does an ''author.'' In providing direction regarding the interpretation of this phrase, the Commission expects filing participants and reviewers to exercise good judgment in complying with this requirement. For example, in the case of a spreadsheet prepared by an assistant, it may be adequate to indicate that the material was prepared under the direction of a certain witness.

With respect to survey results, the Commission notes that it regarded the OCA's original suggestion regarding contemporaneous filing of survey results among those that were beyond the scope of this limited rulemaking. However, the Commission also believed that one objective of the rule—more extensive disclosure of the contents of the material contained in the library reference—would be enhanced if survey results were specifically identified. As surveys may require more extensive or more expert analysis than other material, the Commission continues to believe it is appropriate for this information to be disclosed. However, in line with the Service's observation that survey results are the type of description that might be provided in response to the requirement of a general disclosure of contents, the wording of the accompanying set of rules is amended to reflect this. Several minor editorial changes are made to other provisions to clarify the extent of the required disclosures.

The OCA's proposal that this paragraph include a requirement for a cross-walk or ''road map.'' In line with its interest in a cross-walk, the OCA proposes adding the following paragraph to this provision:

> The filing shall include a listing, by witness, of those witnesses who rely upon or cite to the library reference together with specific references to pages and schedules in testimony and exhibits where the library reference is cited. The listing shall be

updated as additional library references are filed.

OCA Comments at 7.

Commission response. The Commission declines to adopt the proposed amendment, for reasons discussed earlier.

F. Underlying paragraph (b)(2)(iii) of Section 31

Labels, descriptions (including information to be provided in a preface or summary with library reference itself), and related disclosures. The first sentence of the underlying provision directs the filing participant to use standard notation to label the library reference and to comply with any additional requirements that may be imposed by the presiding officer or the Commission. This provision has not been controversial. It is retained in the third version, but the caption is changed to ''Labeling'' to reflect a change in the organization of the rule. The second sentence in the underlying paragraph is replaced with text identifying the inclusion of a detailed preface as an option. It is also redesignated.

Elimination of mandatory inclusion of a preface or summary. The underlying proposal requires that material designated as a library reference include a preface or summary addressing the following points: the proceeding and document or issue involved; the identity of the designating participant; the identity of the sponsoring witness or witnesses (or the reason why this cannot be provided); to the extent feasible, other library references or testimony that utilize information or conclusions developed therein; and whether the library reference is an update or revision to a library reference filed in another Commission proceeding.

Commenters' positions. The Service says that to the extent it agrees information listed in this subsection is necessary, the information has been provided in the vast majority of instances. However, it also contends that not all of the information is necessary. It further notes that in some instances, such as when the material is a pre-existing document, it may be difficult or impossible to comply, and not necessary if the notice is adequate. Id. at 13–14. It also objects to the requirement of identifying ''other library references or testimony that utilize information or conclusions developed therein'' to the extent it calls for an exhaustive list of all downstream testimony or library references, but agrees to the extent it applies to material developed primarily to support a particular study or testimony.

Commission response. The version proposed here makes inclusion of a detailed preface or summary an option. In addition, the Commission is requiring some of the disclosures that were to be included in the preface to be set forth in the expanded notice requirement.

G. Subsection 31(b)(2)(iv)—Electronic Versions of Library References

The underlying version requires an electronic version, or an explanation of why an electronic version cannot be provided.

Commenters' positions. The Service observes, in connection with this requirement, that the universe of library references can largely be bifurcated into those which exist as library references because they are entirely electronic or have an electronic component, and those consisting of voluminous hard copy material for which no electronic version is available. It further says that increasingly, voluminous hard copy material is not likely to be filed if an electronic version could be filed more easily. The Service believes the intended result will be substantially achieved with or without any formal rule change. Id. at 15–16. It says it would prefer a rule which simply encourages parties to file electronic versions of library reference material whenever possible. Id. at 16.

Commission response. The Commission acknowledges the trend toward increased filing of material in an electronic format, but declines to alter the proposed provision in the manner suggested by the Postal Service. However, the Commission amends this provision to encourage the inclusion of a preface containing the information and disclosures required to be provided in the notice. The Commission believes that including a detailed preface would assist reviewers in instances where the notice is not readily available.

H. Underlying Paragraph (b)(2)(v) of Section 31—Status of Library References

This provision remains unchanged, but it is redesignated.

I. Waiver

As explained earlier, the Commission anticipated that the Service or other filers would file a motion for waiver of operation of various library reference provisions when deemed appropriate. To make clear this option exists, the Commission is including a specific provision (described earlier.)

J. Number of Copies

The accompanying version retains the requirement (in the underlying version) that two hard copies be provided. This language appears in a separate provision.

V. Set of Rules

The set of rules the Commission is proposing follows.

Dated: September 23, 1999.

Margaret P. Crenshaw,

Secretary.

List of Subjects in 39 CFR Part 3001

Administrative practice and procedure; Postal Service.

For the reasons discussed in the preamble, the Commission proposes to amend 39 CFR part 3001 as follows:

PART 3001—RULES OF PRACTICE AND PROCEDURE

1. The authority citation for part 3001 continues to read as follows:

Authority: 39 U.S.C. 404(b); 3603, 3622–24, 3661, 3662.

2. Amend § 3001.31 by revising paragraph (b) to read as follows:

§ 3001.31 Evidence.

* * * * *

(b) *Documentary material.*—(1) *General.* Documents and detailed data and information shall be presented as exhibits. Testimony, exhibits and supporting workpapers prepared for Commission proceedings that are premised on data or conclusions developed in a library reference shall provide the location of that information within the library reference with sufficient specificity to permit ready reference, such as the page and line, or the file and the worksheet or spreadsheet page or cell. Where relevant and material matter offered in evidence is embraced in a document containing other matter not material or relevant or not intended to be put in evidence, the participant offering the same shall plainly designate the matter offered excluding the immaterial or irrelevant parts. If other matter in such document is in such bulk or extent as would unnecessarily encumber the record, it may be marked for identification, and, if properly authenticated, the relevant and material parts may be read into the record, or, if the Commission or presiding officer so directs, a true copy of such matter in proper form shall be received in evidence as an exhibit. Copies of documents shall be delivered by the participant offering the same to the other participants or their attorneys appearing at the hearing, who shall be afforded an opportunity to examine the entire document and to offer in evidence in like manner other material and relevant portions thereof.

(2) *Library references.* (i) The term ''library reference'' is a generic term or label that participants and others may use to identify or designate certain documents or things (''material'') filed with the Commission's docket section. To the extent possible, material filed as a library reference shall be identified and referred to by participants in terms of the following categories:

Category 1—Reporting Systems Material (consisting of library references relating to the Service's statistical cost and revenue reporting systems, and their primary outputs); Category 2—Witness Foundational Material (consisting of material relating to the testimony of specific witnesses, primarily that which is essential to the establishment of a proper foundation for receiving into evidence the results of studies and analyses); Category 3—Reference Material (consisting of previously published material provided for the convenience of the reader, such as books, chapters or other portions of books, articles, reports, manuals, handbooks, guides, and contracts; Category 4—Material Provided in Response to Discovery (consisting of material provided in response to discovery requests); Category 5—Disassociated Material (consisting of material at the request of another, from which the filing party wishes to be disassociated, is not vouching for or sponsoring the material provided); Category 6—All Other Material (consisting of library references not fitting any of the other categories).

(ii) The practice of filing a library reference is authorized primarily as a convenience to filing participants and the Commission under certain circumstances. These include when the physical characteristics of the material, such as number of pages or bulk, are reasonably likely to render compliance with the service requirements unduly burdensome; and one of the following considerations apply:

(A) Interest in the material or things so labeled is likely to be so limited that service on the entire list would be unreasonably burdensome, and the participant agrees to serve the material on individual participants upon request within three days of a request, or to provide, within the same period, an explanation of why the material cannot be provided within three days, and to undertake reasonable efforts to promptly provide the material; or,

(B) The participant satisfactorily demonstrates that designation of material as a library reference is appropriate because the material constitutes a secondary source. A secondary source is one that provides background for a position or matter referred to elsewhere in a participant's case or filing, but does not constitute essential support and is unlikely to be a material factor in a decision on the merits of issues in the proceeding; or,

(C) Reference to, identification of, or use of the material would be facilitated if it is filed as a library reference; or

(D) The material is filed in compliance with a discovery request for production of documents or things.

(iii) *Other circumstances.* If a participant considers it appropriate to file material as a library reference, but for the inability to satisfy the terms set out in paragraphs (b)(2)(ii)(A)–(D) of this section, the material may be filed (by means of a notice) subject to the following conditions:

(A) Inclusion in the accompanying notice of a detailed explanation of the reason for filing the material under this provision;

(B) Satisfaction of all other applicable requirements relating to library references; and

(C) the Commission's right to refuse acceptance of the material in its docket room and its right to take other action to ensure participants' ability to obtain access to the material.

(iv) *Filing procedure.* Participants filing material as a library reference shall provide contemporaneous written notice of this action to the Commission and other participants, in accordance with applicable service rules. The notice shall:

(A) Set forth the reason(s) why the material is being designated as a library reference, with specific reference to paragraphs (b)(2) (ii) and (iii) of this section;

(B) Identify the category into which the material falls and describe in detail what the material consists of or represents, noting matters such as the presence of survey results;

(C) Explain in detail how the material relates to the participant's case or to issues in the proceeding;

(D) Identify authors or others materially contributing to substantive aspects of the preparation or development of the library reference;

(E) Identify the documents (such as testimony, exhibits, an interrogatory) or request to which the library reference relates, to the extent practicable;

(F) Identify other library references or testimony relied upon or referred to in the designated material, to the extent practicable;

(G) Indicate whether the library reference is an update or revision to a another library reference and, if it is, clearly identify the predecessor material; and

(H) To the extent feasible, identify portions expected to be entered and the expected sponsor (if the participant filing a library reference anticipates seeking, on its own behalf, to enter all or part of the material contained therein into the evidentiary record).

(v) *Labeling.* Material filed as a library reference shall be labeled in a manner consistent with standard Commission notation and any other conditions the presiding officer or Commission establishes.

(vi) *Optional preface or summary.* Inclusion of a preface or summary in a library reference addressing the matters set out in paragraphs (b)(2)(iv)(A)–(H) of this section is optional.

(vii) *Electronic version.* Material filed as a library reference shall also be made available in an electronic version, absent a showing of why an electronic version cannot be supplied or should not be required to be supplied. Participants are encouraged to include in the electronic version the information and disclosures required to be included in the accompanying notice.

(viii) *Number of copies.* Except for good cause shown, two hard copies of each library reference shall be filed.

(ix) *Special requests.* Special requests for service of material filed as a library reference are not encouraged. Special requests must be made in the form of a detailed motion setting forth the reasons why service is necessary or appropriate.

(x) *Waiver.* Upon the filing of a motion showing good cause, the Commission may waive one or more of the provisions relating to library references. Motions seeking waiver may request expedited consideration and may seek waiver for categories of library references.

(xi) *Status of library references.* Designation of material as a library reference and acceptance in the Commission's docket section does not confer evidentiary status. The evidentiary status of the material is governed by this section.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[FRL–6448–4]

RIN 2060–AI45

Air Quality: Revision to Definition of Volatile Organic Compounds—Exclusion of t-Butyl Acetate

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes to revise EPA's definition of volatile organic

compounds (VOC) for purposes of Federal regulations related to attaining the national ambient air quality standards (NAAQS) for ozone under title I of the Clean Air Act (Act). This proposed revision would add t-butyl acetate (also known as tertiary butyl acetate or informally as TBAC or TBAc) to the list of compounds excluded from the definition of VOC on the basis that this compound has negligible contribution to tropospheric ozone formation. As a result, if you are subject to certain Federal regulations limiting emissions of VOCs, your emissions of TBAc may not be regulated for some purposes.

DATES: If you submit comments on this proposal, EPA must receive them by November 29, 1999. The EPA must receive requests for a hearing by October 12, 1999.

ADDRESSES: If you submit comments, please submit them in duplicate (if possible) to: Air and Radiation Docket and Information Center (6102), Attention: Docket No. A–99–02, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Please strictly limit comments to the subject matter of this proposal, the scope of which is discussed below.

Public Hearing: If you contact EPA requesting a public hearing, it will be held at Research Triangle Park, NC. If you wish to request a public hearing, wish to attend the hearing or wish to present oral testimony, you should notify Mr. William Johnson, Air Quality Strategies and Standards Division (MD–15), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541–5245. The EPA will publish notice of a hearing, if a hearing is requested, in the **Federal Register**. Any hearing will be strictly limited to the subject matter of the proposal, the scope of which is discussed below.

The EPA has established a public docket for this action, A–99–02, which is available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, at EPA's Air and Radiation Docket and Information Center, (6102), 401 M Street, SW, Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: William Johnson, Office of Air Quality Planning and Standards, Air Quality Management Division (MD–15), Research Triangle Park, NC 27711, phone (919) 541–5245. You may call Mr. Johnson to see if a hearing will be held and the date and location of any hearing.

SUPPLEMENTARY INFORMATION:

Sector Identification

Regulated entities. You may be an entity potentially regulated by this action if you use or emit VOCs or are a State which has programs to control VOC emissions.

Category	NAICS codes	SIC codes	Examples of potentially regulated entities
Industry	325510	2851	Industries that manufacture paints, varnishes, lacquers, enamels and allied products.
Industry	4226	2869	Industries that manufacture industrial organic chemicals
State Government			States which have regulations to control volatile organic compounds.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

I. How Does This Rule Fit Into Existing Regulations?

EPA is proposing to exclude tertiary butyl acetate (TBAC or TBAc) from the definition of volatile organic compounds (VOCs). If you use or produce TBAc and are subject to EPA regulations limiting the use of VOCs in your product, limiting the VOC emissions from your facility, or otherwise controlling your use of VOCs, then you would not count TBAc as a VOC in determining whether you meet your regulatory obligations. This proposal may also affect whether TBAc is considered a VOC for State regulatory purposes, depending on whether the State relies on EPA's definition of VOC. The EPA is basing its proposal on information in a petition submitted by Lyondell Chemical Company, which plans to manufacture TBAc.[1] This proposal also addresses policies that may govern whether EPA will exclude other chemicals from the definition of VOC.

Tropospheric ozone, commonly known as smog, occurs when VOCs and nitrogen oxides (NO_X) react in the atmosphere. Because of the harmful health effects of ozone, EPA and State governments limit the amount of VOCs and NO_X that can be released into the atmosphere. Volatile organic compounds are those compounds of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which form ozone through atmospheric photochemical reactions. Compounds of carbon (also known as organic compounds) have different levels of reactivity—that is, they do not react at the same speed or do not form ozone to the same extent. It has been EPA's policy that organic compounds with a negligible level of reactivity need not be regulated to reduce ozone. The EPA lists these compounds in its regulations (at 40 CFR 51.100(s)) and excludes them from the definition of VOCs. The chemicals on this list are often called ''negligibly reactive'' organic compounds.

II. Why Does Lyondell Think TBAc Is Not a VOC?

On January 17, 1997, Lyondell submitted a petition to EPA which requested that EPA add TBAc to the list of compounds which are designated negligibly reactive in the definition of VOC at 40 CFR 51.100(s). The petitioner subsequently submitted supplemental materials to EPA in support of its petition. These materials are contained in docket A–99–02. The petitioner based the request on a comparison of the reactivity of TBAc to that of ethane, the latter having already been listed, since 1977, as negligibly reactive. In the past, EPA has determined that ethane and several compounds with lower reactivity than ethane are negligibly reactive and therefore exempted them from the definition of VOC. Reactivity data presented by Lyondell in support of the petition included both k_{OH} values and incremental reactivity values. The k_{OH} values are values of the rate

[1] The petition was submitted on January 17, 1997, by ARCO Chemical Company. Lyondell is the successor to ARCO for this petition, and EPA will refer to the petitioner as Lyondell throughout this notice.

constant for the VOC + OH (hydroxyl radical) reaction. The incremental reactivity values, which support the petition and reflect TBAc's potential for producing ozone in the atmosphere, were produced and reported by Dr. William Carter of the University of California at Riverside.

Lyondell's primary case for TBAc being less reactive than ethane is based on the use of incremental reactivity data set forth in a report titled ''Investigation of the Atmospheric Ozone Formation Potential of T-Butyl Acetate'' by Carter, et al. In that study, Carter compared the incremental ozone formed per-gram of TBAc under urban atmosphere conditions to that formed, under the same conditions, per-gram of ethane. The study repeated these comparisons for 39 conditions scenarios, that is, sets of ambient conditions intended to represent 39 American urban areas across the United States. Carter concluded that, on average, TBAc formed 0.4 times as much ozone as an equal weight of ethane under the conditions assumed in the study.

There is another way to compare the reactivities of organic compounds with that of ethane. That approach is to compare the compound with ethane on a per-mole basis rather than on a per-gram basis. Using the per-mole basis, the incremental ozone formed under certain conditions per-mole of TBAc would be compared to the ozone formed by a mole of ethane under the same conditions. This approach compares the reactivity of an equal number of molecules of each compound rather than comparing equal weights of the two compounds. On a per-mole basis, the average reactivity of TBAc for the 39-cities set of conditions is about 1.5 times that of ethane. The difference in reactivity results between the two approaches is due to the fact that a molecule of TBAc is almost four times heavier than a molecule of ethane.

III. How Does EPA Determine Whether an Organic Compound Is Negligibly Reactive?

When EPA determines that a chemical is less reactive than ethane, EPA considers the chemical negligibly reactive and can exclude it from the definition of VOC. Reactivities can be compared on either a per-gram (or weight) basis or on a per-mole basis. Based on the information discussed above, TBAc is less reactive than ethane on a per-gram basis, but more reactive on a per-mole basis. Thus, in this situation, which basis EPA uses to make the reactivity comparison will determine whether TBAc should be exempted.

All of the compounds which EPA listed as negligibly reactive before 1994 are less reactive than ethane on both a per-gram basis and a per-mole basis. In those decisions, EPA did not explicitly state whether it was using a per-gram or per-mole test. However, as a matter of practice, EPA evaluated these compounds in a manner consistent with using a per-mole basis because it based the comparisons on k_{OH} values which were expressed on a molecule basis.

The Agency first addressed the use of the per-gram basis in the case of acetone, which the Agency determined was less reactive than ethane on a per-gram basis, but more reactive on a per-mole basis. In the proposal to classify acetone as negligibly reactive, the Agency stated that it had ''elected to adopt the grams ozone per-gram VOC basis, since grams (or tons), rather than moles, is the mass unit used in regulations dealing with VOC emissions'' (59 FR 49878, September 30, 1994). There were no adverse comments on this proposed decision to use the per-gram basis, and the Agency stated in the final rule that ''[t]he EPA has chosen to use the weight basis rather than a mole basis for comparing results since emissions are regulated on a weight basis'' (60 FR 31635, June 16, 1995). This is the only case in which EPA has classified a compound as negligibly reactive solely on the per-gram basis.

The EPA addressed this same issue in a report to Congress concerning VOC emissions from consumer and commercial products (''Study of Volatile Organic Compound Emissions from Consumer and Commercial Products: Report to Congress,'' March 1995). One chapter of this report discussed the Agency's approach for evaluating VOC reactivity and stated that under the protocol ''presently favored—but not officially endorsed—'' if a compound's ''reactivity is found to be equal to or lower than that of ethane on a per-gram-of-VOC basis, * * * it is concluded that [it] can only have negligible O_3 potential * * *'' (p. 3–5). A footnote to this discussion stated that ''[c]omparison of VOC species reactivities to that of ethane can be made on either a per-gram-of-VOC basis or a per-mole-of-VOC basis'' and added that EPA has ''unofficially adopted the per-gram basis.''

The EPA has determined that comparing reactivities on a per-mole basis is more appropriate than comparing them on a per-gram basis. The EPA reexamined the scientific basis for the inclusion of ethane in the original list of negligibly reactive compounds published in 1977 (42 FR 35314). The Agency made the original determination to include ethane, in part, based on the results of a series of smog chamber experiments conducted by EPA in the early 1970s. In those experiments individual organic compounds at the concentration of 4 parts per million (ppm) by volume (or moles) were subjected to simulated ambient urban (Los Angeles) conditions, and resultant maximum ozone build-up in the chamber was measured. Those compounds which resulted in ozone concentration lower than that of the oxidant air quality standard, i.e., 0.08 ppm, were taken to be ''negligibly reactive.'' Ethane was one of the compounds EPA studied, and was the most reactive of those EPA identified as negligibly reactive in that study. Based on those findings and judgments, EPA designated ethane as negligibly reactive and ethane became the benchmark VOC species separating reactive from negligibly reactive compounds. Because EPA chose ethane as the ''benchmark'' species based on an equimolar comparison, comparisons with ethane for reactivity classification purposes are most appropriately made using equimolar concentrations, that is, on a per-mole basis.

Additionally, EPA has concluded that the argument previously used to justify the per-gram basis, i.e., that the per-gram basis is more practical since VOC emissions are regulated on a weight basis, is not the best approach when comparisons are made for reactivity classification purposes. Scientifically, chemical reactions are generally described on a molar basis, so the scientific convention is to compare chemicals on a molar basis. Relying on the number of moles of VOCs is consistent with the way EPA conducts photochemical modeling. For that, EPA takes VOC emissions measured by weight and converts them into moles to determine the impact on ozone formation. It is true that when EPA and States regulate, they generally do not regulate VOCs on a molar basis. Under the current state of information, doing so would impose great administrative burdens and costs on the Agency and on regulated industries. In many circumstances, regulating on a molar basis would pose significant practical compliance and enforcement problems. In contrast, it is practical for EPA to use the molar basis to make decisions on petitions to exempt a compound on an individual basis from the definition of VOCs. The EPA believes that it should use the most scientific approach that is currently feasible for exemption decisions. For that reason, EPA believes the per-mole test is better than the per-

gram test for determining whether a compound is less reactive than ethane and should be exempted from the definition of VOC. Use of the per-mole test is also consistent with the basis used to select ethane as a benchmark species.

Because of the determination that the per-mole basis is the proper scientific basis to use in comparing reactivities to ethane for decisions concerning negligible reactivity, EPA intends to employ the per-mole basis for all future negligible reactivity determinations made on VOC exemption petitions received after the date of publication of today's notice. The EPA will assess these future petitions using only the per-mole basis for comparison with ethane; EPA will not use the per-gram basis for evaluating future VOC exemption petitions.

The EPA has commenced a multi-year review of its policy to determine whether it needs revision. In the course of that review, EPA will investigate whether it is desirable, possible, and legally permissible to consider a compound's role in other air pollution problems (such as particulate matter, regional haze, toxicity, and stratospheric ozone depletion) when EPA determines whether a compound should be excluded from the definition of VOCs. The issue of an integrated approach to considering environmental problems was discussed by the Subcommittee for Ozone, Particulate Matter and Regional Haze, a Federal Advisory Committee Act (FACA) committee, which advised EPA on the implementation of the revised ozone and particulate matter ambient air quality standards. This FACA committee recommended an integrated approach to controlling ozone, fine particulates and regional haze. As part of that review, EPA will solicit comments from the public on these policy issues. If EPA revises its reactivity policy substantially, the current list of negligibly reactive compounds in the definition of VOC could be considerably altered to conform to the new policy.

IV. What Is EPA's Basis for Proposing That TBAc Is Negligibly Reactive and Excluding It From the Definition of VOC?

If EPA were to apply the per-mole test to TBAc, it would deny Lyondell's petition. Lyondell has argued that the appropriate test is the per-gram test, and that even if EPA decides the per-mole test is more appropriate, it would be unfair to apply the per-mole test without warning to petitions for which a company has significantly relied on EPA's prior statements. Because the per-mole test is a change from previous EPA regulatory statements, EPA believes that equitable considerations warrant use of the per-gram test in certain circumstances as described below. Therefore, if certain conditions are met, EPA will apply the per-gram test for currently pending petitions to exempt organic compounds from the definition of VOCs.

In deciding whether EPA will use the per-gram test for any particular pending petition (see Table 1),[2] EPA will consider the extent to which the petitioner actually relied on EPA's past statements regarding the per-gram test. In addition, EPA will also consider the extent to which the application of the per-mole test (rather than the per-gram test) would further the purposes of the Clean Air Act. This balances fairness to the regulated industry with adequate protection of the environment. Based on these considerations, EPA is proposing to use the per-gram test for TBAc and to exclude it from the definition of VOC.[3]

For TBAc, Lyondell has demonstrated substantial actual reliance on EPA's past statements adopting the per-gram test. Lyondell's reliance goes beyond the mere filing of its petition (which would not, by itself, demonstrate sufficient reliance to use the per-gram test). When Lyondell prepared and submitted its petition, these were the only explicit, policy statements the Agency had made regarding the gram versus mole issue. The petitioner has said: ''In reliance on these statements, the Company invested substantial resources to identify and evaluate solvents that would meet the ethane standard on a gram basis. Company experts reviewed hundreds of potentially useful compounds to determine, based on their physical and chemical properties, which were most likely to have very low photochemical reactivity. After identifying TBAc as a promising candidate, the Company funded reactivity and other environmental studies on TBAc.'' (See written communication from Daniel Pourreau (Lyondell) to William Johnson (EPA) dated February 11, 1999). The petitioner has also claimed that: ''In addition to these efforts, the Company has invested significant resources in research and development to evaluate whether TBAc can be used to replace more reactive solvents in a wide range of products. These efforts have included internal studies, studies with outside laboratories, marketing and development work with a number of product manufacturers.'' (See written communication from Daniel Pourreau (Lyondell) to William Johnson (EPA) dated February 11, 1999). Petitioner's reliance on EPA's prior statements is significant enough that it weighs in favor of using the per-gram test.

Another consideration for pending petitions is the extent to which application of the per-mole test would further the purpose of the Act. The specific purpose at issue here is the reduction of ozone. If the reactivity of TBAc on a per-mole basis were markedly higher than that of ethane, that might warrant the application of the per-mole test despite Lyondell's reliance on EPA's earlier statements. Due to scientific and practical concerns, we generally do not distinguish among VOCs on the basis of reactivity in rulemakings under the Act. In rulemakings relating to the definition of VOC, our current practice is to take reactivity into account only to decide whether a compound's reactivity is low enough to justify exempting the compound as negligibly reactive. However, in the very narrow circumstance that is presented here, where we are weighing the petitioner's reliance against the statutory interest in applying the per-mole test, we think it is appropriate to consider the extent to which TBAc's reactivity exceeds that of ethane. Because TBAc's reactivity is on the order of two times that of ethane on a per-mole basis, the extent to which the purpose of the Act would be furthered by denying the petition for an exemption does not outweigh Lyondell's reliance on EPA's previous statements.[4]

Therefore, EPA proposes to grant Lyondell's petition and exclude TBAc from the definition of VOC because TBAc is less reactive than ethane on a per-gram basis.

[2] Table 1 gives a list of the pending petitions requesting exclusion from the definition of VOC. Preliminary review indicates that several of the compounds in Table 1 may be less reactive than ethane on a per-gram basis, but not on a per-mole basis. The EPA will determine whether to use the per-gram or per-mole test for each of these compounds based on a consideration of the petitioner's reliance on past EPA statements regarding the per-gram test and on the extent to which applying the per-mole test would further the purpose of the Clean Air Act. Any petitioner listed in Table 1 that can demonstrate substantial actual reliance on EPA's past statements should submit that information to EPA.

[3] Based on the considerations listed above, EPA currently intends to keep acetone in the list of chemicals that are negligibly reactive VOCs.

[4] Given the other information that has been submitted on TBAc, we do not believe that excluding TBAc from the definition of VOC would undermine other purposes of the Act. In certain circumstances, it might be appropriate to consider the volume of the compound's emissions. We do not believe we have sufficient information to consider that factor for TBAc, but we request comment on this issue.

V. Are There Environmental Benefits to Excluding TBAc From the Definition of VOC?

In addition to the reactivity data comparing TBAc and ethane, the petitioner also submitted other information in support of its petition. The petitioner argued that the VOC exemption of TBAc would benefit the environment because TBAc would be used as a replacement solvent for toluene and xylene. The petitioner claims that hazardous air pollutant (HAP) emissions would be reduced because toluene and xylene are both solvents that are listed in section 112 of the Act as HAPs, and TBAc is not listed. The petitioner also submitted health effects data on TBAc to support its claim that TBAc is less hazardous than xylene and toluene. Additionally, the petitioner claimed that there is potential for TBAc to replace to some degree other HAPs, including methanol, e-glycol ethers, methyl ethyl ketone, n-hexane, methyl isobutyl ketone, and trichloroethylene.

The possible use of TBAc in lieu of HAPs may, indeed, be a collateral benefit of the exemption of TBAc from the definition of VOC. However, this is not a basis for EPA's proposal. At this time, EPA does not believe that it is in a position to predict the market for TBAc or to evaluate Lyondell's claims in that regard. It should be noted that another company has notified EPA that it disagrees with Lyondell's market claims and related substitution benefits. [See letter (with attachments) from Ernest Rosenberg (Occidental International Corp.) to Rob Brenner (EPA) dated May 14, 1999].

Table 1

List of Compounds for Which EPA Has Received Petitions Prior to Today's Notice Requesting VOC Exempt Status and for Which EPA Has Published No Final Action

1. Chlorobromomethane—ICF Kaiser (SAI Division).
2. 1-Bromopropane (also known as n-propyl bromide)—Enviro Tech International. Petition also submitted by Albemarle Corp.
3. Methyl Bromide—Chemical Manufacturers Association.
4. n-Alkanes (C_{12}–C_{18})—The Aluminum Association.
5. Technical white oils—The Printing Industries of America and Pennzoil Products Company.
6. t-butyl acetate—Lyondell Chemical Company.
7. Benzotrifluoride—Occidental Chemical Company.
8. Carbonyl Sulfide (COS)—E.I. du Pont de Nemours and Company. Petition also submitted by Texas Mid-Continent Oil & Gas Association.
9. trans-1,2-dichloroethylene—3M Corporation.
10. Dimethyl succinate and dimethyl glutarate—Dibasic Esters Group, affiliated with the Synthetic Organic Chemical Manufacturers Association, Inc.
11. Carbon Disulfide—Texas Mid-Continent Oil & Gas Association.
12. Acetonitrile—BP Chemicals and GNI Chemicals Corporation.
13. Toluene Diisocyanate (TDI)—Chemical Manufacturers Association [The Diisocynate Panel of CMA reported the following members: ARCO Chemical Company, BASF Corporation, Bayer Corporation, The Dow Chemical Company, and ICI Americas, Inc.].
14. HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane)—Great Lakes Chemical Corporation.
15. Methylene Diphenyl Diisocyanate (MDI)—Chemical Manufacturers Association [The Diisocynate Panel of CMA reported the following members: BASF Corporation, Bayer Corporation, The Dow Chemical Company, ICI Americas, Inc., and Lyondell Chemical Company].
16. 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-$C_3F_7OCH_3$)—3M Corporation.
17. Propylene Carbonate—Huntsman Corporation.

VI. What Is Today's Proposal?

Today's proposed action is based on EPA's review of the material in Docket No. A–99–02. The EPA hereby proposes to amend its definition of VOC at 40 CFR 51.100(s) to exclude TBAc as a VOC. If this action is finalized, you would not count TBAc as a VOC for purposes of EPA regulations related to attaining the ozone NAAQS, including regulations limiting your use of VOCs or your emissions of VOCs; but you would record and report the use and emissions of TBAc as an ''Exempt VOC.'' Your recordkeeping and reporting of TBAc would conform to those requirements that would apply to you for non-exempt VOCs used in the same manner or in the same application as TBAc. You should check with your State to determine whether you should count TBAc as a VOC for State regulations. However, if this action is made final, your State should not include TBAc in its VOC emissions inventories for determining reasonable further progress under the Act (e.g., section 182(b)(1)) or take credit for controlling this compound in its ozone control strategy. However, we urge your State to include TBAc and other VOC exempt compounds in inventories used for ozone modeling to assure that such emissions are not having a significant effect on ambient ozone levels.

VII. Administrative Requirements

A. Docket

The docket is an organized and complete file for all information submitted or otherwise considered by EPA in the development of this proposed rulemaking. The principal purposes of the docket are: (1) To allow interested parties to identify and locate documents so that they can effectively participate in the rulemaking process; and, (2) to serve as the record in case of judicial review (except for interagency review materials) (section 307(d)(7)(A)).

B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and the requirements of this Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review.

C. Unfunded Mandates Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), PL. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit

analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any 1 year. Before promulgation of an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost effective, or least burdensome alternative that achieves the objective of the rule, unless EPA publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments including tribal governments, it must have developed under section 203 of the UMRA a small government plan which informs, educates and advises small governments on compliance with the regulatory requirements. Finally, section 204 provides that for any proposed rule that imposes a mandate on a State, local or tribal government of $100 million or more in any 1 year, the Agency must provide an opportunity for such governmental entities to provide input in development of the proposed rule.

Since today's rulemaking is deregulatory in nature and does not impose any mandate on governmental entities or the private sector, EPA has determined that sections 202, 203, 204 and 205 of the UMRA do not apply to this action.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This proposed rule would not have a significant impact on a substantial number of small entities because it imposes no adverse economic impacts on any small entities. Therefore, I certify that this action will not have a significant economic impact on a substantial number of small entities.

E. Paperwork Reduction Act

This proposed rule does not contain any information collection requirements subject to OMB review under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

F. Executive Order 12875: Enhancing the Intergovernmental Partnership

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide the OMB a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments ''to provide meaningful and timely input in development of regulatory proposals containing significant unfunded mandates.''

Today's rule does not create a mandate on State, local or tribal governments. The rule is deregulatory in nature and does not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

G. Executive Order 13045: Children's Health Protection

Executive Order 13045: ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While this proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, EPA has reason to believe that ozone has a disproportionate effect on active children who play outdoors. (See 62 FR 38856, 38859 (July 18, 1997).) The EPA has not identified any specific studies on whether or to what extent t-butyl acetate directly affects children's health. The EPA has placed the available data regarding the health effects of t-butyl acetate in docket no. A–99–02. The EPA invites the public to submit or identify peer-reviewed studies and data, of which EPA may not be aware, that assess results of early life exposure to t-butyl acetate.

H. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's proposed rule does not impose substantial direct compliance costs on the communities of Indian tribal governments. This proposed rule is deregulatory in nature and does not impose any direct compliance costs. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law No. 104–113, section 12(d), (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus

standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

List of Subjects in 40 CFR Part 51

Environmental protection, Administrative practice and procedure, Air pollution control, Carbon monoxide, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: September 24, 1999.

Carol M. Browner,

Administrator.

For reasons set forth in the preamble, part 51 of chapter I of title 40 of the Code of Federal Regulations is proposed to be amended as follows:

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

1. The authority citation for part 51 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7412, 7413, 7414, 7470-7479, 7501–7508, 7601, and 7602.

2. Section 51.100 is proposed to be amended at the end of paragraph (s)(1) introductory text by removing the words ''and perfluorocarbon compounds which fall into these classes:'' and adding the words ''; t-butyl acetate and perfluorocarbon compounds which fall into these classes:'', as follows:

§ 51.100 Definitions.

* * * * *

(s) * * *

(1) * * * ; t-butyl acetate and perfluorocarbon compounds which fall into these classes:

* * * * *

[FR Doc. 99–25440 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA 198–0175b; FRL–6445–7]

Approval and Promulgation of State Implementation Plans; California State Implementation Plan Revision, San Luis Obispo County Air Pollution Control District South Coast Air Quality Management District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve revisions to the California State Implementation Plan (SIP) which concern the recission of rules from the SIP.

The intended effect of this action is to bring the San Luis Obispo County Air Pollution Control District and the South Coast Air Quality Management District rules and regulations up to date in accordance with the requirements of the Clean Air Act, as amended in 1990 (CAA or the Act). In the Final Rules section of this **Federal Register**, the EPA is approving the state's SIP submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial revision and anticipates no adverse comments. A detailed rationale for this approval is set forth in the direct final rule. If no adverse comments are received, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. The EPA will not institute a second comment period. Any parties interested in commenting should do so at this time.

DATES: Written comments must be received by November 1, 1999.

ADDRESSES: Comments should be addressed to: Andrew Steckel, Chief, Rulemaking Office (AIR–4), Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105–3901.

Copies of the rule revisions and EPA's evaluation report of each rule recision are available for public inspection at EPA's Region IX office during normal business hours. Copies of the submitted rule revisions are also available for inspection at the following locations:

California Air Resources Board, Stationary Source Division, Rule Evaluation Section, 2020 ''L'' Street, Sacramento, CA 95812.

San Luis Obispo County Air Pollution Control District, 3433 Roberto Court, San Luis Obispo, California 93401

South Coast Air Quality Management District, 21865 East Copley Drive, Diamond Bar, California 91765–4182

FOR FURTHER INFORMATION CONTACT: Julie A. Rose, Rulemaking Office, AIR–4, Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105–3901, Telephone: (415) 744–1184.

SUPPLEMENTARY INFORMATION: This document concerns San Luis Obispo County Air Pollution Control District (SLOCAPCD) Rule 102, Compliance by Existing Installation and Rule 408, Gasoline Specifications, and South Coast Air Quality Management District (SCAQMD) Rule 432, Gasoline Specifications. The SLOCAPCD rule recissions were submitted by the California Air Resources Board (CARB) to EPA on August 1, 1997 and the SCAQMD rule recission was submitted by CARB on September 29, 1998. For further information, please see the information provided in the direct final action that is located in the rules section of this **Federal Register**.

Dated: September 14, 1999.

Keith Takata,

Acting Regional Administrator, Region IX.

[FR Doc. 99–25305 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[DC040–2016b; FRL–6449–1]

Approval and Promulgation of Air Quality Implementation Plans; District of Columbia; GSA Central and West Heating Plants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve the State Implementation Plan (SIP) revision submitted by the District of Columbia for the purpose of limiting sulfur dioxide (SO_2) emissions at the General Services Administration's Central and West Heating Plants. In the Final Rules section of this **Federal Register**, EPA is approving the District's SIP submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates no adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this action, no further activity is contemplated. If EPA receives adverse comments, the direct

final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time.

DATES: Comments must be received in writing by November 1, 1999.

ADDRESSES: Written comments should be addressed to Walter Wilkie, Acting Chief, Technical Assessment Branch, Mailcode 3AP22, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; District of Columbia Department of Public Health, Air Quality Division, 51 N Street, N.E., Washington, DC 20002.

FOR FURTHER INFORMATION CONTACT: Denis Lohman (215) 814–2192, at the EPA Region III address above, or by e-mail at lohman.denny@epa.gov.

SUPPLEMENTARY INFORMATION: For further information, please see the information provided in the direct final action, with the same title, that is located in the ''Rules and Regulations'' section of this **Federal Register** publication.

Dated: September 21, 1999.

W. Michael McCabe,

Regional Administrator, Region III.

[FR Doc. 99–25423 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[TN 222–1–9928b; FRL–6448–2]

Approval and Promulgation of State Plans for Designated Facilities and Pollutants: Tennessee

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve the section 111(d) Plan submitted by the Tennessee Department of Environment and Conservation (DEC) for the State of Tennessee on January 8, 1999, for implementing and enforcing the Emissions Guidelines applicable to existing Municipal Solid Waste Landfills. The Plan was submitted by the Tennessee DEC to satisfy certain Federal Clean Air Act requirements. In the Final Rules section of this **Federal Register**, EPA is approving the Tennessee State Plan submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates that it will not receive any significant, material, and adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no significant, material, and adverse comments are received in response to this rule, no further activity is contemplated in relation to this proposed rule. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period on this action.

DATES: Comments must be received in writing by November 1, 1999.

ADDRESSES: Written comments should be addressed to Steven M. Scofield at the EPA Regional Office listed below. Copies of the documents relevant to this proposed rule are available for public inspection during normal business hours at the following locations. The interested persons wanting to examine these documents should make an appointment with the appropriate office at least 24 hours before the day of the visit.

Environmental Protection Agency, Region 4, Air Planning Branch, 61 Forsyth Street, SW, Atlanta, Georgia 30303. Steven M. Scofield, 404/562–9034.

Tennessee Department of Environment and Conservation, Division of Air Pollution Control, 9th Floor L&C Annex, 401 Church Street, Nashville, Tennessee 37243–1531, 615/532–0554.

FOR FURTHER INFORMATION CONTACT: Scott Davis at 404/562–9127 or Steven M. Scofield at 404/562–9034.

SUPPLEMENTARY INFORMATION:

See the information provided in the Direct Final action which is located in the Rules section of this **Federal Register**.

Dated: July 28, 1999.

A. Stanley Meiburg,

Acting Regional Administrator, Region 4.

[FR Doc. 99–25432 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 54

[CC Docket No. 96–45; FCC 99–204]

Federal-State Joint Board on Universal Service: Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas

AGENCY: Federal Communications Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: This document concerning the responsibilities and potential actions of the Federal-State Joint Board on Universal Service addresses the unique issues that may limit telecommunications deployment and subscribership in the unserved or underserved regions of our Nation, including on tribal lands and in insular areas. The Commission seeks comment on current levels of deployment and subscribership in unserved, tribal and insular areas, including penetration rates, availability of telecommunications services, and possible impediments to increased deployment and penetration. With respect to tribal areas, the Commission seeks comment on issues that may be affecting the availability of universal service in tribal areas, including who has jurisdiction, how eligible telecommunications carriers may be designated, and possible modifications to federal high-cost and low-income support mechanisms that may be necessary to promote deployment and subscribership in these areas.

DATES: Comments are due November 29, 1999 and reply comments are due December 29, 1999.

ADDRESSES: All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth Street, SW, TW–A325, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Jack Zinman, Attorney, Common Carrier Bureau, Accounting Policy Division, (202) 418–7400.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Further Notice of Proposed Rulemaking released on September 3, 1999. The full text of this document is available for public inspection during regular business hours in the FCC Reference Center, Room CY–A257, 445 Twelfth Street, SW, Washington, DC 20554.

I. Introduction

1. An important goal of the Telecommunications Act of 1996 is to preserve and advance universal service in a competitive telecommunications environment. The 1996 Act mandates that ''consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high[-] cost areas, should have access to telecommunications and information services * * *.'' Congress also directed that the support mechanisms employed by the Commission for this task should be ''specific, predictable and sufficient.'' Through decisions adopted over the past two years, the Commission has been striving to ensure that federal universal service support mechanisms for high-cost areas, low-income consumers, schools and libraries, and rural health care providers, enable consumers to obtain telecommunications services that would otherwise be prohibitively expensive.

2. The absence of telecommunications service in a home puts its occupants at a tremendous disadvantage in today's society. Parents cannot be reached when urgent situations arise at school. Job seekers cannot offer prospective employers a quick and convenient means of communication. People in immediate need of emergency services cannot contact police departments, fire departments, or medical providers. In short, telephone service provides a vital link between individuals and society as a whole. Given the importance of telephone service in modern society, it is imperative that the Commission take swift and decisive action to promote the deployment of facilities to unserved and underserved areas and to provide the support necessary to increase subscribership in these areas.

3. The Commission took additional steps in the Thirteenth Order on Reconsideration, 64 FR 30917 (June 9, 1999), toward realizing Congress's goal of bringing telecommunications services to all regions of the Nation. Specifically, in consultation with the Federal-State Joint Board on Universal Service (Joint Board), we adopted the framework for a new, forward-looking high-cost support mechanism for non-rural carriers. This new high-cost support mechanism is intended to ensure that high-cost areas receive support that is specific, predictable, and sufficient, even as local competition develops. Moreover, we believe that the forward-looking methodology, as opposed to a methodology based on book costs, will encourage efficient entry and investment in high-cost areas because forward-looking costs drive market decisions.

4. In addition to adopting the methodology for the new high-cost support mechanism for non-rural carriers, the Thirteenth Order on Reconsideration also sought comment on certain issues regarding the implementation of the new mechanism. The Commission intends to resolve these implementation issues in the fall of 1999, so that the new high-cost support mechanism will begin providing support to non-rural carriers beginning on January 1, 2000. In addition, the Commission reaffirmed its intention that rural carriers will receive support based on the forward-looking costs of providing supported services, but not before January 1, 2001, and only after further review by the Commission, the Joint Board, and a Rural Task Force appointed by the Joint Board. In the meantime, rural carriers will continue to receive high-cost support based on the existing mechanism until the Commission adopts an appropriate forward-looking mechanism for determining rural support.

5. The Commission has also recognized that, despite the steps it had taken to achieve the universal service goals of the 1996 Act, some areas of the nation remain unserved or inadequately served. In the *First Report and Order*, 62 FR 32862 (June, 17, 1999), the Commission stated that it would revisit certain issues pertaining to the availability of service in unserved areas and universal service support in insular areas. In its *Second Recommended Decision*, 63 FR 67837 (December 9, 1998), the Joint Board recommended that the special needs of unserved areas be investigated and subjected to a more comprehensive evaluation in a separate proceeding. Telephone penetration rates among low-income consumers, and in insular, high-cost, and tribal lands lag behind the penetration rates in the rest of the country. Indeed, while approximately 94.2 percent of all households in the United States have telephone service today, subscribership levels for very low income households (78.3 percent), insular areas, certain high-cost areas, and tribal lands (46.6 percent), are significantly lower than the national average. The Commission has stated that these low penetration rates are largely the result of ''income disparity, compounded by the unique challenges these areas face by virtue of their location.''

6. The Commission has been particularly concerned that Indians on reservations, in comparison to other Americans, have less access even to basic telecommunications services. In 1998, the Commission began formally examining its relationship with Indian tribes and the unique issues involved in providing access to telephone service for Indians on reservations. As a first step, Commissioners and staff met with many tribal leaders and other Indian representatives to obtain their input. In meetings on April 30, 1998, and July 7, 1998, Commissioners and staff heard from a variety of tribal leaders, tribal telephone company representatives, academics, government personnel, and others with experience and expertise in the deployment of telecommunications services on reservations. Experts discussed problems ranging from geographic isolation to lack of information to economic barriers. These meetings provided an unprecedented opportunity for the Commission to hear about the variety of interrelated obstacles that have resulted in the lowest penetration rates in the country. Following these meetings, several of the experts returned in the fall of 1998, to provide a tutorial on Indian law for Commission staff.

7. Based on this informal dialogue with experts, the Commission determined that it would conduct public hearings to explore further the reasons for the lack of telephone service and to determine what specific actions the Commission could take that would improve access to telephone service on Indian reservations. The hearings, entitled ''Overcoming Obstacles to Telephone Service for Indians on Reservations,'' BO Docket No. 99–11, provided an opportunity to obtain formal testimony and comments on the range of problems the Commission had begun to identify. The first field hearing was held on January 29, 1999 at the Indian Pueblo Cultural Center in Albuquerque, New Mexico. The second field hearing was held on March 23, 1999 at the Gila River Indian Community in Chandler, Arizona. Each hearing consisted of three panels representing tribal authorities and tribal telephone companies, industry, and government and consumer groups. The Commission heard extensive testimony on issues including the costs of delivering services to remote areas having very low population densities; the impact of the size and extent of local calling areas on affordability of service; the quality of telephone service on reservations; the complexities of governmental jurisdiction and sovereignty issues; and the effects on telephone service of low incomes and high unemployment on reservations. Transcripts of the hearings and comments filed by interested parties are

available on the Commission's website. Comments filed in BO Docket Number 99–11 will be incorporated, where relevant, into the record of this proceeding.

8. Further, in connection with each of the field hearings, Commissioners and staff made site visits to Indian reservations and tribally-owned telephone companies. These included visits to the Rosebud Reservation, the Santa Domingo, Jemez, and Picuris Pueblos, and to Saddleback Communications, the Gila River Telephone Company, the Salt River Pima-Maricopa Reservation, the Navajo Nation, the Hopi Reservation, and the Havasupai Reservation. These site visits provided an opportunity for Commissioners and staff to observe firsthand the state of telephone service in these reservations and pueblos and to hear directly from tribal members about their experiences. For example, Commissioners and staff visited the home of an elderly couple who could not afford the cost of installing a telephone in their home. The husband of the couple explained that he was suffering from a chronic illness, but was unable to reach the hospital or his doctor by telephone to schedule medical appointments and discuss his treatment. During another site visit, a tribal member stated that a relative had died during a medical emergency when his family was unable to call an ambulance in time when critical medical attention was needed. In addition, the trips to Saddleback Communications and the Gila River Telephone Company enabled Commission staff to view the successful operations of some tribally-owned telephone companies.

9. In this Further Notice of Proposed Rulemaking (Further Notice), the Commission addresses the unique issues that may limit telecommunications deployment and subscribership in the unserved or underserved regions of our Nation, including on tribal lands and in insular areas. In particular, the Commission seeks comment on current levels of deployment and subscribership in unserved, tribal and insular areas, including penetration rates, availability of telecommunications services, and possible impediments to increased deployment and penetration. With respect to tribal areas, the Commission seeks comment on issues that may be affecting the availability of universal service in tribal areas, including the assignment of jurisdiction, designation of eligible telecommunications carriers, and possible modifications to federal high-cost and low-income support mechanisms that may be necessary to promote deployment and subscribership in these areas. In particular, the Commission seeks comment on the possibility of allowing carriers to establish separate tribal study areas, raising the cap on the high-cost fund to allow for growth based on separate tribal study areas, and revisions to its Lifeline rules. In a companion Notice of Proposed Rulemaking we are adopting today, we seek comment on the potential of wireless technology to provide basic telephone service to tribal lands.

10. With respect to unserved areas, the Commission seeks further comment regarding the implementation of section 214(e)(3) of the Act, which permits the Commission or state commissions to order a carrier to provide service to an unserved community, including the possibility of adopting a competitive bidding mechanism to identify the carrier or carriers best able to serve an unserved area. The Commission also seeks comment on possible modifications to the federal low-income and rural health care support mechanisms in underserved areas, including tribal and insular areas, including the possibility of expanding LinkUp to include facilities based charges, and providing support for intrastate toll-calling and rural health care infrastructure. The Commission seeks comment on rule changes designed to enhance the availability of support for rural health care providers in insular areas, including determining the urban rate and the nearest large city. Through these efforts, we seek to ensure that unserved and underserved areas have access to telecommunications services. With respect to tribal lands, we also seek to ensure that our efforts are consistent with principles of tribal sovereignty, the federal trust relationship, and support for tribal self-determination.

II. Current Levels of Deployment and Subscribership

A. Penetration Rates

11. The Industry Analysis Division of the Common Carrier Bureau publishes a Subscribership Report three times per year. The data in this report is based on the Current Population Survey (CPS), conducted monthly by the Census Bureau to keep track of the unemployment rate and other socio-economic conditions. The survey, however, is based on information from only 50,000 households nationwide and does not identify geographic areas with fewer than 100,000 people. Because many unserved, tribal and insular areas fall below this population threshold, the CPS cannot be used to estimate penetration rates for these areas. In addition, this data does not include areas of the United States that are not states, including Puerto Rico and the Virgin Islands. The long form of the decennial census, which is delivered to millions of households, contains a question about telephone subscribership. As a result, the census data can be used to estimate telephone penetration for smaller geographic areas. This data, however, is collected only every ten years and it takes the Census Bureau one year to compile results.

12. We seek detailed information, to the extent that it is available, on penetration rates in high-cost areas, insular areas, tribal lands, and any other areas considered to be underserved. By the term penetration rate, we mean the percentage of households within a specified area that have telephone service in the housing unit. We seek this information on a national level, on a state-by-state or territory-by-territory level, and on an area-by-area level. To the extent possible, we encourage commenters to provide the following additional information in each of the areas, and on each of the levels, where they measure penetration rates: (1) total population; (2) population density; (3) average annual income; and (4) average unemployment rate. We also ask that commenters briefly explain the methods by which they gather their data (e.g., census data, statistical sampling, etc.). We also seek comment on the difficulty of getting such information, such as the difficulty of mapping a telephone service territory onto the census territories (such as census block groups) because the boundaries may not always coincide, and questions concerning the definitions of the terms ''household'' and ''telephone service.''

B. Availability and Cost of Telecommunications Services

13. In each of the areas, and on each of the levels described, we seek to determine the nature of the telecommunications services available and the costs of such services. In particular, we seek comment on the extent to which these areas receive the following service, if any: basic telephone service, services included within the definition of universal service, and/or advanced telecommunications services. We also seek comment on whether any carrier is providing the following services and the approximate number of households served by each service: wireline, wireless, Basic Exchange Telecommunications Radio Systems (BETRS), or other telecommunications

services; cable television; direct broadcast satellite service; other satellite services that provide voice and data, such as those provided through VSAT networks; Internet service; and electric service. In addition, we seek comment on the monthly rate for each of these services. With specific regard to basic telephone service, we seek comment on the average monthly bill for local service, local toll service, and long-distance service.

14. To the extent that underserved, high-cost, insular, and/or tribal lands have basic telephone service, we seek comment on whether the local calling area includes the nearest metropolitan area or other area where the nearest medical, government, cultural or entertainment facilities exist, *i.e.*, the ''community of interest.'' For unserved areas, and in particular tribal lands, we also seek comment to determine whether these areas fall within the designated service area of existing carriers, regardless of whether such carriers are providing service to the area.

15. We seek comment on the extent to which existing facilities currently used to provide other services (*e.g.*, radio broadcast towers, cable television plant, electrical poles and satellite infrastructure) could be adapted to provide the services included within the definition of universal service. We also seek comment on whether specific services included within the definition of universal service could not be provided via these facilities. We seek comment on the extent to which facilities used to provide telecommunications service to customers outside the unserved or underserved areas exist adjacent to or nearby the unserved or underserved areas. In particular, we seek comment on whether railroad tracks, or towers used for the placement of antennas, are found in these adjacent areas. We seek comment on what role the Commission might play in encouraging the use of these other facilities to provide service in underserved areas. For example, we seek comment on whether the Commission, or some other entity, should develop a database to maintain information about facilities that could be used to provide service in currently unserved or underserved areas, including tribal lands and insular areas.

16. We also seek comment on the possible shared use of existing federal telecommunications infrastructure, facilities or other resources, including government rights-of-way, to provide service in unserved or underserved areas, including tribal and insular areas. We seek comment on whether federal telecommunications resources could be made available in the short term to serve as connecting backbone infrastructure for health and safety telecommunications in unserved areas. We encourage federal entities with government owned telecommunications resources, particularly the Bureau of Indian Affairs, to comment on this issue.

17. Individuals from Indian communities, state agencies and the telecommunications industry have commented that satellite and terrestrial wireless systems may represent practical and cost-effective alternatives for providing service in unserved areas, including tribal lands. In the pending 2 GHz proceeding, which proposes policies and rules for licensing and operation of the 2 GHz mobile satellite service (MSS) systems in the United States, the Commission sought comment on incentives and policies to encourage provision of satellite services to unserved, rural, insular or economically isolated areas. The commenters generally support the Commission's tentative conclusion that satellites represent an excellent technology for providing basic and advanced telecommunications services to unserved areas, including tribal lands. Several commenters stated that the Commission should take positive steps to encourage access to Universal Service Funds by satellite operators or service providers. Several commenters also requested that the Commission should identify express and implicit regulatory provisions that may prevent satellite providers from seeking universal support subsidies and reform those provisions, or forbear from imposing these provisions, so that MSS providers can fully participate in the Universal Service Support initiative.

18. Satellite networks, used either on a stand alone basis or in combination with a terrestrial wireless network, may offer a cost advantage over wireline or other alternatives in remote areas where a limited population may not provide the economies of scale to support the deployment of wireline or other networks for each community. Because satellites have large coverage areas, and in many cases, can reach an entire nation, satellite providers may achieve greater economies of scale in serving isolated areas since the costs of deployment could be spread across a number of communities. The basic build-out required to obtain satellite service is for earth stations to transmit and receive satellite signals. We seek comment on why satellite or terrestrial wireless systems have not been used more extensively to serve these areas. Specifically, we seek comments regarding the particular characteristics of satellite or terrestrial wireless systems that render these technologies suited for serving unserved areas, the costs associated with deployment, the availability of federal universal service support, and any other impediments to deployment. To the extent that costs deter satellite and terrestrial wireless deployment, we seek comment on what actions the Commission should take to support the establishment and maintenance of satellite and terrestrial wireless services. We ask parties to comment on whether specific aspects of our universal service rules may deter both current and future satellite services providers from providing service to rural, insular, and other unserved communities, and what specific steps the Commission can undertake to encourage the use of universal service support by satellite service providers. We also seek comment on any other actions the Commission should take to encourage the deployment of the most cost-effective, practical solution in these geographically extreme areas.

C. Impediments to Increased Penetration

19. In addition to identifying impediments to increased penetration rates, we also ask commenters to discuss potential solutions for overcoming those impediments. We do not reach tentative conclusions on any of the proposals discussed. Instead, we seek comment on the need for the Commission to address the specific concerns set forth and the costs and benefits of the proposals discussed. We seek comment on how the Commission should measure its success in satisfying the mandate in the 1996 Act that consumers in all regions of the nation have access to telecommunications services. We seek comment on what measure we could use, other than penetration rates, to evaluate our success in achieving this goal.

1. Demographic Factors

20. We ask commenters to supply data for high-cost, insular, and tribal lands regarding: (1) total population; (2) population density; (3) average annual income; and (4) average unemployment rate. Bureau of Census data indicates that income and education levels greatly affect telephone penetration rates and that geographic location can also make a difference. In this section, we seek specific comments on how these demographic factors affect penetration rates. For example, do income levels have a greater effect on penetration rates than population density? Do the

combined effects of low income and low population density have an exponential effect on penetration rates? We seek comment on whether other demographic factors significantly affect penetration rates in high-cost, insular, and tribal lands, *e.g.*, education levels.

2. Geographic Factors

21. One of the more obvious explanations for low penetration rates in high-cost, insular, and tribal lands is that these areas are unusually expensive to serve. Distance appears to be one reason line extension charges are so high. During the New Mexico and Arizona Field Hearings, several tribes testified about the remoteness of their locations and the challenges that remote locations presented in terms of telecommunications services. For example, in 1997, the Navajo Communications Company issued 72 line extension charge estimates that averaged more than $40,000, including eight over $100,000 and one over $157,000. The cost for installation of a line on the Salt River Pima-Maricopa Indian Community (located in the heart of metropolitan Phoenix) is $5,000. We seek comment on the general terrain, including the existence of mountains, plains, swamps, water, plateaus, canyons, etc., that create challenges in providing telecommunications services. We also seek comment on the extent to which the absence of necessary infrastructure, for example roads or electrical capacity, constitutes a barrier to deployment in rural, insular, high-cost, and tribal lands.

3. Financial Factors

22. We seek comment on whether difficulties in obtaining access to financing limits the ability of carriers to provide service in unserved or underserved rural, insular, high-cost, and tribal lands. We seek comment on any specific provisions in loan agreements that serve to deter deployment in these areas. We also seek comment on any measures the Commission could take that would diminish the risks faced by investors and would enhance the ability of carriers to attract financing necessary to provide service in unserved or underserved rural, insular, high-cost, and tribal lands. We also seek comment on the availability and utility of existing programs that may provide funding and assistance to carriers seeking to provide telecommunications service in unserved areas and underserved areas, including tribal and insular areas, including whether the availability of existing sources of funding and assistance is adequately publicized.

4. Cultural Factors

23. We seek comment on the extent to which cultural values or lifestyle preferences deter consumer interest in subscribing to telecommunications services in unserved or underserved areas. For example, we seek comment on whether concerns about cultural preservation, religion, identity, and values may affect the willingness of tribal authorities to allow or promote the availability of telecommunications services in their communities. Similarly, we seek comment on whether there are a significant number of individuals that simply do not want telecommunications services because of personal lifestyle choices. We also seek comment on the extent to which carriers justify the lack of deployment in unserved or underserved rural, insular, high-cost, and tribal lands based on concerns for cultural preservation and whether these concerns are legitimate. In addition, we seek comment on whether the Commission's efforts to promote deployment and subscribership in unserved and underserved areas should be constrained by the cultural choices expressed by tribal authorities or other local leadership.

5. Regulatory Factors

24. We seek comment on impediments imposed by various laws, regulations or practices that may deter carriers from providing service to unserved or underserved areas, including federal, state, tribal or insular authorities.

25. *Federal Regulatory Impediments.* We seek comment on the current process for obtaining access to rights-of-way on tribal lands and to what extent this process deters carriers from providing service on tribal lands. Under the Right-of-Way Act of 1948, there are three critical components for obtaining rights-of-way over tribal land: (1) the Secretary of the Interior through the Bureau of Indian Affairs must grant the easement for the right-of-way; (2) compensation of not less than fair market value, as determined by the Secretary, plus severance damages must be paid to the property owner; and (3) tribal consent must be obtained. The first of these requires a service provider to undergo environmental assessments and secure cultural and archaeological clearances from the Bureau of Indian Affairs. The second component requires the service provider to obtain the standard appraisal it would for any easement but under standards set by Bureau of Indian Affairs. Finally, the service provider must also meet any conditions imposed by the particular tribe because the tribe has the ultimate authority to accept or reject the right-of-way. Carriers have indicated that this process is a significant barrier to entry. Tribal authorities have expressed concern about the ability of carriers to use existing rights-of-way to establish new terrestrial networks without obtaining the consent of the tribal authority. In addition, carriers and tribal authorities appear to have concerns concerning appropriate compensation for use of rights-of-way in tribal lands. To the extent rights-of-way management issues pose a barrier to entry on tribal lands, we seek comment on what role, if any, the Commission could play in addressing these issues.

26. We also seek comment on whether any aspect of our universal service rules deters carriers from providing service to unserved and underserved areas. For example, does the definition of supported services deter terrestrial wireless or satellite service providers from providing services in these areas? In our ongoing proceeding to reform the high-cost universal service support mechanism for non-rural carriers, several parties representing rural carriers have filed comments asking that we adjust or eliminate the cap on the high-cost loop fund to coincide with the anticipated transition of non-rural carriers to a new forward-looking support mechanism on January 1, 2000. We observe that the cap on the existing high-cost fund properly allows for growth based on the rate of growth in the total number of working loops nationwide. We also observe that carriers do invest in facilities in an amount greater than that which is supported through federal universal service support mechanisms. We seek comment regarding the extent to which the interim cap on the high-cost fund is a factor contributing to the lack of deployment in unserved areas, including tribal and insular areas.

27. We comment on whether existing LATA boundaries prevent calls from unserved or underserved areas, including tribal lands, to the nearest metropolitan area or community of interest from being included in local service. We seek comment on any other federal rules or Commission regulations which may deter carriers from providing service to unserved or underserved areas. We also observe that issues specific to wireless providers will be addressed in a separate proceeding.

28. *State Regulations.* We also seek comment on regulations or actions at the state level that may impact deployment and subscribership in unserved and underserved areas. We seek comment on the extent to which

statewide rate-averaging requirements or limited local calling areas may make the costs of telecommunications service unaffordable to low-income consumers living in unserved or underserved areas. We also seek comment on existing state programs designed to ensure that rates in remote and tribal lands are affordable.

29. *Tribal/Insular Regulatory Impediments.* We seek comment on any regulations or requirements imposed by tribal or insular authorities that may deter entry in tribal lands or in insular areas. For example, we seek comment on whether local governments own or operate the local exchange carrier in their areas and what impact this may have on competitive entry from other cost-effective wireline, terrestrial wireless, or satellite service providers. We seek comment on whether government ownership or operation affects the provision of services supported by universal service mechanisms in these areas. We seek comment on any ownership or employment requirements imposed by tribal authorities that may impair the ability of carriers to provide service and/or compete with tribally-owned carriers. For example, we seek comment on the extent to which tribes require an ownership interest in a carrier as a prerequisite to allowing the carrier to provide service on tribal lands. We seek comment on the impact such requirements may have on the deployment of telecommunications facilities and services on tribal lands.

III. Tribal Lands

30. For our universal service support mechanisms to be effective on tribal lands, we seek to promote active involvement and collaboration between the Commission and tribal authorities. As a general matter, we seek comment on how we can increase Indian participation in the Commission's decision-making process. At a more specific level, we seek comment throughout this section on issues unique to tribal lands that may affect the goals and incentives of federal universal service support mechanisms and consider additional, targeted assistance the Commission may want to provide to promote deployment and subscribership on tribal lands. As described, the trust relationship between the federal government and Indians as well as principles of tribal sovereignty suggest that the federal government may have the authority to implement particularized measures to address the factors causing the unusually low subscribership on tribal lands. We emphasize that these proposals are not meant to imply that the states have not, or will not, do their share in promoting the availability of universal service on tribal lands. In fact, many states have made significant efforts in this area. We commend them for doing so and we encourage them to continue. In this proceeding, however, we consider measures the Commission may take to fulfill its obligation to address telecommunications needs on tribal lands.

A. Jurisdiction

1. Issues for Comment

31. We recognize that principles of Indian law, including the trust relationship between the federal government and Indian tribes, tribal sovereignty, and tribal self-determination, must apply with equal force in the area of telecommunications. With respect to telecommunications services provided by tribal carriers on or off the reservation or by non-tribal carriers within tribal lands (all of which are referred to jointly as ''tribal telecommunications'') the parameters of federal, state and tribal authority, however, are not always clear. The Supreme Court, itself, has acknowledged that ''generalizations on this subject have become treacherous.'' Nonetheless, some of the proposals presented in this Further Notice necessitate an effort to evaluate these jurisdictional relationships. In this Further Notice, we seek comment to determine how best to give effect to principles of Indian law in the context of rule changes intended to benefit unserved and underserved tribal lands.

32. *State Jurisdiction.* Three of the proposals detailed later in this Further Notice deal with provisions of sections 254 and 214 of the Act, and of our existing rules that are triggered when the state lacks jurisdiction over a carrier providing telephone exchange or access service in a particular area. First, the determination of whether a state has jurisdiction over a common carrier providing telephone exchange service and exchange access is key in determining whether the Commission is required to designate telecommunications carriers as eligible to receive federal universal service support in high-cost areas. Second, in unserved areas where the state lacks jurisdiction the Commission, pursuant to section 214(e)(3) shall determine which common carrier or carriers are best able to provide service. Third, we propose that revisions to our Lifeline rules to address the situation faced by carriers not subject to state jurisdiction.

33. The issue of the extent to which tribal authorities or state governments have authority to regulate activities occurring on tribal lands, whether by tribal members or not, has a long and complex legal history, involving considerations of whether state regulation is preempted by federal regulation, whether state regulation is consistent with tribal sovereignty and self-determination, and whether tribes have consented to state jurisdiction, either in treaties or pursuant to the Indian Civil Rights Act of 1968. In addition, Indian law jurisprudence finds state law generally inapplicable when states attempt to regulate the conduct of Indians directly within reservation boundaries.

34. We recognize that some state commissions have asserted jurisdiction over carriers seeking to provide service on tribal lands and regulate certain aspects of the provision of telecommunications service on tribal lands. We seek comment, in particular from state commissions as well as any other interested parties, concerning the extent of state and tribal regulation of telecommunications provided on tribal lands and by tribally-owned or operated carriers. In particular, we seek comment on the appropriate jurisdictional authority in the following situations: (1) tribally-owned or operated carriers providing service within the reservation (a) to tribal members, (b) to non-tribal members, and (c) to non-tribal members living on non-native fee lands (within the reservation); (2) non-tribally owned or operated carriers offering service both inside and outside of the reservation; and (3) tribally-owned or operated carriers offering service outside of the reservation. We refer parties commenting on these issues to the various ways in which tribal lands could be defined, as discussed, and seek comment on how these definitions inform the jurisdictional analysis requested in this section.

35. In addition, we seek comment on the jurisdictional treatment of the following geographic entities, as classified by the Bureau of the Census: (1) American Indian Reservations, which are areas with boundaries established by treaty, statute and /or executive or court order; (2) Trust Lands, which are real property held in trust by the federal government that is associated with a specific American Indian reservation or tribe and which may be located within or outside the reservation; (3) Tribal Jurisdiction Statistical Areas, which are delineated by those Federally-recognized tribes in Oklahoma that no longer have a reservation; (3) Tribal Designated

Statistical Areas, which encompasses federally and state-recognized tribes without reservation or trust lands; (4) Alaska Native Regional Corporations, which are corporate entities established under the Alaska Native Claims Settlement Act of 1972 (ANCSA) to conduct the commercial and nonprofit business of Alaska Natives; and (5) Alaska Village Statistical Areas, which are tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the ANCSA.

36. We seek comment on whether there are any other kinds of tribal relationships that would inform our jurisdictional analysis. We seek comment on whether the state commission has jurisdiction over telecommunications in the situations described, the legal authority for such jurisdiction (*e.g.* the state constitution, state statute, Indian treaty, etc.); and the extent to which the particular state commission exercises that jurisdiction. We also seek comment on the existence of any concurrent jurisdiction.

37. In addition, we observe that wireline telephone calls between Indian tribal lands and the state in which tribal land is located are currently treated as intrastate calls, subject to state jurisdiction. We seek comment on whether this treatment is consistent with principles of tribal sovereignty and the Indian law jurisprudence regarding the limits of state authority, referenced. We also seek comment on whether the treatment of these calls as intrastate is consistent with the division of jurisdiction between the Commission and the states under section 2 of the Act. We seek comment as well on the need, impact, and Commission's authority to reclassify these calls as interstate for the purpose of giving effect to principles of tribal sovereignty.

38. We observe further that state jurisdiction may be preempted by the operation of federal law ''if it interferes with or is incompatible with federal and tribal interests reflected in federal law, unless the state interests at stake are sufficient to justify the assertion of state authority.'' An express Congressional statement of preemption is not required. Instead, a preemption analysis ''requires a particularized examination of the relevant state, federal and tribal interests.'' We seek comment on state interests in regulating telecommunications on tribal lands, including the ability to ensure reasonable rates, quality service, and the continued viability of local exchange carriers (LECs). We also seek comment from each tribal government, and any other interested parties, on the extent to which the state's exercise of jurisdiction over telecommunications on tribal lands and over tribal carriers that serve areas both inside and outside Indian sovereign territory is warranted.

39. *Tribal Regulation.* We seek comment from each tribal government, and any other interested parties, on the extent of tribal authority over regulation of telecommunications on tribal lands. As a threshold matter, we note that the Commission has previously spoken to some aspects of this issue in the *A.B. Fillins Order,* in which the Commission considered the extent of tribal regulatory authority over the provision of cellular service within a tribal reservation. In that order, the Commission held that under well-settled case law, the Communications Act applies with equal force to tribal reservations as to other areas, and that the Commission has sole authority under Title III of the Act with respect to management and licensing of radio spectrum in tribal areas. The Commission also concluded, however, that the Communications Act does not preempt tribal authority over access by telecommunications carriers to tribal lands, because the provisions of the Act that preempt state and local impediments to entry do not apply to tribal authorities.

40. In light of this statutory framework, we seek comment on the current extent to which tribal authorities have engaged in telecommunications regulation and on any future plans of tribal authorities to regulate telecommunications in tribal areas. We seek comment on the extent to which tribal authorities consider regulation of tribal telecommunications important to the right to self-government and self-determination. We also seek comment on whether tribal authorities should be considered as comparable to state authorities for purposes of regulating telecommunications services, and the degree to which the federal-tribal relationship on communications matters is similar or dissimilar to the federal-state relationship. Finally, while we have determined in the *A.B. Fillins Order* that tribal authorities are not subject to preemption under provisions of the Act applicable to state and local governments, we seek comment on what authority, if any, the Commission has to preempt tribal regulations that may be inconsistent with our federal regulatory scheme.

41. *Tribal Self-determination and Universal Service Goals.* We seek comment to determine how principles of Indian law and federal support for tribal self-determination affect the Commission's statutory mandate to ensure that consumers in all regions of the nation have access to the services supported by federal universal service support mechanisms. Pursuant to the Act, the Commission is bound by its statutory mandate to promote the availability of the services supported by federal universal service support mechanisms in all regions of the Nation. We seek comment on whether this statutory obligation is affected or constrained by any contrary interests, for cultural or other reasons, of certain tribal authorities. We seek comment, in particular from tribal authorities, to ascertain whether tribal authorities share the goals established by the 1996 Act, which the Commission is bound to implement. We seek comment on the extent to which tribal authorities seek to promote the availability of telecommunications services and competition among telecommunications providers.

42. We also seek comment on whether the services supported by federal universal service support mechanisms are consistent with the interests of tribal authorities in promoting service in tribal lands. We recognize that some tribal authorities may prefer a different mix of services to be supported. For example, some tribes may prefer support for terrestrial wireless or satellite services, rather than wireline services. Other tribes may want to prioritize the ability for each member to receive basic telecommunications service, rather than the entire package of services included in the definition of universal service. We seek comment on whether the Commission has the authority to and whether it should develop a procedure by which the Commission, the Joint Board and the sovereign Indian tribes could identify a single alternative definition of the services supported by federal universal service support mechanisms in tribal lands. We seek comment on additional administrative burdens that would be associated with implementing this procedure.

B. Defining ''Tribal Lands''

43. The definition we adopt of ''tribal lands'' will be used to identify those areas in which, for reasons based on principles of Indian sovereignty, the Commission seeks comment to determine whether possible modifications to our federal universal service policies and rules may be warranted. In defining tribal lands, we seek to ensure that we limit the reach of these proposals to those areas in which principles of tribal sovereignty and tribal self-determination apply. We also seek to balance the reasonable exercise

of federal jurisdiction with appropriate deference to state sovereignty and jurisdiction.

44. We seek comment on defining tribal lands as all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. Alternatively, we seek comment on defining tribal lands to have the same meaning as the term ''Indian country,'' as that term is defined by the Bureau of Indian Affairs. ''Indian country'' means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

45. In addition, we seek comment on whether the geographic entities, as classified by the Bureau of the Census, should be included in the definition of tribal lands: (1) American Indian Reservations, which are areas with boundaries established by treaty, statute and/or executive or court order; (2) Trust Lands, which are real property held in trust by the federal government that is associated with a specific American Indian reservation or tribe and which may be located within or outside the reservation; (3) Tribal Jurisdiction Statistical Areas, which are delineated by those Federally-recognized tribes in Oklahoma that no longer have a reservation; (4) Tribal Designated Statistical Areas, which encompasses federally and state-recognized tribes without reservation or trust lands; (5) Alaska Native Regional Corporations, which are corporate entities established under the ANCSA to conduct the commercial and nonprofit business of Alaska Natives; and (6) Alaska Village Statistical Areas, which are tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the ANCSA.

46. We observe that, with the exception of the first category, American Indian Reservations, the listed classifications used by the Bureau of the Census would not be encompassed in a definition of tribal lands that is limited to ''all land within the limits of any Indian reservation under the jurisdiction of the United States Government.'' We recognize that tribes encompassed by these classifications may face obstacles in obtaining telecommunications services that are similar to those faced by tribes in living in American Indian Reservations. Commenters supporting the inclusion of any of these categories should explain the source of the Commission's authority to implement the additional measures proposed in this item with respect to these areas, including noting any jurisdictional arguments provided in response to questions raised.

C. High-Cost Support Mechanisms

1. Federal Share of High-Cost Support

47. As discussed, because the trust relationship creates a unique relationship between the federal government and Indian tribes, the federal government may have authority to undertake additional measures to promote deployment and subscribership on tribal lands and to provide universal service support necessary to offset the particular challenges facing these areas. With respect to high-cost support on tribal lands, we seek comment on the extent to which states currently support the costs of universal service in tribal lands and whether the Commission should provide an additional portion of the universal service support calculated by the federal support methodology in high-cost, tribal lands. For instance, with regard to the forward-looking high-cost support mechanism for non-rural carriers, we seek comment on whether, rather than providing support for costs that exceed both a national cost benchmark and the individual state's resources to support those costs, the mechanism should provide support for all costs in unserved tribal lands that exceed the national benchmark.

2. Separate Study Areas Option for Tribal Lands

48. In order to provide additional high-cost support to tribal lands, we seek comment on modifications to our study area rules. Our study area rules provide a mechanism through which the Commission has controlled the growth of the high-cost universal service support mechanism. Universal service support for high-cost areas is determined on the basis of average loop costs throughout a study area. Averaging costs on a study-area wide basis spreads the burden of serving high-cost areas among all of the telecommunications subscribers in that study area. As a result, however, carriers with relatively low average loop costs in a particular study area receive no support for serving additional customers in a high-cost portion of that study area if the loop costs in the high-cost portion do not raise the overall average loop costs for the study area above a specific national benchmark, currently 115% of the national average cost per loop. By freezing study area boundaries, the Commission sought to eliminate incentives for carriers to place high-cost exchanges in separate study areas in order to receive additional support for providing service to those study areas. As a result of these two policies, however, certain carriers may experience strong financial disincentives to serving unprofitable high-cost customers in their study areas and other carriers may lack incentives to purchase those unserved exchanges.

49. In order to promote the deployment of universal services on tribal lands, we seek comment on modifying our rules to permit carriers to treat tribal lands as a distinct study area. We seek comment on whether, by providing an exception to our study area rules, we can eliminate regulatory requirements that may deter carriers from serving high-cost, tribal lands. For example, one option may be that the tribal study area for a carrier will consist of all of the tribal lands served by the carrier within the borders of a single state. This means that carriers may have a tribal study area in each state in which it provides service on tribal lands. We seek comment on whether the tribal study area should include all of the tribal lands in a state (rather than, for example, a single nationwide tribal study area) because states use study areas for purposes of determining intrastate revenue requirements.

50. We emphasize that the proposal to allow tribal study areas is not related to the issue of the area over which costs are averaged to determine support using the new high-cost mechanisms, which is pending in the high-cost proceeding. We seek comment on how allowing a separate tribal study area could affect whether the carrier serving that area falls within the statutory definition of a rural carrier for providing service to that area. If a carrier designates the tribal lands within a state as a separate study area, the number of access lines or inhabitants in that newly created study area may qualify the carrier as a rural carrier with respect to that study area. We seek comment on whether this may result in some carriers, currently designated as non-rural, being considered rural for purposes of receiving universal service support in certain tribal study areas.

3. Interim Cap on the High-Cost Fund

51. In the *First Report and Order,* the Commission concluded that it would maintain the cap on the existing high-cost loop support mechanism until all carriers receive support based on the new high-cost funding mechanism. The cap on the high-cost loop fund was initially intended as an interim measure. Commission rules require that if total support, based on each carrier's actual costs, is above the total allowed capped amount, each recipient of high-cost loop support will receive a reduced amount of support to keep the total fund at the capped amount. The cap has served its purpose in controlling excessive growth in the size of the fund during the past six years as the Commission has reformed its universal service support mechanisms. We have stated that the rural carriers will receive support based on the new high-cost funding mechanism no earlier than January 1, 2001. The Commission has not established a timetable for moving rural carriers to a forward-looking high-cost support mechanism. Rather, this undertaking is on hold pending the Rural Task Force making its recommendation to the Joint Board; the Joint Board may recommend that the Commission conduct further proceedings on certain issues.

52. Allowing carriers to designate separate tribal study areas, as proposed, could mean that additional carriers may be entitled to a portion of the high-cost support fund. We seek comment on the need for the Commission to provide additional high-cost support under the existing mechanisms to tribal lands. In order to do so, the Commission may either lift the cap on the high-cost fund to allow for growth in the size of the fund attributable to the separate study area proposal or reallocate the existing funds among the expanded category of recipients. We seek comment on these options. We also seek comment on any other options that may assist the Commission in achieving the goal of targeting additional federal high-cost support to tribal lands.

D. Revisions to Lifeline

53. The Commission's Lifeline support program for low-income consumers is designed to reduce the monthly billed cost of basic service for low-income consumers, which we anticipate will increase telephone penetration. Lifeline provides carriers with three elements of universal service support. The support must be passed through to each qualifying low-income consumer by an equivalent reduction in his or her monthly bill for telephone service. All carriers receive a baseline amount of $3.50 per month per Lifeline customer in the form of a waiver of the federal subscriber line charge (SLC). An additional $1.75 per month is available per Lifeline customer if ''the state commission approves an additional reduction of $1.75 in the amount paid by consumers * * *'' Finally, carriers can receive federal matching funds of fifty percent of the amount of state Lifeline support, up to a maximum of an additional $1.75 per month, as long as the entire amount is passed on to subscribers. Federal Lifeline support per qualifying low-income consumer is capped at $7.00 per month.

1. State Commission Approval

54. The Commission has received petitions for waiver of our Lifeline rules to allow carriers not subject to the jurisdiction of a state commission to receive the second tier of federal support where no regulations issued by local authorities (including state commissions and tribal authorities) exist that would prevent an equivalent reduction in the monthly telephone bills of qualifying low-income consumers. In drafting our rule, we did not consider the situation faced by carriers not subject to the jurisdiction of a state commission. Based on these waiver petitions, it appears that our rule has given rise to certain situations that we did not anticipate. The requirement of state consent prior to making available the second tier of federal Lifeline support was intended to reflect deference to the states in such areas of traditional state expertise and authority. We did not intend to require carriers not subject to state commission jurisdiction to seek either state commission action or a Commission waiver in order to receive the additional $1.75 available under federal support mechanisms, where that additional support would be passed through to consumers. For these reasons, we propose to modify our rule to state that an additional $1.75 per qualifying low-income consumer will be provided to the carrier where the additional support will result in an equivalent reduction in the monthly bill of each qualifying low-income consumer. This proposed revision maintains deference to the state commission because the additional support will not be provided where a state commission with jurisdiction to do so has not permitted an equivalent reduction in the consumer's bill. The proposed revision is intended to eliminate the need for carriers not subject to the jurisdiction of a state commission to seek state commission action or a Commission waiver. We seek comment on the proposed revision.

2. Federal Support on Tribal Lands

55. In addition, in keeping with principles of tribal sovereignty, we seek comment on modifying our rule to provide that the third tier of federal support, a maximum of $1.75 per month per low-income consumer, is available to customers on tribal lands. As described, the federal government has a special trust relationship with Indian tribes, and this entails special responsibilities, particularly where tribal reservations appear to be particularly disadvantaged by a lack of important resources, like telecommunications. With respect to tribal lands, we seek comment on the extent to which states currently provide the support necessary to qualify for matching funds for the third tier of Lifeline support. We also seek comment on whether the federal government, in light of its trust relationship with Indian tribes, should provide carriers serving tribal lands the third tier of Lifeline support, $1.75 per qualifying Lifeline customer, as long as all such Lifeline customers receive an equivalent reduction in their bills. Unlike in other areas, this federal support amount would not be contingent upon the state in which the tribal lands are located providing support.

3. Amendments to Consumer Qualification Criteria

56. We seek comment on whether the Commission should expand the consumer qualifications for Lifeline assistance to ensure that low income consumers on tribal lands are able to participate fully in the Lifeline assistance program. Under our current rules, in states that provide intrastate matching funds, a consumer must meet the criteria established by the state commission to receive federal Lifeline support. In most states, a consumer can meet the criteria by demonstrating or certifying that he or she participates in one of several narrowly targeted low income assistance programs. We are concerned that some state commissions have established Lifeline criteria that may inadvertently exclude low income consumers on tribal lands because the criteria do not include low income assistance programs that are specifically targeted toward Indians living on tribal lands. Similarly, in those states that do not provide intrastate matching funds (and thus do not establish the consumer qualifications for Lifeline participation), a consumer seeking Lifeline support must certify his or her participation in one of the following Commission-

designated low income assistance programs: Medicaid; food stamps; Supplemental Security Income; federal public housing assistance; or Low-Income Home Energy Assistance Program.

57. We seek comment on how the Commission might expand the consumer qualifications for Lifeline support to enable low income consumers on tribal lands to participate in the Lifeline assistance program. In particular, we seek comment about whether we should amend our rules to allow low income consumers on tribal lands to qualify for Lifeline support by certifying their participation in additional means tested assistance programs, such as the programs administered by the Bureau of Indian Affairs or Indian Health Services. We encourage commenters to indicate whether there might be other suitable criteria—based solely on income or factors related to income—that should be used to determine qualification for low income members of tribal lands. We ask commenters to indicate whether providing Indians living on tribal lands with greater access to Lifeline assistance might increase incentives for eligible telecommunications carriers to serve these tribal lands. Finally, we seek comment on whether the Commission could apply any new criteria specifically targeted to low income Indians living on tribal lands both to states that do not provide matching funds and states that do provide such funds.

IV. Designating Eligible Telecommunications Carriers Pursuant to Section 214(e)(6)

58. Pursuant to section 254(e) of the 1996 Act, not all telecommunications providers are eligible for federal universal service support. For purposes of the universal service support mechanisms for high-cost areas and low income consumers ''only an eligible telecommunications carrier designated under section 214(e) shall be eligible'' to receive federal universal service support. To be designated as an eligible telecommunications carrier, a carrier must:

> (A) offer the services that are supported by Federal universal service support mechanisms under section 254(c), either using its own facilities or a combination of its own facilities and resale of another carrier's services (including the services offered by another eligible telecommunications carrier); and
>
> (B) advertise the availability of such services and the charges therefor using media of general distribution.

59. Under section 214(e), the primary responsibility for designating a prospective carrier as an eligible telecommunications carrier lies with the state commission. In a situation where there is no common carrier willing to provide supported services to an unserved community that requests such services, section 214(e)(3) states that:

> [T]he Commission, with respect to interstate services * * * or a State commission, with respect to intrastate services, shall determine which common carrier or carriers are best able to provide such service to the requesting unserved community or portion thereof and shall order such carrier or carriers to provide such service for that unserved community or portion thereof.

In the event that a common carrier is not subject to the jurisdiction of a state commission, section 214(e)(6) authorizes the Commission, upon request, to designate the carrier as an eligible telecommunications carrier, for a service area designated by the Commission, if the carrier meets the qualifications for eligible telecommunications carrier status.

60. Section 214(e) of the Act states that only an ''eligible telecommunications carrier'' designated under section 214(e) shall be eligible to receive federal universal service support. Pursuant to section 214(e)(2) and (e)(5) of the Act, state commissions are generally responsible for designating eligible telecommunications carriers and for designating service areas for such carriers. Initially, section 214(e) did not include a provision for designating carriers not subject to the jurisdiction of a state commission. The Act was amended in 1997 to address this ''oversight.'' Section 214(e)(6) authorizes the Commission to designate as an eligible telecommunications carrier ''a common carrier providing telephone exchange service and exchange access that is not subject to the jurisdiction of a State Commission.'' We tentatively conclude that, by adding section 214(e)(6), Congress sought to ensure that carriers serving all regions of the United States have access to a mechanism that will allow them to be designated as eligible telecommunications carriers, if they meet the statutory requirements. Recognizing that the designation of eligible telecommunications carriers is primarily a state commission function, Congress granted this Commission the authority for this task in the event that a carrier is not subject to the jurisdiction of a state commission.

61. Although some of the legislative history of section 214(e)(6) focuses on the ability of tribally-owned carriers to be designated as eligible telecommunications carriers, the statutory language and other legislative history is not so limited. The other legislative history states that ''the intent of this bill is to cover such situations where a State commission lacks jurisdiction over a carrier, in which case the FCC determines who is eligible to receive federal universal service support.'' The legislative history also makes clear that ''nothing in this bill is intended to impact litigation regarding jurisdiction between State and federally recognized tribal entities'' or to ''expand or restrict the existing jurisdiction of State commissions over any common carrier or provider in any particular situation.'' In the following paragraphs, we seek comment on how section 214(e)(6) should be interpreted and implemented with respect to carriers (whether tribally owned or otherwise) that provide telecommunications services to tribal areas.

62. First, however, we seek comment identifying other situations in which carriers providing telephone exchange and exchange access services to areas other than tribal lands are not subject to state commission jurisdiction and thus must seek designation as eligible telecommunications carriers from the Commission. In this context, we seek comment on whether the Commission, rather than state commissions, has the jurisdiction to designate terrestrial wireless or satellite carriers as eligible telecommunications carriers. If such carriers submit applications for designation pursuant to section 214(e)(6) during the pendency of this proceeding, we will consider them on a case by case basis in light of the statutory language and the showings made by the affected parties. We also note that our analysis of the scope of the designation provision of section 214(e)(6) is not intended to affect any other decision with respect to the authority of state commissions or tribal authorities to regulate telecommunications on tribal lands or over terrestrial wireless or satellite carriers.

63. The statutory language of section 214(e)(6) is ambiguous with respect to when the Commission's authority to designate eligible telecommunications carriers is triggered. It is not clear whether the Commission's authority is triggered when a carrier is not subject to the jurisdiction of a state commission or when the service or access the carrier provides is not subject to the jurisdiction of a state commission. Thus, the initial question in interpreting section 214(e)(6) with respect to the provision of telecommunications service

in tribal lands is under what circumstances the Commission may designate carriers as eligible telecommunications carriers. The title of section 214(e)(6), ''Common Carriers not Subject to State Commission Jurisdiction,'' suggests that the triggering inquiry is whether the carrier is subject to state commission jurisdiction. We tentatively conclude, however, that the better interpretation of section 214(e)(6) is that the determination of whether a carrier is subject to the jurisdiction of a state commission depends in turn on the nature of the service provided (*e.g.* telephone exchange or access service provided by wire, satellite or terrestrial wireless) or the geographic area in which the service is being provided (*e.g.* tribal lands). This interpretation is supported by the legislative history of section 214(e)(6). Representative Tauzin stated that ''S.1354 makes a technical correction to the Act that will make it possible for telephone companies serving *areas* not subject to the jurisdiction of a State Commission, to be eligible to receive federal Universal Service support.'' Our tentative conclusion that the nature of the service or the geographic area in which the carrier provides it should be the basis for distinguishing between the designation authority of the Commission and state commission under section 214(e)(6), is consistent with other provisions of the Act. Section 2 of the Act similarly distinguishes between federal and state jurisdiction over telecommunications services based on the geographic area in which the service is provided. Section 332(3) of the Act limits state authority on the basis of the service provided (*i.e.* commercial and private mobile service). We seek comment on this analysis and on any other factors which may be relevant to this determination.

64. Our next question then is under what circumstances are telecommunications carriers providing telecommunications services on tribal lands subject to state commission authority? We seek comment on the extent to which a state commission has jurisdiction over tribally-owned carriers seeking to provide telecommunications service on tribal lands and over non-tribally-owned carriers seeking to provide such service on tribal lands. The answer to these questions will determine whether the Commission may designate carriers seeking to provide service on tribal lands as eligible telecommunications carriers. With respect to tribally-owned carriers seeking to provide telecommunications service on tribal lands, we note that state law is generally inapplicable when states attempt to regulate the conduct of tribal members directly within reservation boundaries, except in ''exceptional circumstances.'' We seek comment on whether, for the purpose of eligible telecommunications carrier designation, tribally-owned carriers providing telecommunications services within tribal reservations would be subject to state regulatory authority.

65. We further recognize that when states seek to regulate non-tribal members and their activities conducted within a reservation, the appropriateness of the state's assertion of regulatory authority is determined by a ''particularized inquiry'' into the nature of the state, federal, and tribal interests at stake. Specifically, the analysis turns ''on whether state authority is pre-empted by the operation of federal law; and '[s]tate jurisdiction is pre-empted * * * if it interferes or is incompatible with federal and tribal interests reflected in federal law, unless the state interests at stake are sufficient to justify the assertion of state authority.' The inquiry is to proceed in light of traditional notions of Indian sovereignty and the congressional goal of Indian self-government, including its 'overriding goal' of encouraging tribal self-sufficiency and economic development.'' We recognize that this inquiry is a particularized one, and thus specific to each state and the facts and circumstances surrounding the provision of telecommunications services by non-tribal members within those tribal lands. However, we seek comment on whether there are any general federal, state and tribal interests at stake which might inform the inquiry and help provide general guidance on the proper boundaries of state authority in this case. Specifically, we seek comment on the federal government's interest in assuming authority over the designation of eligible telecommunications services, and the extent to which state authority would be preempted by the operation of federal law—namely section 214 or other relevant provisions or other federal or tribal interests reflected in federal law.

66. We also seek comment on the states' interests in designating eligible telecommunications carriers, as well as the implications of state designation on Indian sovereignty, self-government and ''tribal self-sufficiency and economic development.'' We recognize, however, that some state commissions have asserted jurisdiction over carriers seeking to provide service on tribal lands, and that these commissions regulate certain aspects of a carrier's provisions of service on tribal lands.

67. In implementing section 214(e)(6), we are concerned that the fact intensiveness and the legal complexity of determining whether a state has jurisdiction over carriers seeking designation as an eligible telecommunications carrier may lead to confusion, duplication of efforts and needless controversy among carriers, tribal authorities, state commissions and this Commission, which could undermine efforts to achieve our universal service goals. For these reasons, we propose the following process to treat applications for the Commission's designation of eligible telecommunications companies eligible to receive universal service support for serving tribal land. Carriers seeking designation as an eligible telecommunications carrier from this Commission, whether to serve tribal lands or on the basis of other jurisdictional arguments, should consult with the relevant tribal authority, where appropriate, and the state commission on the issue of whether the state commission has jurisdiction to designate the carrier. In situations where the tribal authority and the state commission agree that the state has jurisdiction, we anticipate that the state would conduct the designation proceeding. In instances where the tribal authority challenges the state's exercise of jurisdiction, we encourage the carriers, with the support of the tribal authority, to apply to this Commission for designation. In the public comment period subsequent to a carrier's application for designation as an eligible telecommunications carrier, the carriers and tribal authorities would be expected to demonstrate why Commission designation is appropriate. Interested parties, including the state commission, that disagree with the Commission's exercise of jurisdiction would also be expected to raise their challenges in that proceeding. We seek comment on this proposal and suggestions for other ways in which the determination of whether the designation must be performed by the Commission or a state commission could be simplified or streamlined.

V. Unserved Areas—Implementation of Section 214(e)(3)

A. Defining ''Unserved Area''

68. In order to determine whether an allegedly unserved community is eligible for relief pursuant to section 214(e)(3), we must first decide whether the area at issue is unserved. Only after making this initial determination can

we proceed with the rest of the analysis required by section 214(e)(3). We propose defining an unserved area as ''any area in which facilities would need to be deployed in order for its residents to receive each of the services designated for support by the universal service support mechanisms.'' In the *First Report and Order,* we identified the services that would be supported by universal service support mechanisms as: single-party service; voice grade access to the public switched network; DTMF signaling or its functional equivalent; access to emergency services; access to operator services; access to interexchange service; access to directory assistance; and toll limitation services for qualifying low-income consumers. These services were identified based on the statutory directive embodied in section 254(c)(1)(A)–(D), requiring the Joint Board and the Commission to ''consider the extent to which * * * telecommunications services'' included in the definition of universal service: (1) Are essential to education, public health, or public safety; (2) have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers; (3) are being deployed in public telecommunications networks by telecommunications carriers; and (4) are consistent with the public interest, convenience and necessity.

69. The proposed definition is based on whether facilities would need to be deployed to provide the supported services to distinguish unserved areas from areas in which a large percentage of the population does not subscribe to available services. This definition is intended to help further our statutory mandate to promote the availability of services supported by federal universal service support mechanisms. We recognize that this definition may result in certain areas being deemed unserved, even though those areas are receiving some level of service that includes less than all of the services designated for support by the universal service support mechanisms. We also recognize that this definition may result in the existence of relatively small unserved areas within larger areas that are currently receiving service. We seek comment on whether this definition will enable us to appropriately target our efforts to those areas that do not receive all of the services supported by federal universal service support mechanisms.

70. We emphasize, however, that determining whether a particular area meets the definition of unserved area is only the beginning of the analysis under section 214(e)(3). To obtain relief pursuant to section 214(e)(3), each of the steps discussed must be followed. We seek comment on this analysis and we invite commenters to propose alternative definitions.

B. Determining When a Community Is Unserved

71. The language ''or any portion thereof'' in section 214(e)(3) suggests that we are not meant to impose minimum size requirements on the number of potential subscribers needed to invoke the authority of section 214(e)(3). We seek comment on whether the language should be interpreted differently or suggests a particular definition.

C. Determining When No Common Carrier Will Provide Service

72. By its terms, the relief afforded in section 214(e)(3) is not triggered until a determination is made that ''no common carrier will provide'' the services supported by the federal universal service support mechanisms. Therefore, we seek comment on the meaning of the phrase ''no common carrier will provide'' the supported services.

73. As an initial matter, section 214(e)(3) does not specify whether the request for service must be received from members of the unserved community or whether state, local, or tribal authorities must make an official request for service from the carrier on behalf of the unserved members of the community. We tentatively conclude that limitations on who may issue the request are not warranted by the terms of the statute or the goals it seeks to achieve. We seek comment on this tentative conclusion.

74. We tentatively conclude that the language ''no common carrier will provide'' the services supported by the federal universal service support mechanisms means something more than no common carrier is actually providing the supported services. We seek comment on how we can determine that no common carrier is willing to provide the supported services. We seek comment on which common carriers must be asked in order to reach the conclusion that no common carrier will provide the service. We seek comment on how a satellite services provider should be treated for this issue, given that they can potentially provide service to these unserved areas. We also seek comment on whether the reasons for the common carrier's refusal to provide service are relevant to a determination that the area is unserved. For example, what if the refusal to provide service is based on the poor credit histories of the individuals requesting service or an existing overdue debt? Given the extremely low annual incomes, on average, on tribal lands, it seems possible that inadequate credit histories of the potential customers may cause a carrier to be unwilling to provide service.

D. Identifying Carrier or Carriers Best Able To Serve Unserved Areas

75. Section 214(e)(3) authorizes the Commission, with respect to interstate service or an areas served by a carrier to which section 214(e)(6) applies, and state commissions, with respect to intrastate service, to determine which carrier or carriers are best able to provide service to the requesting, unserved community and order that carrier or carriers to provide service. We seek comment on the relative roles that the Commission and the states should play in determining which carriers are best able to provide the supported services in unserved areas, including any coordination that should occur in making this determination.

76. We seek comment on whether the Commission is authorized to and whether it should establish national guidelines by which states may or must make this determination, when they have jurisdiction to do so. We recognize that the selection of the carrier to serve some unserved areas pursuant to section 214(e)(3) of the Act is to be made by state commissions. We seek comment on whether a consistent, national approach is necessary to further the universal service goals of the Act or to provide certainty to carriers regarding the possible application of this important provision. We seek comment on whether, in situations where the state has jurisdiction to designate eligible telecommunications carriers, all aspects of this decision should be left to the states because states have more familiarity with the areas in question. We also seek comment on the role of tribal authorities with respect to the Commission's determination of the carrier or carriers best able to serve unserved, tribal lands. We also seek comment to determine whether the Commission's obligation to identify and order a carrier to provide service in tribal lands should be affected by the interests of the tribal authorities.

77. One approach for making a determination pursuant to section 214(e)(3) would be to conduct a fact-intensive inquiry, polling common carriers serving nearby or surrounding areas to determine where existing facilities are deployed, to estimate the costs for each carrier to provide the supported services, and to consider other possible factors that may be

relevant to the conclusion that a carrier is ''best able.'' We tentatively conclude, however, that our preferred approach would be to adopt a competitive bidding mechanism for identifying the carrier or carriers best able to provide service in unserved areas for which the Commission has authority to order carriers to provide service. We seek comment on the use of a competitive bidding mechanism. We seek comment on whether it is within our authority to require states to adopt a competitive bidding mechanism to determine which carrier or carriers will be ordered to provide intrastate service in unserved areas to which section 214(e)(6) does not apply.

78. If the competitive bidding mechanism does not give rise to a carrier willing and able to provide the supported services in the unserved area at a reasonable cost, we seek comment on whether the Commission should then initiate an inquiry to determine the carrier or carriers best-able to provide service to the area. We seek comment on whether the following factors would be relevant in making that determination: (1) Whether the area falls within the designated service area of an existing carrier; (2) the extent to which a carrier has deployed facilities capable of providing supported services in the surrounding area; (3) the cost for that carrier to build facilities capable of providing the supported services; (4) the quality of services that would be provided; (5) the financial strength of the carrier; (6) the proportionate impact serving the area would have on the number of lines and the geographic area served by the carrier; (7) the amount of time required for the carrier to deploy facilities; and (8) a carrier's status as either an incumbent LEC or a competitive eligible telecommunications carrier. We seek comment on any other factors that may be relevant. We also seek comment on whether our inquiry must be limited to incumbent LECs and competitive eligible telecommunications carriers or whether we may also include other competitive LECs, interexchange carriers, terrestrial wireless or satellite service providers, or providers of cable or electric services that would be capable of providing the supported services to the unserved area. We seek comment on whether to exclude certain carriers from consideration, for example, carriers that are considered small entities for purposes of the Regulatory Flexibility Act. Finally, we seek comment on whether the preferences of the unserved community for a particular carrier or technology should be considered in making a determination of which carrier is best able to provide service to the area.

1. Competitive Bidding Proposal

79. We tentatively conclude that we should adopt a competitive bidding mechanism to identify the carrier or carriers best able to provide the supported services in unserved tribal lands and to set the level of support provided for serving the area. We are hopeful that we may be able to design a competitive bidding mechanism that will generate public awareness of the needs of a particular area for service and elicit proposals from one or more carriers that could be compared before determining which carrier or carriers should be designated as an eligible telecommunications carrier for the area. We seek comment on this proposal.

80. We seek comment on whether the possibility that a carrier will be ordered to provide service pursuant to section 214(e)(3) will provide incentives for carriers to participate in the competitive bidding mechanism in order to be able to set the terms on which they will provide service. We seek comment on whether the competitive bidding mechanism could bring unserved areas to the attention of carriers previously unaware of the need for telecommunications services in those areas and thus identify carriers that would be willing to provide service to the area for a support amount equal to or lower than the amount that would be provided under existing federal universal service support mechanisms. In addition, we seek comment on possible negative incentives and distortions that may be created by using a competitive bidding mechanism. For example, we seek comment on whether a competitive bidding approach will likely lead carriers to provide the lowest-cost, lowest-quality service that meets the definition of supported services, unfairly depriving residents of higher quality or advanced services.

81. We also seek comment on whether the Commission should conduct a trial to determine whether a competitive bidding mechanism is the most efficient means of identifying the carrier or carriers best able to provide the supported services in unserved areas. We seek comment on how large a service area would be appropriate for such a trial. We seek comment on whether the Commission should solicit volunteers from Indian tribes that currently have large unserved areas.

(a) *Participants.* 82. We seek comment on the possible participants in a competitive bidding proceeding. Section 214(e)(3) states that any carrier ordered to provide service pursuant to this section shall meet the requirements necessary and be designated an eligible telecommunications carrier for the unserved area. We seek comment on whether a carrier must first be designated an eligible telecommunications carrier for the area prior to participating in the competitive bidding mechanism. We seek comment on whether any carrier that can demonstrate that it can meet the requirements of section 214(e)(1) may participate in the competitive bidding mechanism. We seek comment on what kind of showing is necessary to demonstrate that a carrier can meet the requirements of section 214(e)(1). We seek comment on whether terrestrial wireless or satellite providers will be able to participate in the competitive bidding mechanism. We also seek comment on the number of bidders we should anticipate for auctions in the universal service context, and the extent to which we should consider that number in deciding the type of auction that should be used, as discussed.

(b) *Number of Winners.* 83. We seek comment on whether the characteristics of the unserved tribal lands may be such that it is not economically practical to support more than one provider to serve unserved, tribal lands. To the extent that supporting a single provider is more economical, permitting multiple providers to receive federal universal service support may not be in the public interest. In addition, if all carriers were entitled to receive support at the level determined in the competitive bidding auctions, bidders would have no incentive to bid below the opening level; that is, competitive bidding would not reveal the minimum amount of support necessary to provide service to the area. For these reasons, we propose that qualified eligible telecommunications carriers bid to secure an exclusive right to receive universal service support for serving the unserved tribal area. That is, the winning bidder would be the only carrier designated as an eligible telecommunications carrier for providing the supported services to the unserved, tribal lands subject to competitive bidding.

84. We seek comment on whether the Commission has the authority to and whether we should try to attract carriers by agreeing to designate only one carrier to serve the unserved tribal land or permitting only one carrier to receive federal universal service support for serving the area. We seek comment on whether a decision to limit support to a single carrier is consistent with the universal service provisions and pro-

competitive goals of the Act. We observe that, in the case of an area served by a rural carrier, the Commission ''may'' designate more than one eligible telecommunications carrier but must make a specific showing that an additional eligible telecommunications carrier would serve the public interest. With respect to all other carriers, the Commission ''shall'' designate more than one common carrier as an eligible telecommunications carrier. We seek comment on whether these provisions apply with respect to an unserved area. We seek comment on whether the statutory language that the Commission ''shall determine which carrier or carriers are best able to provide such service'' indicates that the Commission may determine that a single carrier shall be designated. Finally, we seek comment concerning the ability of bidders to accurately estimate the possible future challenges from other carriers for the more profitable customers in the previously unserved, tribal lands.

85. As an alternative to a single winner, we consider the possibility of supporting two or more winning bidders. We generally believe that customers benefit most when multiple providers are available, because competition leads to lower prices and provides an alternative where service quality is unsatisfactory. Supporting two winning bidders means that a second carrier would be able to compete vigorously with the lowest bidder. We seek comment on whether to use the competitive bidding mechanism to identify a level of support which would be provided for serving the area and to allow any carrier with a bid within a specific range of the winning bidder, who also satisfies the requirements of section 214(e)(1) of the Act, to receive that level of support for providing service to the area. We seek comment on whether the possibility of having multiple carriers receive support for these previously unserved areas would substantially diminish or even eliminate any incentives carrier might have to participate in competitive bidding. We seek comment on whether providing support sufficient to allow competing carriers to build the necessary infrastructure would generate customer benefits over the long-term that would offset the additional cost associated with supporting two carriers. In making this determination, we must consider the duration of the service term and the rate of change in network technology. For example, if technological change were so rapid that both the new entrant and incumbent carrier would need to install and recover the cost of new facilities for each contract term, the benefits of creating competing carriers would be significantly reduced. We seek comment on these issues.

(c) *Term of Exclusivity Period.* 86. If the Commission determines that a bidder should win the exclusive right to federal universal service support, we would seek to establish an exclusivity period that is of an adequate length to provide incentives for carriers to deploy facilities yet does not result in unnecessary support being provided. We seek comment on the appropriate duration of any exclusivity period. After the exclusivity period has ended, we could choose to re-auction the service obligation and consider multiple providers if the costs of providing service decreased or market conditions improved so that multiple providers became practical. we anticipate that the length of the exclusivity period will affect the bids for monthly support levels. In addition, the length of the exclusivity period will affect the average administrative and transaction costs for conducting the auction. Granting exclusivity periods that are too short could be harmful because the winning carrier is likely to need time to establish its network, and to amortize its investments. In addition, more frequent auctions entail increased administrative costs. Granting periods that are too long, however, also could be harmful. Technological advances over time can create more efficient means of providing communications, which would enable firms to offer service at a lower cost. To the extent that the winning bidder is shielded from competition during the exclusivity period, the benefits of adopting a more efficient technology will accrue to the carrier, rather than the customer. In addition, with longer contract terms, the carriers' prediction of their costs at later stages in the contract becomes more speculative, which could translate into higher bids in the auction. We seek comment on this analysis and the appropriate length of the exclusivity period. We suggest that commenters review the competitive bidding proposals and mechanisms summarized that may assist in determining the length of the exclusivity requirement.

(d) *Bidding Process.* 87. We seek comment on whether to use a single-round, sealed bid process or a descending, multi-round auction. Each bidder would submit an amount of support necessary per line given our universal service technical specifications. We observe that the Commission has successfully implemented multi-round auctions in other contexts. We seek comment on whether a descending multi-round bidding system would be preferable to a single-round sealed bid auction.

88. We also seek comment on how to establish the reservation price—the highest bid that would qualify for support—for the competitive bidding mechanism. One option would be to use the new high-cost mechanism to estimate the amount of support that would be available for providing the supported services in the unserved, tribal area and set that as the reservation price. We seek comment on what incentives carriers would have, if any, to bid an amount lower than the reservation price determined by the model. Alternatively, we seek comment on whether we should set a reservation price that is some percentage above the support amount determined under the new high-cost mechanisms. We seek comment on whether a rational percentage can be identified. We also seek comment on whether of conduct an auction without establishing a particular reservation price or specifically identifying the amount that would be provided under the new high-cost mechanism in an effort to determine the amount of support each carrier believes is necessary. We seek comment on whether, if we were to proceed in this manner, the Commission should reserve the right to conclude that the competitive bidding mechanism was not successful and to proceed to the fact-based inquiry.

(e) *Support Amount.* 89. A well-designed auction should provide incentives for carriers to disclose the minimum amount of support they require, even though this information may be competitively sensitive. We seek comment on how to provide incentives for carriers to reveal the minimum amount of support necessary to provide service to the unserved area. We seek comment on whether we should employ a ''Second Price'' or ''Vickrey'' auction, in which the successful bidder gets support at the level of the lowest bid made by a non-successful bidder. In theory, this style of auction appears to induce bidders to reveal their actual costs and would thereby generate the same total support requirements as a first price, sealed bid auction. Another factor relevant in setting the support level is whether the federal support provided constitutes the entire amount of subsidy available to the carrier. We tentatively conclude that we would need to establish that the competitive bidding mechanism for unserved areas would be used to determine the entire amount of support to be divided and the relevant share of support would be

allocated to the federal and state authorities, in whatever proportion is established for the high-cost support mechanism in general. We seek comment on this analysis.

(f) *Obligations Assumed by Winning Bidder.* 90. We tentatively conclude that, pursuant to section 214(e), a successful bidder must provide the services supported by the universal service support mechanisms to all customers requesting service in the designated area and advertise the availability of such service throughout the service area. We seek comment on this tentative conclusion.

2. Other Proposals and Examples of Competitive Bidding

91. A number of parties submitted competitive bidding proposals in the universal service docket, the most detailed of which were submitted by GTE, consultants to Ameritech, and Frank Kelly and Richard Steinberg of Cambridge University, Great Britain. These proposals were designed to determine the carrier or carriers entitled to receive universal service support and the level of support to be provided. In addition, other government agencies have used competitive bidding systems that may have features relevant to the market at issue here. We seek comment on these other competitive bidding proposals, because aspects of these proposals may be preferable to the competitive bidding approach proposed.

E. Ordering Carriers To Provide Service

92. We seek comment on the ramifications of ordering a carrier to provide service in an unserved area. We tentatively conclude that this requirement entails an obligation to deploy the facilities necessary to provide the services supported by federal universal service support mechanisms, to offer the services to all customers requesting service in the designated area, and to advertise the availability of such service throughout the service area. These requirements are consistent with the language in section 214(e)(3) of the Act, stating that the carrier ordered to provide service shall meet the requirements of section 214(e)(1) of the Act. We seek comment on this tentative conclusion.

93. We also seek comment whether additional measures may be necessary to ensure that the carrier ordered to provide service is able to earn an appropriate return on its investment. For example, a carrier may deploy facilities, advertise the availability of services and offer service to all customers and yet an inadequate number of customers may subscribe to the service, rendering the operation unprofitable. This result may occur due to faulty estimations by the carrier, but it may also be the result of unpredictable demand. Similarly, it is possible that carriers may provide services to all requesting customers, yet the customers might default on their bills. If the carrier is ordered to provide service, to what extent must it retain customers who cannot pay overdue debts or with poor credit records? How will the carrier recover its investment on the facilities deployed to provide service to subscribers who do not pay their bills? We seek comment on these issues, including the appropriate role for the Commission and state commissions to play in addressing these issues.

VI. Underserved Areas

94. In this section of the Further Notice, the Commission considers whether additional support for low-income consumers is necessary to promote subscribership in unserved and underserved areas, including tribal and insular areas.

A. Defining ''Underserved Area''

95. In the *Thirteenth Order on Reconsideration,* the Commission observed that there may be inadequately served areas that are characterized by extremely low penetration, low population density, and high costs. We seek comment on the need for the Commission to establish a definition of ''underserved area'' that would be used in targeting supplemental universal service support to those areas. For example, a community may be considered underserved if the penetration rate of the community is significantly below the national average. In addition to the number of supported services available, and the percentage of the population receiving those supported services, there may be other identifying characteristics that describe an underserved area. We seek comment on an appropriate definition for underserved area. For example, we could define underserved area as a geographic area that meets certain statistical benchmarks, *i.e.,* a penetration rate below a certain percentage, a population density below a certain level, costs of providing supported services above a certain level, etc. We also seek comment on whether there is sufficient, readily available statistical data to make such a definitional approach viable.

B. Expanding LinkUp to Include Facilities-Based Charges

96. We seek comment on whether increasing federal support to offset initial connection charges may be necessary to increase the success of our universal service support mechanisms in underserved areas, including insular and tribal lands. In the proceeding leading up to the *Second Recommended Decision,* the Arizona Corporation Commission (Arizona Commission) submitted a proposal to use a portion of federal support to address the problem of unserved areas and the inability of low-income residents to obtain telecommunications service because they cannot afford to pay the required line extension or construction costs. The Arizona Commission's proposal was not intended to be a comprehensive alternative to the high-cost fund distribution model, but rather to address a discrete concern related to low-income residents in remote areas. We seek comment on the Arizona Commission's proposal and the extent to which the problem identified by the Arizona Commission is widespread. In particular, we seek further data on the cost of line extensions in rural areas and regarding the number of residents that are deprived of telecommunications services because of high line extension or construction costs and areas in which this problem is acute.

97. The Joint Board recognized that investments in line extensions historically have been an issue addressed by the states through intrastate proceedings that establish reasonable rates for line extension agreements and encourage carriers to minimize unserved regions of the states. The Joint Board suggested that these issues should continue to be dealt with by states, to the extent that the states are able to do so. We note that regulators generally require carriers to use rate averaging to reduce the rates for their highest-cost customers in rural and insular areas, but those regulators often still permit carriers to charge particularly isolated customers a supplementary ''initial connection'' charge for installing a new line. Moreover, while regulators also generally require carriers to amortize the cost of installing new lines, if there is a reasonable chance that those lines will not be used over their full life-span, regulators often permit carriers to charge most, if not all, of the initial connection charge up front. These charges can be prohibitive. We seek comment on whether states have the ability to address this problem, or, in the

alternative, whether federal assistance, in some instances, may be necessary.

98. We seek comment on what role the Commission might play in trying to alleviate this problem. We seek comment on whether we might provide additional support through the LinkUp America program—which provides federal support to reduce the price of initial connection charges—at least for locations with significantly lower than average telecommunications penetration rates, *e.g.*, below 75 percent. Commenters supporting such an approach should also explain whether support would be provided as a one-time payment or over a number of years. We also seek comment on what we might do to encourage carriers to offer installment loans for such extensions over a practical time frame. We seek comment on these and any other alternatives that might be more effective ways of addressing this problem. For example, we seek comment on whether the provision of telecommunication service to remote areas using terrestrial wireless or satellite technologies might allow service at lower cost compared to the cost of line extension or construction of wireline facilities. Commenters offering proposals should also explain how their proposals would avoid encouraging uneconomic investments in relatively high-cost technologies.

C. Support for Intrastate Toll Calling

99. We seek comment on the extent to which limited local calling areas impose a barrier to increased penetration in certain underserved areas. For example, the local calling area for the Jemez Pueblo in New Mexico includes only about half a dozen other towns. It does not include any other Pueblos or hospitals nor the cities of Albuquerque or Santa Fe, where most residents work. Similarly, the calling area for the Picuris Pueblo does not even include 911 calls. To the extent that limited local calling areas impose a barrier to increased penetration, we seek comment on how to remove this barrier. For example, expanding the local calling area to include the unserved or underserved area and the nearest metropolitan area or community of interest may entice more consumers to request service. Expanding local calling areas, however, would likely cause upward pressure on local rates. We seek comment on how expanded local calling areas would impact local rates, including rates for consumers living in communities outside of tribal lands. We seek comment on what role, if any, the Commission is authorized to and should play in seeking to address impediments caused by limited local calling areas.

100. We seek comment on whether federal universal service support mechanisms should provide additional support for low-income consumers living in remote areas or low-income consumers living on tribal lands. For example, the Commission could provide support for calls outside of the local calling area that fall within specified federally-designated support areas. Similarly, federal universal service support could be provided to pay for a foreign exchange (FX) line service from the remote or tribal area to the nearest metropolitan area or community of interest. We seek comment on whether such proposals would eliminate incentives for states to ensure affordable local rates. We also seek comment on whether the provision of service by terrestrial wireless or satellite providers would alleviate any problems associated with limited local calling areas.

D. Expanded Availability of Toll Limitation Devices

101. Many households may forgo telecommunications service because of past or anticipated future problems with high telephone bills. The general prevalence of this bill management problem was documented in a GTE-Pacific Bell commissioned survey done in 1993 by the Field Research Corp. for the California PUC. The Commission sought to address the problem, however, by requiring carriers offering low-income subscribers ''Lifeline'' service, to permit those subscribers to secure a ''toll limitation'' service—either toll blocking or toll control. We believe that our actions in this regard should alleviate this bill management problem. We seek comment on whether expanded options for toll-control or toll-blocking would make telecommunications service more desirable in unserved and underserved areas, including tribal lands. We ask that commenters identify any specific toll-control or toll-blocking features that would be useful, including, for example, the ability to require the use of a Personal Identification Number (PIN) in order to restrict access to toll calls. We also recognize that the benefits of these options are minimal if consumers are not aware of them. We seek comment on what additional measures, if any, the Commission should undertake to ensure consumers are educated about the availability of toll-limitation devices.

E. Publicizing Availability of Low-Income Support

102. We observe that customers may fail to subscribe to telecommunications service because they are unaware of the Commission's Lifeline and LinkUp programs, which are intended to make service more affordable, and the availability of toll-control and toll-blocking, which are intended to help low-income consumers control the amount of their monthly bills. Although the Commission's Lifeline and LinkUp programs have been providing universal service support to eligible customers for more than a decade, we are concerned that carriers may have failed to publicize the programs in some areas, particularly on Indian reservations. Unfortunately, it appears that in markets where carriers find it unprofitable to provide service, they have no particular incentive to publicize the availability of Lifeline and LinkUp. Thus, the Commission found that none of the representatives of the pueblos testifying in the January, 1999 Albuquerque field hearings were aware of the Lifeline and LinkUp programs. Furthermore, despite the 60-percent unemployment rate in the Cheyenne River Sioux Telephone Authority area, only about 10-percent of the subscribers there receive Lifeline service.

103. We seek comment on whether the Commission should play a role in ensuring the spread of information on tribal lands, or in other low-income, underserved areas, about the availability of low-income support that may make telecommunications service affordable. We recognize that carriers already have an incentive to convince potential customers of the value of their service—assuming the customers will be profitable to serve. We are concerned about those consumers whom carriers may consider unprofitable to serve. We tentatively conclude that a lack of information may contribute to the significantly low penetration rates on tribal lands.

104. We seek comment on what options the Commission may have to promote awareness of low-income support mechanisms on tribal lands. Section 214(e)(1)(B) of the Act requires an eligible telecommunications carrier to ''advertise the availability of'' the services supported by federal universal service support mechanisms ''and the charges therefor using media of general distribution.'' We seek comment on the possibility of amending our current universal service rules to require carriers to publicize the availability of Lifeline and LinkUp and toll-limitation options. For example, we could revise section 54.405 of our rules by adding the following italicized language:

All telecommunications carriers shall *(a)* make available Lifeline service, as defined in

§ 54.401, to qualifying low-income consumers, *and (b) publicize the availability of Lifeline service in a manner reasonably designed to reach those likely to qualify for the services.*

105. We seek comment on the costs and benefits of requiring carriers to publicize the availability of Lifeline, LinkUp and toll-control devices. Alternatively, the Commission could encourage and participate in other marketing and information dissemination efforts, such as preparing consumer information fact-sheets that would be distributed in local communities. We seek comment on whether there is, or should be, some entity that would collect and verify the accuracy of data on Lifeline rates for each reservation, the eligibility standards for Lifeline in the relevant state, and how individuals who desired Lifeline service could confirm their eligibility and how they could sign up for service. We also seek comment on the best ways to disseminate this information to the relevant audience of potential Lifeline subscribers. We seek comment on any research or other data that indicates the most effective way of marketing to this population, whether via broadcast, print, wireline, or other media; whether separately or in combination with the marketing efforts of other social programs seeking to reach this audience; and whether on a federal, state or tribal level. Commenters aware of a particularly effective program are requested to provide us with sufficient information to enable us to contact that program administrator.

F. Support for Rural Health Care Infrastructure

106. We seek comment on the technical limitations of the telecommunications services available to rural health care providers throughout the United States, including Alaska and insular areas. We ask commenters to provide as much detail as possible regarding the extensions or improvements needed in areas lacking adequate infrastructure. We ask that commenters identify the most urgent needs, such as those that would address threats to the health and safety of residents. We particularly encourage providers of fixed satellite services, geo-stationary satellites, and emerging technologies, to describe the capability of these technologies to serve Alaska and insular areas, and ask these providers to estimate the costs, provide a timetable for deploying particular technologies, and provide information regarding the capability of different technologies to support telehealth and telemedicine applications. We ask providers of other technologies, such as fixed wireless technology, to describe whether these technologies could effectively supplement the apparently inadequate infrastructure in the rural areas of Alaska, insular areas, and the mainland United States.

107. We seek comment on whether and to what extent improvements to the telecommunications network required to meet the telecommunications needs of rural health care providers should be supported by federal universal service mechanisms and whether other mechanisms exist that would provide support for improving infrastructure. We ask parties to submit detailed descriptions of any programs supporting infrastructure development that would assist rural health care providers. We specifically ask the sponsors of programs cited in the State Health Care Report and other commenters familiar with these programs to detail their scope, identify any needs that are unmet by existing programs, and explain why.

108. We invite commenters to submit specific proposals that they have already prepared for expanding the federal universal service support for rural health care providers to include infrastructure improvement costs of telecommunications carriers. Any commenter submitting a proposal should analyze the extent to which the proposal is competitively neutral, technically feasible, and economically reasonable, as required pursuant to section 254(h)(2). Commenters should also file detailed cost information for any proposal submitted. We recognize that some improvements to the telecommunications network made to provide service to rural health care providers may also be used to provide commercial services. We seek comment on whether and to what extent we should take account of such additional revenue sources in the event that support is provided to extend or improve telecommunications networks.

VII. Insular Areas

A. Defining ''Insular Area''

109. In articulating the principle that consumers in all regions of the nation should have access to telecommunications services, Congress explicitly included insular areas within this mandate. As the Joint Board noted in the *Recommended Decision*, however, the Act does not define the phrase insular areas. We tentatively conclude that we should adopt a definition of insular areas to provide clarity regarding the availability of universal service support in those areas.

110. We observe that, in other statutes, the term insular area generally refers to the island portions of the United States that are not states or portions of states. In addition, we observe that in common usage, the term insular area means ''of, or having the form of an island.'' Accordingly, we propose the following definition of insular areas: ''islands that are territories or commonwealths of the United States.'' By including the phrase ''territories or commonwealths,'' we intend to restrict the definition to areas that are populated islands that have a local government. We also observe that the proposed definition comports with publications of the Department of Interior's Office of Insular Affairs (OIA) and various provisions of the United States Code. We seek comment on this proposal.

111. We seek comment on whether the definition of insular areas should include only those areas that are subject to the laws of the United States, and for which carriers serving those areas would be required to contribute to our universal service support mechanisms, and, if so, we seek comment on whether the proposed definition satisfies this goal. We seek comment on whether the definition of insular areas should exclude sovereign states that are not subject to the laws of the United States nor eligible to receive universal service support under the Act, unpopulated islands, and insular areas subject to the jurisdiction of, and receiving telecommunications service from, the United States military. We tentatively conclude that Puerto Rico, American Samoa, CNMI, Guam, and the U.S. Virgin Islands are properly included in the definition of insular areas and seek comment on this tentative conclusion.

112. We seek comment on whether the Freely Associated States (FAS), including the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau, should be included in the definition of insular areas. These islands are associated with the United States through the terms of a Compact of Free Association, which gives the Commission authority and jurisdiction over various telecommunications services in the FAS, but carriers are not subject to universal service contribution requirements for the services they provide on these islands. We also observe that Midway Atoll is being transferred from the jurisdiction of the United States Navy to the U.S. Fish & Wildlife Service of the Department of Interior and has a population of 450 persons. We seek comment on whether Midway Atoll should be included in the

definition of insular areas. We invite commenters to provide alternative definitions of ''insular areas'' and to describe which areas would and would not be included with any alternative definition.

113. We seek comment on whether similarities between the historical experience of Indians and persons living in insular areas warrant the extension of federal trust-type principles, including supplemental measures to promote the availability of universal service, to insular areas.

B. Rural Health Care Support

114. Parties have already submitted information to us demonstrating that insular areas may have few hospitals and substantial undeveloped terrain and that travel between insular areas and more developed states or countries nearest to them may be very expensive. For these reasons, we anticipate that telehealth and telemedicine initiatives may be particularly important in insular areas. We encourage interested parties to highlight previous comments they have made on this issue or present any relevant new information to us. We are particularly interested in the differences between the needs and opportunities of rural health care providers in insular areas and those located in the remainder of the United States.

115. *Urban Rates.* In the *First Report and Order,* the Commission adopted rules requiring carriers to provide rural health care providers with access to telecommunications services permitting speeds up to 1 Mbps at rates comparable to those offered in urban areas. Consistent with the statute, the Commission's rules for rural health care providers calculate support amounts on the basis of the difference between the ''urban rate'' and the ''rural rate'' for the supported service. The urban rate is determined with reference to the rates charged other commercial customers of a similar service in the nearest large city in the state. The nearest large city is defined as having a population of at least 50,000 people.

116. In the *First Report and Order,* the Commission found that the mechanism of using urban rates as a benchmark for reasonable rates may be ill-suited to certain insular areas that are relatively rural all over. The Commission concluded that it required additional information about whether telecommunications rates differ in urban and non-urban areas or insular areas, including areas of the Pacific Islands and the U.S. Virgin Islands. Accordingly, we seek comment on whether the rules concerning calculation of rural health care support need modifications to address the geographic or demographic situation in insular areas. We invite commenters to propose specific revisions in this regard.

117. *Nearest Large City.* Consistent with the statute, the Commission's rules for providing universal service support to rural health care providers limit the length of the supported service to the distance between the health care provider and the point farthest from that provider on the jurisdictional boundary of the nearest large city in the state. The Governor of Guam proposed that we modify this rule to provide support for telecommunications services between an insular area's medical facilities and a supporting medical center in an urban area outside the insular area, such as in Hawaii or on the west coast of the continental United States. We seek comment on this proposal. We encourage commenters supporting this proposal to present detailed estimates of the cost of such a proposal and steps that must be taken to implement it. Commenters favoring this proposal should also provide legal analysis explaining whether it would be consistent with section 254 to treat insular areas differently from the remainder of the United States, where support is only provided based on intrastate distances, as section 254(h)(1)(A) appears to require.

118. Finally, we seek comment on whether health care providers and telecommunications carriers that serve insular areas face unique challenges that have not been documented previously in the record of this proceeding, and, if so, how we should tailor additional support mechanisms to address those problems, consistent with the statute. We encourage commenters to present proposals for additional support mechanisms through which rural health care providers located in insular areas could have access to the telecommunications services available in urban areas of the nation at affordable rates.

C. Access to Toll-Free Services in Insular Areas

119. Because of their traditional treatment as international destinations, the Pacific Island areas have faced high rates for interexchange service and have had limited ability to obtain access to toll-free and advanced services. Calls between these insular areas and the remainder of the United States also required callers to use the ''011'' international access code. Recent changes have begun to address these problems. Specifically, the 1996 Act requires that insular areas become subject to rate integration and averaging, which means that interexchange carriers are required to offer domestic interstate service using a uniform rate structure throughout the United States. In addition, many insular areas have been integrated into the North American Numbering Plan (NANP). In the *First Report and Order,* the Commission permitted residents of CNMI and Guam to access toll-free (*e.g.,* 800) services by using 880 and 881 codes and paying the cost of reaching Hawaii where the calls could be connected thereafter toll-free to the called party until July 1, 1998, and that date was subsequently extended indefinitely.

120. In the *First Report and Order,* the Commission determined that ''these changes will have a significant impact on how residents of the[se] islands place interexchange calls and the rates that they, and toll-free access customers, will pay for the calls they place.'' Based upon the recommendation of the Joint Board, the Commission concluded that it should delay, until after July 1, 1998, consideration of whether the Commission should provide additional support for toll-free access and access to advanced and information services for insular areas so that the impact of rate integration and averaging and incorporation into the NANP could be evaluated. We seek comment on whether rate integration, rate-averaging, and incorporating insular areas into the NANP are leading toll-free customers to include insular areas in their toll-free calling areas. We seek comment on whether additional universal service support is needed to support toll-free calling from insular areas. We ask commenters to present any evidence that the marketplace will not fully solve this problem.

VIII. Procedural Matters

A. Ex Parte Procedures

121. The Further Notice is a non-restricted notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission's rules.

B. Comment Filing Procedures

122. Pursuant to §§ 1.415 and 1.419 of the Commission's rules, interested parties may file comments as follows: comments are due November 29, 1999 and reply comments are due December 29, 1999. Comments may filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.

123. Comments filed through the ECFS can be sent as an electronic file

via the Internet to *http://www.fcc.gov/e-file/ecfs.html*. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic copy by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to *ecfs@fcc.gov*, and should include the following words in the body of the message: ''get form <your email address>.'' A sample form and directions will be sent in reply.

124. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. All paper filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth Street S.W., Room TW–A325, Washington, DC 20554.

125. Parties who choose to file by paper should also submit their comments on diskette to Sheryl Todd, Accounting Policy Division, Common Carrier Bureau, Federal Communications Commission, 445 Twelfth Street SW, Room 5–A523, Washington, DC 20554. Such a submission should be on a 3.5 inch diskette formatted in an IBM-compatible format using WordPerfect 5.1 for Windows or a compatible software. The diskette should be accompanied by a cover letter and should be submitted in ''read-only'' mode. The diskette should be clearly labeled with the commenter's name, proceeding, including the lead docket number in the proceeding (CC Docket No. 96–45), type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase (''Disk Copy—Not an Original.'') Each diskette should contain only one party's pleadings, preferably in a single electronic file. In addition, commenters should sent diskette copies to the Commission's copy contractor, International Transcription Service, Inc., 1231 20th St. NW, Washington DC 20037.

C. Initial Regulatory Flexibility Act Analysis

126. The Regulatory Flexibility Act (RFA) requires a Regulatory Flexibility Act analysis whenever an agency publishes a notice of proposed rulemaking or promulgates a final rule, unless the agency certifies that the proposed or final rule will not have ''a significant economic impact on a substantial number of small entities,'' and includes the factual basis for such certification. Pursuant to section 603 of the RFA, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and actions considered in this Further Notice. The text of the IRFA is set forth. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided. The Commission will send a copy of the Further Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration. In addition, summaries of the Further Notice and IRFA will be published in the **Federal Register**.

IX. Ordering Clauses

127. Accordingly, it is ordered that, pursuant to the authority contained in sections 1–4, 201–205, 214(e), and 254 of the Communications Act of 1934, as amended, 47 U.S.C. 151–154, 201–205, 214(e), and 254, this Further Notice of Proposed Rulemaking is hereby adopted and comments are requested as described.

128. It is further ordered that the Commission's Office of Public Affairs, Reference Operations Division, shall send a copy of this Further Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Act Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 54

Universal service.

Federal Communications Commission.

Shirley Suggs,

Chief, Publication Branch.

[FR Doc. 99–25479 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 91–221, 87–8; FCC 99–240]

Comment Sought on Processing Order for Applications Filed Pursuant to the Commission's New Local Broadcast Ownership Rules

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document seeks comment on how to resolve conflicts resulting from two or more applications being filed on the same day relating to stations in the same market pursuant to new rules in the local broadcast ownership proceeding. The intended effect is to determine a sufficient and fair method in determining the order in which applications filed on the same day will be processed.

DATES: Comments must be filed on or before October 4, 1999. Reply comments must be filed on or before October 12, 1999.

ADDRESSES: Federal Communications Commission, 445 12th Street, SW, Room TW–A306, Washington, DC 20554. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Vicki Phillips, Chief, Legal Branch, Policy and Rules Division, Mass Media Bureau. Alternatively, comments may also be filed by using the Commission's Electronic Comment Filing System (ECFS), via the Internet to http://www.fcc.gov.e-file/ecfs.html.

FOR FURTHER INFORMATION CONTACT: Vicki Phillips, (202) 418–2120, Policy and Rules Division, Mass Media Bureau.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Public Notice*, FCC 99–240, adopted September 8, 1999 and released September 9, 1999. The full text of the Commission's *Public Notice* is available for inspection and copying during normal business hours in the FCC Docket Branch (Room TW-A306), 445 12 St. S.W., Washington, D.C. The complete text of this *Notice* may also be purchased from the Commission's copy contractor, International Transcription Services (202) 857–3800, 1231 20th St., N.W., Washington, D.C. 20036. It is also available on the Commission's web page at www.fcc.gov/Bureaus/Mass__Media/Public__Notices/fcc99240.txt. This Proposed Rule is being republished because it was inadvertently published under the ''Notices'' rather than the

''Proposed Rules'' section in the **Federal Register**, (64 FR 50668, September 17, 1999). The dates for filing comments and replies have not changed.

Synopsis of the Proposed Notice

1. By this *Public Notice*, the Commission requests supplemental comment in MM Docket Numbers 91–221 and 87–8 on procedures for processing applications filed pursuant to the Local Ownership *Order* adopted in the local broadcast ownership proceeding on August 5, 1999 (64 FR 50651, September 17, 1999). In that *Order*, we stated that ''[a]applications filed pursuant to this *Report and Order* will not be accepted by the Commission until the effective date'' of the *Order*, which will be sixty days after publication in the **Federal Register**. We also said: ''We realize that the rules adopted in this *Report and Order* could result in two or more applications being filed on the same day relating to stations in the same market and that due to the voice count all applications might not be able to be granted. We will address how to resolve such conflicts in a subsequent action.'' This *Notice* seeks comment on how to resolve such conflicts.

2. Ordinarily, we would process these applications in the order in which they are filed. Generally, however, we treat broadcast applications filed on the same day as being filed simultaneously, regardless of the time of filing. Under the commission's new local ownership rules, as we noted in the *Local Ownership Order*, we anticipate that applications for transfer or assignment might be filed on the same day relating to stations in the same market that will not all be able to be granted due to the voice counts that apply to the local ownership rules. The order in which the applications are processed would thus be determinative in these situations. Similar issues could arise in the radio-television cross ownership rule context, in situations in which grant of one application will bring the voice count down to ten or twenty, such that certain other applications relying on the minimum voice count for compliance with the rule could not be granted.

3. We believe that the most prudent, easy to administer, and fair method for determining the order in which applications filed on the same day will be processed is by random selection. Under this procedure, each potentially conflicting applicant in a market would be assigned a random number which would be determined by use of one or more forced-air blowers each containing numbered ping-pong balls. The applications would then be processed in ascending order based upon their randomly assigned numbers.

4. We thus seek comment on the use of random selection to determine processing order, as well as on any alternatives, such as auctions or first-come, first-served, that are both fair and easy to administer. We also seek comment on when the lotteries, if they are implemented, should be held relative to the filing of applications.

5. Because of timing concerns, we also anticipate that the rules adopted will be made effective upon publication in the **Federal Register** (see 5 U.S.C. 553(d)(3) (exception to 30-day effective date period for good cause).

6. *Filing of Comments and Reply Comments.* Pursuant to §§ 1.415 and 1.419 of the commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments on or before October 4, 1999. Reply comments must be filed on or before October 12, 1999. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. See Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (May 1, 1998).

7. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, ''get form <your e-mail address>.'' A sample form and directions will be sent in reply.

8. Parties who choose to file by paper must file an original and four copies of each filing. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary TW–A306, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554. The Mass Media Bureau contact for this proceeding is Vicki Phillips at (202) 418–2120.

9. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center (Room CY–A257) 445 12th Street, N.W., Washington, D.C. 20554.

List of Subjects in 47 CFR Part 73

Television broadcasting.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

[FR Doc. 99–25450 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AF59

Endangered and Threatened Wildlife and Plants; Reopening of the Comment Period on the Proposed Endangered Status of the Sierra Nevada Distinct Population Segment of the California Bighorn Sheep

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; notice of reopening of comment period.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), pursuant to the Endangered Species Act of 1973, as amended (Act), provide notice of the reopening of the comment period for the proposed endangered status for the Sierra Nevada distinct population segment of California bighorn sheep (*Ovis canadensis californiana*). The comment period has been reopened in response to a request from the Foundation for North American Wild Sheep and to conduct a peer review of the proposed rule.

DATES: Comments from all interested parties must be received by October 15, 1999.

ADDRESSES: Written comments, materials, data, and reports concerning this proposal should be sent to the Supervisor, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California 93003. Comments and materials received will be available for public inspection, by appointment, during normal business hours, at the above address.

FOR FURTHER INFORMATION CONTACT: Carl Benz, at the address listed above (telephone 805/644–1766; facsimile 805/644–3958).

SUPPLEMENTARY INFORMATION:

Background

The bighorn sheep (*Ovis canadensis*) is a large mammal (family Bovidae) originally described by Shaw in 1804 (Wilson and Reeder 1993). Several subspecies of bighorn sheep have been recognized on the basis of geography and differences in skull measurements (Cowan 1940; Buechner 1960). These

subspecies of bighorn sheep, as described in these early works, include *O.c. cremnobates* (Peninsular bighorn sheep), *O.c. nelsoni* (Nelson bighorn sheep), *O.c. mexicana* (Mexican bighorn sheep), *O.c. weemsi* (Weems bighorn sheep), *O.c. californiana* (California bighorn sheep), and *O.c. canadensis* (Rocky Mountain bighorn sheep). However, recent genetic studies question the validity of some of these subspecies and suggest a need to re-evaluate overall bighorn sheep taxonomy. For example, Sierra Nevada bighorn sheep appear to be more closely related to desert bighorn sheep than the *O.c. californiana* found in British Columbia (Ramey 1991, 1993). Regardless, the Sierra Nevada bighorn sheep meets our criteria for consideration as a distinct vertebrate population segment (as discussed below) and are treated as such in this final rule.

The historical range of the Sierra Nevada bighorn sheep (*Ovis canadensis californiana*) includes the eastern slope of the Sierra Nevada, and, for at least one subpopulation, a portion of the western slope, from Sonora Pass in Mono County south to Walker Pass in Kern County, a total distance of about 346 kilometers (km) (215 miles (mi)) (Jones 1950; Wehauser 1979, 1980). By the turn of the century, about 10 out of 20 subpopulations survived. The number dropped to five subpopulations at mid-century, and down to two subpopulations in the 1970s, near Mount Baxter and Mount Williamson in Inyo County (Wehauser 1979). Currently, five subpopulations of Sierra Nevada bighorn sheep occur at Lee Vining Canyon, Wheeler Crest, Mount Baxter, Mount Williamson, and Mount Langley in Mono and Inyo Counties, three of which have been reintroduced using sheep obtained from the Mount Baxter subpopulation from 1979 to 1986 (Wehausen et al. 1987).

The Sierra Nevada bighorn sheep is similar in appearance to other desert associated bighorn sheep. The species' pelage shows a great deal of color variation, ranging from almost white to fairly dark brown, with a white rump. Males and females have permanent horns; the horns are massive and coiled in males, and are smaller and not coiled in females (Jones 1950; Buechner 1960). As the animals age, their horns become rough and scarred with age, and will vary in color from yellowish-brown to dark brown. In comparison to many other desert bighorn sheep, the horns of the Sierra Nevada bighorn sheep are generally more divergent as they coil out from the base (Wehausen 1983). Adult male sheep stand up to a meter (m) (3 feet (ft)) tall at the shoulder; males weigh up to 99 kilograms (kg) (220 pounds (lbs)) and females 63 kg (140 lbs) (Buechner 1960).

The current and historical habitat of the Sierra Nevada bighorn sheep is almost entirely on public land managed by the U.S. Forest Service, Bureau of Land Management, and National Park Service. The Sierra Nevada is located along the eastern boundary of California, and peaks vary in elevation from 1825 to 2425 m (6000 to 8000 ft)) in the north, to over 4300 m (14,000 ft) in the south adjacent to Owens Valley, and then drop rapidly in elevation in the southern extreme end of the range (Wehausen 1980).

Sierra Nevada bighorn sheep inhabit the alpine and subalpine zones during the summer, using open slopes where the land is rough, rocky, sparsely vegetated and characterized by steep slopes and canyons (Wehausen 1980; Sierra Nevada Bighorn Sheep Interagency Advisory Group (Advisory Group) 1997). Most of these sheep live between 3,050 and 4,270 m (10,000 and 14,000 ft) in elevation in summer (John Wehausen, University of California, White Mountain Research Station, pers. comm. 1999). In winter, they occupy high, windswept ridges, or migrate to the lower elevation sagebrush-steppe habitat as low as 1,460 m (4,800 ft) to escape deep winter snows and find more nutritious forage. Bighorn sheep tend to exhibit a preference for south-facing slopes in the winter (Wehausen 1980). Lambing areas are on safe precipitous rocky slopes. They prefer open terrain where they are better able to see predators. For these reasons, forests and thick brush usually are avoided if possible (J. Wehausen, pers. comm. 1999).

Bighorn sheep are primarily diurnal, and their daily activity show some predictable patterns that consists of feeding and resting periods (Jones 1950). Bighorn sheep are inherently grazers; however, they may browse woody vegetation when it is growing and very nutritious. They are opportunistic feeders selecting the most nutritious diet from what is available.

Sierra Nevada bighorn sheep are gregarious, with group size and composition varying with gender and from season to season. Spatial segregation of males and females occurs outside the mating season, with males more than two years old living apart from females and younger males for most of the year (Jones 1950; Cowan and Geist 1971; Wehausen 1980). Ewes generally remain in the same band into which they were born (Cowan and Geist 1971). During the winter, Sierra Nevada bighorn sheep concentrate in those areas suitable for wintering, preferably Great Basin habitat (sagebrush steppe) at the very base of the eastern escarpment.

All five subpopulations of this species are threatened by mountain lion (Puma concolor) predation, disease, and random, naturally-occurring events.

We published an emergency rule to list the Sierra Nevada distinct population segment of California bighorn sheep as endangered on April 20, 1999 (64 FR 19300), as well as a proposed rule to list the species as endangered on that same date (64 FR 19333). The original comment period closed on June 21, 1999. In a memo dated June 16, 1999, the Foundation for North American Wild Sheep requested that the comment period be extended to allow us to consider additional information regarding the Sierra Nevada bighorn sheep. In addition, we will also conduct a peer review of this proposal and solicit the opinions of three appropriate and independent specialists regarding the data, assumptions, and supportive information presented for the Sierra Nevada bighorn sheep, per our Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities (59 FR 34270).

References Cited

A complete list of references cited in this rule is available upon request from the Ventura Fish and Wildlife Office of the U.S. Fish and Wildlife Service (see **ADDRESSES** section).

Author

The primary author of this notice is Barbara Behan of the Regional Office, U.S. Fish and Wildlife Service, 911 N.E. 11th Avenue, Portland, Oregon 97232–4181 (telephone 503/231–6131).

Authority

The authority of this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: September 24, 1999.

Elizabeth H. Stevens,

Acting Manager, California/Nevada Operations Office, Fish and Wildlife Service.

[FR Doc. 99–25466 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[I.D. 092399D]

Western Pacific Fishery Management Council; Public Hearings

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting/public scoping hearing/public hearing.

SUMMARY: The Western Pacific Fishery Council (Council) will hold its 72nd meeting of its Scientific and Statistical Committee (SSC) in Honolulu, HI. A public hearing will be held on the draft Coral Reef Ecosystem Fishery Management Plan (FMP). A public scoping hearing on the intent to prepare an Environmental Impact Statement (EIS) will be held on the Bottomfish and Seamount Groundfish FMP.

DATES: The SSC meeting will be held on October 12–14, 1999, from 8:30 a.m. to 5:00 p.m., each day, except for the first day, which will start at 9:00 a.m.

ADDRESSES: The 72th SSC meeting will be held at the Council office conference room, 1164 Bishop St., Suite 1400, Honolulu, HI; telephone: (808–522–8220).

Council address: Western Pacific Fishery Management Council, 1164 Bishop St., Suite 1400, Honolulu, HI 96813.

FOR FURTHER INFORMATION CONTACT: Kitty M. Simonds, Executive Director; telephone 808–522–8220.

SUPPLEMENTARY INFORMATION: The SSC will discuss and may make recommendations to the Council on the agenda items listed here. The order in which agenda items will be addressed are subject to change.

8:30 a.m. Tuesday, October 12, 1999

A. Draft Coral Reef Ecosystem FMP/ Draft Environmental Impact Statement (DEIS)

1. Introduction to the FMP
2. Description of the fisheries
3. Description of threats/management issues
4. Management objectives, program and impacts

a. Fishing permit (alternatives include, but are not limited to, exploratory permit and reporting requirement, general permit based on standard eligibility requirements, moratorium to prohibit all harvest of coral reef species, and status quo (no action))

b. Marine Protected Areas (alternatives include, but are not limited to, candidate areas, such as remote U.S. atolls, and the Northwestern Hawaiian Islands shallower than 20 meters, or status quo (no action))

c. Restrictions of gear and methods (alternatives include, but are not limited to, allow only selective, non-destructive gear and methods, allow no gear or methods, allow use of other gears and/ or methods, restrict other methods and practices, or status quo (no action))

d. Restrict harvest of a particular management unit species (alternatives include, but are not limited to, restrict harvest of corals and live rock, restrict harvest of other selected species, restrict the harvest of all management unit species, or no restrictions (no action))

e. Framework provisions (alternatives include, but are not limited to, establish a framework regulatory process with options for future consideration, or status quo (no action))

5. Description of resource ecosystem
6. Essential Fish Habitat
7. Sustainable Fishery Act determinations
8. Relationship to existing laws and policies
9. Future needs
10. Plan Team recommendations
11. Advisory Panel recommendations
12. Public hearing on draft FMP/DEIS

B. Bottomfish FMP issues

1. Update on status of activities

a. Main Hawaiian Islands bottomfish meeting

b. Need to prepare EIS for Bottomfish FMP

2. Public scoping hearing on Bottomfish FMP

C. Precious Corals FMP issues

1. Final action on adjustments to the FMP regarding harvest quotas, definitions, size limits, gear restrictions, bed classifications and reporting and recordkeeping requirements. Recent research and surveys have provided new information on precious corals in the waters around Hawaii, including information on the size and condition of certain classified precious coral beds, potential increases in fishing pressure on black corals, the presence of a new precious coral bed near French Frigate Shoals and the possible importance of precious coral beds as foraging areas for Hawaiian monk seals. Based on a discussion of these issues at the 100th Council meeting, the Council identified the following preferred actions: Suspend the harvest quota for gold coral at the Makapu'u Bed until additional information is available on the impact of harvesting on subsequent recruitment of gold coral at the Makapu'u Bed; redefine precious coral as precious coral that has live coral polyps or tissue, and redefine dead precious coral as precious coral that no longer has any live coral polyps or tissue; apply size limits to live coral only; prohibit the harvest of black coral unless it has attained either a minimum stem diameter of 1 inch (2.54 cm), measured 1 inch (2.54 cm) from the top of the living holdfast, or a minimum height of 48 inches (121.92 cm), measured from the base to the greatest vertical extremity of the colony; only selective gear may be used to harvest precious corals from all permit areas; apply the current size limit for pink coral to all permit areas; revise the boundaries of Brooks Bank, Permit Area C-B–3, to include the area within a radius of 2.5 nautical miles (nm) of a point 23° 58.8' N. lat. and 166° 42' W. long., and change the harvest quota for pink coral to 200 kg and suspend the harvest quota for gold coral until additional scientific information becomes available on the impact of harvesting gold coral on monk seal foraging habitat; classify the newly-discovered French Frigate Shoals-Gold Pinnacles Bed as a conditional bed, Permit Area C-B–5, which includes the area within a radius of 0.25 nm of a point at 23° 55' N. lat. and 165° 23.11' W. long., and set the annual harvest quota for all types of precious coral at zero until additional information becomes available on the impact of harvesting gold coral on monk seal foraging habitat; list all managed species of precious corals on the NMFS Daily Precious Coral Harvest Log and Precious Coral Sales Trip Report, and revise reporting and recordkeeping requirements as follows: A permit holder shall, within 72 hours of landing, mail to NMFS Pacific Island Area Office (PIAO) a copy of the NMFS Daily Precious Coral Harvest Log with complete information including:

(1) Vessel information -(i) Name of vessel; (ii) Call sign of vessel; and (iii) permit number of vessel.

(2) Fishing information - (i) beginning and ending time, and date, of all dives, including the dives when no harvest is made; (ii) beginning and ending position in degrees latitude and longitude of each dive, and distance traveled; (iii) maximum and minimum depth of each dive; (iv) number of live and dead colonies harvested on each dive, by species; (v) weight of harvested coral on each dive by species, to the nearest tenth of a kilogram (landed weight air dried for at least 24 hours); (vi) number of live and dead colonies

damaged but not harvested on each dive, by species; (vii) method of harvest; (viii) observations that may be made about the habitat (current, bottom type, bottom topography, bottom slope, etc.).

(3 Sale information - (i) amount of coral sold, by species; (ii) sale price; (iii) date of sale; (iv) name(s) and address(es) of buyer(s).

(4) any other information specified in the permit. Any video tapes made during harvest operations shall be made available to the NMFS PIAO upon request. The video recording should continuously display date and time. Although these measures were identified as the preferred actions, the other alternatives are still being analyzed and considered.

Plan Team Recommendations

8:30 a.m. Wednesday, October 13, 1999

D. Pelagic FMP issues

1. 2nd quarter 1999 Hawaii and American Samoa longline fishery report
2. Status of bigeye and yellowfin tuna tagging around the Hawaiian Islands
3. Shark incidental catch in the Hawaii longline fishery
   a. Update on catch trends and NMFS shark studies
   b. Cultural study of sharks and shark fishing in Western Pacific (WP) Region
   c. Management of shark fishing in the WP Region
   d. State of Hawaii Department of Land and Natural Resources and Council action on sharks in Hawaii.
4. Seabird interactions in the Hawaii longline fishery
   a. Update on trends and numbers
   b. Mitigation project final draft
   c. Final action on measures to reduce the incidental catch of seabirds in the Hawaii longline fishery.

Based on a discussion of these issues at the 100th Council meeting, the Council identified the following preferred actions: Require vessels with Hawaii Longline Limited Entry Permits operating with longline gear above 25° N. lat. to adhere to two or more of the following measures to mitigate seabird-longline interactions: maintain adequate quantities of blue dye on board and use only completely thawed, blue-dyed bait; use strategic offal discards while setting and hauling the line; tow a NMFS-approved deterrent (such as a tori line or a buoy) while setting and hauling the line; deploy line with a shooter so that the line is set faster than the vessel's speed; ensure that weights greater than 45 grams are attached to branch lines within 1 meter of each hook; begin setting 1 hour after sunset and complete setting 1 hour before sunrise, using minimal vessel lighting. In addition, vessels must make every reasonable effort to ensure that birds brought onboard alive are released alive and that hooks are removed without jeopardizing the life of the birds, and all vessel captains must complete an annual protected species educational workshop conducted by NMFS. Although these measures were identified as the preferred actions, the other alternatives are still being analyzed and considered.

5. Turtles longline fishery interactions
   a. Update on trends and numbers
   b. Update on mitigation studies
   c. Outcome of recent litigation
6. Marine debris
7. International meetings
8. Recreational fisheries data task force

8:30 am Thursday, October 14, 1999

E. Crustaceans FMP issues (NWHI lobster fishery)

1. Status of the fishery
2. Public Education Project
3. Status of state regulations for NWHI import license

Although non-emergency issues not contained in this agenda may come before this Council for discussion, those issues may not be the subject of formal Council action during this meeting. Council action will be restricted to those issues specifically listed in this document and any issue arising after publication of this document that requires emergency action under section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the Council's intent to take final action to address the emergency.

F. Other Business

List of authorized fishing gear/fisheries

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Kitty M. Simonds, 808–522–8220 (voice) or 808–522–8226 (fax), at least 5 days prior to meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 27, 1999.

Gary C. Matlock,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25463 Filed 9–27–99; 4:56 pm]

BILLING CODE 3510–22–F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[I.D. 092499A]

Environmental Impact Statement (EIS) for the Proposed Fishery Management Plan (FMP) for Highly Migratory Species (HMS) off the West Coast

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of intent to prepare an EIS; request for comments.

SUMMARY: NOAA announces its intention to prepare an EIS in accordance with the National Environmental Policy Act for the proposed FMP for HMS fisheries off the West Coast. The NMFS and Pacific Fishery Management Council (Council) will jointly hold public scoping hearings in California, Oregon, and Washington on management issues and alternatives to be analyzed under the FMP and associated EIS.

DATES: Written comments on the intent to prepare the EIS will be accepted on or before November 1, 1999. Public scoping meetings are scheduled for October 12 and 13 and October 18 and 19, 1999 (see SUPPLEMENTARY INFORMATION).

ADDRESSES: Written comments on suggested alternatives and potential impacts should be sent to Larry D. Six, Executive Director, Pacific Fishery Management Council, 2130 SW Fifth Avenue, Suite 224, Portland, OR 97201; and to Svein Fougner, Assistant Regional Administrator for Sustainable Fisheries, Southwest Region, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802. See SUPPLEMENTARY INFORMATION for specific dates and times.

FOR FURTHER INFORMATION CONTACT: Larry Six, at 503–326–6352.

SUPPLEMENTARY INFORMATION:

Dates and Times

The following locations and times have been set for scoping meetings:

1. California - San Pedro Hilton Hotel, Madeo Ristorante and Banquet Center, 2800 Via Cabrillo Marina, San Pedro, October 12, 1999, beginning at 7:00 P.M.;
2. California - Hilton Monterey, Vista del Mar Banquet Room, 1000 Aguajito Road, Monterey, October 13, beginning at 7:00 P.M.;

3. Washington - Driftwood Room, Islander Motel, 421 Westhaven Drive, Westport, October 18, 1999, beginning at 1:00 P.M.; and

4. Oregon - Hatfield Marine Science Center, Room 9, Newport, October 19, 1999, beginning at 7:00 P.M.

A summary of a background information document on HMS fisheries off the West Coast and on initial issues to be considered will be presented, as well as potential conservation and management actions that might be included in the FMP. Comments will be solicited from the public on these and any other issues and management alternatives the public cares to offer.

Management measures that may be adopted in the FMP for HMS Fisheries off the West Coast include permit and reporting requirements for commercial and recreational harvest of HMS resources, time and/or area closures to minimize gear conflicts or bycatch, adoption or confirmation of state regulations for HMS fisheries, and allocations of some species to non-commercial use. The FMP is likely to include a framework management process to add future new measures, including the potential for collaborative management efforts with other Regional Fishery Management Councils with interests in HMS resources. It would also include essential fish habitat and habitat areas of particular concern, including fishing and non-fishing threats, as well as other components of FMPs required under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

The proposed FMP, and its associated EIS, would be the Council's fourth FMP for the exclusive economic zone off the West Coast. Development of the FMP is timely, considering the new mandates under the Magnuson-Stevens Act, efforts by the United Nations to promote conservation and management of HMS resources through domestic and international programs, and the increased scope of activity of the Inter-American Tropical Tuna Commission in HMS fisheries in the eastern Pacific Ocean.

Public Information Meetings

The planning process for the FMP will involve many meetings of the Council Plan Team, and these meetings are open to the public. The Council also will frequently discuss progress on the FMP at regular Council meetings. All Plan Team and Council meetings will be advertised in the **Federal Register** and local newspapers.

Special Accommodations

These meetings are physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Larry Six, (see **ADDRESSES**), 503–326–6352 (voice) or 503–326–6831 (fax), at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 27, 1999.

Gary C. Matlock,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25462 Filed 9–27–99; 4:56 pm]

BILLING CODE 3510–22–F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[I.D. 092499I]

Western Pacific Fishery Management Council; Public Hearings

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting/public scoping hearing/public hearings.

SUMMARY: The Western Pacific Fishery Council (Council) will hold its 101st meeting in Honolulu, HI. The Council expects to initiate action on shark management and expects to adopt a draft Coral Reef Ecosystem Fishery Management Plan (FMP) at this meeting. The Council may take final action on regulatory amendments for precious corals and incidental catch of seabirds in the Hawaii longline fishery. A public hearing will be held on the management alternatives being considered in the draft Coral Reef Ecosystem FMP of the U.S. Western Pacific Region and being analyzed in associated documents, including a Draft Environmental Impact Statement (DEIS). A public scoping hearing on the intent to prepare an Environmental Impact Statement (EIS) will be held on the Bottomfish and Seamount Groundfish FMP.

DATES: The full Council meeting will be held on October 19–21, 1999. The Council's Standing Committees will meet on October 18, 1999. See **SUPPLEMENTARY INFORMATION** for specific dates and times for these meetings.

ADDRESSES: The Council meeting will be held at the Lanai Ballroom, Sheraton Waikiki Hotel, 2255 Kalakaua Ave., Honolulu, Phone: (808) 922–4422.

Council address: Western Pacific Fishery Management Council, 1164 Bishop St., Suite 1400, Honolulu, HI 96813.

FOR FURTHER INFORMATION CONTACT: Kitty M. Simonds, Executive Director; telephone 808–522–8220.

SUPPLEMENTARY INFORMATION:

Dates and Times

Enforcement/Vessel Monitoring System (VMS) from 8:00 a.m. to 10:00 a.m., International Fisheries/Pelagics Fisheries from 9:30 a.m. to 11:30 a.m., Bottomfish Fisheries from 10:30 a.m. to 11:30 a.m., Ecosystem & Habitat from 1:00 p.m. to 3:00 p.m., Native and Indigenous Rights from 1:00 p.m. to 3:00 p.m., Precious Corals Fisheries from 3:00 p.m. to 4:00 p.m., Crustaceans Fisheries from 3:00 p.m. to 4:00 pm, and Executive/Budget & Program from 4:00 p.m. to 6:00 p.m. The full Council will meet on October 19, 20 and 21, 1999, from 8:30 a.m. to 5:00 p.m., each day. Public hearings will be conducted as follows: Draft Coral Reef Ecosystem FMP/DEIS–October 19, 1999; regulatory amendment governing incidental catch of seabirds in Hawaii longline fishery–October 20, 1999; scoping on bottomfish FMP EIS–October 21, 1999; and regulatory amendment for precious corals–October 21, 1999.

Agenda

The agenda during the full Council meeting will include the items below. The order in which agenda items are addressed may change. The Council will meet as late as necessary to complete scheduled business.

1. Introductions
2. Approval of Agenda
3. Approval of 100st Meeting Minutes
4. Island Reports
A. American Samoa
B. Guam
C. Hawaii
D. Northern Mariana Islands
5. Reports from Fishery Agencies and Organizations
A. Department of Commerce
(1) NMFS
(a) Southwest Region, Pacific Island Area Office
(b) Southwest Fisheries Science Center LaJolla and Honolulu Laboratory
(2) NOAA General Counsel, Southwest Region
B. Department of the Interior
(1) Fish and Wildlife Service
6. Enforcement
A. Cooperative enforcement presentation to American Samoa B. U.S. Coast Guard enforcement activities
C. NMFS enforcement activities and status of violations

D. Cooperative agreements for Guam
E. Illegal immigration related to the foreign fishing fleet
7. VMS
A. Hawaii VMS report
B. National VMS plans
8. Ecosystems and Habitat
A. Honolulu Lab Essential Fish Habitat (EFH) research
B. Draft coral reef ecosystem FMP/DEIS (Council will take initial action to select preferred management alternatives and may direct staff to finalize the draft FMP/DEIS for distribution for public review
(1) Introduction to the FMP
(2) Description of the fisheries
(3) Description of threats/management issues
(4) Management objectives, program and impacts
(a) Fishing permits (alternatives include, but are not limited to, exploratory permit and reporting requirements, general permit based on standard eligibility requirements, moratorium to prohibit all harvest of coral reef species, and status quo (no action))
(b) Marine Protected Areas (alternatives include, but are not limited to, candidate areas, such as remote U.S. atolls and the Northwestern Hawaiian Islands (NWHI) shallower than 20 meters, or status quo (no action))
(c) Restrictions of gear and methods (alternatives include, but are not limited to, allow only selective, non-destructive gear and methods, allow no gear or methods, allow use of other gears and/or methods, restrict other methods and practices, or status quo (no action))
(d) Restrict harvest of a particular management unit species (alternatives include, but are not limited to, restrict harvest of corals and live rock, restrict harvest of other selected species, restrict the harvest of all management unit species, or no restrictions (no action))
(e) Framework provisions (alternatives include, but are not limited to, establish a framework regulatory process with specified options for future consideration, or status quo (no action))
(5) Description of resource ecosystem
(6) EFH
(7) Sustainable Fisheries Act determinations
(8) Relationship to existing laws and policies
(9) Future needs
(10) Plan Team recommendations
(11) Advisory Panel recommendations
(12) Science and Statistical Committee recommendations
(13) Public hearing on draft FMP/DEIS
9. Fishery Rights of Indigenous Peoples
A. Review of marine conservation plans. Council will review the plan submitted by the Governor of Guam and any other plan submitted and may take final action.
B. Status of community development program/demonstration projects
10. Pelagic FMP issues
A. 2nd quarter 1999 Hawaii and American Samoa longline fishery report
B. Shark management
(1) Update on catch trends and NMFS shark studies
(2) Status of study of the cultural-historic significance of sharks to the indigenous peoples of Hawaii, American Samoa, Guam and the Northern Mariana Islands.
(3) Discussion of optimal utilization of sharks in the Western Pacific, including transshipment of shark products. The increase in shark finning has raised concerns about the perceived waste associated with this practice. In addition, there are concerns about the impacts of increased fishing pressure on shark stocks. The Council will discuss various management options to address these issues and expects to initiate action. Management options include, but are not limited to, harvest quotas, size limits, finning restrictions, release conditions and reporting requirements.
(4) Federal-State coordination in shark management in waters around the Hawaiian Islands
C. Incidental catch of seabirds in the Hawaii longline fishery
(1) Update on catch trends and numbers
(2) Final report by Garcia and Associates on evaluation of mitigation measures
(3) Final action on measures to reduce the incidental catch of seabirds in the Hawaii longline fishery. The preferred action initially identified by the Council at the June 16–18, 1999, Council meeting is to require vessels with Hawaii Longline Limited Entry Permits operating with longline gear above 25° N. latitude to adhere to two or more of the following measures to mitigate seabird-longline interactions: (i) Maintain adequate quantities of blue dye on board and use only completely thawed, blue-dyed bait; (ii) use strategic offal discards while setting and hauling the line; (iii) tow a NMFS-approved deterrent (such as a tori line or a buoy) while setting and hauling the line; (iv) deploy line with a shooter, so that the line is set faster than the vessel's speed; (v) ensure that weights greater than 45 grams are attached to branch lines within 1 meter of each hook; and (vi) begin setting at least 1 hour after sunset and complete setting at least 1 hour before sunrise, using minimal vessel lighting. In addition, vessels would be required to make every reasonable effort to ensure that birds brought onboard alive are released alive and that hooks are removed without jeopardizing the life of the birds, and all vessel captains must complete an annual protected species educational workshop conducted by NMFS. Although these measures were identified as the preferred actions, the other alternatives are still being analyzed and considered. This will be the second meeting under the Council's two-meeting framework process in the pelagics FMP for implementing ''new management measures.'' The Council may take final action on the proposed adjustments to the regulations implementing the FMP.
(4) Public hearing
D. Turtles-longline fishery interactions
(1) Update on interaction trends and numbers
(2) Update on interaction mitigation studies
(3) Outcome of recent litigation
E. Marine debris
F. International meetings
G. Recreational fisheries data task force
H. Science and Statistical Committee recommendations
11. Bottomfish FMP issues
A. Bottomfish FMP issues
(1) Update on status of activities
(a) Main Hawaiian Islands bottomfish meeting
(b) Need to prepare an EIS for Bottomfish FMP
(2) Public scoping hearing on Bottomfish FMP
B. Science and Statistical Committee recommendations
12. Precious corals FMP issues
A. A final action on adjustments to regulations implementing the FMP regarding harvest quotas, definitions, size limits, gear restrictions, bed classifications and reporting and recordkeeping requirements. Recent research and surveys have provided new information on precious corals in the waters around Hawaii, including information on the size and condition of certain classified precious coral beds, potential increases in fishing pressure on black corals, the presence of a new precious coral bed near French Frigate Shoals and the possible importance of precious coral beds as foraging areas for Hawaiian monk seals. Based on a discussion of these issues at the 100th Council meeting, the Council identified the following preferred actions: Suspend the harvest quota for gold coral at the Makapu'u Bed until additional information is available on the impact of harvesting on subsequent recruitment of

gold coral at the Makapu'u Bed; redefine precious coral as precious coral that has live coral polyps or tissue, and redefine dead precious coral as precious coral that no longer has any live coral polyps or tissue; apply size limits to live coral only; prohibit the harvest of black coral unless it has attained either a minimum stem diameter of 1 inch (254 cm), measured 1 inch (254 cm) from the top of the living holdfast, or a minimum height of 48 inches (cm), measured from the base to the greatest vertical extremity of the colony; only selective gear may be used to harvest precious corals from all permit areas; apply the current size limit for pink coral to all permit areas; revise the boundaries of Brooks Bank, Permit Area C-B–3, to include the area within a radius of 2.5 nautical miles (nm) of a point 23° 58.8' N lat. and 166° 42' W long., and change the harvest quota for pink coral to 200 kg and suspend the harvest quota for gold coral until additional scientific information becomes available on the impact of harvesting gold coral on monk seal foraging habitat; classify the newly-discovered FFS-Gold Pinnacles Bed as a conditional bed, Permit Area C-B–5, which includes the area within a radius of 0.25 nm of a point at 23° 55' N lat. and 165° 23.11' W long., and set the annual harvest quota for all types of precious coral at zero until additional information becomes available on the impact of harvesting gold coral on monk seal foraging habitat; list all managed species of precious corals on the NMFS Daily Precious Coral Harvest Log and Precious Coral Sales Trip Report, and revise reporting and recordkeeping requirements as follows: A permit holder shall, within 72 hours of landing, mail to NMFS Pacific Island Area Office (PIAO) a copy of the NMFS Daily Precious Coral Harvest Log with complete information including:

(1) Vessel information - (i) Name of vessel; (ii) Call sign of vessel; and (iii) Permit number of vessel.

(2) Fishing information - (i) Beginning and ending time, and date, of all dives, including the dives when no harvest is made; (ii) beginning and ending position in degrees latitude and longitude of each dive and distance traveled; (iii) maximum and minimum depth of each dive; (iv) number of live and dead colonies harvested on each dive by species; (v) weight of harvested coral on each dive by species, to the nearest tenth of a kilogram (landed weight air dried for at least 24 hours); (vi) number of live and dead colonies damaged but not harvested on each dive by species; (vii) method of harvest; and (viii) observations that may be made about the habitat (current, bottom type, bottom topography, bottom slope, etc.).

(3) Sale information - (i) Amount of coral sold (by species); (ii) sale price; (iii) date of sale; and (iv) name(s) and address(es) of buyer(s).

(4) Any other information specified in the permit. Any video tapes made during harvest operations shall be made available to the NMFS PIAO upon request. The video recording should continuously display date and time. Although these measures were identified as the preferred actions, the other alternatives are still being analyzed and considered. This will be the second meeting under the Council's two-meeting framework process in the Precious Corals FMP for implementing ''new management measures.'' The Council may take final action on the proposed adjustments to regulations implementing the FMP.

B. Plan Team recommendations

C. Science and Statistical Committee recommendations

D. Public Hearing

13. Crustaceans FMP issues

A. Crustaceans FMP issues (NWHI lobster fishery)

(1) Status of the fishery

(2) Public education project

(3) Necker Island refuge boundary

(4) Status of state regulations for NWHI import license

B. Science and Statistical Committee recommendations

C. Public comments

14. Program Planning

A. Magnuson-Stevens Fishery Conservation Management Act amendments

B. Carbon monoxide-treated tuna update

C. Food and Drug Administration Hazard Analysis Critical Control Point requirements aboard vessels

D. Western Pacific Fisheries Information Network

E. Educational initiatives and technical reports

F. Science and Statistical Committee recommendations

15. Administrative Matters

A. Administrative reports

B. Meetings and workshops

C. 102nd Council Meeting

Although non-emergency issues not contained in this agenda may come before this Council for discussion, those issues may not be the subject of formal Council action during this meeting. Council action will be restricted to those issues specifically listed in this document and any issue arising after publication of this document that requires emergency action under section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency.

16. Other Business

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Kitty M. Simonds, 808–522–8220 (voice) or 808–522–8226 (fax), at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 24, 1999.

Gary C. Matlock,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25413 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–22–F

Notices

Federal Register

Vol. 64, No. 189

Thursday, September 30, 1999

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. 99–056–1]

Notice of Request for Extension of Approval of an Information Collection

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Extension of approval of an information collection; comment request.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, this notice announces the Animal and Plant Health Inspection Service's intention to request an extension of approval of an information collection in support of the National Animal Health Monitoring System's Layers '99 national study.

DATES: Comments on this notice must be received by November 29, 1999, to be assured of consideration.

ADDRESSES: We invite you to comment regarding the accuracy of burden estimate, ways to minimize the burden (such as through the use of automated collection techniques or other forms of information technology), or any other aspect of this collection of information. Please send your comment and three copies to: Docket No. 99–056–1, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road Unit 118, Riverdale, MD 20737–1238. Please state that your comment refers to Docket No. 99–056–1.

You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue, SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690–2817 before coming.

APHIS documents published in the **Federal Register**, and related information, including the names of organizations and individuals who have commented on APHIS rules, are available on the Internet at http://www.aphis.usda.gov/ppd/rad/webrepor.html.

FOR FURTHER INFORMATION CONTACT: For information regarding the Layers '99 data collection activity, contact Ms. Marj Swanson, Program Specialist, Centers for Epidemiology and Animal Health, VS, APHIS, 555 S. Howes, Fort Collins, CO 80521; (970) 490–7978. For copies of more detailed information on the information collection, contact Ms. Cheryl Groves, APHIS' Information Collection Coordinator, at (301) 734–5360.

SUPPLEMENTARY INFORMATION:

Title: National Animal Health Monitoring System.

OMB Number: 0579–0079.

Expiration Date of Approval: December 31, 1999.

Type of Request: Extension of approval of an information collection.

Abstract: The mission of the Animal and Plant Health Inspection Service (APHIS), Veterinary Services, is to protect and improve the health, quality, and marketability of U.S. livestock and poultry by preventing, controlling, and monitoring animal diseases. Collection and dissemination of animal and poultry health data and information are mandated by 7 U.S.C. 391, the Animal Industry Act of 1884, which established the precursor of Veterinary Services, the Bureau of Animal Industry. Legal requirements for examining and reporting on animal disease control methods were further mandated by 21 U.S.C. 119, amended February 7, 1928, ''Agents to examine and report on methods of treatment of animals and means for suppression of diseases.''

Veterinary Services' National Animal Health Monitoring System (NAHMS) is charged with collecting, on a national basis, statistically valid and scientifically sound data on the prevalence and economic importance of livestock and poultry health and disease. Information from these national studies is disseminated to and used by animal and poultry producers, consumers, animal health officials, private practitioners, animal industry groups, policymakers, public health officials, media, educational institutions, and others to improve productivity and competitiveness.

NAHMS national studies have evolved into a collaborative industry and government initiative to help improve the quality of, and to determine the most effective production of, animal and poultry health and disease. Participation in a NAHMS study is strictly voluntary and confidential.

Layers '99 will collect data that will be used to describe baseline health and management practices used by the U.S. table egg layer industry, to estimate flock prevalence of Salmonella enteriditis, to identify potential risk factors associated with the presence of Salmonella enteriditis, to support and enhance quality assurance programs, and to describe biosecurity measures being used by the industry and their effects on flock health.

We are asking the Office of Management and Budget to approve the continued use of this information collection activity.

The purpose of this notice is to solicit comments from the public (as well as affected agencies) concerning these information collection activities. These comments will:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of our estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, through use, as appropriate, of automated, electronic, mechanical, and other collection technologies, *e.g.*, permitting electronic submission of responses.

Estimate of burden: The public reporting burden for this collection of information is estimated to average 0.9048 hours per response.

Respondents: Industry personnel, private veterinary practitioners, company and independent producers, academicians, as well as other interested parties involved with poultry health and management practices in the United States.

Estimated annual number of respondents: 2,657.

Estimated annual number of responses per respondent: 3.2013.

Estimated annual number of responses: 8,506.

Estimated total annual burden on respondents: 7,697 hours. (Due to rounding, the total annual burden hours may not equal the product of the annual number of responses multiplied by the average reporting burden per response.)

All responses to this notice will be summarized and included in the request for OMB approval. All comments will also become a matter of public record.

Done in Washington, DC, this 24th day of September 1999.

Bobby R. Acord,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 99–25426 Filed 9–29–99; 8:45 am]

BILLING CODE 3410–34–U

DEPARTMENT OF AGRICULTURE

Forest Service

Revision of the Land and Resource Management Plan for the Tonto National Forest Located in Gila, Maricopa, Pinal and Yavapai Counties, Arizona

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: Pursuant to 36 CFR 219.10(g), the Regional Forester for the Southwestern Region gives notice of the agency's intent to prepare an environmental impact statement (EIS) for the Revised Tonto National Forest Land and Resource Management Plan (Forest Plan). According to 36 CFR 219.10(g), Forest Plans are ordinarily revised on a 10-year cycle or at least every 15 years. The existing Tonto National Forest Plan was approved on October 31, 1985 and has been amended 23 times. The proposed action is to update the amended Forest Plan, make format changes and edit to improve clarity, and modify based on needs determined through the EIS process.

The responsible official for approving the Forest Plan revision is Eleanor S. Towns, Regional Forester, Southwestern Region, USDA Forest Service, 517 Gold Avenue SW, Albuquerque, New Mexico 87102. The Forest Supervisor, Tonto National Forest, is delegated responsibility for preparing the environmental impact statement.

DATES: Comments concerning the scope of the analysis (the need to revise, add or delete specific sections of the Forest Plan) should be received in writing by December 31, 1999. The Draft EIS should be available for public review in September 2002. The Final EIS and revised Forest Plan should be completed by March 2004.

ADDRESSES: Send written comments to Charles R. Bazan, Forest Supervisor, Tonto National Forest, 2324 E. McDowell Road, Phoenix, Arizona 85006, Attn: Forest Plan Revision.

FOR FURTHER INFORMATION CONTACT: Eddie Alford, Planning Group Leader or Paul Stewart, Acting Team Leader, (602) 225–5200.

SUPPLEMENTARY INFORMATION: The requirement and process for developing, adopting and revising land and resource management plans for the National Forest System are defined by the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended and the National Forest Management Act of 1976. Implementing regulations are defined at Title 36, Chapter II, Part 219, Subpart A of the Code of Federal Regulations (36 CFR 219, Subpart A).

The Forest Supervisor has amended the Forest Plan, pursuant to 36 CFR 219.10(f), 23 times since its adoption in 1985. The ''Five Year Review'' was completed and approved on November 4, 1991. This report identified changed conditions and demands, and identified amendment and revision needs. In addition, new laws and revisions to the Code of Federal Regulations have resulted in the need to update portions of the Forest Plan.

Initiation of the Forest Plan revision process has been delayed since 1995 pending finalization of proposed changes to National Forest System planning regulations, which would significantly alter the current process. Amendments continued to be processed and approved to address immediate needs. Currently proposed or needed amendments may be acted upon, consistent with the National Environmental Policy Act, during the Forest Plan revision process. Regulations at 36 CFR 219.10(g) require that the Tonto National Forest proceed with revision at this time using existing planning regulations, regardless of the status of currently proposed changes in the regulations.

The content of the Forest Plan is prescribed in planning regulations (36 CFR 219.11) and includes:

(a) A brief summary of the management situation including demand and supply conditions for commodities and services, production potentials, and use and development opportunities;

(b) Forest multiple-use goals and objectives that include a description of the desired future condition of the Forest and an identification of the quantities of goods and services that are expected to be produced or provided during the planning period;

(c) Multiple-use prescriptions and associated standards and guidelines for each management area including proposed and probable management practices; and

(d) Monitoring and evaluation requirements that will provide a basis for a periodic determination and evaluation of the effects of management practices.

Planning regulations (36 CFR 219.13) also require that area planning for specific individual resources be integrated into the Forest Plan. These individual resource-planning requirements include but are not limited to:

(a) Timber resource land suitability (219.14);

(b) Roadless areas, unless otherwise provided by law (219.17);

(c) Grazing resource suitability (219.20);

(d) Recreation resource, including the visual resource (219.21); and

(e) Research natural areas (219.25).

Alternatives required by implementing regulations of the National Forest Management Act and the National Environmental Policy Act will be considered during the planning process. An alternative addressing the Resource Planning Act (RPA) program tentative resource objectives, a ''no action'' alternative that reflects the current Forest Plan direction, and a reasonable range of alternatives will be developed to respond to public issues, management concerns and resource opportunities identified during the planning process (36 CFR 219.12; 40 CFR 1501.7, 1502.14). The initial proposed action is to update the amended Forest Plan by reformatting and editing to improve clarity, and to ensure direction is consistent with new laws and regulations.

The Forest Service hereby gives notice that it is beginning a full environmental analysis and decision making process for this proposal so that interested or potentially affected people may know how they may contribute to the final decision. The Forest Service invites comments and suggestions from Federal, State, and local governments and agencies, Native American tribes, individuals, organizations and businesses on the scope of the analysis to be included in the draft environmental impact statement (DEIS). The scope of the analysis is limited to

those actions for which the Forest Supervisor has the legal authority to approve in a forest plan decision. Written comments are encouraged during the initial comment period, which ends December 31, 1999.

Specific information, which is needed at this stage of the process, includes:

(a) Names and addresses of interested parties, including specific agency or organization contacts, in order to update the Forest Plan mailing list;

(b) Suggestions for effective public involvement;

(c) Identification of areas or topics of interest; and

(d) New information or changed conditions which may indicate a need to change direction from the current Forest Plan.

Comments, as well as names and addresses on the Forest Plan mailing list, will be considered part of the public record on this proposed action and will be available to the public. Comments submitted anonymously will be accepted and considered. Any person may request the agency withhold their name, address or comment from the public record by showing how the Freedom of Information Act permits such confidentiality. The Forest Service will inform the requester of the agency's decision regarding a request for confidentiality, and where the request is denied, the agency will return the submission and notify the requester that the comments may be resubmitted with or without name and address.

Following this initial scoping, public meetings will be scheduled and/or informational newsletters will be produced consistent with public interest and involvement needs; and additional meetings with individuals or groups may also be arranged. It is anticipated that at least one additional comment period will be provided prior to issuance of the DEIS. The DEIS and proposed revised Forest Plan should be available for public review in September 2002. After a minimum comment period of 90 days, the final environmental impact statement and revised Forest Plan should be completed by March 2004.

The following information applies to review of the DEIS when it is issued. The 90-day public comment period on the DEIS will commence on the day the Environmental Protection Agency publishes a ''Notice of Availability'' in the **Federal Register**. It is very important that those interested in this proposed action have established their interest by that time. Written comments on the DEIS should be as specific as possible and may also address the adequacy of the statement or the merits of the alternatives formulated and discussed in the statement (see The Council on Environmental Quality Regulations for implementing the procedural provisions of the National Environmental Policy Act at 40 CFR 1503.3). Please note that comments you make on the DEIS will be regarded as public information.

In addition, Federal court decisions have established that reviewers of a DEIS must structure their participation in the environmental review of the proposal so that it is meaningful and alerts an agency to the reviewers' position and contentions (*Vermont Yankee Power Corp.* v. *NRDC*, 435 U.S. 519, 553 (1978)). Environmental objections that could have been raised at the draft stage may be waived or dismissed by the courts if not raised until after completion of the final environmental impact statement (*City of Angoon* v. *Hodel*, 9th Circuit, 803 F.2d 1018, (1986) and *Wisconsin Heritages, Inc.* v. *Harris*, 490 F. Supp. 1334 (E.D. Wis. 1980)). Because of these court rulings, it is very important that those interested in this proposed action participate by the close of the 90 day comment period so that substantive comments and objections are made available to the Forest Service at a time when it can meaningfully consider them and respond to them in the final environmental impact statement.

Dated: September 24, 1999.

James T. Gladen,

Deputy Regional Forester.

[FR Doc. 99–25401 Filed 9–29–99; 8:45 am]

BILLING CODE 3410–11–U

DEPARTMENT OF AGRICULTURE

Forest Service

Revised Land and Resource Management Plan, Uinta National Forest, Utah

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an Environmental Impact Statement and a revised Land and Resource Management Plan for the Uinta National Forest, located in Utah, Wasatch, Juab, Tooele, and Sanpete Counties, Utah.

SUMMARY: The Department of Agriculture, Forest Service will prepare an Environmental Impact Statement (EIS) in conjunction with revision of the Land and Resource Management Plan (Forest Plan), and a revised Forest Plan for the Uinta National Forest. The revised Forest Plan will supersede the current Forest Plan, which was approved October 3, 1984, and has been amended seven times.

This notice describes the needs for change in the current Forest Plan that to date have been identified by Uinta Forest Supervisor, Peter W. Karp, to be revised; the environmental issues considered in the revision; the estimated dates for filing the EIS; the information concerning public participation; and the names and addresses of the responsible agency official and the individual who can provide additional information.

DATES: Comments regarding the scope of the analysis should be received in writing by November 30, 1999. The agency expects to file a Draft EIS in the Fall of 2000, and a Final EIS in the Spring of 2001.

ADDRESSES: Send written comments to: Peter W. Karp, Forest Supervisor, Uinta National Forest, PO Box 1428, 88 West 100 North, Provo, UT 84603–1428.

FOR FURTHER INFORMATION CONTACT: Marlene DePietro, Planning Team Leader, Uinta National Forest (801) 342–5161.

Responsible Official: Jack Blackwell, Intermountain Regional Forester, 324 25th Street, Ogden, UT 84401.

SUPPLEMENTARY INFORMATION: Pursuant to part 36 Code of Federal Regulations (CFR) 219.10(g), the Regional Forester for the Intermountain Region gives notice of the agency's intent to prepare an Environmental Impact Statement to revise the Uinta National Forest Plan. According to 36 CFR 219.10(g), land and resource management plans shall ordinarily be revised on a 10 to 15 year cycle. The existing plan was approved October 3, 1984.

The Regional Forester gives notice that the Uinta National Forest is beginning an environmental analysis and the decision-making process for this proposed programmatic action to revise the Uinta Forest Plan.

Forest plans describe the long-term direction for managing national forests. Agency decisions in these plans do the following:

- Establish multiple use goals and objectives (36 CFR 219.11)
- Establish forest-wide management requirements (standards and guidelines) (36 CFR 219.13 to 219.26)
- Establish management areas and management area direction through the application of management prescriptions (36 CFR 219.11(c))
- Establish monitoring and evaluation requirements (36 CFR 219.11(d))
- Determine suitability and potential capability of lands for resource production. This includes identifying lands not suited for timber production

and establishment of allowable sale quantity (36 CFR 219.14)

• Where applicable, recommend official designation of special areas such as wilderness (36 CFR 219.17) and wild and scenic rivers to Congress.

The authorization of project-level activities on a forest occurs through project or site-specific decisions. Project-level decisions must comply with National Environmental Policy Act (NEPA) procedures and must include a determination that the project is consistent with the forest plan.

Need for Changes in the Current Forest Plan

It has been almost 15 years since the current Forest Plan was approved. Experience and monitoring have shown the need for changes in management direction for some resources or programs. Several sources have highlighted needed changes in the current Forest Plan. These sources include:

• Public involvement that has identified new information and public values,

• Monitoring and scientific research that has identified new information and knowledge gained, and

• Forest Plan implementation that has identified management concerns to find better ways for accomplishing desired conditions.

In addition to changing public views about how these lands should be managed, information and the scientific understanding of these ecosystems has evolved.

Proposed Action

The following topics are being considered for revision in the Forest Plan. Each need for change was placed into one of three categories: appropriate for inclusion in the revision; able to be postponed and later addressed through the continuous assessment process; or not requiring attention.

Identified needs for change are addressed in the following sections, with a short description of what each change entails and why it is necessary.

1. Topics Appropriate for Inclusion in the Forest Plan Revision

The following topics will be included in the Forest Plan revision because law and/or regulation require them to be considered in all forest plan revisions.

a. Wild and Scenic Rivers: The Wild and Scenic Rivers Act of 1968 was enacted to protect and preserve, in their free-flowing condition, certain selected rivers of the nation and their immediate environments. The Act established the National Wild and Scenic Rivers System (NWSRS), designated rivers included in the system, established policy for managing designated rivers, and prescribed a process for designating additional rivers to the system. The Act requires consideration of Wild and Scenic Rivers as part of the ongoing planning process. In 1997 the Uinta National Forest, in consultation with tribal governments and state and other federal agencies, undertook an inventory of the rivers on the Forest. Four segments were found to be free-flowing and in possession of at least one outstandingly remarkable value, making them eligible for designation. Until such time as a suitability determination and Congressional designation can be made, the Forest Service must protect the values that made the stream eligible for NWSRS, and maintain the rivers' free-flowing character. The proposed action is to establish direction to provide interim protection for these four rivers and to defer decisions on NWSRS recommendations until these decisions can be made through separate, more focused analyses later.

b. Wilderness Recommendation From Existing Roadless Inventory: Forest Service policy, the regulations in 36 CFR 219.17, and the 1984 Utah Wilderness Act require that roadless areas be evaluated and considered for recommendation as potential wilderness areas during the forest planning process. In 1997 the Forest began updating its inventory of roadless areas. A Draft Inventory of Unroaded and Undeveloped Lands on the Uinta National Forest was released for public review in April 1999, identifying 528,015 acres of roadless areas on the Uinta National Forest.

c. Reevaluation of Lands Not Suited for Timber: NFMA and its implementing regulations require identification of lands appropriate for timber management. The revision process provides an opportunity to reassess and better define the lands deemed appropriate for timber management, and to account for changes in land status and uses having occurred in the past 10–15 years. The revision will also use more accurate technology (such as GIS data) than was available during development of the original Forest Plan. The proposed action is to make any appropriate adjustments and better define the lands suited for timber production.

d. Areas Where Change May Be Needed: The topics in the following sections were included in the revision based on information found in monitoring reports, insight from Forest Service employees and their experience with the public regarding the effectiveness (or ineffectiveness) of the current Plan, requirements in Forest Service Handbooks and Manuals, and employment of new direction and policy.

The following topics will be included in the Forest Plan revision. Experience indicates that existing direction for the following topics is too limited or is inappropriate. Forest plan direction could be changed on a project by project basis through amendment; however, addressing these topics through the revision would eliminate the need for several future site-specific amendments and would facilitate achievement of other Forest Plan, ecosystem management, and Natural Resource Agenda goals.

e. Revise the List of Timber Practices: The Forest Plan identified the even-aged silvicultural system as the primary means of forest regeneration. While this may be appropriate for lodgepole pine and aspen, which develop an even-aged structure, many spruce/fir stands naturally develop an uneven-aged structure, and consequently, individual and group selection (instead of clearcutting) have been the preferred regeneration methods under an uneven-aged silvicultural system. The proposed action is to expand the array of silvicultural systems and harvest methods that may be used.

f. Eliminate Game Retrieval Policy: Although the Uinta Forest Plan does not make site-specific travel management decisions, it does contain direction allowing off-road and trail motorized vehicle use to retrieve legally taken big game animals. Monitoring has revealed that the practice often causes resource damage. The policy is inconsistent with other local national forests and other Uinta National Forest policies. Ghost roads are created that are difficult to control and that increase road densities. Limiting off-road motorized vehicle use to only game retrieval purposes is virtually impossible. The proposed action is to eliminate this provision. Site-specific travel management decisions will not be made through the Forest Plan revision.

g. Expand Management Direction for Areas of Heavy Dispersed Recreation Use: Dispersed recreation use on the Forest has increased significantly over the last several years, and this is expected to continue in the future. This use is resulting in resource damage and conflicts in some areas. The proposed action is to develop Limits of Acceptable Change (LAC) guidelines for determining unacceptable impacts to resources, and to use Meaningful Measures (another set of criteria developed by the Forest Service) for

defining recreation management objectives. Meaningful Measures blends both quantitative and qualitative aspects of recreation and will be more useful in budgeting and monitoring than were the reports previously used.

h. Revise Fuelwood Harvest Levels: The 1984 Forest Plan projected an annual fuelwood program of 18,000 cords (equivalent to 9 million board feet (MMBF)). Although there has been little interest in commercial fuelwood, the Forest has maintained a personal-use fuelwood program. Current annual demand is about 1,000 cords (equivalent to 0.5 MMBF). The proposed action is to revise the objective for fuelwood harvest to more closely reflect demand.

i. Update/Revise Management Indicator Species (MIS): The regulations in 36 CFR 219.19 require identification and monitoring of MIS to indicate the effects of management activities on fish and wildlife. A list of MIS were identified in the 1984 Forest Plan, and was subsequently amended in 1993. Experience with these MIS indicates additional refinements may be needed. Some of the species listed are difficult to monitor accurately, and/or their population trends may be affected by things other than forest management. The proposed action is to change the list of MIS.

j. Eliminate Emphasis On Adding Developed Recreation Capacity: The 1984 Forest Plan placed an emphasis on the construction of additional recreational facilities to accommodate an expected increase in demand. Since the Plan was written, inadequate funding and limited personnel have restricted both new construction and the expansion of existing facilities. As this trend is expected to continue, the proposed action is to change the focus in the Plan to managing existing facilities to increase utilization, and to provide for reconstruction when necessary.

k. Remove Post and Pole Harvest Objectives: Forest Plan timber objectives include providing posts and poles to the public as a service. While limited post and pole opportunities do exist on the Uinta National Forest, these stands are valuable for wildlife, and most requests are referred to the Ashley and Wasatch-Cache National Forests. The proposed action is to remove post and pole harvest objectives from the Forest Plan.

In addition to the topics previously listed, the following topics will be included in the revision. Experience has shown the lack of specificity or direction in the following areas has severely hampered implementation of the Forest Plan. Addressing these topics, while not required, would provide the over-arching framework needed to effectively implement the Forest Plan.

l. Refine Management Area Boundaries: To implement the Forest Plan, ecosystem boundaries must be delineated. The present management areas are less useful than they could be given the current understanding of ecosystems from both a social and biological standpoint. The seven current management areas range in size from 56,755 to 290,925 acres and are not easily recognized as distinct places. They are not directly related to ecological units such as watersheds, and their usefulness in examining actions and their effects is limited. The proposed action is to redefine management area boundaries, generally using watersheds as revised management areas.

m. Define Management Prescription Categories: A management prescription category is a set of management practices and intensities scheduled for application on a specific area. Management choices must be made in determining management prescription categories, as these in turn determine the direction for specific areas based on the resource emphasis. Once management areas are defined and potential Desired Future Conditions (DFCs) for those areas are identified, management prescription categories will be used to describe what is and is not allowed in a given area. With some exceptions, the current Forest Plan does not clearly identify the management prescription for any specific area. The proposed action is to identify the management prescription category applicable to each specific area of the Forest.

n. Identify Desired Future Conditions (DFCs) For All Ecosystems: DFCs describe the land, resources, or social and economic conditions that are expected in 50–100 years if objectives are achieved. It is a vision of the long-term conditions of the land. The current Forest Plan describes a DFC for each management area; however, these are often vague and/or do not address all components of the ecosystem. Failure to adequately describe the DFC results in a high degree of uncertainty as to what management actions were intended and needed. The proposed action is to develop, for each management area, DFCs addressing all affected ecosystems.

o. Identify Desired Recreation Environments Using the Recreation Opportunity Spectrum (ROS): The ROS allocation in the 1984 Forest Plan is incomplete and is not being utilized as intended. The Forest Plan references locations and acreages, but includes no map. ROS can be used together with Limits of Acceptable Change (LAC) to define capacity and establish standards and guidelines, particularly for wilderness and many types of dispersed recreation. ROS can be incorporated into the description of the DFC as a useful tool for allocating and separating conflicting or competing uses. Site-specific travel management decisions will not be made in the revision. However, establishing ROS will facilitate travel management planning, which strongly influences the supply of opportunity for various activities. The proposed action is to identify the ROS allocation for each area of the Forest and to incorporate ROS into the description of DFC.

p. Identify Desired Scenery Management Objectives: The visual quality objectives in the 1984 Forest Plan are incomplete and outdated. The 1974 Visual Management System used in the 1984 Forest Plan was replaced in 1995 with the Scenery Management System (SMS). The SMS process can assist in the establishment of overall resource goals and objectives to monitor the scenic resource and ensure high quality scenery for future generations. However, fully implementing SMS would not be practical during revision given the revision schedule and available staffing and funding. The proposed action is to identify desired scenery management conditions across the Forest, and initiate implementation of the SMS.

q. Delineate Areas Suitable For Domestic Livestock Grazing: The Forest Plan addresses suitability of lands for domestic livestock grazing, but discusses capability and suitability in terms of animal unit months of forage rather than acres. This makes comparison between the current Plan and current conditions difficult. Some large tracts of land, including the Strawberry Projects Lands, have been added to the Forest since the suitability analysis was completed. These areas were grazed for many years prior to their transfer to the Forest Service, and the Forest annually receives some requests to restore grazing on these lands. In addition, two domestic sheep allotments in the Pleasant Grove Management Area were identified as suited for grazing in the 1984 Forest Plan. These allotments are currently vacant and adjoin a proposed bighorn sheep reintroduction site. The Strawberry Project Lands and these two vacant allotments are part of important watersheds, provide valuable wildlife habitat, and support heavy recreation use. The proposed action is to delineate the areas of the Forest suited for

domestic livestock grazing using acres instead of animal unit months, identifying the Strawberry Project Lands and lands within the two allotments in the Pleasant Grove Management Area as not suited for domestic livestock grazing.

r. Establish Direction For Managing Cave Resources: Since the Forest Plan was written, the Federal Cave Management Act of 1988 was implemented. As the Forest Plan provides no direction for managing cave resources, the proposed action is to develop direction for accessing and managing cave resources on the Forest. Addressing the following topics in the Forest Plan revision would simplify and clarify the intent of the Forest Plan without requiring significant resource expenditures. Consequently, these topics will be addressed in the Forest Plan revision.

s. Remove Administrative or Procedural Direction: The proposed action is to remove information that is not related to land and resource management planning or to one of the six decisions made in forest plans, or that is redundant. Such information can be found in Forest Service Handbooks or Manuals or other reference materials.

t. Correct Typographical and Description Errors: The proposed action is to make editorial corrections, clarifications, and updates in order to present an accurate and more professional document.

u. Correct and Clarify Direction for 3-Pasture Rest Rotation: The proposed action is to reword an existing standard and guideline to identify the 3-pasture rest rotation as one of several recognized livestock management strategies, instead of it being the only management option.

v. Clarification of Existing Minerals Goals and Objectives: Current direction does not specify if goals and objectives for minerals management refer to locatable, leasable, or common variety minerals. Management of these minerals is governed by different laws and regulations. The proposed action is to refine the existing management direction to be more specific as to the type of mineral resource concerned.

w. Incorporate Best Management Practices (BMPs) and Air Quality Standards: The Utah Department of Environmental Quality has been working in cooperation with the Forest Service and other state and federal agencies to develop a set of BMPs as part of a statewide Non-point Source Management Plan for Silvicultural Activities. This plan, which will be adopted by the national forests in Utah, provides a set of standard management practices to reduce non-point source pollution from silvicultural activities. Air quality and visibility are national concerns, goals, and priorities. The proposed action is to add direction to the Forest Plan to address these issues.

x. Remove Direction for Afforestation of Oak Woodlands: Ecosystem management implies managing wildlands using vegetation native to the site. Past afforestation practices on the Uinta have included the planting of tree species on oak sites where such species would not have otherwise established. These plantings have sometimes done well for a number of years, but many have then exhibited a rapid decline. These plantings also have the potential to replace the vegetation natural to the site. Current thinking on ecosystem management is to manage wildlands using vegetation native to the site. The proposed action is to eliminate direction in the current Plan calling for afforestation of oak woodlands.

y. Elimination of Numerical Objectives and Implementation Schedules: Many of the objectives and schedules in the existing Plan are not required, are quickly out-of-date, and have lead to frequent confusion. The proposed action is to eliminate those that are not required by law or regulation.

z. Update Property Management Goals and Terminology: Right-of-Way and Land Adjustment Plans for the Forest have been updated since the 1984 Forest Plan was completed. The proposed action is to incorporate goals and objectives from these in the revised Forest Plan.

aa. Remove Direction Allowing Horse Use During Hunting Season in All Developed Sites: The Forest Plan allowed for this practice for the period of 1980–90, with no direction following that period. The Forest has not continued this practice outside of the designated time frame. The proposed action is to remove this direction.

bb. Identify the Jumpoff Point Research Natural Area (RNA) and Establish Management Direction for It: In 1987, the Chief of the Forest Service signed an Establishment Report designating the Jumpoff Point Research Natural Area (RNA). The Jumpoff Point RNA was designated after the completion of the Forest Plan, and no amendment was completed at the time of establishment. The proposed action is to map this 290 acre area as a unique management prescription category and to develop appropriate management direction.

cc. Identify Standards Versus Guidelines: Standards are not currently distinguished from guidelines. Standards are direction which must be followed; guidelines are direction which generally should be followed. The proposed action is to identify which management direction are standards and which are guidelines. This will clarify the intent of the Forest Plan and eliminate unnecessary site-specific amendments in implementation.

dd. Revise/Correct the Section Describing Amendment of the Forest Plan: The Forest Plan implies amendments may be needed when the list of projects proposed in the Forest Plan must be altered. A Forest Plan defines programmatic actions and does not make project decisions. The proposed action is to revise this section to state that amendment is needed when one of the six decisions made in the Forest Plan must be adjusted.

ee. Eliminate Redundant Monitoring Requirements: Currently, the Forest Plan requires monitoring of items pertaining to individual resource areas. This has lead to overlapping and redundant monitoring of items such as riparian habitat and water quality. The proposed action is to eliminate redundant and overlapping monitoring.

ff. Correct the Monitoring Frequency for Timber Suitability: Current direction requires suitability determination and monitoring to be completed every 10 years. The Forest Plan erroneously states it is to be completed every year. The proposed action is to correct this error.

gg. Update Acreages and Other ''Current Situation'' Data: Numerous changes in the environment have occurred since this section was prepared in 1984. This includes changes resulting from land adjustments, the Central Utah Project, implementation of the Forest Plan, and natural events such as wildfire. The proposed action is to update this section to reflect changes that have occurred.

hh. Use People At One Time (PAOTs) Instead of Recreation Visitor Days (RVDs) for Developed Recreation Supply Objectives: PAOTs are commonly used to define capacity; RVDs are used to define use. The Forest Plan uses RVDs for both, Using PAOTs to define capacity is more accurate. The proposed action is to revise objectives for developed recreation capacity using PAOTs rather than RVDs.

2. Topics Not Addressed in the Forest Plan Revision But To Be Addressed Through Continuous Assessment and Planning (CAP)

The following topics are areas where existing management direction needs to be clarified, refined, or changed. These topics will not be addressed in the Forest Plan revision, but will be

addressed through project or forest Plan amendments. Addressing these topics in the Forest Plan revision would likely require significant and unavailable resources, given time and funding limitations. These are topics where implementation can usually proceed and be consistent with existing Forest Plan direction (only occasional site-specific amendments to Forest Plan direction may be needed to allow implementation to proceed).

a. Refinement of grazing standards for stream channel types
b. Expansion of management direction for non-greenline conditions in streamside management zones
c. Development of species-specific conservation measures for threatened, endangered, or sensitive species.

There is a need for management decisions on the following topics, to the extent they involve Forest Service discretionary decisions. More thorough, detailed analysis and consideration of these topics and related issues would occur if they were analyzed through localized, site-specific analyses conducted outside of the revision process.

d. Wild and Scenic River suitability determinations (Little Provo Deer Creek, North Fork of the American Fork River, South Fork of the Provo River, and Fifth Water)
e. Wildlife reintroductions
f. Non-conforming uses in wilderness areas
g. Energy corridors

3. Topics Where No change Is Proposed

The following topics would not be addressed through the Forest Plan revision, except to the extent they are directly impacted by other revision topics being addressed. These topics cover areas where the Forest Plan provides management direction that some may want changed, but which otherwise appears to be adequate (and therefore, not a need for change).

a. Western Uinta Basin Oil and Gas leasing decisions
b. General intent of DFCs established through the Rangeland Ecosystem Amendment
c. Predator control direction established through the Predator Control EIS and in accordance with the Memorandum of Understanding between the U.S. Forest Service and the Animal Plant Health Inspection Service (APHIS)
d. Direction to harvest timber only where needed for forest health or other resource objectives
e. Identification of recreation residences
f. Direction established through the ongoing Utah Fire Amendment
g. Direction established through the ongoing Utah Goshawk Amendment
h. Direction emphasizing protection of water quality, particularly in watersheds providing water for domestic use.

Potential Alternatives

The No Action Alternative, continuing management under the present Forest Plan, will be considered in the analysis of the proposed action. The No Action Alternative would not include any of the legally mandated revision topics.

Topics to be addressed in the proposed action were described previously. No other alternatives have been developed at this time. However, additional alternatives will likely be developed based upon comments provided.

Involving the Public

The Forest Service is seeking information comments, and assistance from individuals, organizations, tribal governments, and federal, state, and local agencies who may be interested in or affected by the proposed action (36 CFR 219.6).

Public participation will be solicited by notifying (in person and/or by mail) known interested and affected publics. News releases will be used to give the public general notice, and public involvement opportunities will be offered at various locations. Public participation activities included written comments, open houses, focus groups, and collaborative forums.

Public participation will be sought throughout the revision process, but will be particularly important at several points along the way. The first formal opportunity to comment is during the scoping process (40 CFR 1501.7). Three public meetings are scheduled during the scoping process. These will run from 7 to 9 p.m. and be held October 26, 1999, at Wasatch County Chamber of Commerce Visitor Center, 475 N. Main Street, Heber City, Utah; October 27, 1999, at Mellor Banquets, 877 North 100 East, Lehi, Utah; and October 28, 1999, at Payson City Banquet Hall, 439 W. Utah Avenue, Payson, Utah.

Release and Review of the EIS

The Draft EIS is expected to be filed with the Environmental Protection Agency (EPA) and be available for public comment in late Fall of 2000. At that time, the EPA will publish a notice of availability in the **Federal Register**. The comment period on the Draft EIS will be at least 90 days from the date the EPA publishes the notice of availability in the **Federal Register**, as required by the planning regulations.

The Forest Service believes that at this early stage it is important to give reviewers notice of several court rulings related to public participation in the environmental review process. First, reviewers of the Draft EIS must structure their participation in the environmental review of the proposal so that it is meaningful and alerts an agency to the reviewer's position and contentions; *Vermont Yankee Nuclear Power Corp.* v. *NRDC* 435 U.S. 519, 553 (1978). Also, environmental objections that could be raised at the Draft EIS stage but are not raised until after completion of the Final EIS may be waived or dismissed by the courts; *City of Angoon* v. *Hodel,* 803 F. 2d 1016, 1022 (9th Cir. 1986) and *Wisconsin Heritages, Inc.* v. *Harris,* 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). Because of these court rulings, it is very important that those interested in this proposed action participate by the close of the comment period so that substantive comments and objectives are made available to the Forest Service at a time when it can meaningfully consider them and respond to them in the Final EIS.

To assist the Forest Service identifying and considering issues and concerns on the proposed programmatic actions, comments on the Draft EIS should be as specific as possible. It is also helpful if comments refer to specific pages or chapters of the draft statement. Comments may also address the adequacy of the Draft EIS or the merits of the alternatives formulated and discussed in the statements. Reviewers may wish to refer to the Counsel on Environmental Quality Regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) at 40 CFR 1503.3 in addressing these points.

After the comment period ends on the Draft EIS, comments will be analyzed, considered, and responded to by the Forest Service in preparing the Final EIS. The Final EIS is scheduled to be completed in the Spring of 2001. The responsible official will consider the comments, responses, and environmental consequences discussed in the Final EIS, and applicable laws, regulations, and policies in making decisions regarding the revision. The responsible official will document decisions and reasons for the decisions in a Record of Decision for the revised plan. The decisions will be subject to appeal in accordance with 36 CFR part 217. Jack A. Blackwell, Intermountain Regional Forester, is the responsible official for this EIS.

Dated; September 20, 1999.

Peter W. Karp,

Forest Supervisor.

[FR Doc. 99–25016 Filed 9–29–99; 8:45 am]

BILLING CODE 3410–11–M

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

Government-Owned Inventions Available for Licensing

AGENCY: National Institute of Standards and Technology, Commerce.

ACTION: Notice of Government-owned inventions available for licensing.

SUMMARY: The inventions listed below are owned in whole or in part by the U.S. Government, as represented by the Department of Commerce. The Department of Commerce's ownership interest in the inventions is available for licensing in accordance with 35 U.S.C. 207 and 37 CFR Part 404 to achieve expeditious commercialization of results of Federally funded research and development.

FOR FURTHER INFORMATION CONTACT: Technical and licensing information on these inventions may be obtained by writing to: National Institute of Standards and Technology, Office of Technology Partnerships, Building 820, Room 213, Gaithersburg, MD 20899; Fax 301–869–2751. Any request for information should include the NIST Docket No. and Title for the relevant invention as indicated below.

SUPPLEMENTARY INFORMATION: NIST may enter into a Cooperative Research and Development Agreement (''CRADA'') with the licensee to perform further research on the inventions for purposes of commercializations. The inventions available for licensing are:

NIST Docket Number: 95–036US.

Title: X-Ray Lithography Mask Inspection System.

Abstract: The invention is jointly owned by the U.S. Government, as represented by the Secretary of Commerce, and Wisconsin Alumni Research Foundation. The Department of Commerce's ownership interest in this invention is available for nonexclusive licensing. The invention uses an x-ray conversion microscope to form an enlarged image of the actual x-ray pattern that an x-ray mask would project onto a resist. Present x-ray mask inspection is done by electron microscopes where the image produced is representative of the interaction of high energy electrons with the features on the mask. The proposed technique would instead form images from the x-ray transmission of the mask, the quantity most relevant to the mask's performance in the x-ray lithography process.

NIST Docket Number: 96–045US.

Title: Electroenzymatic Reactor and Method for Enzymatic Catalysis.

Abstract: The invention is jointly owned by the U.S. Government, as represented by the Secretary of Commerce, and the University of California, Los Angeles. Interest in biocatlytic hydroxylation derives from its ability to transform organic substrates having no functional groups into oxygen-bearing compounds with high regio- or stereo-selectivity. Use of redox enzymes in these syntheses is hampered by intrinsic dependence on stoichiometric amounts of freely dissociated cofactors, such as NADH and/or redox partner proteins, which supply necessary reducing equivalents. Economic feasibility requires that simple, regeneration can meet these requirements. Previously, a bioelectrochemical process has been described in which electrons are transferred directly (without mediators) between an electrode and redox-active biological material, such as an enzyme or protein. In that work, electron transfer was achieved using various modified metal or graphite electrodes. Such processes suffer from either inefficiency (low redox reaction rates) or rapid decline in activity due to component fouling by proteins. In the present disclosure, the P450 enzymatic cycle, which requires a continuous supply of reducing equivalents, molecular oxygen and an amendable organic substrate, is utilized in an unique electroenzymatic reactor to catalyze the generation of stereochemical hydroxylation products. The reactor permits rapid and persistent electron transfer to a P450 protein cofactor (putidaredoxin) by using certain tin oxide or iridium oxide cathodes, while simultaneously providing necessary dissolved oxygen at platinum or ruthenium oxide counter electrodes. The need for NADH and the redox protein, flavin reductase, which are required in the native cycle, has been eliminated.

NIST Docket Number: 96–048US.

Title: Surface Immobilization of Biopolymers.

Abstract: In one embodiment, the present invention provides a biopolymer-containing monolayer comprising: thiol-derivatized biopolymers and organic thiols bound to a metal substrate. In another embodiment, the present invention provides a method for forming this biopoly-containing monolayer. Preferably, the biopolymers are single-stranded DNA probes.

NIST Docket Number: 98–024US.

Title: System for Stabilizing and Controlling a Hoisted Load.

Abstract: A load control method that can be adapted to single point lift mechanisms such as boom cranes can precisely control the position, velocity and force of a spreader bar or other tools in six degrees of freedom. Winches can be controlled manually by a multi-axis joystick, or can be automatically controlled by computer. Various combinations of manual and automatic control can also be implemented. The invention has application in preventing load pendulation during the off-loading of cargo from ships in high seas and in improving safety in the handling of loads in terrestrial applications.

NIST Docket Number: 99–008US.

Title: Test-Chip Carrier.

Abstract: The invention is jointly owned by the U.S. Government, as represented by the Secretary of Commerce, and Sandia National Laboratories. The Department of Commerce's ownership interest in this invention is available for nonexclusive licensing. A test-chip carrier includes a standard semiconductor wafer of single crystal material with a crystallographic lattice on at least one major surface. A mask is formed on the one major surface, including a coating of masking material, and patterning the masking material to define a rectangularly shaped test-chip receiving pit and one or more reference marks to facilitate location of target reference features. The test-chip receiving pit is positioned with one diagonal extending parallel to a first crystallographic lattice vector/direction and another diagonal extending parallel to a second crystallographic lattice vector/direction, *e.g.* the (010) and (001) crystallographic vectors. The semiconductor wafer is lattice-plans selective etched to form the test-chip receiving pit and the one or more reference marks. A plurality of pits can be formed if desired and a test-chip is mounted in each of the pits to provide multiple calibration artifacts, failure analysis, or product chip mounting.

Dated: September 23, 1999.

Karen Brown,

Deputy Director.

[FR Doc. 99–25420 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–13–M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 091599C]

National Plan of Action for the Conservation and Management of Sharks

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of Availability of National Plan of Action Outline and request for comments.

SUMMARY: The United States is developing a National Plan of Action (NPOA) pursuant to the endorsement of the International Plan of Action (IPOA) for the Conservation and Management of Sharks by the United Nations Food and Agriculture Organization (FAO) Committee on Fisheries (COFI) Ministerial Meeting in March 1999. Noting the increased concern about the expanding catches of sharks and their potential negative impacts on shark populations, this IPOA calls on COFI member states to voluntarily develop national plans to ensure the conservation and management of sharks for their long-term sustainable use. The United States has committed to developing this national plan, and reporting on its implementation to COFI, no later than the 25th COFI session in February 2001. This document provides a time frame for the completion of this project and an outline of the contents of this NPOA. The public is invited to provide written comments and suggestions for items to be incorporated and addressed within the NPOA. Specifically the public is encouraged to provide NMFS with comments on the level of interactions between sharks and U.S. fisherman in the fisheries listed in the outline or whether the management measures already in place in these fisheries significantly decrease the occurrence of these interactions.

DATES: Comments on the Shark NPOA will be accepted from September 30, 1999 through November 1, 1999.

ADDRESSES: Written comments should be sent to Robyn Wingrove, NOAA Fisheries / SF1, 1315 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Robyn Wingrove, 301–713–2347, ext. 118, or fax 301–713–1917.

SUPPLEMENTARY INFORMATION: The Shark IPOA was endorsed in principle at the 23rd FAO COFI session in February 1999 and also at the Fisheries Ministerial in March 1999. As with the two other IPOAs on seabirds and fishing capacity, the Shark IPOA calls on members to voluntarily develop an NPOA on this issue. For the purposes of this document, the term ''shark'' includes all species of sharks, skates, rays, and chimaeras.

The FAO Fisheries Department will, to the extent directed by its Conference, support the development and implementation of the Shark NPOAs through specific, in-country technical assistance projects with Regular Programme funds and by use of extra-budgetary funds made available to the Organization for this purpose. FAO will assist its members by: (1) providing a list of experts and a mechanism of technical assistance while preparing NPOAs, and (2) assisting in the reporting process to COFI.

Many measures have already been taken in the United States to ensure that shark catches from directed and non-directed fisheries are sustainable as required under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). These are entirely consistent with, and may in some cases exceed, the measures suggested in the IPOA. The U.S. NPOA is currently under development by NMFS, with a draft Shark NPOA tentatively due for publication in the *Federal Register* in December 1999 and full completion by February 2000.

Written comments on the Shark NPOA are encouraged (see **ADDRESSES**).

Proposed Schedule

October 1999—Release approved schedule and outline to public via a *Federal Register* notice.

November 1999—Collect and incorporate review comments.

December 1999—Release Draft NPOA for public comment.

February 2000—Respond to public comments and release final version of Shark NPOA.

Proposed Outline of Shark NPOA

Executive Summary

I. Introduction: Description of the Problem

II. History of IPOA and NPOA Process

A. FAO Involvement
B. Delegation of National Authority and Cooperative Efforts

III. Methods Used in NPOA Development Process

A. Role of NMFS Headquarters and Regional Fishery Management Councils
B. Feedback and Constituent Input Process

IV. Implementation Framework

A. International : Role of Member Countries
B. International: Role of Fisheries Organizations
C. Domestic: Regional Fishery Management Councils, Secretarial Management, Fishery Management Plans, and Other Regulatory Documents

V. Biological Characteristics: General Overview

VI. Directed and Non-directed Shark Fisheries of the United States: Descriptions, Regulations, and Current Management, by Fishery Management Councils(FMC), Secretary of Commerce Management and / or International Agreements.

A. Directed Fisheries:
1. New England FMC: Dogfish (Fishery Management Plan (FMP)); Atlantic Skate (non FMP)
2. Mid-Atlantic FMC: Dogfish (FMP)
3. Gulf of Mexico FMC: Inshore Coastal Gillnet Fishery (non-FMP)
4. Caribbean FMC: Caribbean Pelagics Fishery (non-FMP)
5. Pacific FMC: Shark/Bonito Longline/Setline Fishery (non FMP); California Angel Shark/ Halibut and other species Large-Mesh Set Net Fishery (non-FMP); CA/OR Thresher shark / Swordfish Drift Gillnet Fishery (non-FMP); OR Blue shark Floating Longline Fishery
6. Western Pacific (WP) FMC:WP Pelagics Fishery (FMP and non-FMP); WP Coastal Pelagics Fishery (non-FMP)
7. Secretary of Commerce Authority: Atlantic and Gulf Sharks Fisheries (FMP)

B. Non-Directed Fisheries:
1. New England FMC: Northeast Multispecies Fishery (FMP); Atlantic Menhaden Purse Seine Fishery (non-FMP); Atlantic Halibut Fishery (non-FMP); Atlantic Herring Fishery (non-FMP); Weakfish Fishery (non-FMP); Monkfish(FMP)
2. Mid-Atlantic FMC: Summer Flounder, Scup, Black Sea Bass Fishery (FMP); Atlantic Mackerel, Squid and Butterfish Fishery (FMP); Atlantic Bluefish Fishery (FMP); Tilefish Fishery (non-FMP); Atlantic Menhaden Purse Seine Fishery (non-FMP); Northern Shrimp Trawl Fishery (non-FMP); Monkfish Fishery (FMP); Coastal Gillnet Fishery (non-FMP); Mixed Species Trawl Fishery (non-FMP)
3. South Atlantic FMC: Snapper / Grouper Complex Fishery (FMP), South Atlantic Coastal Migratory Pelagics Fishery (FMP); Shrimp Fishery of the South Atlantic Region (FMP); Coral, Coral Reefs, and Live/Hard Bottom Habitats (FMP)

4. Gulf of Mexico FMC: Gulf of Mexico Reef Fish Fishery (FMP); Gulf of Mexico Shrimp Fishery (FMP); Gulf of Mexico Coastal Migratory Pelagics Fishery (FMP); Mullet Fishery (non-FMP); Coastal Herring Trawl Fishery (non-FMP); Gulf of Mexico Menhaden Purse Fishery (non-FMP); Gulf of Mexico Groundfish Fishery (non-FMP); Butterfish Trawl Fishery (non-FMP); Sardine Purse Seine Fishery (non-FMP); Non-Groundfish Finfish Fishery(non-FMP); Gulf of Mexico Coastal Migratory Pelagics Fishery (FMP).

5. Caribbean FMC: Caribbean Shallow Water Reef Fish Fishery (FMP)

6. Pacific FMC: Washington, Oregon, and California Salmon Fishery (FMP); West Coast Groundfish Fishery (FMP); Pacific Shrimp/Prawn Fishery (non-FMP); California Halibut Trawl and Trammel Net Fishery (non-FMP); Pacific Halibut (non FMP); Pacific Albacore, Other Tuna Hook and Line Fishery (non-FMP); Pacific Yellowfin, Skipjack Tuna, Purse Seine Fishery (non-FMP); Coastal Pelagics Fishery (FMP).

7. North Pacific FMC: Bering Sea and Aleutian Islands Groundfish Fishery (FMP); Gulf of Alaska Groundfish Fishery (FMP); Octopus / Squid Longline Fishery (non-FMP); Alaska High Seas Salmon Fishery (FMP); Alaska Salmon Fishery (non-FMP); Finfish Purse Seine Fishery (non-FMP); Finfish Handline/Hook and Line Fishery (non-FMP)

8. Western Pacific (WP) FMC: WP Bottomfish/Seamount Groundfish Fishery (FMP); WP Pacific Shallow Reef Fishery (non-FMP)

9. Secretary of Commerce Control: Atlantic Tunas, and Swordfish Fisheries (FMP) C. International Fisheries Agreements

1. International Convention for the Conservation of Atlantic Tunas (ICCAT)

2. International Council for the Exploration of the Sea (ICES)

3. Latin America Organization for Fishery Development (OLDEPESCA)

4. Northwest Atlantic Fisheries Organization (NAFO)

5. Inter-American Tropical Tuna Commission (IATTC)

6. South Pacific Commission (SPC)

VII. References

VIII. Appendices

A. International Plan of Action for the Conservation and Management of Sharks

B. 1998 Report of the Stock Evaluation Workshop

C. NMFS National Bycatch Plan, Executive Summary

D. Summary of Magnuson-Stevens Act

E. NMFS Regional Science Center and Management Council Contact Information

Dated: September 27, 1999.

Gary C. Matlock,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 99–25414 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–22–F

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton, Wool and Man-Made Fiber Textile Products Produced or Manufactured in Cambodia

September 27, 1999.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs adjusting limits.

EFFECTIVE DATE: September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Roy Unger, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port, call (202) 927–5850, or refer to the U.S. Customs website at http://www.customs.ustreas.gov. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854); Executive Order 11651 of March 3, 1972, as amended.

The current limits for certain categories are being adjusted for swing.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see **Federal Register** notice 63 FR 71096, published on December 23, 1998). Also see 64 FR 6050, published on February 8, 1999.

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

September 27, 1999.

Commissioner of Customs,

Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on February 1, 1999, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool and man-made fiber textile products, produced or manufactured in Cambodia and exported during the twelve-month period which began on January 1, 1999 and extends through December 31, 1999.

Effective on September 30, 1999, you are directed to adjust the current limits for the following categories, as provided for under the terms of the current bilateral textile agreement between the Governments of the United States and Cambodia:

Category	Adjusted twelve-month limit [1]
331/631	1,300,000 dozen pairs.
338/339	2,800,000 dozen.
347/348/647/648	3,360,000 dozen.
438	96,300 dozen.
645/646	171,875 dozen.

[1] The limits have not been adjusted to account for any imports exported after December 31, 1998.

The Committee for the Implementation of Textile Agreements has determined that these actions fall within the foreign affairs exception of the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 99–25458 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–DR–F

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton, Wool and Man-Made Fiber Textiles and Textile Products Produced or Manufactured in Indonesia

September 27, 1999.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs increasing limits.

EFFECTIVE DATE: October 6, 1999.

FOR FURTHER INFORMATION CONTACT: Janet Heinzen, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port, call (202) 927–5850, or refer to the U.S.

Customs website at http://www.customs.ustreas.gov. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854); Executive Order 11651 of March 3, 1972, as amended.

The current limits for certain categories are being increased for carryforward.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see **Federal Register** notice 63 FR 71096, published on December 23, 1998). Also see 63 FR 69055, published on December 15, 1998.

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

September 27, 1999.

Commissioner of Customs,
Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on December 8, 1998, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool, man–made fiber, silk blend and other vegetable fiber textiles and textile products, produced or manufactured in Indonesia and exported during the twelve-month period which began on January 1, 1999 and extends through December 31, 1999.

Effective on October 6, 1999, you are directed to increase the limits for the categories listed below, as provided for under the Uruguay Round Agreement on Textiles and Clothing:

Category	Adjusted twelve-month limit [1]
Levels in Group I	
200	917,590 kilograms.
300/301	4,601,560 kilograms.
338/339	1,377,688 dozen.
340/640	1,586,159 dozen.
345	493,382 dozen.
443	91,710 numbers.
634/635	350,445 dozen.

[1] The limits have not been adjusted to account for any imports exported after December 31, 1998.

The Committee for the Implementation of Textile Agreements has determined that these actions fall within the foreign affairs exception to the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 99–25461 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–DR–F

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton and Man-Made Fiber Textiles and Textile Products Produced or Manufactured in Malaysia

September 27, 1999.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs adjusting limits.

EFFECTIVE DATE: October 6, 1999.

FOR FURTHER INFORMATION CONTACT: Ross Arnold, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port, call (202) 927–5850, or refer to the U.S. Customs website at http://www.customs.ustreas.gov. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854); Executive Order 11651 of March 3, 1972, as amended.

The current limits for certain categories are being adjusted for swing and carryover.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see **Federal Register** notice 63 FR 71096, published on December 23, 1998). Also see 63 FR 59945, published on November 6, 1998.

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

September 27, 1999.

Commissioner of Customs,
Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on November 3, 1998, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool and man-made fiber textiles and textile products and silk blend and other vegetable fiber apparel, produced or manufactured in Malaysia and exported during the period beginning on January 1, 1999 and extending through December 31, 1999.

Effective on October 6, 1999, you are directed to adjust the limits for the following categories, as provided for under the Uruguay Round Agreement on Textiles and Clothing:

Category	Adjusted twelve-month limit [1]
300/301	4,072,680 kilograms.
645/646	285,828 dozen.

[1] The limits have not been adjusted to account for any imports exported after December 31, 1998.

The Committee for the Implementation of Textile Agreements has determined that these actions fall within the foreign affairs exception of the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 99–25459 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–DR–F

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton and Man-Made Fiber Textile Products Produced or Manufactured in the Philippines

September 27, 1999.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs adjusting limits.

EFFECTIVE DATE: October 4, 1999.

FOR FURTHER INFORMATION CONTACT: Janet Heinzen, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port, call (202) 927–5850, or refer to the U.S. Customs website at http://www.customs.ustreas.gov. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854); Executive Order 11651 of March 3, 1972, as amended.

Special shift between Categories 338/339 and 638/639 is being reversed, and the current limits for these categories are being adjusted to reflect this change.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see **Federal Register** notice 63 FR 71096, published on December 23, 1998). Also see 63 FR 67050, published on December 4, 1998.

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

September 27, 1999.

Commissioner of Customs,
Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on November 30, 1998, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool and man–made fiber textiles and textile products and silk blend and other vegetable fiber apparel, produced or manufactured in the Philippines and exported during the twelve-month period which began on January 1, 1999 and extends through December 31, 1999.

Effective on October 4, 1999, you are directed to adjust the limits for the following categories, as provided for under the Uruguay Round Agreement on Textiles and Clothing:

Category	Adjusted twelve-month limit [1]
Levels in Group I	
338/339	2,851,226 dozen.
638/639	2,462,448 dozen.

[1] The limits have not been adjusted to account for any imports exported after December 31, 1998.

The Committee for the Implementation of Textile Agreements has determined that these actions fall within the foreign affairs exception to the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc.99–25460 Filed 9–29–99; 8:45 am]

BILLING CODE 3510–DR–F

COMMODITY FUTURES TRADING COMMISSION

Privacy Act of 1974: Notice of New System of Records

AGENCY: Commodity Futures Trading Commission.

ACTION: Notice of new system of records and proposed routine uses.

SUMMARY: This notice adds a new system of records to the Commission's system of records under the Privacy Act. The new system will contain information about employees of the Commission and third parties who are visiting or working at Commission offices who are accused of sexual or other unlawful harassment. The Commission is proposing that the routine uses of these records be limited to use in proceedings in which the Commission or any present or former member or employee is a party and in any investigation to which the information is relevant. In addition, the Commission is proposing that the records be available to any other federal or state agency for use in meeting the responsibilities assigned to them under the law or to another federal agency, if relevant, in connection with a personnel action concerning the employee about whom the record is maintained. The Commission is also publishing a notice of a proposed rule to exempt the system of records under 5 U.S.C. 552a(k)(2) from certain sections of the Privacy Act, as investigatory material compiled for law enforcement purposes.

DATES: Comments on the establishment of the new system of records and the proposed routine uses must be received no later than November 1, 1999. The new system of records and the routine uses will be effective November 9, 1999 unless the Commission receives comments which would mandate a contrary determination.

ADDRESSES: Comments should be addressed to Jean A. Webb, Secretary, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st St., NW., Washington, DC 20581. Comments may be sent via electronic mail to *secretary@cftc.gov*.

FOR FURTHER INFORMATION CONTACT: Stacy Dean Yochum, Office of the Executive Director, (202) 418–5157, or Glynn L. Mays, Office of the General Counsel, (202) 418–5140, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street, NW., Washington, DC 20581.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Commission's implementing regulations, 17 CFR part 146, the Commission is publishing a description of a new system of records. The new system will contain records generated in compliance with the Commission's Sexual Harassment Policy, which in relevant part permits persons complaining of harassment to invoke certain informal procedures to resolve the complaint and requires a report of the resolution to be forwarded to the Commission's Executive Director. The Policy also requires supervisors and managers to report observed and reported incidents of harassment to the Commission's EEO Director. Under the Policy, reports or complaints of incidents of harassment if not resolved at the supervisor level may be referred in-house or to an outside contractor for investigation. These investigations may result in disciplinary action. This system also would contain similar records of complaints of other violations of equal employment rights, although the Commission does not have a published policy for informal handling of such matters at this time.

The system is being numbered ''CFTC–7'', the number used for a system of records which was consolidated with other systems and is no longer being maintained. This new system of records, as required by 5 U.S.C. 552a(r) of the Privacy Act, has been submitted to the Committee on Government Oversight and Reform of the U.S. House of Representatives, the Committee on Governmental Affairs of the U.S. Senate, and the Office of Management and Budget, pursuant to Appendix 1 to OMB Circular A–130, ''Federal Agency Responsibilities for Maintaining Records About Individuals,'' dated July 15, 1994. Accordingly, the Commission is giving notice of the establishment of the following system of records:

CFTC–7

SYSTEM NAME:

Exempted Informal Employment Complaint Files.

SYSTEM LOCATION:

Office of the Executive Director, Three Lafayette Centre, 1155 21st St. NW, Washington, DC 20581.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals, including Commission employees, contractors or visitors, who are accused of sexual or other harassment in violation of employment discrimination laws or Commission employment policies, including the Commission's Sexual Harassment Policy.

CATEGORIES OF RECORDS IN THE SYSTEM:

Reports to Commission officials from supervisors, managers, or members of the Commission concerning complaints or concerning observed instances of sexual harassment. Records relating to

the complaint or incident, relating to any investigation, and to any disposition of the matter. The potential contents of the system are not limited to complaints or other material under the Commission's Sexual Harassment Policy. Complaints concerning other forms of illegal employment discrimination would be made part of this system.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

5 U.S.C. 2302(b); 29 CFR 1614.102(a).

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The four routine uses for this system are taken from the Commission's General Statement of Routine Uses, published 64 FR 33829: Number 1 (disclosed in an action where the Commission or a present or former member or employee of the Commission is a party); 2 (given to other federal or state agencies within the scope of their statutory mandates); 4 (disclosed in an investigation); and 6 (disclosed if relevant to a federal agency in connection with a personnel, contracting or licensing action concerning the person about whom the record is maintained).

POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

STORAGE:

Paper records stored in files.

RETRIEVABILITY:

Records are retrievable by the name of the employee or third party about whom a complaint or report has been made.

SAFEGUARDS:

In addition to general building security, paper records are maintained in areas accessible only to authorized personnel.

RETENTION AND DISPOSAL:

Indefinite.

SYSTEM MANAGER(S) AND ADDRESS:

Executive Director, 1155 21st Street, NW, Washington, DC 20581.

NOTIFICATION PROCEDURE:

Individuals seeking to determine whether the system of records contains information about themselves, seeking access to records about themselves in the system of records or contesting the content of records about themselves should address written inquiries to the Assistant Secretary for FOI, Privacy and Sunshine Acts Compliance, Commodity Futures Trading Commission, 1155 21st Street, NW, Washington, DC 20581.

RECORD ACCESS PROCEDURES:

See ''Notification Procedures,'' above.

CONTESTING RECORD PROCEDURES:

See ''Notification Procedures,'' above.

RECORD SOURCE CATEGORIES:

Internal complaints, internal investigations, reports of activity which apparently violate the Commission's Sexual Harassment Policy or other employment discrimination prohibitions, proceedings, as relevant, under the EEOC's Federal Sector Complaint Processing Rules, 29 CFR Part 1614.

(Authority: 5 U.S.C. 552a(e)(4))

Issued in Washington, DC, on September 22, 1999.

By the Commission.

Jean A. Webb,

Secretary of the Commission.

[FR Doc. 99–25190 Filed 9–29–99; 8:45 am]

BILLING CODE 6351–01–M

DEPARTMENT OF DEFENSE

[OMB Control Number 0704–0321]

Information Collection Requirement; Defense Federal Acquisition Regulation Supplement; Contract Financing

AGENCY: Department of Defense (DoD).

ACTION: Notice and request for comments regarding a proposed extension of an approved information collection requirement.

SUMMARY: In compliance with section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), DoD announces the proposed extension of a public information collection requirement and seeks public comment on its provisions. DoD invites comments on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of DoD, including whether the information will have practical utility; (b) the accuracy of the estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including the use of automated collection techniques or other forms of information technology. The Office of Management and Budget (OMB) has approved this information collection for use through April 30, 2000, under OMB Control Number 0704–0321. DoD proposes that OMB extend its approval for use through April 30, 2003.

DATES: DoD will consider all comments received by November 29, 1999.

ADDRESSES: Interested parties should submit written comments and recommendations on the proposed information collection to: Defense Acquisition Regulations Council, Attn: Ms. Sandra Haberlin, PDUSD (A&T) DP (DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062. Telefax (703) 602–0350.

Address E-mail comments submitted via the Internet to: dfars@acq.osd.mil.

Please cite OMB Control Number 0704–0321 in all correspondence related to this issue. E-mail comments should cite OMB Control Number 0704–0321 in the subject line.

FOR FURTHER INFORMATION CONTACT: Ms. Sandra Haberlin, at (703) 602–0289. The information collection requirements addressed in this notice are available electronically via the Internet at: http://www.acq.osd.mil/dp/dars/dfars.html

Paper copies are available from Ms. Sandra Haberlin, PDUSD (A&T) (DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062.

SUPPLEMENTARY INFORMATION:

Title, Associated Form, and OMB Number: Contract Financing, Progress Payments for Foreign Military Sales Acquisitions—Defense Federal Acquisition Regulation Supplement (DFARS) Part 232 and the clause at 252.232–7002; OMB Control Number 0704–0321.

Needs and Uses: Section 22 of the Arms Export Control Act (22 U.S.C. 2762) requires the U.S. government to use foreign funds, rather than U.S. appropriated funds, to purchase military equipment for foreign governments. To comply with this requirement, the government needs to know how much to charge each country. The clause at 252.232–7002, Progress Payments for Foreign Military Sales Acquisitions, requires each contractor whose contract includes foreign military sales (FMS) requirements to submit a separate progress payment request for each progress payment rate, and to submit a supporting schedule that clearly distinguishes the contract's FMS requirements from U.S. requirements. The Government uses this information to determine how much of each country's funds to disburse to the contractor.

Affected Public: Businesses or other for-profit and not-for-profit institutions.

Annual Burden Hours: 9,234 (includes 3,078 response hours plus 6,156 recordkeeping hours).

Number of Respondents: 513.

Responses Per Respondents: 12.

Annual Responses: 6,156.

Average Burden Per Response: .5 hours.

Frequency: On occasion.

Summary of Information Collection

This information collection includes requirements relating to DFARS Part 232, Contract Financing, and the related clause at DFARS 252.232–7002, Progress Payments for Foreign Military Sales Acquisitions.

a. DFARS 232.502–4–70(a) prescribes use of the clause at DFARS 252.232–7002 in any contract that provides for progress payments and contains FMS requirements.

b. DFARS 252.232–7002 requires each contractor whose contract includes FMS requirements to submit a separate progress payment request for each progress payment rate, and to submit a supporting schedule that distinguishes the contract's FMS requirements from U.S. requirements.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

[FR Doc. 99–25166 Filed 9–30–99; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF EDUCATION

National Advisory Committee on Institutional Quality and Integrity (National Advisory Committee); Meeting

AGENCY: National Advisory Committee on Institutional Quality and Integrity, Department of Education.

ACTION: Notice of meeting.

What Is the Purpose of This Notice?

The purpose of this notice is to announce the public meeting of the National Advisory Committee and invite third-party oral presentations before the Committee. This notice also presents the proposed agenda and informs the public of its opportunity to attend this meeting. The notice of this meeting is required under section 10(a)(2) of the Federal Advisory Committee Act.

When and Where Will the Meeting Take Place?

We will hold the public meeting on December 6–8, 1999 from 8:30 a.m. until 5:30 p.m. at the Ritz Carlton Hotel at Pentagon City Mall, 1250 South Hayes Street, Arlington, Virginia 22202. You may call the Hotel on (703) 415–5000 to inquire about rooms.

What Access Does the Hotel Provide for Individuals With Disabilities?

The meeting site is accessible to individuals with disabilities. If you will need an auxiliary aid or service to participate in the meeting (*e.g.*, interpreting service, assistive listening device, or materials in an alternate format), notify the contact person listed in this notice at least two weeks before the scheduled meeting date. Although we will attempt to meet a request received after that date, we may not be able to make available the requested auxiliary aid or service because of insufficient time to arrange it.

Who Is the Contact Person for the Meeting?

Please contact Ms. Bonnie LeBold, who is the Executive Director of the National Advisory Committee on Institutional Quality and Integrity, if you have questions about the meeting. You may contact her at the US Department of Education, ROB–3, Room 3082, 400 Maryland Ave., SW, Washington, DC 20202–7592, telephone: (202) 260–3636, fax: (202) 260–5049. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

What Is the Authority for the National Advisory Committee?

The National Advisory Committee on Institutional Quality and Integrity is established under Section 114 of the Higher Education Act (HEA) as amended, 20 U.S.C. 1011.

What Are the Functions of the National Advisory Committee?

The Committee advises the Secretary of Education about:

- The establishment and enforcement of the criteria for recognition of accrediting agencies or associations under subpart 2 of part H of Title IV, HEA.
- The recognition of specific accrediting agencies or associations.
- The preparation and publication of the list of nationally recognized accrediting agencies and associations.
- The eligibility and certification process for institutions of higher education under Title IV, HEA.
- The development of standards and criteria for specific categories of vocational training institutions and institutions of higher education for which there are not recognized accrediting agencies, associations, or State agencies in order to establish the interim eligibility of those institutions to participate in Federally funded programs.

What Agencies Will the Advisory Committee Review at the Meeting?

The Advisory Meeting will review the following agencies during its December 6–8, 1999 meeting.

Nationally Recognized Accrediting Agencies

Petition for Initial Recognition

1. Commission on Collegiate Nursing Education (Requested scope of recognition: Baccalaureate Degree Programs in Nursing Education and Graduate Degree Programs in Nursing Education)

Petitions for Renewal of Recognition

1. Accrediting Commission of Career Schools and Colleges of Technology (Requested scope of recognition: the accreditation of private, postsecondary, non-degree-granting institutions and degree-granting institutions, including those granting associate and baccalaureate degrees, that are predominantly organized to educate students for occupational, trade and technical careers).
2. American Psychological Association, Committee on Accreditation (Requested scope of recognition: the accreditation of doctoral programs in clinical, counseling, school and combined professional-scientific psychology, predoctoral internship programs in professional psychology, and postdoctoral residency programs in professional psychology)
3. Council on Naturopathic Medical Education (Requested scope of recognition: the accreditation and preaccreditation (Candidate for Accreditation) of institutions and graduate programs in Naturopathy that lead to the degree of Doctor of Naturopathy (N.D.) or Doctor of Naturopathic Medicine (N.M.D.))
4. National Accrediting Commission of Cosmetology Arts and Sciences (Scope of recognition: the accreditation of postsecondary schools and departments of cosmetology arts and sciences)
5. Translational Association of Christian Colleges and Schools, Accrediting Commission (Requested scope of recognition: the accreditation and preaccreditation (''Candidate for Accreditation'') of postsecondary institutions that offer certificates, diplomas, and associate, baccalaureate, and graduate degrees)

Interim Reports

(An interim report is a follow-up report on an accrediting agency's compliance

with specific criteria for recognition that was requested by the Secretary when the Secretary granted renewed recognition to the agency.)

1. American Bar Association, Council of the Section of Legal Education and Admissions to the Bar
2. Association for Clinical Pastoral Education, Inc., Accreditation Commission
3. Accrediting Council on Education in Journalism and Mass Communications
4. American Dental Association, Commission on Dental Accreditation
5. American Physical Therapy Association, Committee on Accreditation
6. Commission on Opticianry Accreditation
7. National Association of Nurse Practitioners in Reproductive Health, Council on Accreditation
8. North Carolina Association of Colleges and Schools, Commission on Schools

State Agency Recognized for the Approval of Public Postsecondary Vocational Education

Interim Report

1. Kansas State Department of Education

Interim Report

1. Kansas State Department of Education

State Agencies Recognized for the Approval of Nurse Education

Interim Report

1. New York State Board of Regents, Nursing Education

Federal Agency Seeking Degree-Granting Authority

In accordance with the Federal policy governing the granting of academic degrees by Federal agencies (approved by a letter from the Director, Bureau of the Budget, to the Secretary, Health, Education, and Welfare, dated December 23, 1954), the Secretary is required to establish a review committee to advise the Secretary concerning any legislation that may be proposed that would authorize the granting of degrees by a Federal agency. The review committee forwards its recommendation concerning a Federal agency's proposed degree-granting authority to the Secretary, who then forwards the committee's recommendation and the Secretary's recommendation to the Office of Management and Budget for review and transmittal to the Congress. The Secretary uses the Advisory Committee as the review committee required for this purpose. Accordingly, the Advisory Committee will review the following institution at this meeting:

Proposed Associate Degree-Granting Authority

1. Defense Language Institute (Accredited by the Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges)

Who Can Make Third-Party Oral Presentations at This Meeting?

We invite you to make a third-party oral presentation before the National Advisory Committee concerning the recognition of any agency published in this notice.

How Do I Request To Make an Oral Presentation?

You must submit a written request to make an oral presentation concerning an agency listed in this notice to the contact person by November 1, 1999. Your request should include:

—The names of all persons seeking an appearance,
—The organization they represent, and
—A brief summary of the principal points to be made during the oral presentation.

This notice is not a call for third-party written comments. However, if you wish to provide the Advisoy Committee with a brief document (no more than 6 pages maximum) illustrating the main points of your oral testimony, please enclose one original and 25 copies of the document with your written request to make an oral presentation. Please do not distribute written materials at the meeting or send materials directly to Committee members.

Materials submitted by the deadline and in accordance with these instructions become part of the official record and are considered by the Committee in its deliberations. Department staff will not distribute documents submitted after the November 1, 1999, deadline to the Advisory Committee.

If I Cannot Attend the Meeting, Can I Submit Written Comments Regarding an Accrediting Agency in Lieu of Making an Oral Presentation?

This notice requests third-party oral testimony, not written comment. A request for writen comments on agencies that are being reviewed during this meeting was published in the **Federal Register** on June 9, 1999. The Advisory Committee will receive and consider only written comments submitted by the deadlines specified in that **Federal Register** notice.

How Do I Request To Present Comments Regarding General Issues Rather Than Specific Accrediting Agencies?

At the conclusion of the meeting, the Committee, at its discretion, may invite attendees to address the Committee briefly on issues pertaining to the functions of the Committee, which are listed earlier in this notice. If you are interested in making such comments, you should inform Ms. LeBold before or during the meeting.

How May I Obtain Access to the Records of the Meeting?

We will record the meeting and make a transcript available for public inspection at the US Department of Education, ROB–3, Room 3012, 7th and D Streets, SW, Washington, DC, telephone (202) 260–3636, between the hours of 9 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. It is preferred that an appointment be made in advance of such inspection.

Authority: 5 U.S.C. Appendix 2.

Greg Woods,

Chief Operating Officer, Student Financial Assistance.

[FR Doc. 99–25480 Filed 9–29–99; 8:45 am]

BILLING CODE 4000–01–M

DEPARTMENT OF EDUCATION

Regional Educational Laboratory Program

AGENCY: Office of Educational Research and Improvement, Department of Education.

ACTION: Notice of public meetings.

SUMMARY: The Assistant Secretary announces three public meetings. The purpose of these meetings is to discuss issues relating to the FY 2000 Regional Educational Laboratory competition.

DATES: See **SUPPLEMENTARY INFORMATION** section for meeting dates.

ADDRESSES: See **SUPPLEMENTARY INFORMATION** section for meeting locations.

FOR FURTHER INFORMATION CONTACT: Jennifer Rinehart, US Department of Education, 555 New Jersey Avenue, NW, room 506f, Washington, DC 20202–5644. Telephone (202) 219–2193. If you use a telecommunications device for the deaf (TDD), you may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

Individuals with disabilities may obtain this document in an alternate format (*e.g.*, Braille, large print, audiotape, or computer diskette) on request to the contact person listed in the preceding paragraph.

SUPPLEMENTARY INFORMATION:

Public Meetings

The dates, times, and locations of the meetings are as follows:

1. October 6, 1999, 8:30 a.m. to 10:20 a.m., Tampa Convention Center, 333 S. Franklin Street, Tampa, FL.
2. November 8, 1999, 8:30 a.m. to 10:20 a.m., Salt Palace Convention Center, 100 South West Temple, Salt Lake City, UT.
3. December 15, 1999, 8:30 a.m. to 10:20 a.m., Sheraton Chicago Hotel, 301 East North Water Street, Chicago, IL.

Note: Please check with the Improving America's Schools (IAS) Conference registration desk for exact meeting room locations.

Assistance to Individuals With Disabilities at the Public Meetings

The meeting sites are accessible to individuals with disabilities. If you will need an auxiliary aid or service to participate in the meeting (*e.g.*, interpreting service, assistive listening device, or materials in an alternate format), notify the contact person listed in this notice at least two weeks before the scheduled meeting date. Although we will attempt to meet a request we receive after that date, we may not be able to make available the requested auxiliary aid or service because of insufficient time to arrange it.

Additional Information

The Regional Educational Laboratories are funded by the Office of Educational Research and Improvement to conduct research, development, and technical assistance for educational reform. In the year 2000, the ten contracts for Regional Educational Laboratories will be re-competed. A series of public meetings will be held at the IAS Conferences this fall. The meetings will provide an opportunity for attendees to offer input on the issues and priorities for the next competition. Federal program staff will meet with attendees to discuss what services a regional laboratory should offer its region and what priorities the labs should address to support educational reform at state and local levels. More specifically, attendees will be invited to provide feedback on a series of issues relating to the scope of work to be performed under the new laboratory contracts.

Interested parties may attend the public meeting without paying the registration fee for the conference; however, they may not attend other sessions at the conference without registering. For more information about the conferences, please visit the IAS Conference website at http://www.ncbe.gwu.edu/iasconferences.

Proceedings from the meetings will be made available on the Department's website. See the program website (http://www.ed.gov/prog_info/Labs/) for additional information about the laboratory competition.

Electronic Access to This Document

You may view this document, as well as all other Department of Education documents published in the **Federal Register**, in text or Adobe Portable Document Format (PDF) on the Internet at either of the following sites:

http://ocfo.ed.gov/fedreg.htm
http://www.ed.gov/news.html

To use the PDF you must have the Adobe Acrobat Reader Program with Search, which is available free at either of the previous sites. If you have questions about using the PDF, call the U.S. Government Printing Office (GPO), toll free, at 1–888–293–6498; or in the Washington, D.C. area, at (202) 512–1530.

Note: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: http://www.access.gpo.gov/nara/index.html.

Program Authority: 20 U.S.C. 6041(h).

Dated: September 27, 1999.

C. Kent McGuire,

Assistant Secretary for Educational Research and Improvement.

[FR Doc. 99–25409 Filed 9–29–99; 8:45 am]

BILLING CODE 4000–01–U

DEPARTMENT OF ENERGY

Notice of Floodplain and Wetlands Involvement for Transfer of the Department of Energy Grand Junction Office to Non-DOE Ownership

AGENCY: Grand Junction Office, Department of Energy.

ACTION: Notice of floodplain and wetlands involvement for transfer of the Grand Junction Office to Non-DOE ownership.

SUMMARY: The Department of Energy (DOE) proposes to transfer the 56.4 acres and approximately 35 structures that comprise the DOE Grand Junction Office (GJO) to non-DOE ownership. A portion of the facility is located in the 100-year floodplain of the Gunnison River and there are several jurisdictional wetlands located within the property boundary. The facility is located in Mesa County, Colorado. In accordance with 10 CFR part 1022, DOE will prepare a floodplains and wetlands assessment and will perform this proposed action in a manner that will avoid or minimize potential harm to or within the affected floodplain and wetlands. The assessment will be conducted in conjunction with an Environmental Assessment (EA) that analyzes the potential environmental affects of the transfer of the property.

DATES: Written comments are due to the address below no later than October 15, 1999.

ADDRESSES: Written comments should be addressed to Mary Ann Rondinella, U.S. Department of Energy—Grand Junction Office, 2597 B ¾ Road, Grand Junction, Colorado 81503; or transmitted electronically by E-mail via Internet to: mrondinella@doegjpo.com; or by facsimile to (970)248–6023.

FOR FURTHER INFORMATION ON THIS PROPOSED ACTION CONTACT: Donna Bergman-Tabbert, Manager, U.S Department of Energy-Grand Junction Office 2597 B ¾ Road, Grand Junction, Colorado 81503, Telephone 1–970–248–6001 or 1–800–399–5618, Email via Internet to dbergman-tabbert@doegjpo.com, Facsimile to 1–970–248–6023.

FOR MORE INFORMATION ON GENERAL DOE FLOOPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS, CONTACT: Carol M. Borgstrom, Director, Office of NEPA Policy and Assistance (EH–42), U.S. Department of Energy 1000 Independence Avenue, SW, Washington, D.C. 20585, (202) 586–4600 or (800) 472–2756.

SUPPLEMENTARY INFORMATION: Under E.O. 11988—Floodplain Management, E.O. 11990—Protection of Wetlands, and 10 CFR part 1022—Compliance with Floodplain/Wetlands Environmental Review Requirements, notice is given that the DOE intends to transfer the 56.4 acres that comprise the GJO to non-DOE ownership. The facility includes offices, warehouses, computer and telecommunications centers, classrooms, a cafeteria, an occupational health facility, hazardous and radioactive waste storage facilities, and an analytical laboratory. DOE's primary missions at Grand Junction are environmental restoration, environmental science, technology development, long-term stewardship of inactive waste sites, and management of leases on government lands for uranium exploration and mining. The missions of the office have grown smaller over the past several years. As a result, DOE has determined that it no longer needs to own the GJO facility to perform its assigned missions. Upon completion of cleanup of residual radioactive

materials at the GJO site in 2000, DOE plans to transfer the facility to non-DOE ownership.

In accordance with DOE regulations for compliance with floodplain and wetlands environmental review requirements (10 CFR part 1022), DOE will prepare a floodplain and wetlands assessment for this proposed DOE action. The assessment will be included in the EA being prepared for the proposed transfer of the property in accordance with the requirements of the National Environmental Policy Act. A floodplain statement of findings will be included in any finding of no significant impact that is issued following the completion of the EA or may be issued separately.

Issued in Albuquerque, NM on September 21, 1999.

Constance L. Soden,

Director, Environmental, Safety, and Health Division, Department of Energy, Albuquerque Operations Office.

[FR Doc. 99–25429 Filed 9–29–99; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP99–94–000]

Florida Gas Transmission Company; Notice of Intent To Participate in Meeting on FGT Phase IV Project

September 24, 1999.

The staff of the Federal Energy Regulatory Commission will attend a meeting in the City of Maitland, Florida, at 10 a.m., on Thursday, September 30, 1999, at 601 South Lake Destiny Drive, Suite 450. The purpose of attending the meeting is to coordinate the review of information required for evaluating the effects of the above-referenced docket and project, with regard to federally listed and protected species. The U.S. Fish and Wildlife Service and Florida Gas Transmission Company (FGT) will discuss the project status and species involved, and potential impacts and mitigation. The staff will use this information in preparing its biological assessment for the above-referenced docket and project.

For additional information, contact Mr. Paul McKee of the Commission's Office of External Affairs at (202) 208–1088.

Linwood A. Watson, Jr.,

Acting Secretary

[FR Doc. 99–25393 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. RP99–509–000]

Granite State Gas Transmission, Inc.; Notice of Proposed Changes in FERC Gas Tariff

September 24, 1999.

Take notice that on September 22, 1999, Granite State Gas Transmission, Inc. (Granite State) tendered for filing as part of its FERC Gas Tariff, Third Revised Volume No. 1, the revised taroff sheets listed below for effectiveness on October 22, 1999:

First Revised Sheet No. 106
First Revised Sheet No. 121
First Revised Sheet No. 135
First Revised Sheet No. 200–A
Second Revised Sheet No. 204
Third Revised Sheet No. 278
Second Revised Sheet No. 297
Second Revised Sheet No. 323
Original Sheet No. 339
Third Revised Sheet Nos. 340–399

Granite State states that the purpose of this filing is to set forth in its tariff a negotiated rates provision pursuant to the Alternative Rates Policy Statement (74 FERC ¶61,076 (1996)).

Granite State further states that copies of its filing have been served on its firm and interruptible customers and on the regulatory agencies of the states of Maine, Massachusetts and New Hampshire.

Any person desiring to be heard or to protest said filing should file a motion to intervene or a protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Sections 385.214 or 385.211 of the Commission's Rules and Regulations. All such motions or protests must be filed in accordance with Section 154.210 of the Commission's Regulations. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceedings. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the Public Reference Room. This filing may be viewed on the web at http://www.ferc.fed.us/online/rims.htm (call 202–208–2222 for assistance).

Linwood A. Watson, Jr.,

Acting Secretary.

[FR Doc. 99–25392 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. RP99–508–000]

KN Interstate Gas Transmission Co.; Notice of Tariff Filing

September 24, 1999.

Take notice that on September 22, 1999, KN Interstate Gas Transmission Co. (KNI) tendered for filing as part of its FERC Gas Tariff, First Revised Volume No. 1–D the following tariff sheet, relating to its Buffalo Wallow System, with an effective date October 21, 1999:

Fourth Revised Sheet No. 18

KNI states that it is submitting this filing to clarify the tariff language regarding the methodology of allocating gas to receipt and delivery points as it relates to Firm and Interruptible Transportation services.

KNI states that copies of this filing have been served upon all affected firm customers of KNI and applicable state agencies.

Any person desiring to be heard or to protest said filing should file a motion to intervene or a protest with the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426, in accordance with Sections 385.214 or 385.211 of the Commission's Rules and Regulations. All such motions or protests must be filed in accordance with Section 154.210 of the Commission's Regulations. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceedings. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the Public Reference Room. This filing may be viewed on the web at http://www.ferc.fed.us/online/rims.htm (call 202–208–2222 for assistance).

Linwood A. Watson, Jr.,

Acting Secretary.

[FR Doc. 99–25391 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Maine Project Nos. 2364 and 2365]

Madison Paper Industries; Notice of Scoping Meetings and Site Visit and Soliciting Scoping Comments

September 24, 1999.

The Federal Energy Regulatory Commission's (Commission) regulations provide applicants with the option of preparing their own Environmental Assessment (EA) for hydropower projects, and filing this applicant-prepared EA (APEA) with their application as part of an alternative licensing procedure.[1] On July 1, 1999, Madison Paper Industries (MPI) requested, approval to use the alternative relicensing procedure in preparation of the license applications for the Anson (FERC No. 2365) and the Abenaki (FERC No. 2364) Hydroelectric Projects. The Commission approved MPI's request on September 10, 1999. The current licenses for the projects expire on May 1, 2004.

In February 1999, MPI initiated a collaborative consultation process with state and federal agencies, local interests, and non-governmental organizations (NGOs), which have formed an APEA Team for the alternative licensing procedures. MPI obtained support from the participants involved in the collaborative process to pursue the APEA process for the Anson and Abenaki Projects.

Based on APEA Team meetings and comments received from February through August 1999, the MPI APEA Team has prepared Scoping Document I (SDI), which provides information on the scoping process, APEA schedule, background information, environmental issues, and proposed project alternatives. In conjunction with the APEA Team, MPI has prepared, and is distributing with SDI, a comprehensive Initial Information Package (IIP) which describes in detail the alternative process that MPI intends to use, the projects and their operations, environmental resources potentially affected by the project, and proposed studies.

Scoping Process

The purpose of the scoping process is to identify issues related to the proposed Madison Paper Industries action and to determine what issues should be addressed in the APEA. SDI is being circulated to enable appropriate federal, state, and local resource agencies, Indian tribes, NGOs, and other interested individuals and entities to participate in the scoping process. SDI provides a brief description of the proposed action, alternatives to the proposed action, and a list of preliminary issues identified by the APEA Team.

Scoping Meeting and Site Visit

MPI will conduct two publics scoping meetings on October 21, 1999.

The times and locations of the scoping meeting are:

Afternoon Scoping Meeting
October 21, 1999, 1:00 PM, Madison Paper Industries Mill, Main Street, Madison, Maine.

Evening Scoping Meeting
October 21, 1999, 6:00 PM, Madison Paper Industries Mill, Main Street, Madison, Maine.

All interested individuals, organizations, and agencies are invited and encouraged to attend either or both meetings to assist in identifying and clarifying the scope of environmental issues that should be analyzed in the APEA. For more details or a copy of SDI, please contact David Lovley, MPI, (207) 696–1225. Copies of SDII and the IIP will be available at both meetings.

A site tour, conducted by MPI, will begin at 9:00 AM, on October 21, 1999, and is expected to last about three hours. The site tour will include the Anson and Abenaki Project works, including generating facilities, the Abenaki bypassed reach, and project recreation facilities (The Pines and Madison boat launch). Site tour participants will meet at the security building at the Madison Paper Industries Mill, Main Street, Madison, Maine. Transportation will be provided. Those who wish to attend should contact David Lovley at (207) 696–1225, before October 14, 1999.

Objectives

At the scoping meetings, MIP will: (1) summarize the environmental issues tentatively identified for analysis in the EA; (2) outline any resources they believe would not require a detailed analysis; (3) identify reasonable alternatives to be addressed in the Madison Paper Industries EA; (4) solicit from the meeting participants all available information, especially quantitative data, on the resources at issue; and (5) encourage statements from experts and the public on issues that should be analyzed in the APEA.

Meeting Procedures

The meeting will be conducted consistent with the procedures used at Commission scoping meetings. Because this meeting will be conducted pursuant to a National Environmental Policy Act scoping meeting, the Commission will not conduct another scoping meeting when the application and APEA are filed with the Commission in early 2002.

Both meetings will be recorded by a stenographer and become a part of the record of the Commission's relicensing proceedings on the Anson and Abenaki Projects. Individuals presenting statements at the meetings will be asked to identify themselves for the record. Speaking time allowed for individuals will be determined before each meeting, based on the number of persons wishing to speak and the approximate amount of time available for the session. Persons choosing not to speak but wishing to express an opinion, as well as speakers unable to summarize their positions within their allotted time, may submit written statements for inclusion in the record no later than December 21, 1999.

All comments should be submitted to: Mr. David Lovley, Madison Paper Industries, P.O. Box 129, Madison, ME 04950.

A copy of all comments should also be sent to MPI's agent: Ms. Maureen Winters, Kleinschmidt Associates, P.O. Box 576, Pittsfield, ME 04967.

Based on all written comments, a Scoping Document II (SDII) may be issued. SDII will include a revised list of issues, based on the scoping comments.

For further information regarding the APEA scoping process, please contact David Lovley of MPI at (207) 696–1225, or Nan Allen of the Commission at (202) 219–2938.

Linwood A. Watson, Jr.,

Acting Secretary.

[FR Doc. 99–25389 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

[1] 81 FERC ¶ 61,103 (1997).

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. RP99–505–000]

Natural Gas Pipeline Company of America; Notice of Termination of Gathering Service

September 24, 1999.

Take notice that on September 20, 1999, Natural Gas Pipeline Company of America (Natural), tendered for filing in Docket No. RP99–505–000 a request pursuant to Section 4 of the Natural Gas Act, 15 U.S.C. 717C and the Commission's policy set forth in its order on rehearing in *Arkla Gathering*

Services Company, 69 FERC ¶61,280 (1994), for authorization to terminate service through two gathering areas—the Panhandle Gathering Area located in Carson, Moore, Hutchinson and Gray Counties, Texas, and the Quinduno Gathering Area located in Carson, Gray and Roberts Counties, Texas.

Collectively these two gathering areas are referred to as the West Panhandle Gathering System. Natural intends to sell the West Panhandle Gathering System to MidCon Gas Products Corp. (MidCon), a gathering affiliate. On August 26, 1999, Natural received authorization in Docket No. CP99–161–000 to abandon, by sale to MidCon, certain previously certificated facilities within the West Panhandle Gathering System.

Natural states that copies of the filing are being mailed to the customers which are currently receiving service in the West Panhandle Gathering System and interested state commissions.

Any person desiring to be heard or to protest said filing should file a motion to intervene or a protest with the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426, in accordance with Sections 385.214 or 385.211 of the Commission's Rules and Regulations. All such motions or protests must be filed in accordance with Section 154.210 of the Commission's Regulations. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceedings. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the Public Reference Room. This filing may be viewed on the Web at http://www.ferc.fed.us/online/rims.htm (call 202–208–2222 for assistance).

Linwood A. Watson, Jr.,

Acting Secretary.

[FR Doc. 99–25390 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. EG99–234–000]

Southern Energy Wichita Falls, L.P. (d/b/a SEI Wichita Falls, L.P.); Notice of Application for Commission Determination of Exempt Wholesale Generator Status

September 22, 1999.

Take notice that on September 20, 1999, Southern Energy Wichita Falls, L.P. (SE Wichita Falls), 900 Ashwood Parkway, Suite 500, Atlanta, Georgia 30338–4780, filed with the Federal Energy Regulatory Commission an application for determination of exempt wholesale generator status pursuant to Part 365 of the Commission's regulations.

SE Wichita Falls is a Delaware limited partnership that intends acquire an 80 MW natural gas-fired cogeneration facility located in Wichita Falls, Texas. SE Wichita Falls is engaged directly and exclusively in the business of owning or operating, or both owning and operating, all or part of one or more eligible facilities and selling electric energy at wholesale.

Any person desiring to be heard concerning the application for exempt wholesale generator status should file a motion to intervene or comments with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). The Commission will limit its consideration of comments to those that concern the adequacy or accuracy of the application. All such motions and comments should be filed on or before October 13, 1999, and must be served on the applicant. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection or on the Internet at http://www.ferc.fed.us/online/rims.htm (please call (202) 208–2222 for assistance).

David P. Boergers,

Secretary.

[FR Doc. 99–25411 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP99–624–000]

Wyoming Interstate Company, Ltd.; Notice of Application

September 24, 1999.

Take notice that on September 16, 1999, Wyoming Interstate Company, Ltd. (WIC), P.O. Box 1087, Colorado Springs, Colorado 80944 filed an application pursuant to Section 7(c) of the Natural Gas Act (NGA) and Part 157 of the Commission's Regulations to construct and operate facilities in order to increase the capacity of its Medicine Bow Lateral, all as more fully set forth in the application which is on file with the Commission and open to public inspection. The application may be viewed on the web at www.ferc.fed.us/online/rims.htm (call (202) 208–2222 for assistance).

WIC proposes to increase the capacity of the Medicine Bow Lateral from 260,000 dth per day to 380,000 dth per day by constructing: (1) 5.6 miles of 24-inch diameter pipeline from the interconnect with the WIC mainline and the Medicine Bow Lateral to the discharge side of WIC's Cheyenne Compressor Station all in Weld County, Colorado; and (2) a 7,170 horsepower compressor unit at the Douglas Compressor Station in converse County, Wyoming. WIC estimates that the proposed facilities will cost $12,101,200 and proposes to finance the construction of the facilities through funds on hand and internally generated cash from operations.

WIC states that it has entered into contracts for the full capacity of the proposed expansion with the existing Medicine Bow shippers. WIC proposes to charge these shippers the existing Medicine bow rate as previously approved in Docket Nos. CP99–102 and RP99–381.

Any questions regarding this application should be directed to James R. West, Manager, Certificates, Wyoming Interstate Company, Ltd., P.O. box 1087, Colorado Springs, Colorado 80944 at (719) 520–4679.

Any person desiring to be heard or to make any protest with reference to said application should on or before October 15, 1999, file with the Federal Energy Regulatory Commission, 888 First Street N.E., Washington, D.C. 20426, a motion to intervene or protest in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) and the regulations under the

NGA (18 CFR 157.10). All protests field with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party in any proceeding must file a motion to intervene in accordance with the Commission's rules.

A person obtaining intervenor status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents issued by the Commission, filed by the applicant, or filed by all other intervenors. An intervenor can file for rehearing of any Commission order and can petition for court review of any such order. However, an intervenor must serve copies of comments or any other filing it makes with the Commission to every other intervenor in the proceeding, as well as filing an original and 14 copies with the Commission.

A person does not have to intervene, however, in order to have comments considered. A person, instead, may submit two copies of such comments to the Secretary of the Commission. Commenters will be placed on the Commission's environmental mailing list, will receive copies of environmental documents, and will be able to participate in meetings associated with the Commission's environmental review process. Commenters will not be required to serve copies of filed documents on all parties. However, commenters will not receive copies of all documents filed by other parties or issued by the Commission, and will not have the right to seek rehearing or appeal the Commission's final order to a Federal court.

The Commission will consider all comments and concerns equally, whether filed by commenters or those requesting intervenor status.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Commission by Sections 7 and 15 of the NGA and the Commission's Rules of Practice and Procedure, a hearing will be held without further notice before the Commission or its designee on this application if no motion to intervene is filed within the time required by the public convenience and necessity. If a motion for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure provide for, unless otherwise advised, it will be unnecessary for WIC to appear or to be represented at the hearing.

Linwood A. Watson, Jr.,

Acting Secretary.

[FR Doc. 99–25387 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. EC99–108–000, et al.]

Central Illinois Public Service Company, et al.; Electric Rate and Corporate Regulation Filings

September 22, 1999.

Take notice that the following filings have been made with the Commission:

1. Central Illinois Public Service Company; Union Electric Company and Ameren Generating Company

[Docket Nos. EC99–108–000 and ER99–4115–000]

Take notice that on September 15, 1999, Central Illinois Public Service Company, Union Electric Company and Ameren Generating Company filed an amendment to their August 17, 1999 application in the above-captioned proceedings.

Comment date: October 15, 1999, in accordance with Standard Paragraph E at the end of this notice.

2. Cogeneration Corporation of America and Calpine Corporation

[Docket No. EC99–114–000]

Take notice that on September 17, 1999, Cogeneration Corporation of America (CogenAmerica) and Calpine Corporation (Calpine) tendered for filing with the Federal Energy Regulatory Commission (Commission) a Joint Application for Approval of Merger Under Section 203 of the Federal Power Act and Request for Expedited Consideration in the above-referenced docket. In the proposed transactions, CogenAmerica will for purposes of Section 203 be considered to have disposed of its jurisdictional assets pursuant to the change in control effected by the proposed merger with Calpine; and Calpine will acquire control of, and ultimately an 80-percent equity interest in, CogenAmerica.

Comment date: November 16, 1999, in accordance with Standard Paragraph E at the end of this notice.

3. SEI Texas, L.P.

[Docket No. EG99–235–000]

Take notice that on, SEI Texas, L.P. (SEI Texas), 900 Ashwood Parkway, Suite 500, Atlanta, Georgia 30338–4780, filed with the Federal Energy Regulatory Commission an application for determination of exempt wholesale generator status pursuant to Part 365 of the Commission's regulations.

SEI Texas is a Delaware limited partnership that intends to construct, own, and operate a 450 MW natural gas-fired generation facility located in Bosque County, Texas. SEI Texas is engaged directly and exclusively in the business of owning or operating, or both owning and operating, all or part of one or more eligible facilities and selling electric energy at wholesale.

Comment date: October 13, 1999, in accordance with Standard Paragraph E at the end of this notice. The Commission will limit its consideration of comments to those that concern the adequacy or accuracy of the application.

4. Central Maine Power Company

[Docket No. ER99–4460–000]

Take notice that on September 17, 1999, Central Maine Power Company (CMP) tendered for filing an executed service agreement for sale of capacity and/or energy entered into with NRG Power Marketing Inc. Service will be provided pursuant to CMP's Wholesale Market Tariff, designated rate schedule CMP–FERC Electric Tariff, Original Volume No. 4.

CMP requests that the Service Agreement become effective as of September 17, 1999.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

5. Maine Electric Power Company

[Docket No. ER99–4461–000]

Take notice that on September 17, 1999, Maine Electric Power Company (MEPCO) tendered for filing a service agreement for Non-Firm Point-to-Point Transmission Service entered into with American Electric Power Service Corporation (AEPSC). Service will be provided pursuant to MEPCO's Open Access Transmission Tariff, designated rate schedule MEPCO–FERC Electric Tariff, Original Volume No. 1, as supplemented.

MEPCO requests that the Service Agreement become effective as of September 17, 1999.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

6. California Independent System Operator Corporation

[Docket No. ER99–4462–000]

Take notice that on September 17, 1999, the California Independent

System Operator Corporation (ISO) tendered for filing a proposed amendment (Amendment No. 21) to the ISO Tariff. Amendment No. 21 includes proposed changes to the ISO Tariff which would extend for one year the authority of the ISO to disqualify Energy and Ancillary Service bids that exceed levels specified by the ISO's Board of Governors.

The ISO states that this filing has been served upon the Public Utilities Commission of California, the California Energy Commission, the California Electricity Oversight Board, and all parties with effective Scheduling Coordinator Service Agreements under the ISO Tariff.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

7. Northeast Generation Company

[Docket No. ER99–4463–000]

Take notice that on September 17, 1999, Northeast Generation Company (NGC) tendered for filing, under section 205 of the Federal Power Act, a rate schedule providing for the sale of energy, capacity and ancillary services at market-based rates and for the reassignment of transmission capacity.

NGC requests an effective date concurrent with the earlier of the date on which it closes the transaction to purchase certain generating facilities from The Connecticut Light and Power Company and the date on which it closes the transaction purchase certain generating facilities from Western Massachusetts Electric Company.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

8. Orange and Rockland Utilities, Inc.

[Docket No. ER99–4464–000]

Take notice that on September 17, 1999, Orange and Rockland Utilities, Inc. (Orange and Rockland) filed a Service Agreement between Orange and Rockland and PP&L, Inc. (Customer). This Service Agreement specifies that the Customer has agreed to the rates, terms and conditions of Orange and Rockland Open Access Transmission Tariff filed on July 9, 1996 in Docket No. OA96–210–000.

Orange and Rockland requests waiver of the Commission's sixty-day notice requirements and an effective date of August 15, 1999 for the Service Agreement.

Orange and Rockland has served copies of the filing on The New York State Public Service Commission and on the Customer.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

9. Duquesne Light Company

[Docket No. ER99–4465–000]

Take notice that on September 17, 1999, Duquesne Light Company (DLC) filed a Service Agreement dated September 16, 1999 with Allegheny Power Service Corporation under DLC's Open Access Transmission Tariff (Tariff). The Service Agreement adds Allegheny Power Service Corporation as a customer under the Tariff.

DLC requests an effective date of September 16, 1999 for the Service Agreement.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

10. Duquesne Light Company

[Docket No. ER99–4466–000]

Take notice that on September 17, 1999, Duquesne Light Company (DLC) filed a Service Agreement dated September 16, 1999 with Allegheny Power Service Corporation under DLC's Open Access Transmission Tariff (Tariff). The Service Agreement adds Allegheny Power Service Corporation as a customer under the Tariff.

DLC requests an effective date of September 16, 1999 for the Service Agreement.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

11. Commonwealth Edison Company and Commonwealth Edison Company of Indiana

[Docket No. ER99–4470–000]

Take notice that on September 17, 1999, Commonwealth Edison Company and Commonwealth Edison Company of Indiana (collectively ComEd) filed amendments to ComEd's Open Access Transmission Tariff (OATT) to reduce and update the rates for transmission and ancillary services and to update the loss factors.

ComEd requests an effective date of October 1, 1999 for the above-described rate reductions.

Copies of the filing were served upon ComEd's jurisdictional customers, interested state commissions, and on the parties to the Illinois Commerce Commission (ICC) Docket Nos. 98–0894 and 99–0117 proceedings now pending before the ICC.

Comment date: October 7, 1999, in accordance with Standard Paragraph E at the end of this notice.

Standard Paragraphs

E. Any person desiring to be heard or to protest such filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). All such motions or protests should be filed on or before the comment date. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of these filings are on file with the Commission and are available for public inspection. This filing may also be viewed on the Internet at http://www.ferc.fed.us/ online/rims.htm (call 202–208–2222 for assistance).

David P. Boergers,

Secretary.

[FR Doc. 99–25410 Filed 9–29–99; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[OH128; FRL–6447–5]

Delegation of Governor's Authority for the Preparation and Submittal of State Implementation Plans; Ohio

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The purpose of this document is to announce that on May 6, 1999, Bob Taft, Governor of Ohio notified EPA that he delegated his authority to develop and submit State Implementation Plans (SIPs) to Christopher Jones, Director of the Ohio Environmental Protection Agency (Ohio EPA).

ADDRESSES: The document relevant to the above action is available for public inspection during normal business hours at the following address: United States Environmental Protection Agency, Region 5, 77 West Jackson Blvd. (AR–18J), Chicago, IL 60604.

FOR FURTHER INFORMATION CONTACT: Randolph O. Cano, United States Environmental Protection Agency, Region 5, 77 West Jackson (AR–18J), Chicago, Illinois 60604, (312) 886–6036.

SUPPLEMENTARY INFORMATION:

What Action Is USEPA Taking?

EPA is notifying the public that Bob Taft, Governor of Ohio, has delegated

his authority to submit State Implementation Plans (SIPs) and SIP revisions to Christopher Jones, Director of the Ohio EPA.

What Are SIPs?

Under section 110 and part D of the Clean Air Act, States are required to develop plans for attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: sulfur dioxide (SO_2), carbon monoxide (CO), lead (Pb), ozone, particulate matter(PM), and nitrogen dioxide (NO_2). These plans are referred to as state implementation plans or SIPs.

What Are NAAQS?

NAAQS are standards of air quality which are established to protect both human health and welfare.

What Are the Pertinent Requirements for SIP Submittals?

Federal requirements to which SIP submittals must conform are codified at PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS of title 40 of the Code of Federal Regulations. The requirement which is the subject of this document is contained in section 103 Submission of plans, preliminary review of plans. This section provides that the Governor or his designee must submit SIP revisions to EPA. By his May 6, 1999, letter, Governor Taft notified EPA that he delegated this task to the Director of the Ohio EPA, Christopher Jones.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: September 17, 1999.

Francis X. Lyons,

Regional Administrator, Region 5.

[FR Doc. 99–25437 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–6448–1]

Acid Rain Program: Notice of Annual Adjustment Factors for Excess Emission Penalty

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of annual adjustment factors for excess emissions penalty.

SUMMARY: Under the Acid Rain Program, affected units must hold enough allowances to cover their sulfur dioxide emissions and meet an emission limit for nitrogen oxides. Under 40 CFR 77.6, units that do not meet these requirements must pay a penalty without demand to the Administrator based on the number of excess tons emitted times $2000 as adjusted by an annual adjustment factor that must be published in the **Federal Register**.

The annual adjustment factor for adjusting the penalty for excess emissions of sulfur dioxide and nitrogen oxides under 40 CFR part 77 for compliance year 1999 is 1.3114. This value is derived from the Consumer Price Index for 1990 and 1999, as defined in 40 CFR part 72, and corresponds to a penalty of $2623 per excess ton of sulfur dioxide or nitrogen oxides emitted.

The annual adjustment factor for adjusting the penalty for excess emissions of sulfur dioxide and nitrogen oxides under 40 CFR part 77 for compliance year 2000 is 1.3411. This value is derived from the Consumer Price Index for 1990 and 2000, as defined in 40 CFR part 72, and corresponds to a penalty of $2682 per excess ton of sulfur dioxide or nitrogen oxides emitted.

FOR FURTHER INFORMATION CONTACT: Robert Miller, Acid Rain Division (6204J), U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460 at (202) 564–9077.

Dated: September 21, 1999.

Larry F. Kertcher,

Acting Director, Acid Rain Division, Office of Atmospheric Programs, Office of Air and Radiation.

[FR Doc. 99–25439 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–6447–8]

Adoption of Environmental Assessment (EA) and Finding of No Significant Impact, Inyo County Saltcedar Control Program; Owens Valley, CA

AGENCY: Environmental Protection Agency.

ACTION: Notice.

SUMMARY:

Project Location and Description

The U.S. Environmental Protection Agency (EPA) proposes to adopt an EA for a long-term, comprehensive program to control and possibly eradicate saltcedar (also known as tamarix) from portions of the Owens Valley. This plant is an aggressive non-native shrub or tree that displaces native vegetation and wildlife. The work will primarily involve cutting stems and applying herbicides to cut stems in infested areas on land owned by the Los Angeles Department of Water and Power (LADWP). The project area extends from the Inyo County line north of Bishop to the southern end of the valley near Olancha. It consists of unincorporated land owned by the LADWP. The work area extends from the Inyo County line north of Bishop to the southern end of the valley near Olancha. Saltcedar stands occur in patches and encompass about 25,000 acres. The work will primarily occur during the months of October through March, and will continue for 5 or more years. Funding is provided by LADWP and a grant from the EPA.

Purpose and Need for the Proposed Action

The purpose of the program is to systematically eradicate saltcedar on City of Los Angeles land within Inyo County. The benefit of the program would be to facilitate the recovery of native plant communities in the affected areas, thereby increasing the abundance and variety of plant and animal life. The program would implement an element of the Inyo County/Los Angeles Long-term Water Agreement, result in beneficial impacts to the native habitats and wildlife, and assist in implementing the Lower Owens River Project.

Environmental Consequences and Conditions

The proposed saltcedar control program will represent a beneficial impact to the native habitats of the Owens Valley because there will be an increase in the amount and diversity of native plant communities, which will result in an increase in the abundance and diversity of fish and wildlife. The project includes 14 mitigation measures to avoid significant impacts, therefore, no significant impacts to the environment will result from the implementation of this project.

Preliminary Findings

EPA has determined that the proposed project will not have a significant adverse impact on the environment and that an environmental impact statement will not be required for the project.

The EA is available for public inspection at EPA Region 9 in San Francisco, California at 75 Hawthorne Street. To review the project document, to obtain a copy of the document, or to obtain additional information regarding the project, please contact Wendy Melgin of EPA Region 9 at (415) 744–1831 or via e-mail at *melgin.wendy@epamail.epa.gov*.

Comments on this Finding of No Significant Impact may be submitted for consideration by EPA on or before November 1, 1999. No administrative action will be taken by EPA on the project described above prior to the expiration of this public comment period. Comments should be: (1) Mailed to Wendy Melgin, U.S. EPA Region IX, (WTR–9), 75 Hawthorne Street, San Francisco, CA 94105; (2) faxed to Wendy Melgin at (415) 744–1873; or e-mailed to Wendy Melgin at *melgin.wendy@epamail.epa.gov*.

Dated: September 21, 1999.

Alexis Strauss,

Acting Regional Administrator, Region 9.

[FR Doc. 99–25438 Filed 9–29–99; 8:45 am]

BILLING CODE 6560–50–P

FARM CREDIT ADMINISTRATION

Sunshine Act Meeting

AGENCY: Farm Credit Administration.

SUMMARY: Notice is hereby given, pursuant to the Government in the Sunshine Act (5 U.S.C. 552b(e)(3)), of the special meeting of the Farm Credit Administration Board (Board).

DATE AND TIME: The special meeting of the Board will be held at the offices of the Farm Credit Administration in McLean, Virginia, on September 30, 1999, from 9:00 a.m. until such time as the Board concludes its business.

FOR FURTHER INFORMATION CONTACT: Vivian L. Portis, Secretary to the Farm Credit Administration Board, (703) 883–4025, TDD (703) 883–4444.

ADDRESSES: Farm Credit Administration, 1501 Farm Credit Drive, McLean, Virginia 22102–5090.

SUPPLEMENTARY INFORMATION: Parts of this meeting of the Board will be open to the public (limited space available), and parts will be closed to the public. In order to increase the accessibility to Board meetings, persons requiring assistance should make arrangements in advance. The matters to be considered at the meeting are:

Open Session

A. Approval of Minutes

—August 12, 1999 (Open and Closed)

B. Report

—FCS Building Association Quarterly Report

C. New Business

—Regulations

1. Organization; Termination of Farm Credit Status [12 CFR Part 611] (Proposed).

2. Federal Agricultural Mortgage Corporation Risk-Based Capital [12 CFR Part 650] (Proposed).

**Closed Session*

D. Report

—OSMO Report

Dated: September 27, 1999.

Vivian L. Portis,

Secretary, Farm Credit Administration Board.

[FR Doc. 99–25557 Filed 9–28–99; 12:12 pm]

BILLING CODE 6705–01–P

FEDERAL COMMUNICATIONS COMMISSION

Notice of Public Information Collection(s) Being Reviewed by the Federal Communications Commission, Comments Requested

September 23, 1999.

SUMMARY: The Federal Communications Commission, as part of its continuing effort to reduce paperwork burden invites the general public and other Federal agencies to take this opportunity to comment on the following information collection, as required by the Paperwork Reduction Act of 1995, Public Law 104–13. An agency may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a valid control number. Comments are requested concerning (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimate; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

DATES: Written comments should be submitted on or before November 29, 1999. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contact listed below as soon as possible.

ADDRESSES: Direct all comments to Les Smith, Federal Communications Commissions, 445 12th Street, S.W., Room 1–A804, Washington, DC 20554 or via the Internet to lesmith@fcc.gov.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collections contact Les Smith at (202) 418–0217 or via the Internet at lesmith@fcc.gov

SUPPLEMENTARY INFORMATION:

OMB Approval Number: 3060–0107.

Title: Private Radio Application for Renewal, Reinstatement and/or Notification of Change to License information.

Form Number: FCC 405A.

Type of Review: Revision of a currently approved collection.

Respondents: Businesses or other for-profit; Small businesses or organizations; Individuals or households; State or Local Governments; Non-profit institutions.

Number of Respondents: 1,500.

Estimated Time Per Response: .33 hour.

Total Annual Burden: 495 hours.

Needs and Uses: FCC Rules require that radio station licensees renew their PRMS (Private Mobile Radio Service) radio station authorization every five years or their CMRS (Commercial Mobile Radio Service) radio station authorization every ten years. Data is used to update the existing database and make efficient use of the frequency spectrum. Data is also used by Compliance personnel in conjunction with Field Engineers for enforcement and interference resolutions.

The data collected is required by the Communications Act of 1934, as amended; International Treaties and FCC Rules 47 CFR Parts 1.926, 90.119, 90.135, and 90.157.

The form has been revised to delete the requirement to provide payment information. FCC Form 159 (Fee Remittance Advice) is required to be filed with any feeable Form 405A and applicants must provide payment information thereon. The collection is being revised to delete reference in General Mobile Radio Service use of the form. This radio service has been converted to ULS and will no longer use this form. This program change resulted in a reduction in the number of respondents from 2,700 to 1,500 and total burden hours from 891 to 495 hours. Total respondent cost is $80,000.

OMB Approval Number: 3060–0127.

Title: Assignment of Authorization.

Form Number: FCC 1046.

Type of Review: Revision of a currently approved collection.

Respondents: Individuals; Business or other for-profit; State or local governments; Non-profit.

Session closed-exempt pursuant to 5 U.S.C. 552b(c)(8) and (9).

Number of Respondents: 3,000.

Estimated Time Per Response: 5 minutes (.083).

Total Annual Burden: 249 hours.

Needs and Uses: This form is required by the Communications Act, International Treaties and FCC Rules 47 CFR Parts 1.922, 1.924, 80.19, 87.21, and 90.119. To assign authorization of radio station to another entity, the assignor must, in writing, assign all right, title and interest of the authorization to the other entity.

The Commission uses the data to determine if assignment of authorization submitted with the application will meet the rule requirements for issuance of a station authorization.

The form is being revised to delete the reference to Microwave Radio Services use of the form, reducing the number of respondents from 6,000 to 3,000. Microwave Services have been converted to ULS and will use FCC Form 603 for assignment of authorization.

OMB Approval Number: 3060–0035.

Title: Application for Renewal of Auxiliary Broadcast License.

Form Number: FCC 313R.

Type or Review: Revision of a currently approved collection.

Respondents: Business or other for-profit.

Number of Respondents: 50.

Estimated Time Per Response: 30 minutes (.50).

Total Annual Burden: 25 hours.

Total Respondent Costs: $2,250.

Needs and Uses: FCC 313–R is used by licensees of remote pickup and low power stations that are not broadcast licensees (e.g., cable operators, network entities, international broadcast services, motion picture producers and television producers) to renew their auxiliary broadcast license. Statutory authority for this collection of information is contained in Section 307 of the Communications Act. It is also required by 47 CFR 73.3500 and 73.3539.

The Commission intends to revise the application to include a place for the applicant to provide a Fax number; delete payment information and Taxpayer ID Number as the same information is provided on FCC Form 159 (Fee Remittance Advice) required with any feeable application.

OMB Approval Number: 3060–0250.

Title: Section 74.784 Rebroadcasts.

Form Number: None.

Type of Review: Extension of currently approved collection.

Respondents: Business or other for-profit, not-for-profit institutions, state, local or tribal government.

Number of Respondents: 1,080 low power television, TV translator and TV booster stations.

Estimated Time per Response: 1 hour.

Frequency of Response: Reporting, on occasion.

Annual Burden: 1,080.

Annual Costs: $0.

Needs and Uses: Section 74.784(b) states that a licensee of a low power television or TV translator station shall not rebroadcast the programs of any other TV broadcast station without obtaining prior consent of the station whose signals or programs are proposed to be retransmitted. Section 74.784(b) requires licensees of low power television or TV translator stations to notify the Commission when rebroadcasting programs or signals of another station. This notification shall include the call letters of each station rebroadcast. The licensee of the low power television or TV translator station shall certify that written consent has been obtained from the licensee of the station whose programs are retransmitted. The data is used by FCC staff to ensure compliance with Section 325(a) of the Communications Act of 1934, as amended, which states that no broadcasting station shall rebroadcast the program or any part thereof of another broadcasting station without the express authority of the originating station.

OMB Approval Number: 3060–0398.

Title: Equipment Authorization Measurement Standards, 47 CFR 2.948, 15.117(g)(2).

Form Number: None.

Type of Review: Extension of a currently approved collection.

Number of Respondents: 320.

Estimated Time per Response: 28.4375 hours.

Total Annual Burden: 9,100 hours.

Needs and Uses: The information gathered is used by the Commission to ensure that data accompanying all requests for equipment authorization are valid, and that proper testing procedures are used. Testing ensures that potential interference to radio communications is controlled, and if necessary, the data gathered may be used for investigating complaints or harmful interference, or for verifying the manufacture's compliance with the Commission rules. This collection eliminates the necessity for manufacture's to file UHF noise figure data documenting the performance of TV receivers tested and marketed in the U.S. The requirement was eliminated from the rules by a Report and Order in ET Docket 95–144.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

[FR Doc. 99–25405 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–M

FEDERAL COMMUNICATIONS COMMISSION

Notice of Public Information Collection(s) Being Submitted to OMB for Review and Approval

September 23, 1999.

SUMMARY: The Federal Communications Commissions, as part of its continuing effort to reduce paperwork burden invites the general public and other Federal agencies to take this opportunity to comment on the following information collection, as required by the Paperwork Reduction Act of 1995, Public Law 104–13. An agency may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a valid control number. Comments are requested concerning (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimate; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

DATES: Written comments should be submitted on or before November 1, 1999. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contact listed below as soon as possible.

ADDRESSES: Direct all comments to Les Smith, Federal Communications Commission, Room 1–A804, 445 12th Street, SW, Washington, DC 20554 or via the Internet to lesmith@fcc.gov.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collections contact Les Smith at (202) 418–0217 or via the Internet at lesmith@fcc.gov.

SUPPLEMENTARY INFORMATION:

OMB Control Number: 3060–0874.

Title: Consumer Complaint Forms.

Form Number: FCC 475 and FCC 476.

Type of Review: Revision of a currently approved collection.

Respondents: Individuals or households; Business or other for-profit entities; Not-for-profit institutions; and Federal Government.

Number of Respondents: 80,000.

Estimate Time Per Response: 0.5 hours (avg.).

Frequency of Response: Recordkeeping; On occasion reporting requirements.

Total Annual Burden: 40,000 hours.

Total Annual Costs: None.

Needs and Uses: FCC Forms 475 and 476 allow the Commission to collect detailed data from consumers on the practices of common carriers. The information contained in these collections will allow consumers to provide the Commission with the relevant information required and help consumers to develop a concise statement outlining the issue in dispute. The information will then be used to assist in the resolution of informal complaints and to collect data required to assess the practices of common carriers.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

[FR Doc. 99–25404 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

Federal Advisory Committee; Notice of Public Meeting

AGENCY: Federal Communications Commission.

ACTION: Notice of public meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92–463, as amended, this notice advises interested persons of a meeting of the Network Reliability and Interoperability Council (''NRIC'' or ''Council''), which will be held at the Federal Communications Commission in Washington, DC.

DATE: October 14, 1999 at 1:30 p.m.–3:30 p.m.

ADDRESS: Federal Communications Commission, Commission Meeting Room, Room TW–C305, 445 12th St. SW, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Marsha MacBride, Executive Director of the FCC Year 2000 Task Force and Designated Federal Officer of the Council, 445 12th St. SW, Washington, DC 20554; telephone (202) 418–2379, e-mail year2000@fcc.gov.

Press Contact, Audrey Spivak, Office of Public Affairs, 202–418–0512, aspivak@fcc.gov.

SUPPLEMENTARY INFORMATION: The Council was established by the Federal Communications Commission to bring together leaders of the telecommunications industry and telecommunications experts from academic, consumer and other organizations to explore and recommend measures that would enhance network reliability. One of the current issues before the Council is the risk that the Year 2000 date conversion problem presents for the telecommunications networks.

The agenda for the meeting is as follows: The Council will review status reports from Focus Groups 1 and 2 and test results of intercarrier and supplier contingency planning. Focus Group 3 will present a status report. Finally, the Network Reliability Steering Committee will present its quarterly report.

Information concerning the activities of NRIC can be reviewed at the Council's website <www.nric.org@>. Material relevant to the October 14, 1999 meeting will be posted there.

Members of the general public may attend the meeting. The Federal Communications Commission will attempt to accommodate as many people as possible. However, admittance will be limited to the seating available. A live RealAudio feed will be available over the Internet; information on how to tune in can be found at the Commission's website <www.fcc.gov>.

The public may submit written comments to the Council's designated Federal Officer before the meeting.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

[FR Doc. 99–25407 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

Technological Advisory Council Meeting

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: In accordance with the Federal Advisory Committee Act, 5 USC App. 2, Public Law 92–463, as amended, this notice advises interested persons of the third meeting of the Technological Advisory Council (''Council''), which will be held at the Federal Communications Commission in Washington, DC.

DATES: Monday, December 13, 1999, at 10:00 a.m.

ADDRESSES: Federal Communications Commission, 445 12th St. S.W., Room TW-C305, Washington DC 20554.

FOR FURTHER INFORMATION CONTACT: Contact Stagg Newman at snewman@fcc.gov or 202–418–2478.

SUPPLEMENTARY INFORMATION: The Council was established by the Federal Communications Commission to provide a means by which a diverse array of recognized technical experts from a variety of interests such as industry, academia, government, citizens groups, etc., can provide advice to the FCC on innovation in the communications industry.

The purpose of this third meeting will be to hear and discuss the progress of the three focus groups established by the Council to consider the issues the FCC presented to it at its April 30, 1999 meeting. These issues include: (1) the current state of the art for software defined radios, cognitive radios, and similar devices, future developments for these technologies, and ways that the availability of such technologies might affect the FCC's traditional approaches to spectrum management; and the current state of knowledge of electromagnetic noise levels and the effects of such noise on the reliability of existing and future communications systems; (2) the current technical trends in telecommunications services, changes that might decrease, rather than increase, the accessibility of telecommunications services by persons with disabilities and ways the FCC might best communicate to designers of emerging telecommunications network architectures, the requirements for accessibility; and (3) the telecommunications common carrier network interconnection scenarios that are likely to develop, including the technical aspects of cross network (i.e., end-to-end) interconnection, quality of service, network management, reliability, and operations issues, as well as the deployment of new technologies such as dense wave division multiplexing and high speed packet/cell switching. The three focus groups will also report on their progress in implementing the suggestions for continued investigation of these issues presented to them at the September 22, 1999 meeting. The Council may also consider such other issues as come before the Council at the meeting.

Members of the general public may attend the meeting. The Federal Communications Commission will attempt to accommodate as many persons as possible. However,

admittance will be limited to the seating available. There will be no public oral participation, but the public may submit written comments to Stagg Newman, the Council's Designated Federal Officer, before the meeting.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

[FR Doc. 99–25406 Filed 9–29–99; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Agency Information Collection Activities: Proposed Collection; Comment Request

AGENCY: Federal Deposit Insurance Corporation (FDIC).

ACTION: Notice and request for comment.

SUMMARY: The FDIC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35). Currently, the FDIC is soliciting comments concerning an information collection titled ''Interagency Notice of Change in Director or Senior Executive Officer.''

DATES: Comments must be submitted on or before November 29, 1999.

ADDRESSES: Interested parties are invited to submit written comments to Tamara R. Manly, Management Analyst (Regulatory Analysis), (202) 898–7453, Office of the Executive Secretary, Room 4058, Attention: Comments/OES, Federal Deposit Insurance Corporation, 550 17th Street NW, Washington, DC 20429. All comments should refer to ''Interagency Notice of Change in Director or Senior Executive Officer.'' Comments may be hand-delivered to the guard station at the rear of the 17th Street Building (located on F Street), on business days between 7:00 a.m. and 5:00 p.m. [FAX number (202) 898–3838; Internet address: comments@fdic.gov].

A copy of the comments may also be submitted to the OMB desk officer for the FDIC: Alexander Hunt, Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, Room 3208, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Tamara R. Manly, at the address identified above.

SUPPLEMENTARY INFORMATION:

Proposal To Renew the Following Currently Approved Collection of Information

Title: Interagency Notice of Change in Director or Senior Executive Officer.

OMB Number: 3064–0097.

Frequency of Response: On occasion.

Affected Public: All financial institutions.

Estimated Number of Respondents: 300.

Estimated Time per Response: 2 hours.

Estimated Total Annual Burden: 600 hours.

General Description of Collection: The Interagency Notice of Change in Director or Senior Executive Officer is submitted regarding the proposed addition of any individual to the board of directors or the employment of any individual as a senior executive officer. The information is used by the FDIC to make an evaluation of the general character of individuals who will be involved in the management of depository institutions, as required by statute.

Request for Comment

Comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the FDIC's functions, including whether the information has practical utility; (b) the accuracy of the estimates of the burden of the information collection, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

At the end of the comment period, the comments and recommendations received will be analyzed to determine the extent to which the collection should be modified prior to submission to OMB for review and approval. Comments submitted in response to this notice also will be summarized or included in the FDIC's requests to OMB for renewal of this collection. All comments will become a matter of public record.

Federal Deposit Insurance Corporation.

Dated at Washington, DC, this 27th day of September, 1999.

Robert E. Feldman,

Executive Secretary.

[FR Doc. 99–25441 Filed 9–29–99; 8:45 am]

BILLING CODE 6714–01–P

FEDERAL HOUSING FINANCE BOARD

Sunshine Act Meeting

Announcing an Open Meeting of the Board

TIME AND DATE: 10:00 a.m., October 4, 1999.

PLACE: Board Room, Second Floor, Federal Housing Finance Board, 1777 F Street, N.W., Washington, D.C. 20006.

STATUS: The entire meeting will be open to the public.

MATTERS TO BE CONSIDERED DURING PORTIONS OPEN TO THE PUBLIC:

- Single-Family Member Mortgage Assets.
- Final Rule: Allocation of Joint and Several Liability on Consolidated Obligations Among the Federal Home Loan Banks.

CONTACT PERSON FOR MORE INFORMATION: Elaine L. Baker, Secretary to the Board, (202) 408–2837.

William W. Ginsberg,

Managing Director.

[FR Doc. 99–25603 Filed 9–28–99; 1:34 pm]

BILLING CODE 6725–01–P

FEDERAL TRADE COMMISSION

[File No. 992 3158]

Physicians Formula Cosmetics, Inc.; Analysis To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed consent agreement.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair or deceptive acts or practices or unfair methods of competition. The attached analysis to Aid Public comment describes both the allegations in the draft complaint that accompanies the consent agreement and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before November 29, 1999.

ADDRESSES: Comments should be directed to: FTC/Office of the Secretary, Room 159, 600 Pennsylvania., NW, Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: Elaine Kolish or Kent Howerton, FTC/S–4302, 600 Pennsylvania. Ave., NW, Washington, DC 20580. (202) 326–3042. or 326–3013.

SUPPLEMENTARY INFORMATION: Pursuant to section 6(f) of the Federal Trade Commission Act, 38 Stat. 721, 15 U.S.C. 46 and § 2.34 of the Commission's rules of practice (16 CFR 2.34), notice is

hereby given that the above-captioned consent agreement containing a consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of sixty (60) days. The following Analysis to Aid Public Comment describes the terms of the consent agreement, and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained from the FTC Home Page (for September 13, 1999), on the World Wide Web, at ''http://www.ftc.gov/os/actions97.htm.'' A paper copy can be obtained from the FTC Public Reference Room, Room H–130, 600 Pennsylvania Avenue, NW, Washington, DC 20580, either in person or by calling (202) 326–3627.

Public comment is invited. Comments should be directed to: FTC/Office of the Secretary, Room 159, 600 Pennsylvania. Ave., NW, Washington, DC 20580. Two paper copies of each comment should be filed, and should be accompanied, if possible, by a 3½ inch diskette containing an electronic copy of the comment. Such comments or views will be considered by the Commission and will be available for inspection and copying at its principal office in accordance with § 4.9(b)(6)(ii) of the Commission's rules of practice (16 CFR 4.9(b)(6)(ii)).

Analysis of Proposed Consent Order To Aid Public Comment

The Federal Trade Commission has accepted an agreement, subject to final approval, to a proposed consent order from respondent Physicians Formula Cosmetics, Inc.

The proposed consent order has been placed on the public record for sixty (60) days for reception of comments by interested persons. Comments received during this period will become part of the public record. after sixty (60) days, the Commission will again review the agreement and the comments received and will decide whether it should withdraw from the agreement and take other appropriate action or make final the agreement's proposed order.

This matter concerns ''Made in USA'' labeling of cosmetics, cosmetic brushes,and skin care products. The Commission's complaint charges that respondent, by labeling its products as ''Made in USA,'' misrepresented that they were all or virtually all made in the United States when, in truth and in fact, a significant proportion of their components was of foreign origin.

The proposed consent order contains a provision designed to remedy the charges and to prevent the respondent from engaging in similar acts and practices in the future. Part I of the proposed order prohibits the respondent from misrepresenting the extent to which its products are made in the United States. The proposed order would allow respondent to represent that its products are made in the United States as long as all, or virtually all, of the components of the products are of U.S. origin and all, or virtually all, of the labor in manufacturing them is performed in the United States.

The proposed consent order additionally provides that the order shall not prohibit the respondent from depleting its inventory of products bearing a marking or labeling otherwise prohibited by the order and existing on the date the order is signed, in the normal course of business, provided that no such existing inventory may be shipped later than 120 days after the date the order becomes final.

Part II of the proposed order requires the respondent to maintain materials relied upon in disseminating any representation covered by the order. Part III of the proposed order requires the respondent to distribute copies of the order to certain company officials and employees. Part IV of the proposed order requires the respondent to notify the Commission of any change in the corporation that may affect compliance obligations under the order. Part V of the proposed order requires the respondent to file one or more compliance reports. Part VI of the proposed order is a provision whereby the order, absent certain circumstances, terminates twenty years from the date of issuance.

The purpose of this analysis is to facilitate public comment on the proposed consent order. It is not intended to constitute an official interpretation of the agreement and proposed order or to modify in any way their terms.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 99–25418 Filed 9–29–99; 8:45 am]

BILLING CODE 6750–01–M

FEDERAL TRADE COMMISSION

[File No. 982–3588]

The Wire Works, Inc., et al.; Analysis To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed consent agreement.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair or deceptive acts or practices or unfair methods of competition. The attached Analysis to Aid Public comment describes both the allegations in the draft complaint that accompanies the consent agreement and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before November 29, 1999.

ADDRESSES: Comments should be directed to: FTC/Office of the Secretary, Room 159, 600 Pennsylvania Ave., NW., Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: Elaine Kolish or Kent Howerton, FTC/S–4302, 600 Pennsylvania Ave., NW., Washington, DC 20580. (202) 326–3042 or 326–3013.

SUPPLEMENTARY INFORMATION: Pursuant to section 6(f) of the Federal Trade Commission Act, 38 Stat. 721, 15 U.S.C. 46 and § 2.34 of the Commission's Rules of Practice (16 CFR 2.34), notice is hereby given that the above-captioned consent agreement containing a consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of sixty (60) days. The following Analysis to Aid Public comment describes the terms of the consent agreement, and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained from the FTC Home Page (for September 13, 1999), on the World Wide Web, at ''http://www.ftc.gov/os/actions97.htm.'' A paper copy can be obtained from the FTC Public Reference Room, Room H–130, 600 Pennsylvania Avenue, NW., Washington, DC 20580, either in person or by calling (202) 326–3627.

Public comment is invited. Comments should be directed to: FTC/Office of the Secretary, Room 159, 600 Pennsylvania Ave., NW., Washington, DC 20580. Two paper copies of each comment should be filed, and should be accompanied, if possible, by a 3½ inch diskette containing an electronic copy of the comment. Such comments or views will be considered by the Commission and will be available for inspection and copying at its principal office in accordance with § 4.9(b)(6)(ii) of the Commission's rules of practice (16 CFR 4.9(b)(6)(ii)).

Analysis of Proposed Consent Order To Aid Public Comment

The Federal Trade Commission has accepted an agreement, subject to final approval, to a proposed consent order

from respondents The Wire Works, Inc., and Electrodes, Inc.

The proposed consent order has been placed on the public record for sixty (60) days for reception of comments by interested persons. Comments received during this period will become part of the public record. After sixty (60) days, the Commission will again review the agreement and the comments received and will decide whether it should withdraw from the agreement and take other appropriate action or make final the agreement's proposed order.

This matter concerns advertising, labeling, and promotional practices related to the sale of brass electrical discharge machining (''EDM'') wire electrodes. Wire EDM is a metal removal technique that is used to cut metal parts. The Commission's complaint charges that respondents misrepresented that certain of its EDM wire electrodes were all or virtually all made in the United States when, in truth and in fact, a substantial portion of their content was of foreign origin.

The proposed consent order contains a provision that is designed to remedy the charges and to prevent the respondents from engaging in similar acts and practices in the future. Part I of the proposed order prohibits the respondents from misrepresenting the extent to which their EDM wire electrodes are made in the United States. The proposed order would allow respondents to represent that such EDM wire electrodes are made in the United States as long as all, or virtually all, of the components of the EDM wire electrodes are of U.S. origin and all, or virtually all, of the labor in manufacturing them is performed in the United States. It also would allow respondents to make a representation regarding the U.S. origin or U.S. content of their EDM wire electrodes product as permitted in future regulations, guides, or enforcement policy statements promulgated by the Commission. The proposed order further would allow respondents to describe the specific processing that is performed on the product in the United States, *e.g.*, that the product is ''Drawn in the U.S.A.,'' ''Annealed in U.S.A.,'' ''Coldworked in U.S.A.,'' or ''Strengthened in U.S.A.,'' so long as the claim is truthful and substantiated. If the product is not last substantially transformed in the United States, the proposed order would require the respondents to comply with regulations and rulings issued by the U.S. Customs Service under section 304 of the Tariff Act, 19 U.S.C. 1304.

Part II of the proposed order requires the respondents to maintain materials relied upon in disseminating any representation covered by the order. Part III of the proposed order requires the respondents to distribute copies of the order to certain company officials and employees. Part IV of the proposed order requires the respondents to notify the Commission of any change in the corporations that may affect compliance obligations under the order. Part V of the proposed order requires the respondents to file one or more compliance reports. Part VI of the proposed order is a provision whereby the order, absent certain circumstances, terminates twenty years from the date of issuance.

The purpose of this analysis is to facilitate public comment on the proposed consent order. It is not intended to constitute an official interpretation of the agreement and proposed order or to modify in any way their terms.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 99–25419 Filed 9–29–99; 8:45 am]

BILLING CODE 6750–01–M

FEDERAL TRADE COMMISSION

Report of the ''Tar,'' Nicotine, and Carbon Monoxide of the Smoke of 1262 Varieties of Domestic Cigarettes for the Year 1996 and Report of the ''Tar,'' Nicotine, and Carbon Monoxide of the Smoke of 1252 Varieties of Domestic Cigarettes for the Year 1997

ACTION: Notice.

SUMMARY: The Federal Trade Commission publishes the ''Report of the 'Tar,' Nicotine, and Carbon Monoxide of the Smoke of 1262 Varieties of Domestic Cigarettes for the Year 1996'' and the ''Report of the 'Tar,' Nicotine, and Carbon Monoxide of the Smoke of 1252 Varieties of Domestic Cigarettes for the Year 1997.''

DATES: September 30, 1999.

ADDRESSES: Copies of the reports are available from the FTC's World Wide Web site at: http://www.ftc.gov and from the FTC's Public Reference Branch, Room 130, 600 Pennsylvania Ave., NW., Washington, DC 20580. Telephone (202) 326–3128.

FOR FURTHER INFORMATION CONTACT: Michael Ostheimer, Staff Attorney Federal Trade Commission, Bureau of Consumer Protection, 600 Pennsylvania Ave., NW., Washington, DC 20580. Telephone (202) 326–2699.

SUPPLEMENTARY INFORMATION: These reports contain data on the ''tar,'' nicotine and carbon monoxide yields of 1262 varieties of cigarettes manufactured and sold in the United States in 1996, and of 1252 varieties sold in 1997. The Tobacco Institute Testing Laboratory (TITL), a private laboratory operated by the cigarette industry, conducted the ''tar,'' nicotine, and carbon monoxide testing for the widely-available domestic cigarette varieties. This testing was conducted under the review of a representative of the FTC through periodic unannounced inspections. TITL provided the results to the respective cigarette companies, which then provided the data generated by TITL regarding their own brands to the Commission in response to compulsory process. Cigarette smoke from generic, private label, and not-widely-available cigarettes was not tested by TITL, but was tested by the cigarette companies and the test results were provided to the FTC in response to compulsory process.

In response to concerns that have been raised regarding the accuracy and utility of the testing method currently used to determine the ''tar,'' nicotine, and carbon monoxide ratings of cigarettes, the Commission in 1998 requested the assistance of the Department of Health and Human Services in reviewing the scientific and public health questions surrounding the test method and, if appropriate, determining how the test method should be changed. In its July 1999 ''Report to Congress for 1997, Pursuant to the Cigarette Labeling and Advertising Act,'' the Commission recommended that Congress consider giving authority over cigarette testing to one of the Federal government's science-based, public health agencies.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 99–25417 Filed 9–29–99; 8:45 am]

BILLING CODE 6750–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of Inspector General

Publication of the OIG Special Advisory Bulletin on the Effect of Exclusion From Participation in Federal Health Care Programs

AGENCY: Office of Inspector General (OIG), HHS.

ACTION: Notice.

SUMMARY: In its role of identifying and eliminating fraud, waste and abuse in the Department's health care programs, the OIG periodically develops and

issues guidance, including Special Fraud Alerts and Advisory Bulletins, to alert and inform health care providers and program beneficiaries about potential problems or areas of special interest. This **Federal Register** notice sets forth the recently-issued OIG Special Advisory Bulletin addressing the effect of an OIG exclusion on an individual's or entity's participation in the Federal health care programs.

FOR FURTHER INFORMATION CONTACT: Robin Schneider, Office of Counsel to the Inspector General, (202) 619–1306.

SUPPLEMENTARY INFORMATION:

I. Background

This Special Advisory Bulletin is designed to help all affected parties better understand the scope of payment prohibitions that apply to items and services provided to Federal program beneficiaries, and to provide guidance to individuals and entities that have been excluded from the Federal health care programs and to those who employ or contract with an excluded individual or entity to provide such items or services.

II. Special Advisory Bulletin: Gainsharing Arrangements and CMPs for Hospital Payments to Physicians To Reduce or Limit Services to Beneficiaries

A. Introduction

The Office of Inspector General (OIG) was established in the U.S. Department of Health and Human Services to identify and eliminate fraud, waste, and abuse in the Department's programs and to promote efficiency and economy in Departmental operations. The OIG carries out this mission through a nationwide program of audits, inspections, and investigations. In addition, the OIG has been given the authority to exclude from participation in Medicare, Medicaid and other Federal health care programs [1] individuals and entities who have engaged in fraud or abuse, and to impose civil money penalties (CMPs) for certain misconduct related to Federal health care programs (sections 1128 and 1128A of the Social Security Act (the Act)).

Recent statutory enactments have strengthened and expanded the OIG's authority to exclude individuals and entities from the Federal health care programs. These laws also expanded the OIG's authority to assess CMPs against individuals and entities that violate the law. With this expanded authority, the OIG believes that it is important to explain the effect of program exclusions under the current statutory and regulatory provisions.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996, Public Law 104–191, authorized the OIG to provide guidance to the health care industry to prevent fraud and abuse, and to promote high levels of ethical and lawful conduct. To further these goals, the OIG issues Special Advisory Bulletins about industry practices or arrangements that potentially implicate the fraud and abuse authorities subject to enforcement by the OIG.

In order to assist all affected parties in understanding the breadth of the payment prohibitions that apply to items and services provided to Federal program beneficiaries,[2] this Special Advisory Bulletin provides guidance to individuals and entities that have been excluded from Federal health care programs, as well as to those who might employ or contract with an excluded individual or entity to provide items or services reimbursed by a Federal health care program.

B. Statutory Background

In 1977, in the Medicare-Medicaid Anti-Fraud and Abuse Amendments, Public Law 95–142, Congress first mandated the exclusion of physicians and other practitioners convicted of program-related crimes from participation in Medicare and Medicaid (now codified at section 1128 of the Act). This was followed in 1981 with Congressional enactment of the Civil Monetary Penalties Law (CMPL), Public Law 97–35, to further address health care fraud and abuse (section 1128A of the Act). The CMPL authorizes the Department and the OIG to impose CMPs, assessments and program exclusions against individuals and entities who submit false or fraudulent, or otherwise improper claims for Medicare or Medicaid payment. ''Improper claims'' include claims submitted by an excluded individual or entity for items or services furnished during a period of program exclusion.

To enhance the OIG's ability to protect the Medicare and Medicaid programs and beneficiaries, the Medicare and Medicaid Patient and Program Protection Act of 1987, Public Law 100–93, expanded and revised the OIG's administrative sanction authorities by, among other things, establishing certain mandatory and discretionary exclusions for various types of misconduct.

The enactment of HIPAA in 1996 and the Balanced Budget Act (BBA) of 1997, Public Law 105–33, further expanded the OIG's sanction authorities. These statutes extended the application and scope of the current CMP and exclusion authorities beyond programs funded by the Department to all ''Federal health care programs.'' BBA also authorized a new CMP authority to be imposed against health care providers or entities that employ or enter into contracts with excluded individuals for the provision of services or items to Federal program beneficiaries.

In the discussion that follows, it should be understood that the prohibitions being described apply to items and services provided, directly or indirectly, to Federal program beneficiaries. The ability of an excluded individual or entity to render items and services to others is not affected by an OIG exclusion.

C. Exclusion From Federal Health Care Programs

The effect of an OIG exclusion from Federal health care programs is that no Federal health care program payment may be made for any items or services (1) furnished by an excluded individual or entity, or (2) directed or prescribed by an excluded physician (42 CFR 1001.1901). This payment ban applies to all methods of Federal program reimbursement, whether payment results from itemized claims, cost reports, fee schedules or a prospective payment system (PPS). Any items and services furnished by an excluded individual or entity are not reimbursable under Federal health care programs. In addition, any items and services furnished at the medical direction or prescription of an excluded physician are not reimbursable when the individual or entity furnishing the services either knows or should know of the exclusion. This prohibition applies even when the Federal payment itself is made to another provider, practitioner or supplier that is not excluded.

The prohibition against Federal program payment for items or services furnished by excluded individuals or entities also extends to payment for administrative and management services not directly related to patient care, but that are a necessary component of providing items and services to

[1] A Federal health care program is defined as any plan or program that provides health benefits, whether directly, through insurance, or otherwise, which is funded directly, in whole or in part, by the United States Government or a State health care program (with the exception of the Federal Employees Health Benefits Program) (section 1128B(f) of the Act). The most significant Federal health care programs are Medicare, Medicaid, Tricare and the Veterans programs.

[2] A Federal program beneficiary is an individual that receives health care benefits that are funded, in whole or in part, by a Federal health care program.

Federal program beneficiaries. This prohibition continues to apply to an individual even if he or she changes from one health care profession to another while excluded.[3] In addition, no Federal program payment may be made to cover an excluded individual's salary, expenses or fringe benefits, regardless of whether they provide direct patient care.

Set forth below is a listing of some of the types of items or services that are reimbursed by Federal health care programs which, when provided by excluded parties, violate an OIG exclusion. These examples also demonstrate the kinds of items and services that excluded parties may be furnishing which will subject their employer or contractor to possible CMP liability.

- Services performed by excluded nurses, technicians or other excluded individuals who work for a hospital, nursing home, home health agency or physician practice, where such services are related to administrative duties, preparation of surgical trays or review of treatment plans if such services are reimbursed directly or indirectly (such as through a PPS or a bundled payment) by a Federal health care program, even if the individuals do not furnish direct care to Federal program beneficiaries;
- Services performed by excluded pharmacists or other excluded individuals who input prescription information for pharmacy billing or who are involved in any way in filling prescriptions for drugs reimbursed, directly or indirectly, by any Federal health care program;
- Services performed by excluded ambulance drivers, dispatchers and other employees involved in providing transportation reimbursed by a Federal health care program, to hospital patients or nursing home residents;
- Services performed for program beneficiaries by excluded individuals who sell, deliver or refill orders for medical devices or equipment being reimbursed by a Federal health care program;
- Services performed by excluded social workers who are employed by health care entities to provide services to Federal program beneficiaries, and whose services are reimbursed, directly or indirectly, by a Federal health care program;
- Administrative services, including the processing of claims for payment, performed for a Medicare intermediary or carrier, or a Medicaid fiscal agent, by an excluded individual;
- Services performed by an excluded administrator, billing agent, accountant, claims processor or utilization reviewer that are related to and reimbursed, directly or indirectly, by a Federal health care program;
- Items or services provided to a program beneficiary by an excluded individual who works for an entity that has a contractual agreement with, and is paid by, a Federal health care program; and
- Items or equipment sold by an excluded manufacturer or supplier, used in the care or treatment of beneficiaries and reimbursed, directly or indirectly, by a Federal health care program.

D. Violation of an OIG Exclusion by an Excluded Individual or Entity

An excluded party is in violation of its exclusion if it furnishes to Federal program beneficiaries items or services for which Federal health care program payment is sought. An excluded individual or entity that submits a claim for reimbursement to a Federal health care program, or causes such a claim to be submitted, may be subject to a CMP of $10,000 for each item or service furnished during the period that the person or entity was excluded (section 1128A(a)(1)(D) of the Act). The individual or entity may also be subject to treble damages for the amount claimed for each item or service. In addition, since reinstatement into the programs is not automatic, the excluded individual may jeopardize future reinstatement into Federal health care programs (42 CFR 1001.3002).

E. Employing an Excluded Individual or Entity

As indicated above, BBA authorizes the imposition of CMPs against health care providers and entities that employ or enter into contracts with excluded individuals or entities to provide items or services to Federal program beneficiaries (section 1128A(a)(6) of the Act; 42 CFR 1003.102(a)(2)). This authority parallels the CMP for health maintenance organizations that employ or contract with excluded individuals (section 1857(g)(1)(G) of the Act). Under the CMP authority, providers such as hospitals, nursing homes, hospices and group medical practices may face CMP exposure if they submit claims to a Federal health care program for health care items or services provided, directly or indirectly, by excluded individuals or entities.

Thus, a provider or entity that receives Federal health care funding may only employ an excluded individual in limited situations. Those situations would include instances where the provider is both able to pay the individual exclusively with private funds or from other non-federal funding sources, and where the services furnished by the excluded individual relate solely to non-federal program patients.

In many instances, the practical effect of an OIG exclusion is to preclude employment of an excluded individual in any capacity by a health care provider that receives reimbursement, indirectly or directly, from any Federal health care program.

F. CMP Liability for Employing or Contracting With an Excluded Individual or Entity

If a health care provider arranges or contracts (by employment or otherwise) with an individual or entity who is excluded by the OIG from program participation for the provision of items or services reimbursable under such a Federal program, the provider may be subject to CMP liability if they render services reimbursed, directly or indirectly, by such a program. CMPs of up to $10,000 for each item or service furnished by the excluded individual or entity and listed on a claim submitted for Federal program reimbursement, as well as an assessment of up to three times the amount claimed and program exclusion may be imposed. For liability to be imposed, the statute requires that the provider submitting the claims for health care items or services furnished by an excluded individual or entity ''knows or should know'' that the person was excluded from participation in the Federal health care programs (section 1128A(a)(6) of the Act; 42 CFR 1003.102(a)(2)). Providers and contracting entities have an affirmative duty to check the program exclusion status of individuals and entities prior to entering into employment or contractual relationships, or run the risk of CMP liability if they fail to do so.

G. How to Determine If an Individual or Entity is Excluded

In order to avoid potential CMP liability, the OIG urges health care providers and entities to check the OIG List of Excluded Individuals/Entities on the OIG web site (www.hhs.gov/oig) prior to hiring or contracting with individuals or entities. In addition, if they have not already done so, health care providers should periodically check the OIG web site for determining the participation/exclusion status of current employees and contractors. The web site contains OIG program

[3] For example, the prohibition against Federal program payment for items and services would continue to apply in the situation where an excluded pharmacist completes his or her medical degree and becomes a licensed physician.

exclusion information and is updated in both on-line searchable and downloadable formats. This information is updated on a regular basis. The OIG web site sorts the exclusion of individuals and entities by: (1) The legal basis for the exclusion, (2) the types of individuals and entities that have been excluded, and (3) the State where the excluded individual resided at the time they were excluded or the State where the entity was doing business. In addition, the entire exclusion file may be downloaded for persons who wish to set up their own database. Monthly updates are posted to the downloadable information on the web site.

H. Conclusion

In accordance with the expanded sanction authority provided in HIPAA and BBA, and with limited exceptions,[4] an exclusion from Federal health care programs effectively precludes an excluded individual or entity from being employed by, or under contract with, any practitioner, provider or supplier to provide any items and services reimbursed by a Federal health care program. This broad prohibition applies whether the Federal reimbursement is based on itemized claims, cost reports, fee schedules or PPS. Furthermore, it should be recognized that an exclusion remains in effect until the individual or entity has been reinstated to participate in Federal health care programs in accordance with the procedures set forth at 42 CFR 1001.3001 through 1001.3005. Reinstatement does not occur automatically at the end of a term of exclusion, but rather, an excluded party must apply for reinstatement.

If you are an excluded individual or entity, or are considering hiring or contracting with an excluded individual or entity, and question whether or not the employment arrangement may violate the law, the OIG Advisory Opinion process is available to offer formal binding guidance on whether an employment or contractual arrangement may be in violation of the OIG's exclusion and CMP authorities. The process and procedure for submitting an advisory opinion request can be found at 42 CFR 1008, or on the OIG web site at www.hhs.gov/oig.

[4] In certain instances, a State health care program may request a waiver of an exclusion if an individual or entity is the sole community physician or the sole source of essential specialized services in a community (42 CFR 1001.1801(b)).

Dated: September 21, 1999.

June Gibbs Brown,

Inspector General.

[FR Doc. 99–25427 Filed 9–29–99; 8:45 am]

BILLING CODE 4150–04–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

Notice of Receipt of Application for Approval

The following applicant has applied for approval to conduct certain activities with birds that are protected in accordance with the Wild Bird Conservation Act of 1992. This notice is provided pursuant to Section 112(4) of the Wild Bird Conservation Act of 1992, 50 CFR 15.26(c).

Applicant: Jerry Jennings, on behalf of the Cooperative Breeding Program for Keel-billed toucan, Red-breasted toucan, Saffron toucanet, and Chestnut-eared aracari (CB006). The applicant wishes to amend the approved cooperative breeding program to include the Spot-billed toucanet (*Selenidera maculirostris*). The Toucan Preservation Center maintains responsibility for the oversight of the program.

Written data or comments should be submitted to the Director, U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, Room 700, Arlington, Virginia 22203 and must be received by the Director within 30 days of the date of this publication.

Documents and other information submitted with these applications are available for review, *subject to the requirements of the Privacy Act and Freedom of Information Act,* by any party who submits a written request for a copy of such documents to the following office within 30 days of the date of publication of this notice: U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, Room 700, Arlington, Virginia 22203. Phone: (703/358–2095); FAX: (703/358–2298).

Dated: September 24, 1999.

Dr. Rosemarie Gnam,

Chief, Branch of Operations, Office of Management Authority.

[FR Doc. 99–25398 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management,

[NM–070–1430–01; NMNM 97495]

Notice of Realty action—Recreation and Public Purpose (R&PP) Act Classification, New Mexico

AGENCY: Bureau of Land Management Interior.

ACTION: Notice.

SUMMARY: The following described public land in San Juan County, New Mexico have been examined and found suitable for classification for lease or conveyance to the City of Farmington under the provisions of the Recreation and Public Purposes (R&PP) Act, as amended (43 U.S.C. 869 et seq.). City of Farmington proposes to use the land for a sports complex with adjoining trail system.

New Mexico Principal Meridian

T. 29 N., R. 13 W.,
sec. 6, lots 9, 13, SE¼SE¼,
W½SW¼SE¼, S½SE¼SW¼SE¼.

containing 7.95 acres, more or less.

COMMENT DATES: On or before November 15, 1999 interested parties may submit comments regarding the proposed conveyance or classification of the lands to the Bureau of Land Management at the following address. Any adverse comments will be reviewed by the Field Office Manager, Bureau of Land Management, 1235 La Plata Highway, Suite A, Farmington, New Mexico 87401 who may sustain, vacate, or modify this reality action. In the absence of any adverse comments, this realty action becomes the final determination of the Department of the Interior and effective November 30, 1999.

FURTHER INFORMATION: Information related to this action, including the environmental assessment, is available for review at the Bureau of Land Management, Farmington Field Office, 1235 La Plata Highway, Suite A, Farmington, NM 87401.

SUPPLEMENTARY INFORMATION: Upon publication of this notice in the **Federal Register**, the lands will be segregated from all other forms of appropriation under the public land laws, including the general mining laws, except for lease or conveyance under the R&PP Act and leasing under the mineral leasing laws. The segregative effect will terminate upon issuance of the patent to City of Farmington, or two (2) years from the date of this publication, whichever occurs first.

The lease/patient, when issued, will be subject to the following terms, conditions and reservations:

1. Reservation to the United States of a right-of-way for ditches and canals in accordance with 43 U.S.C. 945.

2. Reservation to the United States of all minerals.

3. All valid existing rights, e.g., rights-of-way and leases of record.

4. Provisions that if the patentee or its successor attempts to transfer title to or control over the land to another or the land is devoted to a use other than that for which the land was conveyed, without the consent of the Secretary of the Interior or his delegate, or prohibits or restricts, directly or indirectly, or permits its agents employees, contractors, or subcontractors, including without limitation, lessees, sublessees and permittees), to prohibit or restrict, directly or indirectly, the use of any part of the patented lands or any of the facilities whereon by any person because of such person's race, creed, color, or national origin, title shall revert to the United States.

The lands are not needed for Federal purposes. Lease or conveyance is consistent with current BLM land use planning and would be in the public interest.

Dated: September 24, 1999.

Lee Otteni,

Field Office Manager.

[FR Doc. 99–25402 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–FB–M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[CO–100–1990–00]

Temporary Travel Restrictions

AGENCY: Bureau of Land Management, Department of the Interior.

ACTION: Establishment of travel restrictions for the Irish Canyon and Lookout Mountain ACEC (Area of Critical Environmental Concern) areas of Moffat County, Colorado.

SUMMARY: This order closes certain public lands to motorized vehicle use in the Irish Canyon and Lookout Mountain ACEC in the Little Snake Field Office, Moffat County, Colorado. This order modifies the existing use ''designated roads and trails'' on 11,680 acres for the Irish Canyon ACEC and 6,500 acres for the Lookout Mountain ACEC. The existing restrictions now include an emergency limitation that prohibits the use of any motorized wheeled vehicles off existing roads and trails. This order is issued under the authority of 43 CFR 8364.1 and 43 CFR 8341.2(a) as a temporary measure while the off-highway vehicle (OHV) management portion of the Little Snake Resource Area (Field Office) Resource Management Plan is reviewed and modified as needed to address public issues, concerns, and needs, as well as resource uses, development, impacts, and protection.

EFFECTIVE DATE: October 1, 1999.

FOR FURTHER INFORMATION CONTACT: John E. Husband, Field Manager, Little Snake Field Office, 455 Emerson Street, Craig, Colorado 81625 at (970) 826–5000.

SUPPLEMENTARY INFORMATION: This order affects public lands in Moffat County, Colorado thus described:

(1) Irish Canyon ACEC

Public Lands within:

T.11N., R.101W., Secs. 19, 29, 30, 32, and 33;
T.10N., R.101W., Secs. 2 thru 5, 9 thru 11, 13 thru 16, 18, 22 thru 27, and 34 thru 36;
T.10N., R.100W., Secs. 30 and 31;
T.9N., R.101W., Secs. 1 thru 3, 11, and 12;
T.9N., R.100W., Secs. 5 thru 8;

(2) Lookout Mountain ACEC

Public Lands within:

T.11N., R.98W., Secs. 19, 20, 29, and 30;
T.11N., R.99W., Secs. 25, 26, 32 thru 36
T.10N., R.99W., Secs. 1 thru 7, 9, 10, 15, 16, and 18

This restriction order shall be effective October 1, 1999, and shall remain in effect until rescinded or modified by the Authorized Officer.

Current OHV use designations for public land in the area, established in the Little Snake Resource Area Management Plan, 1989, allow motorized vehicle use on designated road and trails year round. Increased OHV use in adjacent areas are impacting the Irish Canyon and Lookout Mountain ACECs. This is causing an unacceptable impact to natural resources and potentially to the significant cultural resources within the ACECs.

Given due consideration of concerns expressed by the public and the potential impacts of motorized vehicle use, a modification of existing OHV use designation is necessary to adequately protect natural resources and cultural resources on public land and ensure public safety. This modification is an emergency limitation that prohibits the use of motorized vehicles off existing roads and trails. These issues will be thoroughly addressed in upcoming activity planning for these two ACEC areas.

The ACEC area roads and trails affected by this order will be posted with appropriate regulatory signs. Maps of the roads and trails will be available at the Irish Canyon Interpretive site and in the Field Office at the address below.

Persons who are exempt from this restriction contained in this notice include:

1. Any Federal, State, or local Officers engaged in fire, emergency, and law enforcement activities.

2. BLM employees engaged in official duties.

3. Persons or agencies holding a special use permit or right-of-way for access to maintenance and operations of authorized facilities within the restricted area, for purposes related to access for maintenance and operation of said authorized facilities, and provided such motorized use is limited to the routes specifically identified in the special use permit or right-of-way.

4. Grazing permittee is authorized during the permitted grazing season for related motorized use to existing roads and trails. Grazing permittee is authorized in emergency situations, sick or injured animals, to recover the animal(s) with as little damage as possible to the area. Further, notify the Authorized Officer, within 10 working days, of such actions by phone and in a letter describing the location and reason for the action.

Penalties

Violations of this restriction order are punishable by fines not to exceed $1,000 and/or imprisonment not to exceed 12 months.

Dated: September 24, 1999.

John E. Husband,

Field Manager.

[FR Doc. 99–25403 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–JB–P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

Bay-Delta Advisory Council's Ecosystem Roundtable Meeting

AGENCY: Bureau of Reclamation, Interior.

ACTION: Notice of Meeting.

SUMMARY: The Bay-Delta Advisory Council's (BDAC) Ecosystem Roundtable will meet on October 13, 1999 to discuss potential projects for FY 2000 including additional 1999 watershed projects and other issues. This meeting is open to the public. Interested persons may make oral statements to the Ecosystem Roundtable or may file written statements for consideration .

DATES: The Bay-Delta Advisory Council's Ecosystem Roundtable meeting will be held from 9:30 a.m. to 3:30 p.m. on Wednesday October 13, 1999.

ADDRESSES: The Ecosystem Roundtable will meet at the Resources Building, Room 1131, 1416 Ninth Street, Sacramento, CA 95814.

FOR FURTHER INFORMATION CONTACT: Wendy Halverson Martin, CALFED Bay-Delta Program, at (916) 657–2666. If reasonable accommodation is needed due to a disability, please contact the Equal Employment Opportunity Office at (916) 653–6952 or TDD (916) 653–6934 at least one week prior to the meeting.

SUPPLEMENTARY INFORMATION: The San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta system) is a critically important part of California's natural environment and economy. In recognition of the serious problems facing the region and the complex resource management decisions that must be made, the state of California and the Federal government are working together to stabilize, protect, restore, and enhance the Bay-Delta system. The State and Federal agencies with management and regulatory responsibilities in the Bay-Delta system are working together as CALFED to provide policy direction and oversight for the process.

One area of Bay-Delta management includes the establishment of a joint State-Federal process to develop long-term solutions to problems in the Bay-Delta system related to fish and wildlife, water supply reliability, natural disasters, and water quality. The intent is to develop a comprehensive and balanced plan which addresses all of the resource problems. This effort, the CALFED Bay-Delta Program (Program), is being carried out under the policy direction of CALFED. The Program is exploring and developing a long-term solution for a cooperative planning process that will determine the most appropriate strategy and actions necessary to improve water quality, restore health to the Bay-Delta ecosystem, provide for a variety of beneficial uses, and minimize Bay-Delta system vulnerability. A group of citizen advisors representing California's agricultural, environmental, urban, business, fishing, and other interests who have a stake in finding long-term solutions for the problems affecting the Bay-Delta system has been chartered under the Federal Advisory Committee Act (FACA). The BDAC provides advise to CALFED on the program mission, problems to be addressed, and objectives for the Program. The BDAC provides a forum to help ensure public participation, and will review reports and other materials prepared by CALFED staff. BDAC has established a subcommittee called the Ecosystem Roundtable to provide input on annual workplans to implement ecosystem restoration projects and programs.

Minutes of the meeting will be maintained by the Program, Suite 1155, 1416 Ninth Street, Sacramento, CA 95814, and will be available for public inspection during regular business hours, Monday through Friday within 30 days following the meeting.

Dated: September 23, 1999.

Donna E. Tegelman,

Acting Regional Director.

[FR Doc. 99–25279 Filed 9–29–99; 8:45 am]

BILLING CODE 4310–94–M

INTERNATIONAL TRADE COMMISSION

[USITC SE–99–041]

Sunshine Act Meeting

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: October 5, 1999 at 11:00 a.m.

PLACE: Room 101, 500 E Street S.W., Washington, DC 20436, Telephone: (202) 205–2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. Agenda for future meeting: none.
2. Minutes.
3. Ratification List.
4. Inv. Nos. 701–TA–A and 731–TA–157 (Review) (Carbon Steel Wire Rod from Argentina)—briefing and vote. (The Commission will transmit its determination to the Secretary of Commerce on October 20, 1999.)
5. Outstanding action jackets:

1. Documents No. GC–99–076: Regarding Inv. No. 337–TA–409 (Certain CD–ROM Controllers and Products Containing Same–II).

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission:

Issued: September 27, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99–25828 Filed 9–28–99; 3:37 pm]

BILLING CODE 7020–02–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Notice of information collection under review: Application for benefits under the Family Unity Program.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995. The information collection was previously published in the **Federal Register** on February 19, 1999 at 64 FR 8404, allowing for a 60-day public comment period. A 30-day notice, reinstating this information collection without change, was also published in the **Federal Register** on July 9, 1999 at 64 FR 37167. The INS received no comments on the proposed information collection.

The purpose of this notice is to notify the public that INS is reinstating with change this information collection and to allow an additional 30 days for public comments. Comments are encouraged and will be accepted until November 1, 1999. This process is conducted in accordance with 5 CFR 1320.10.

Written comments and/or suggestions regarding the items contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Stuart Shapiro, Department of Justice Desk Officer, Room 10235, Washington, DC 20530; 202–395–7316.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who

are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information collection:

(1) *Type of Information Collection:* Reinstatement with change of a previously approved collection.

(2) *Title of the Form/Collection:* Application for Benefits Under the Family Unity Program.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–817. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or households. The Family Unity Program provides for employment authorization and the voluntary departure of the spouse and unmarried children who are not eligible for the same status as the legalized alien they are related to.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 30,000 responses at 2 hours and 5 minutes (2.083) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 62,490 annual burden hours.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, Room 5307, 425 I Street, NW., Washington, DC 20536. Additionally, comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time may also be directed to Mr. Richard A. Sloan.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: September 24, 1999.

Richard A. Sloan,

Department Clearance Officer, United States Department of Justice, Immigration and Naturalization Service.

[FR Doc. 99–25380 Filed 9–29–99; 8:45 am]

BILLING CODE 4410–10–M

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

Sunshine Act Meeting; ''Federal Register'' Citation of Previous Announcement, Vol. 64, No. 164, at 46,422, August 25, 1999

PREVIOUSLY ANNOUNCED TIME AND DATE: 10:00 a.m., Thursday, September 30, 1999.

PLACE: Room 6005, 6th Floor, 1730 K Street, NW., Washington, DC.

STATUS: Open.

CHANGES IN MEETING: The Commission meeting to consider and act upon Hubb Corp., Docket No. KENT 97–302, has been changed to 10:00 a.m., Thursday, October 14, 1999.

TIME AND DATE: 2:00 p.m., Thursday, October 14, 1999.

PLACE: Room 6005, 6th Floor, 1730 K Street, NW., Washington, DC.

STATUS: Open.

MATTERS TO BE CONSIDERED: The Commission will consider and act upon the following:

1. *Saab* v. *Dumbarton Quarry Assoc.*, Docket No. WEST 97–236–DM (Issues include whether substantial evidence supports the judge's finding that the operator's layoffs of the complainant did not violate section 105(c).)

TIME AND DATE: 10:00 a.m., Thursday, October 28, 1999.

PLACE: Room 6005, 6th Floor, 1730 K Street, NW., Washington, D.C.

STATUS: Open.

MATTERS TO BE CONSIDERED: The Commission will consider and act upon the following:

1. *Dolan* v. *F&E Erection Co.*, Docket No. CENT 97–24–DM (Issues include whether the judge erred in concluding that Dolan was discharged in violation of section 105(c), and whether the judge properly excluded from back pay the period of time Dolan was unavailable for work due to his physical condition.)

TIME AND DATE: 2:00 p.m., Thursday, October 28, 1999.

PLACE: Room 6005, 6th Floor, 1730 K Street, NW., Washington, DC.

STATUS: Open.

MATTERS TO BE CONSIDERED: The Commission will consider and act upon the following:

1. *Pero* v. *Cyprus Plateau Mining Corp.*, Docket No. WEST 97–154–D (Issues include whether substantial evidence supports the judge's finding the operator did not discriminate against Pero in violation of section 105(c).)

Any person attending an open meeting who requires special accessibility features and/or auxiliary aids, such as sign language interpreters, must inform the Commission in advance of those needs. Subject to 29 CFR § 2706.150(a)(3) and § 2706.160(d).

CONTACT PERSON FOR MORE INFO: Jean Ellen (202) 653–5629/(202) 708–9300 for TDD Relay/1–800–877–8339 for toll free.

Jean H. Ellen,

Chief Docket Clerk.

[FR Doc. 99–25519 Filed 9–28–99; 10:05 am]

BILLING CODE 6735–01–M

NATIONAL FOUNDATION ON THE ARTS AND HUMANITIES

Cooperative Agreement for Communicating Information to Targeted Areas about Challenge America Small Grants

AGENCY: National Endowment for the Arts.

ACTION: Notification of availability.

SUMMARY: The National Endowment for the Arts is requesting proposals leading to the award of a Cooperative Agreement to communicate information to targeted areas of the country and communities that have historically been underrepresented as recipients of grants from the National Endowment for the Arts. The work will involve devising and implementing strategies to help inform organizations and provide guidance about a new grant program, Challenge America Small Grants. Those interested in receiving the solicitation package should reference Program Solicitation PS 2000–01 in their written request and include two (2) self-addressed labels. Verbal requests for the Solicitation will not be honored.

DATES: Program Solicitation PS 99–05 is scheduled for release approximately October 25, 1999 with proposals due on November 29, 1999.

ADDRESSES: Requests for the Solicitation should be addressed to the National Endowment for the Arts, Grants & Contracts Office, Room 618, 1100 Pennsylvania Ave., NW, Washington, DC 20506.

FOR FURTHER INFORMATION CONTACT: William Hummel, Grants & Contracts Office, National Endowment for the

Arts, Room 618, 1100 Pennsylvania Ave., NW, Washington, DC 20506 (202/682–5482).

William I. Hummel,

Coordinator, Cooperative Agreements and Contracts.

[FR Doc. 99–25381 Filed 9–29–99; 8:45 am]

BILLING CODE 7537–01–M

NATIONAL SCIENCE FOUNDATION

Notice of Permits Issued Under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of permits issued under the Antarctic Conservation Act of 1978, Public Law 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish notice of permits issued under the Antarctic Conservation Act of 1978. This is the required notice.

FOR FURTHER INFORMATION CONTACT: Nadene G. Kennedy, Permit Office, Office of Polar Programs, Rm. 755, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230.

SUPPLEMENTARY INFORMATION: On August 17, 1999, the National Science Foundation published a notice in the **Federal Register** of permit application received. Permits were issued on September 21, 1999 to the following applicants:

Steven D. Emslie—Permit No. 2000–001
Paul J. Poganis—Permit No. 2000–004
Wayne Z. Trivelpiece—Permit No. 2000–006
W. Berry Lyons—Permit No. 2000–008
Ron Naveen—Permit No. 2000–012
Gary D. Miller—Permit No. 2000–014

Nadene G. Kennedy,

Permit Officer.

[FR Doc. 99–25465 Filed 9–29–99; 8:45 am]

BILLING CODE 7555–01–M

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–220 and 50–410]

Niagara Mohawk Power Corporation; New York State Electric & Gas Corporation; Nine Mile Point Nuclear Station, Units 1 and 2; Notice of Consideration of Approval of Transfer of Facility Operating Licenses and Conforming Amendments, and Opportunity for a Hearing

The US Nuclear Regulatory Commission (the Commission) is considering the issuance of orders under 10 CFR 50.80 approving the transfer of Facility Operating License No. DRP–63 for Nine Mile Point Nuclear Station, Unit 1 (NMP1), and Facility Operating License No. NPF–69 for Nine Mile Point Nuclear Station, Unit 2 (NMP2). Niagara Mohawk Power Corporation (NMPC) is currently the sole owner and operator of NMP1. The transfer of the license for NMP1 would be to AmerGen Energy Company, LLC (AmerGen). NMPC currently holds a 41% undivided ownership interest in NMP2, is its exclusive licensed operator, and acts as agent for its other co-owners. The other current co-owners, who may possess but not operate NMP2, are New York Electric & Gas Corporation (NYSEG) with an 18% interest, Long Island Lighting Company with an 18% interest, Rochester Gas and Electric Corporation with a 14% interest, and the Central Hudson Gas & Electric Company with a 9% interest. Under the proposed transfer for NMP2, NMPC's and NYSEG's interests, and NMPC's operating authority under the license for NMP2, would be transferred to AmerGen. Accordingly, following the proposed transfers, AmerGen would become the licensed operator of both NMP units, the sole owner of NMP1, and a 59% co-owner of NMP2. The Commission is also considering amending the licenses for administrative purposes to reflect the proposed transfers. The NMP facility is located in Oswego County, New York.

Under the proposed transfers, AmerGen would be authorized to possess, use, and operate NMP1 and NMP2 under essentially the same conditions and authorizations included in the existing licenses. In addition, no physical changes would be made to either NMP1 or NMP2 as a result of the proposed transfer, and there would be no significant changes in the day-to-day operations of either unit. The proposed amendments to each unit's license would delete all references to ''Niagara Mohawk Power Corporation'' and ''New York State Electric & Gas Corporation'' (including variations of these names) and substitute ''AmerGen Energy Company, LLC'' (or its new position of ''licensee'' or ''applicant''). The proposed amendments would also add to the licenses certain additional conditions arising from the license transfers; these conditions would (1) Preserve AmerGen's decision-making authority over safety issues, (2) Limit the foreign membership of AmerGen's Management Committee, (3) Assign to AmerGen's Chief Executive Officer and Chief Nuclear Officer the responsibility and authority for ensuring that AmerGen's business and activities with respect to the NMP units are conducted consistent with the protection of the public health and safety and common defense and security of the United States, and (4) Require AmerGen to report to the Commission the filing of any Schedules 13D or 13G with the U.S. Securities and Exchange Commission that disclose beneficial ownership of a registered class of Philadelphia Electric Energy Company (PECO Energy) stock.

Pursuant to 10 CFR 50.80, no license, or any right thereunder, shall be transferred, directly or indirectly, through transfer of control of the license, unless the Commission shall give its consent in writing. The Commission will approve an application for the transfer of a license, if the Commission determines that the proposed transferee is qualified to hold the license, and that the transfer is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.

Before issuance of the proposed conforming license amendments, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

As provided in 10 CFR 2.1315, unless otherwise determined by the Commission with regard to a specific application, the Commission has determined that any amendment to the license of a utilization facility which does no more than conform the license to reflect the transfer action involves no significant hazards consideration. No contrary determination has been made with respect to this specific license amendments application. In light of the generic determination reflected in 10 CFR 2.1315, no public comments with respect to significant hazards considerations are being solicited, notwithstanding the general comment procedures contained in 10 CFR 50.91.

The filing of requests for hearing and petitions for leave to intervene, and written comments with regard to the application for transfers of licenses, are discussed below.

By October 20, 1999, any person whose interest may be affected by the Commission's action on the application may request a hearing, and, if not the applicants, may petition for leave to intervene in a hearing proceeding on the Commission's action. Requests for a hearing and petitions for leave to intervene should be filed in accordance with the Commission's rules of practice set forth in Subpart M, ''Public Notification, Availability of Documents and Records, Hearing Requests and Procedures for Hearings on License Transfer Applications,'' of 10 CFR part

2. In particular, such requests must comply with the requirements set forth in 10 CFR 2.1306, and should address the considerations contained in 10 CFR 2.1308(a). Untimely requests and petitions may be denied, as provided in 10 CFR 2.1308(b), unless good cause for failure to file on time is established. In addition, an untimely request or petition should address the factors that the Commission will also consider, in reviewing untimely requests or petitions, set forth in 10 CFR 2.1308(b)(1)–(2).

Requests for a hearing and petitions for leave to intervene should be served upon (1) Mark J. Wetterhahn, counsel for NMPC, at Winston & Strawn, 1400 L Street, NW, Washington, DC 20005 (tel: 202–371–5703; fax: 202–371–5950; e-mail: *mwetterh@winston.com*); (2) Samuel Behrends IV, counsel for NYSEG, at LeBoeuf, Lamb, Greene & MacRae, L.L.P., 1875 Connecticut Avenue, NW, Suite 1200, Washington, DC 20009–5728 (tel: 202–986–8018; fax: 202–986–8102; e-mail: *sbehrend@llgm.com*); (3) Kevin P. Gallen, counsel for AmerGen, at Morgan, Lewis & Bockius LLP, 1800 M Street, NW, Washington, DC 20036–5869 (tel: 202–467–7462; fax: 202–467–7176; e-mail: *Kpgallen@mlb.com*); (4) the General Counsel, US Nuclear Regulatory Commission, Washington, DC 20555 (e-mail address for license transfer cases only: ogclt@nrc.gov); and (5) the Secretary of the Commission, US Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemakings and Adjudications Staff, in accordance with 10 CFR 2.1313.

The Commission will issue a notice or order granting or denying a hearing request or intervention petition, designating the issues for any hearing that will be held and designating the Presiding Officer. A notice granting a hearing will be published in the **Federal Register** and served on the parties to the hearing.

As an alternative to requests for hearing and petitions to intervene, by November 1, 1999, persons may submit written comments regarding the application for transfer of licenses, as provided for in 10 CFR 2.1305. The Commission will consider and, if appropriate, respond to these comments, but such comments will not otherwise constitute part of the decisional record. Comments should be submitted to the Secretary, US Nuclear Regulatory Commission, Washington, DC 20555–001, Attention: Rulemakings and Adjudications Staff, and should cite the publication date and page number of this **Federal Register** notice.

For further details with respect to this action, see the application dated September 10, 1999, available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Reference and Documents Department, Penfield Library, State University of New York, Oswego, New York 13126.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

Elinor G. Adensam,

Director, Project Directorate I, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25473 Filed 9–29–99; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Peco Energy Company

[Docket Nos. 50–277 and 50–278]

Notice of Withdrawal of Application for Amendments to Facility Operating Licenses

The US Nuclear Regulatory Commission (the Commission) has granted the request of PECO Energy Company (the licensee) to withdraw its application dated August 6, 1999, for proposed amendments to Facility Operating License Nos. DPR–44 and DPR–56 for the Peach Bottom Atomic Power Station, Units 2 and 3, located in York County, Pennsylvania.

The proposed exigent amendments would have temporarily revised Technical Specification Surveillance Requirement 3.7.2.2, for the normal heat sink. The revision would have allowed a temporary increase to the limit for the average water temperature of the normal heat sink from less than or equal to 90 °F to less than or equal to 92 °F.

The Commission had previously issued a Notice of Consideration of Issuance of Amendments published in the **Federal Register** on August 13, 1999 (64 FR 44243). However, by letter dated September, 23, 1999, the licensee withdrew the proposed amendment application.

For further details with respect to this action, see the application for amendments dated August 6, 1999, and the licensee's letter dated September 23, 1999, which withdrew the application for license amendments. The above documents are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Government Publications Section, State Library of Pennsylvania, (Regional Depository) Walnut Street and Commonwealth Avenue, Harrisburg, PA.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

Bartholomew C. Buckley,

Sr. Project Manager, Section 2, Project Directorate 1, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25472 Filed 9–29–99; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–387 and 50–388]

PP&L, INC., (Susquehanna Steam Electric Station, Units 1 and 2); Exemption

I

PP&L, Inc., (PP&L or the licensee) is the holder of Facility Operating License Nos. NPF–14 and NPF–22, which authorize operation of the Susquehanna Steam Electric Station, Units 1 and 2 (SSES 1 & 2 or the facilities) at power levels not to exceed 3441 megawatts thermal. The facilities consist of two boiling-water reactors located at the licensee's site in Salem Township, Luzerne County, Pennsylvania. The licenses provide, among other things, that the licensee is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

II

Section IV.F.2.b of Appendix E to 10 CFR part 50 requires each licensee at each site to conduct an exercise of its onsite emergency plan every 2 years and indicates the exercise may be included in the full-participation biennial exercise required by paragraph 2.c. Paragraph 2.c requires offsite plans for each site to be exercised biennially with full participation by each offsite authority having a role under the plan. During such biennial full-participation exercises, the NRC evaluates onsite emergency preparedness activities and the Federal Emergency Management Agency (FEMA) evaluates offsite emergency preparedness activities. PP&L successfully conducted a full-participation exercise for SSES during the week of October 28, 1997. By letter dated January 29, 1999, as supplemented by letter dated May 24, 1999, the licensee requested an

exemption from Sections IV.F.2.b and c of Appendix E regarding the conduct of a full-participation exercise originally scheduled for November 15, 1999. This one-time change in the exercise schedule would increase the interval in this one instance between full-participation exercises from the current 2 years to 3 years.

The Commission, pursuant to 10 CFR 50.12(a)(1), may grant exemptions from the requirements of 10 CFR part 50 that are authorized by law, will not present an undue risk to public health and safety, and are consistent with the common defense and security. The Commission, however, pursuant to 10 CFR 50.12(a)(2), will not consider granting an exemption unless special circumstances are present. Under 10 CFR 50.12(a)(2)(v), special circumstances are present whenever the exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.

III

The licensee requests a one-time change in the schedule for the next full-participation exercise for the SSES facilities. Subsequent full-participation exercises for the facilities would be scheduled at no greater than two year intervals in accordance with 10 CFR part 50 Appendix E, Section IV.F.2.c. Accordingly, the exemption would provide only temporary relief from that regulation.

As indicated in the licensee's request for an exemption of January 29, 1999, the licensee had originally scheduled a full-participation exercise for the week of November 15, 1999. As further set forth in that letter, however, FEMA indicated that schedule conflicts precluded their participation in such an exercise in November 1999, and requested that the exercise be rescheduled. In a letter dated March 11, 1999, FEMA documented its position and noted that the affected Pennsylvania jurisdictions do not object to changing the date of the exercise. In addition, the NRC concurred with FEMA's request, and asked that the exercise be scheduled in the year 2000 to relieve resource demands. Accordingly, the licensee made a good faith effort to comply with the schedule requirements of Appendix E for full-participation exercises.

The staff completed its evaluation of the licensee's request for an exemption and the licensee's proposed compensatory measures that it would take to maintain the level of emergency preparedness over the third year. These compensatory measures include training for on-site emergency response organization personnel; on-site health physics drills; off-site emergency response training and plan preparation and drills involving county and municipal volunteers (with critique from trained licensee employees); and routine testing of emergency sirens and notification systems. The staff considered that these measures are adequate to maintain the level of emergency preparedness over the third year. The staff, having considered the schedule and resource issues within FEMA Region III and Region I of the Commission and the proposed licensee compensatory measures, believes that the request should be granted.

IV

The Commission has determined that, pursuant to 10 CFR part 50, appendix E, this exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. Further, the Commission has determined, pursuant to 10 CFR 50.12(a), that special circumstances of 10 CFR 50.12(a)(v) are applicable in that the exemption would provide only temporary relief from the applicable regulation and the licensee has made good faith efforts to comply with the regulation. Therefore, the Commission hereby grants the exemption from Section IV.F.2.b and c of Appendix E to 10 CFR part 50.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact on the quality of the human environment (64 FR 33326).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

John A. Zwolinski,

Director, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25467 Filed 9–29–99; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 50–341]

Detroit Edison Company, Fermi 2; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. NPF–43, issued to the Detroit Edison Company (the licensee) for operation of Fermi 2, located in Monroe County, Michigan.

Environmental Assessment

Identification of the Proposed Action

The proposed amendment would replace the current Technical Specifications (CTS) in their entirety with Improved Technical Specifications (ITS) based on the guidance provided in NUREG–1433, Revision 1, ''Standard Technical Specifications, General Electric Plants BWR/4,'' dated April 1995. The proposed action is in accordance with the licensee's application for amendment dated April 3, 1998, as supplemented by letters dated September 28, October 19, and December 10, 1998, and January 8, January 26, February 24, March 30, April 8, April 30, May 7, June 2, June 24, June 30, July 7, July 13, July 26, August 4, August 17, August 25, and September 8, 1999.

The Need for the Proposed Action

It has been recognized that nuclear safety in all plants would benefit from improvement and standardization of Technical Specifications (TSs). The ''NRC Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors'' (52 FR 3788) contained proposed criteria for defining the scope of TSs. Later, the ''NRC Final Policy Statement on TS Improvement for Nuclear Power Reactors'' (58 FR 39132) incorporated lessons learned since publication of the interim policy statement and formed the basis for a revision to 10 CFR 50.36. The ''Final Rule'' (60 FR 36953) codified criteria for determining the content of TSs. To facilitate the development of standard TSs, each reactor vendor owners group and the NRC staff developed standard TSs (STS). The NRC Committee to Review Generic Requirements reviewed the STS, made note of their safety merits, and indicated its support of conversion by operating plants to the STS. For Fermi 2, the STS are NUREG–1433, Revision 1, ''Standard Technical Specifications, General Electric Plants BWR/4,'' dated April 1995. This document formed the basis for the Fermi 2 ITS conversion.

Description of the Proposed Change

The proposed revision of the CTS is based on NUREG–1433, and on guidance provided in the Final Policy Statement. Its objective is to completely rewrite, reformat, and streamline the CTS. Emphasis is placed on human factors principles to improve clarity and

understanding. The Bases section has been significantly expanded to clarify and better explain the purpose and foundation of each specification. In addition to NUREG–1433, portions of the CTS were also used as the basis for the development of the Fermi 2 ITS. Plant-specific issues (unique design features, requirements, and operating practices) were discussed at length with the licensee.

The proposed changes from the CTS can be grouped into four general categories. These groupings are characterized as administrative changes, technical changes-relocations, technical changes-more restrictive, and technical changes-less restrictive. They are described as follows:

1. Administrative changes are those that involve restructuring, renumbering, rewording, interpretation, and rearranging of requirements and other changes not affecting technical content or substantially revising an operational requirement. The reformatting, renumbering, and rewording processes reflect the attributes of NUREG–1433 and do not involve technical changes to the CTS. The proposed changes include (a) providing the appropriate numbers, etc., for NUREG–1433 bracketed information (information that must be supplied on a plant-specific basis, and which may change from plant to plant), (b) identifying plant-specific wording for system names, etc., and (c) changing NUREG–1433 section wording to conform to existing licensee practices. Such changes are administrative in nature and do not affect initiators of analyzed events or assumed mitigation of accident or transient events.

2. Technical changes—relocations are those changes involving relocation of requirements and surveillances from the CTS to licensee-controlled documents. The relocated requirements do not satisfy or fall within any of the four criteria specified in the Commission's Final Policy Statement and 10 CFR 50.36(c)(2)(ii)(A)–(D), and may be relocated to appropriate licensee-controlled documents.

The licensee's application of the screening criteria is described in Volume 1 of its April 3, 1998, application, ''Fermi 2 Improved Technical Specifications Submittal, Cover Letter and Split Report.'' The affected structures, systems, components, or variables are not assumed to be initiators of events analyzed in the Updated Final Safety Analysis Report (UFSAR) and are not assumed to mitigate accident or transient events analyzed in the UFSAR. The requirements and surveillances for these affected structures, systems, components, or variables will be relocated from the CTS to administratively controlled documents such as the UFSAR, the Bases, or other licensee-controlled documents. Changes made to these documents will be made pursuant to 10 CFR 50.59 or other appropriate control mechanisms.

3. Technical Changes—more restrictive are those changes that involve more stringent requirements for operation of the facility or eliminate existing flexibility. These more stringent requirements do not result in operation that will alter assumptions relative to mitigation of an accident or transient event. In general, these more restrictive technical changes have been made to achieve consistency, correct discrepancies, and remove ambiguities from the specifications.

4. Technical changes—less restrictive are changes where current requirements are relaxed or eliminated, or new flexibility is provided. The more significant ''less restrictive'' requirements are justified on a case-by-case basis. When requirements have been shown to provide little or no safety benefit, their removal from the ITS may be appropriate. In most cases, relaxations granted to individual plants on a plant-specific basis were the result of (a) generic NRC actions, (b) new NRC staff positions that have evolved from technological advancements and operating experience, or (c) resolution of comments from the owners groups on the ITS. Generic relaxations contained in NUREG–1433 were reviewed by the NRC staff and found to be acceptable because they are consistent with current licensing practices and NRC regulations. Each less restrictive change in the Fermi 2 conversion was justified by the licensee in a Discussion of Change and reviewed by the NRC staff.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed revision to the CTS. Changes which are administrative in nature have been found to have no effect on the technical content of the TSs and are acceptable. The increased clarity and understanding these changes bring to the TSs are expected to improve the operators' control of the plant in normal and accident conditions. Relocation of requirements to other licensee-controlled documents does not change the requirements themselves nor does 10 CFR 50.36(c)(2)(ii) mandate that the TSs include these requirements. Further changes to these requirements may be made by the licensee under 10 CFR 50.59 or other NRC-approved control mechanisms that ensure continued maintenance of adequate requirements. All such relocations have been found to be in conformance with the guidelines of NUREG–1433 and the Final Policy Statement, and are, therefore, acceptable.

Changes involving more restrictive requirements have been found to enhance plant safety and to be acceptable.

Changes involving less restrictive requirements have been reviewed individually. When requirements have been shown to provide little or no safety benefit or to place unnecessary burden on the licensee, their removal from the TSs was justified. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of a generic action, or of agreements reached during discussions with the Owners Groups and found to be acceptable for Fermi 2. Generic relaxations contained in NUREG–1433 have also been reviewed by the NRC staff and have been found to be acceptable.

In summary, the proposed revisions to the CTS were found to provide control of plant operations such that reasonable assurance will be provided that the health and safety of the public will be adequately protected.

These TS changes will not increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed TS amendment.

With regard to potential nonradiological impacts, the proposed amendment involves features located entirely within the restricted area as defined in 10 CFR Part 20 and does not involve any historical sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed TS amendment.

Accordingly, the Commission concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the ''no-action'' alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed

action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Fermi 2.

Agencies and Persons Consulted

In accordance with its stated policy, on September 2, 1999, the Commission consulted with the State official, Mr. Michael McCarty of the Michigan Department of Environmental Quality, regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's application dated April 3, 1998, as supplemented by letters dated September 28, October 19, and December 10, 1998, and January 8, January 26, February 24, March 30, April 8, April 30, May 7, June 2, June 24, June 30, July 7, July 13, July 26, August 4, August 17, August 25, and September 8, 1999, which are available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, D.C. 20555, and at the local public document room located at the Monroe County Library System, Ellis Reference and Information Center, 3700 South Custer Road, Monroe, Michigan 48161.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

Andrew J. Kugler,

Project Manager, Section 1, Project Directorate III, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25471 Filed 9–29–99; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–413 and 50–414]

Duke Energy Corporation; Catawba Nuclear Station, Units 1 and 2 Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption to 10 CFR Section 54.17(c), for Facility Operating Licenses No. NPF–35 and NPF–52, issued to Duke Energy Corporation (the licensee) for operation of Catawba Nuclear Station, Units 1 and 2, located in York County, South Carolina.

Environmental Assessment

Identification of Proposed Action

The proposed action would exempt the licensee from certain requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 54.17(c), which specifies that a licensee may not apply for a renewed operating license earlier than 20 years before the expiration of the operating license currently in effect. Catawba Nuclear Station, Units 1 and 2, will not have met this schedular requirement by June 13, 2001 (the earliest date the licensee may apply concurrently for renewed licenses for the Catawba and McGuire units, see below). The proposed action is in response to the licensee's application dated June 22, 1999.

The Need for the Proposed Action

The licensee requested an exemption from the requirements of 10 CFR 54.17(c), which requires that an application for a renewed license may not be submitted to the U.S. Nuclear Regulatory Commission (NRC) earlier than 20 years before the expiration of the operating license currently in effect. The current operating license for McGuire, Unit 1, expires on June 12, 2021, and for McGuire, Unit 2, on March 3, 2023. The current operating license for Catawba, Unit 1, expires on December 6, 2024, and for Catawba, Unit 2, on February 24, 2026. If the licensee submits the renewal applications on the earliest possible date, June 13, 2001, when McGuire, Unit 1, meets the 20-year limit contained in Section 54.17(c), McGuire, Unit 2, will have approximately 18.3 years of operating experience and Catawba, Units 1 and 2, approximately 16.5 years and 15.3 years operating experience, respectively.

In its request, the licensee stated that business considerations dictate preparation and submission of concurrent license renewal applications for McGuire and Catawba. Further, the licensee stated that submission of such renewal applications in 2001, as opposed to some time thereafter, is necessary to obtain the full amount of the potential cost savings. To support preparation of the July 1998 Oconee Nuclear Station renewal applications, the licensee assembled a team of individuals with relevant experience in necessary disciplines to prepare the applications and to remain dedicated to the renewal effort throughout the period of NRC staff review. According to the licensee, granting the exemption request would allow it to use this same team of qualified and experienced professionals to prepare its McGuire and Catawba renewal applications. Thus, the licensee states that it can avoid redeployment costs that would arise if it were unable to proceed promptly with preparation of additional renewal applications.

The licensee's submittal of June 22, 1999, addressed both sites and all four units, but specifically sought schedular exemptions for Catawba, Units 1 and 2 and McGuire Unit 2. This Environmental Assessment only addresses the licensee's request for schedular exemption for Catawba, Units 1 and 2.

Environmental Impacts of the Proposed Action

The staff has completed its evaluation of the environmental impacts of the proposed exemption. The exemption, if granted, will permit the licensee to apply for renewal of the existing operating licenses sooner than would be allowed under the schedule specified by 10 CFR 54.17(c). Should the licensee apply to renew the licenses for the Catawba units, the environmental impacts of operating them under the renewed licenses would then be evaluated by the licensee and the staff. In short, granting of the exemption will not necessitate, or lead to, changes to the as-built plant design or existing procedures at the two Catawba units.

The staff evaluated potential radiological environmental impacts associated with granting the requested exemption. Since no plant design change or procedure change will be made, no new accident causal mechanisms would be introduced. For the same reason, the proposed exemption will not increase the probability or consequences of accidents previously evaluated by the staff (Catawba Safety Evaluation Report, NUREG–0954 dated February 1983 and supplements), will not change the types of effluents that may be released offsite,

and will not increase the allowable individual or public radiation exposure (Catawba Final Environmental Impact Statement, NUREG–0921 dated January 1983). Therefore, there are no significant radiological environmental impacts associated with the proposed action.

The staff also evaluated potential nonradiological impacts. On the basis that the proposed exemption involves no plant design change or procedure change, the staff finds that the proposed exemption does not affect any historic sites, does not increase or decrease nonradiological plant effluents, and has no other environmental impact from those previously evaluated by the staff (Catawba Final Environmental Impact Statement, NUREG–0921). Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the staff concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the ''no action'' alternative). Denial of the application would result in no change in current environmental impacts. Thus, the environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Impact Statement related to the Catawba Nuclear Station (NUREG–0921).

Agencies and Persons Contacted

In accordance with its stated policy, on September 22, 1999, the staff consulted with the South Carolina State official, Mr. Virgil Autrey, of the Bureau of Land and Waste Management, Department of Health and Environmental Control, regarding the environmental impact of the proposed action. Mr. Autrey had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the staff concludes that the proposed exemption will not have a significant effect on the quality of the human environment. Accordingly, the staff has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's request for the exemptions dated June 22, 1999, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington DC, and at the local public document room located at the York County Library, 138 East Black Street, Rock Hill, South Carolina.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

Peter S. Tam,

Senior Project Manager, Section 1, Project Directorate II, Division of Licensing and Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25469 Filed 9–29–99; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–369 and 50–370]

Duke Energy Corporation; McGuire Nuclear Station, Units 1 and 2 Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption to 10 CFR Section 54.17(c), for Facility Operating License No. NPF–9, issued to Duke Energy Corporation (the licensee), for operation of McGuire Nuclear Station, Unit 2, located in Mecklenburg County, North Carolina.

Environmental Assessment

Identification of Proposed Action

The proposed action would exempt the licensee from certain requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 54.17(c), which specifies that a licensee may not apply for a renewed operating license earlier than 20 years before the expiration of the operating license currently in effect. McGuire Nuclear Station, Unit 2, will not have met this schedular requirement by June 13, 2001 (the earliest date the licensee may apply concurrently for renewed licenses for the Catawba and McGuire units, see below). The proposed action is in response to the licensee's application dated June 22, 1999.

The Need for the Proposed Action

The licensee requested an exemption from the requirements of 10 CFR 54.17(c), which requires that an application for a renewed license may not be submitted to the U. S. Nuclear Regulatory Commission (NRC) earlier than 20 years before the expiration of the operating license currently in effect. The current operating license for McGuire, Unit 1, expires on June 12, 2021, and for McGuire, Unit 2, on March 3, 2023. The current operating license for Catawba, Unit 1, expires on December 6, 2024, and for Catawba, Unit 2, on February 24, 2026. If the licensee submits the renewal applications on the earliest possible date, June 13, 2001, when McGuire, Unit 1, meets the 20-year limit contained in Section 54.17(c), McGuire, Unit 2, will have approximately 18.3 years of operating experience and Catawba, Units 1 and 2, approximately 16.5 years and 15.3 years operating experience, respectively.

In its request, the licensee stated that business considerations dictate preparation and submission of concurrent license renewal applications for McGuire and Catawba. Further, the licensee stated that submission of such renewal applications in 2001, as opposed to some time thereafter, is necessary to obtain the full amount of the potential cost savings. To support preparation of the July 1998 Oconee Nuclear Station renewal applications, the licensee assembled a team of individuals with relevant experience in necessary disciplines to prepare the applications and to remain dedicated to the renewal effort throughout the period of NRC staff review. According to the licensee, granting the exemption request would allow it to use this same team of qualified and experienced professionals to prepare its McGuire and Catawba renewal applications. Thus, the licensee states that it can avoid redeployment costs that would arise if it were unable to proceed promptly with preparation of additional renewal applications.

The licensee's submittal of June 22, 1999, addressed both sites and all four units, but specifically sought schedular exemptions for Catawba, Units 1 and 2, and McGuire, Unit 2. This Environmental Assessment only addresses the licensee's request for schedular exemption for McGuire, Unit 2.

Environmental Impacts of the Proposed Action

The staff has completed its evaluation of the environmental impacts of the proposed exemption. The exemption, if granted, will permit the licensee to apply for renewal of the existing McGuire, Unit 2 operating license sooner than would be allowed under the schedule specified by 10 CFR 54.17(c). Should the licensee apply to renew the licenses for the McGuire units, the environmental impacts of operating them under renewed licenses would then be evaluated by the licensee and the staff. In short, granting of the

exemption will not necessitate, or lead to, changes to the as-built plant design or existing procedures at the two McGuire units.

The staff evaluated potential radiological environmental impacts associated with granting the requested exemption. Since no plant design change or procedure change will be made, no new accident causal mechanisms would be introduced. For the same reason, the proposed exemption will not increase the probability or consequences of accidents previously evaluated by the staff (McGuire Safety Evaluation Report, NUREG–0422 dated March 1978 and supplements), will not change the types of effluents that may be released offsite, and will not increase the allowable individual or public radiation exposure (McGuire Final Environmental Impact Statement, NUREG–0063 dated April 1976). Therefore, there are no significant radiological environmental impacts associated with the proposed action.

The staff also evaluated potential nonradiological impacts. On the basis that the proposed exemption involves no plant design change or procedure change, the staff finds that the proposed exemption does not affect any historic sites, does not increase or decrease nonradiological plant effluents, and has no other environmental impact from those previously evaluated by the staff (McGuire Final Environmental Impact Statement, NUREG–0063). Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the staff concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the ''no action'' alternative). Denial of the application would result in no change in current environmental impacts. Thus, the environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Impact Statement related to the McGuire Nuclear Station (NUREG–0063).

Agencies and Persons Contacted

In accordance with its stated policy, on September 22, 1999, the staff consulted with the North Carolina State official, Mr. Johnny James, of the Bureau of Land and Waste Management, Department of Health and Environmental Control, regarding the environmental impact of the proposed action. Mr. James had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the staff concludes that the proposed exemption will not have a significant effect on the quality of the human environment. Accordingly, the staff has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's request for the exemptions dated June 22, 1999, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington DC, and at the local public document room located at the J. Murrey Atkins Library, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, North Carolina.

Dated at Rockville, Maryland, this 24th day of September 1999.

For the Nuclear Regulatory Commission.

Frank Rinaldi,

Project Manager, Section 1, Project Directorate II, Division of Licensing and Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25470 Filed 9–29–99; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

[Docket No. 50–368]

Entergy Operations, Inc.; Arkansas Nuclear One, Unit No. 2 Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of its regulations for Facility Operating License No. NPF–6 issued to Entergy Operations, Inc. (the licensee), for operation of Arkansas Nuclear One, Unit 2 (ANO–2), located in Pope County, Arkansas.

Environmental Assessment

Identification of Proposed Action

The proposed action would exempt the licensee from the requirements of Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR part 50), appendix R, Section III.G.2.c, regarding the fire protection of the safe shutdown capability for equipment located below the 354 foot elevation of the ANO–2 intake structure. The licensee is requesting an exemption from the specific requirement to provide fire detectors and an automatic fire suppression system to protect redundant trains of safe shutdown equipment that are located in the same fire zone.

The proposed action is in accordance with the licensee's application for exemption dated October 8, 1997, as supplemented by letter dated February 25, 1999.

The purpose of 10 CFR part 50, appendix R, Section III.G.2, is to ensure that adequate fire protection features are provided for redundant cables or equipment located in the same fire area outside of primary containment such that at least one of the redundant trains of safe shutdown equipment will remain available during and after any postulated fire in the plant to achieve and maintain safe shutdown conditions. Section III.G.2.c requires the following means of assurance:

> Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

The ANO–2 intake structure below the 354 foot elevation consists of three service water intake bays, which contain service water (SW) piping and conduits. The bays are approximately 7 feet by 32 feet and are separated from one another by 2-foot thick, non-rated concrete walls. The bays are separated from the ground level by an 18-inch thick, non-rated concrete slab on metal decking. The floor of the bays is typically covered with water 16 feet deep. The ceiling height is approximately 14 feet above the normal pool level. Of the three bays, only the ''A'' SW intake bay contains redundant cables. The licensee stated that the total in-situ combustible loading is 3,469,060 BTUs, which is equivalent to a fire severity to a standard fire duration of less than 4 minutes. Each bay is administratively controlled as a ''confined space,'' thus limiting access by personnel during routine operations and precluding the accumulation of combustibles. In addition, the licensee's administrative procedures limit the transient combustibles to 5 pounds unless personnel are continuously present in the area. In such cases, the personnel could be either the craft personnel responsible for using the combustible materials or a continuous fire watch. Water to the bay is normally provided

through a sluice gate for the bays where the circulating pumps take suction.

Service water is required to be available to supply cooling water for various safe shutdown components including the diesel generators and the shutdown cooling heat exchangers. Additionally, SW can be aligned to the emergency feedwater system in the event that the desired condensate source is depleted. The time critical function is to supply cooling for the diesel generators. The licensee stated that, on the basis of its calculations, the diesel generators (and therefore the SW system components) are not required to be operated during the first 30 minutes of a postulated fire event. The licensee allows the operators to manually align the SW system because the diesel generators are not required during the first 30 minutes of a fire event and sufficient time is available to complete the alignment.

The SW system consists of two independent seismic category 1 flow paths that furnish cooling water to two independent trains of 100 percent capacity engineered safety feature equipment, and two non-seismic category 1 flow paths. The SW system has three 100 percent capacity pumps. One pump is dedicated to each of the two SW trains while the third pump is designated as a swing pump and can be aligned to either train. The two loops of the SW system are also electrically independent with two separate divisions of electrical power designated as the red and green train. The red train power for SW is aligned to either SW pump 2P4A or SW pump 2P4B, while the green train power is aligned to either SW pump 2P4C or SW pump 2P4B.

The four power cables associated with the 2P4A, 2P4B, and 2P4C SW pumps interface with the ''A'' SW intake bay challenging the protection criteria specified in Section III.G.2 of Appendix R. The red train power to 2P4A is provided with a fire wrap rated as a 1-hour rated barrier. The red train power to 2P4B is embedded in the concrete wall of the ''A'' SW intake bay, which provides an equivalent 1-hour rated fire barrier. The green train power to 2P4B is provided with a fire wrap rated for a 1-hour barrier. The cables for the red train power to 2P4A and the green train power to 2P4B are routed together inside of a protective moisture barrier. The green train power to 2P4C is routed independently and is approximately 6 feet (horizontally) from the protective moisture barrier providing some physical separation. Therefore, based on the preceding discussion, this area would require the addition of fire detectors and an automatic fire suppression system in order to comply with the requirements of 10 CFR part 50, appendix R, Section III.G.2.c.

Power and control cables for the sluice gates are also located in the SW intake bays. Sluice gate valves 2CV1470–1, 2CV1472–5, and 2CV1474–2 are normally open, which corresponds to the safe shutdown position. The redundant control cables are separated horizontally by approximately 8 feet. As stated previously, the time critical function of the SW system is to provide cooling to the diesel generators. The licensee stated that if a fire were to cause the sluice gates to spuriously close, adequate time would be available before service water was required to manually realign any affected component.

The Need for the Proposed Action

The proposed action is needed because the addition of fire detectors and an automatic fire suppression system to the SW intake bays is considered infeasible due to the construction of the intake structure and the fact that the room is partially water-filled during normal conditions.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed action and concludes that there is no significant environmental impact if the exemption is granted.

The proposed action will not increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regards to potential nonradioactive impacts, the proposed action does not involve any historic sites. It does not affect nonradiological plant effluents and has no other environmental impacts. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the Commission concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the requested action (i.e., the ''no-action'' alternative). Based on the physical characteristics of the SW intake bays, the NRC staff has determined that there is a low probability of occurrence for a fire event in the ANO–2 intake structure below the 354 foot elevation. This low probability of occurrence combined with the lack of combustible material, administrative controls, and the fire protection features provided is sufficient to show adequate protection for redundant equipment in the SW system. Therefore, the features associated with the ANO–2 Intake Structure below the 354 foot elevation are sufficient to achieve the underlying purpose of Appendix R, Section III.G.2.c. Therefore, denial of the application would result in no change in the current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for Arkansas Nuclear One, Unit 2.

Agencies and Persons Consulted

In accordance with its stated policy, on June 24, 1999, the staff consulted with the Arkansas State official, Mr. Bernie Bevill, Supervisor, Quality and Evaluation Section, Division of Radiation Control and Emergency Management, regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated October 8, 1997, as supplemented by letter dated February 25, 1999. These letters are available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room at the Tomlinson Library, Arkansas Tech University, Russellville, Arkansas.

For the Nuclear Regulatory Commission.

Robert A. Gramm,

Chief, Section 1, Project Directorate IV & Decommissioning, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 99–25468 Filed 9–29–99; 8:45 am]

BILLING CODE 7590–01–P

OFFICE OF MANAGEMENT AND BUDGET

Office of Federal Procurement Policy Small Disadvantaged Business Procurement: Reform of Affirmative Action in Federal Procurement

AGENCY: Office of Federal Procurement Policy (OFPP), OMB.

ACTION: Notice of Determination Concerning the Price Evaluation Adjustment Program and the Small Disadvantaged Business (SDB) Participation Program.

SUMMARY: The Federal Acquisition Regulation (FAR), 48 CFR subparts 19.11 and 19.12 contain procurement mechanisms applicable to the SDB reform program. FAR subpart 19.11 permits eligible SDBs to receive price evaluation adjustments in Federal procurement programs. FAR subpart 19.12 provides for an SDB participation program that evaluates the extent of participation of SDB concerns in contract performance. The FAR provides further that the Department of Commerce will determine on an annual basis the price evaluation adjustment by standard industrial classification (SIC) major groups for the price evaluation adjustment program and the authorized SIC major groups for the SDB participation program.

The Commerce Department, in the attached memorandum, determines that for fiscal year 2000 the price evaluation adjustment and the authorized SIC major groups are the same as used in fiscal year 1999. The OFPP notice of June 30, 1998 (63 Fed. Reg. 35714) includes the Commerce determination for fiscal year 1999 of the price evaluation adjustment by SIC major groups for the price evaluation adjustment program. Subsequently, OFPP published on December 29, 1998 (63 Fed. Reg. 71724) the Commerce determination of authorized SIC major groups for the SDB participation program which were the same SIC major groups applicable to the price evaluation adjustment program.

EFFECTIVE DATE: October 1, 1999.

FOR FURTHER INFORMATION CONTACT: Michael Gerich, Deputy Associate Administrator, Office of Federal Procurement Policy, Telephone, 202–395–3501. For information on the Commerce determination, contact Jeffrey Mayer, Director of Policy Development, Economics and Statistics Administration, U.S. Department of Commerce, Telephone 202–482–1728.

SUPPLEMENTARY INFORMATION:

Procurement Mechanisms and Factors

FAR subparts 19.11 and 19.12 contain procurement mechanisms applicable to the SDB reform program. FAR subpart 19.11 provides for the use of a price evaluation adjustment for eligible SDBs. FAR subpart 19.12 provides for an SDB participation program that consists of two mechanisms: (1) An evaluation factor or subfactor for evaluating the extent of participation of SDBs in performance of the contract; and (2) an incentive subcontracting program for exceeding SDB participation targets. OFPP gives notice that the attached memorandum from the Commerce Department determines that for fiscal year 2000 the price evaluation adjustment and the authorized SIC major groups are the same as used in fiscal year 1999. (See 63 FR 35714 (June 30, 1998) for the price evaluation adjustment and the listing of the eligible SIC major groups applicable in fiscal year 1999.) This determination affects solicitations issued on or after October 1, 1999.

Deidre A. Lee,

Administrator.

Attachment.

MEMORANDUM FOR OFFICE OF FEDERAL PROCUREMENT POLICY

From: Jeffrey L. Mayer, Director of Policy Development.

Subject: Determination on the Price Evaluation Adjustment for Small Disadvantaged Business Concerns and the Small Disadvantaged Business Participation Program for FY 2000.

Pursuant to Federal Acquisition Regulation paragraph 19.201(b) and subparts 19.11 and 19.12, transmitted herein is the Department of Commerce (DOC) determination on the Price Evaluation Adjustments for Small Disadvantaged Business Concerns and the Small Disadvantaged Business Participation Program for use in Federal procurements in FY 2000.

DOC transmitted a Notice of Determination Concerning Price Evaluation Adjustments to the Office of Federal Procurement Policy, which was published in the **Federal Register** on June 30, 1998 (see 63 FR 35714 (1998)). The Notice identified the standard industrial classification (SIC) major industry groups in which offers by small disadvantaged businesses on certain federal prime contracts would be eligible for ten percent price evaluation adjustments in FY 1999. In addition, DOC transmitted a Notice of Determination Concerning the Small Disadvantaged Business Participation Program to the Office of Federal Procurement Policy, which was published in the **Federal Register** on December 29, 1998 (see 63 FR 71724 (1998)). In both cases, the determinations were based on DOC's benchmark and utilization estimates derived from FY 1996 data.

In order to develop new benchmarks and utilization estimates for its FY 2001 determination, DOC plans to collect and analyze FY 1999 data along the lines of the methodology outlined in the June 30, 1998 Notice. The determination based on the resulting estimates will be published in June 2000 and will take effect on October 1, 2000. Based on its assessment of the consistency in recent federal procurement patterns, DOC proposes to develop new benchmarks and utilization estimates every three years. DOC will monitor procurement annually to see if benchmarks and utilization estimates should be updated more frequently than every three years.

DOC's determination of industries eligible for both the Price Evaluation Adjustment for Small Disadvantaged Business Concerns and the Small Disadvantaged Business Participation Program for FY 2000 is the same as its determination for FY 1999 and is reproduced in the table below.

INDUSTRIES ELIGIBLE FOR A TEN PERCENT PRICE EVALUATION ADJUSTMENT AND THE SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM

SIC major industry group	Eligibility (*)	Description of Industry Grouping
		Agriculture, Forestry, and Fishing
01		Agricultural production—crops.
02		Agricultural production—livestock.
07		Agricultural services.
08		Forestry.
09		Fishing, hunting, & trapping.

INDUSTRIES ELIGIBLE FOR A TEN PERCENT PRICE EVALUATION ADJUSTMENT AND THE SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM—Continued

SIC major industry group	Eligibility (*)	Description of Industry Grouping
		Mining
10	*	Metal mining.
12	*	Coal mining.
13	*	Oil & gas extraction.
14	*	Extraction of nonmetallic minerals, ex. Fuels
		Construction
15		Building construction—general contractors.
15	*	*East North Central.*
15	*	*East South Central.*
15	*	*Middle Atlantic.*
15		*Mountain.*
15		*New England.*
15		*Pacific.*
15		*South Atlantic.*
15		*West North Central.*
15	*	*West South Central.*
16		*Heavy construction other than buildings—contractors.*
16		*East North Central.*
16	*	*East South Central.*
16		*Middle Atlantic.*
16		*Mountain.*
16		*New England.*
16		*Pacific.*
16		*South Atlantic.*
16		*West North Central.*
16	*	*West South Central.*
17		Construction—special trade contractors.
17		*East North Central.*
17		*East South Central.*
17		*Middle Atlantic.*
17		*Mountain.*
17	*	*New England.*
17		*Pacific.*
17		*South Atlantic.*
17	*	*West North Central.*
17		*West South Central.*
		Manufacturing
20		Food & kindred products.
21		Tobacco products.
22	*	Textile mill products.
23	*	Apparel & other finished products made from fabrics.
24	*	Lumber & wood products, ex. Furniture.
25	*	Furniture & fixtures.
26	*	Paper & allied products.
27	*	Printing, publishing, & allied industries.
28	*	Chemicals & allied products.
29	*	Petroleum refining & related industries.
30	*	Rubber & miscellaneous plastics products.
31	*	Leather & leather products.
32		Stone, clay, glass, & concrete products.
33		Primary metal industries.
34	*	Fabricated metal products.
35		Industrial & commercial machinery & computer equipment.
36	*	Electronic & other electrical equipment & components, ex. Computers.
37	*	Transportation equipment.
38	*	Measuring, analyzing, & controlling instruments; photographic, medical & optical goods; watches & clocks.
39	*	Miscellaneous manufacturing industries.
		Transportation, Communications, Electric, Gas, Sanitary Services
40		Railroad transportation.
41	*	Local & suburban transit & interurban highway passenger transportation.
42	*	Motor freight transportation & warehousing.
44	*	Water transportation.
45		Transportation by air.

INDUSTRIES ELIGIBLE FOR A TEN PERCENT PRICE EVALUATION ADJUSTMENT AND THE SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM—Continued

SIC major industry group	Eligibility (*)	Description of Industry Grouping
46	*	Pipelines, exc. natural gas.
47	*	Transportation services.
48	*	Communications.
49	*	Electric, gas, & sanitary services
		Wholesale Trade
50	*	Wholesale trade—durable goods.
51	*	Wholesale trade—nondurable goods.
		Retail Trade
52	*	Building materials, hardware, garden supply, & mobile home dealers.
53	*	General Merchandise stores.
54	*	Food stores.
55	*	Automotive dealers & gasoline service stations.
56	*	Apparel & accessory stores.
57	*	Home furniture, furnishings, & equipment stores.
58	*	Eating & drinking places.
59	*	Miscellaneous retail.
		Finance, Insurance, and Real Estate
60	*	Depository institutions.
61	*	Nondepository adjustment institutions.
62	*	Security & commodity brokers, dealers, exchanges, & services.
63	*	Insurance carriers.
64	*	Insurance agents, brokers, & services.
65	*	Real estate.
67	*	Holding & other investment offices.
		Services
70	*	Hotels, rooming houses, camps, & other lodging places.
72		Personal services.
73	*	Business services.
75	*	Automotive repair, services, & parking.
76	*	Miscellaneous repair services.
78		Motion pictures.
79		Amusement & recreation services.
80	*	Health services.
81		Legal services.
82	*	Educational services.
83		Social services.
84		Museums, art galleries, & botanical & zoological gardens.
86		Membership organizations.
87	*	Engineering, accounting, research, management, & related services.
88		Private households.
89	*	Miscellaneous services.

Recommendations specific to major industry groups (and combinations thereof) apply nation-wide for all industry groupings except the major construction industry groups (SIC Major Industry Groups 15, 16, and 17). Determinations in these three major groups apply regionally rather than nationally. Regional definitions are based on the nine multi-state Divisions used by the Bureau of the Census when it reports certain sub-national data. DOC augmented the Bureau's basic definitions for the Divisions by including Guam in the Pacific Region and Puerto Rico and the Virgin Islands in the South Atlantic Region. A complete list of the states and outlying areas that comprise each of the nine regions used by DOC follows:

East North Central: Illinois, Indiana, Michigan, Ohio, Wisconsin.

East South Central: Alabama, Kentucky, Mississippi, Tennessee.

Middle Atlantic: New Jersey, New York, Pennsylvania.

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming.

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

Pacific: Alaska, California, Guam, Hawaii, Oregon, Washington.

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, Puerto Rico, South Carolina, Virgin Islands, Virginia, West Virginia.

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

West South Central: Arkansas, Louisiana, Oklahoma, Texas.

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BILLING CODE 3110–01–P

OFFICE OF MANAGEMENT AND BUDGET

Public Availability of Agency Inventories Under the Federal Activities Inventory Reform Act of 1998 (Public Law 105–270) (''FAIR Act'')

AGENCY: Office of Management and Budget, Executive Office of the President.

ACTION: Notice of Public Availability of Commercial Activities Inventories.

SUMMARY: The Office of Management and Budget (OMB) hereby announces that the FAIR Act Commercial Activities Inventories are now available to the public from the agencies listed below.

The ''Federal Activities Inventory Reform Act of 1998'' (Pub. L. 105–270) (''FAIR Act'') requires that OMB publish an announcement of public availability of agency Commercial Activities Inventories upon completion of OMB's review and consultation process concerning the agencies' inventory submissions. OMB has completed this process for the agencies listed below. Further announcements will be published as OMB completes the review process for additional agencies.

Commercial Activities Inventories are now available from the following agencies:

Agency	Contact
African Development Foundation	Tom Wilson, 202–673–3948.
Agency for International Development	Deborah Lewis, 202–712–0936.
American Battle Monuments Commission	Anthony Corea, 703–696–6898.
Appalachian Regional Commission	Guy Land, 202–884–7674.
Architectural and Transportation Barriers Compliance Board.	Lawrence W. Roffee, 202–272–5434.
Arlington National Cemetery	Rory Smith, 703–614–5060.
Barry Goldwater Scholarship and Excellence in Education Foundation.	Ms. Wanni Spence, 703–756–6012.
Chemical Safety Board	Phyllis Thompson, Chief Operating Officer, 202–261–7600.
Christopher Columbus Fellowship Foundation	Judith M. Shellenberger, Executive Director, 703–505–7700.
Committee for Purchase from People who are Blind or Severely Disabled.	Beverly L. Milkman, Executive Director, 703–603–7740.
Council on Environmental Quality	Ellen Athas, 202–456–6541.
Department of Agriculture	Richard M. Guyer, Director, Fiscal Policy Division, Office of the CFO, 202–690–0291.
Department of Commerce	Ms. Brenda Dolan, 202–482–3258.
Department of Education	Gary Weaver, 202–401–3848.
Department of Health and Human Services	Michael Colvin, 202–690–7887; web site: www.hhs.gov/progorg/oam/fair.
Department of Housing and Urban Development.	David Weaver, 202–708–0638 ext. 3894.
Environmental Protection Agency	George Ames, 202–564–4998.
Farm Credit Administration	Donald P. Clark, 703–883–4200.
Federal Labor Relations Authority	Solly Thomas, Executive Director, 202–482–6560.
Federal Maritime Commission	Edward P. Walsh, 202–523–5800.
Federal Mine Safety and Health Review Commission.	Dick Baker, 202–653–5625.
General Services Administration	Thomas Fitzpatrick, 202–501–0324; e-mail: Tom.Fitzpatrick@GSA.GOV.
Harry S. Truman Scholarship Foundation	Louis H. Blair, Executive Secretary, 202–395–4831.
Institute of Museum and Library Services	Linda Bell, Director of Policy, Planning and Budget, 202–606–8637.
Inter-American Foundation	Adolfo Franco, 703–306–4323.
James Madison Memorial Fellowship Foundation.	Paul A. Yost, President, 202–653–6045.
Marine Mammal Commission	Jacqueline L. Murphy, 301–504–0087.
Merit Systems Protection Board	Bob Lawshe, 202–653–7263.
Morris Udall Foundation	Chris Helms, Director, 520–670–5299.
National Aeronautics and Space Administration	Timothy Sullivan, 202–358–2215.
National Archives and Records Administration	Lori Lasowski, 301–713–7360 extension 257.
National Commission on Libraries and Information Science.	Judith C. Russell, 202–606–9200.
National Council on Disability	Ethel D. Briggs, 202–272–2004.
National Education Goals Panel	John Masaitis, 202–724–0015.
National Endowment for the Arts	Ron Fineman, 202–682–5767.
National Endowment for the Humanities	Barry Maynes, 202–606–8310.
National Labor Relations Board	Harding Darden, 202–273–3970.
National Mediation Board	June King, 202–692–5010.
Nuclear Waste Technical Review Board	Dr. William Barnard, Executive Director, 703–235–4473.
Occupational Safety & Health Review Commission.	Patricia Randle, 202–606–5390.
Office of Federal Housing Enterprise Oversight	Linda L. Gwinn, Deputy Director, Office of Finance and Administration, 202–414–3789.
Office of Government Ethics	Sean Donohue, 202–208–8000, ext. 1217.
Office of Management and Budget	Brian Gillis, 202–395–7250.
Office of National Drug Control Policy	Tilman Dean, Director of Administration, 202–395–6722.
Office of Navaho and Hopi Indian Relocation	Michael J. McAlister, 520–779–2721.
Office of Science & Technology Policy	Barbara Ferguson, 202–456–6001.

Agency	Contact
Office of the Special Counsel	Jane McFarland, 202–653–9001.
Office of the U.S. Trade Representative	John Hopkins, 202–395–5797.
Selective Service System	Calvin Montgomery, 703–605–4038.
Social Security Administration	Phil Kelly, 410–965–3099.
U.S. Commission for the Preservation of America's Heritage Abroad.	Chris Hill, 202–254–3824.
U.S. Trade and Development Agency	Julie Norton, 703–875–6066 .

Clarence Crawford,

Associate Director for Administration.

[FR Doc. 99–25550 Filed 9–29–99; 8:45 am]

BILLING CODE 3110–01–P

OFFICE OF PERSONNEL MANAGEMENT

Personnel Demonstration Project; Alternative Personnel Management System for the U.S. Department of Commerce

AGENCY: Office of Personnel Management.

ACTION: Notice of modification to Department of Commerce Personnel Management Demonstration Project.

SUMMARY: Title VI of the Civil Service Reform Act, now codified in 5 U.S.C. 4703, authorizes the Office of Personnel Management (OPM) to conduct demonstration projects that experiment with new and different human resources management concepts to determine whether changes in policies and procedures result in improved Federal human resources management. OPM approved a demonstration project covering several operating units of the U.S. Department of Commerce (DoC). 5 CFR 470.315 requires that modifications to approved demonstration project plans be approved by OPM.

This notice announces the following changes to the project plan: (1) Elimination of the assignment of numerical ranks from the performance payout process, (2) expansion of performance-based reduction-in-force (RIF) credit to include employees whose scores are in the top 30 percent of scores in a pay pool, (3) authorization to include clarifying guidance on bonuses in the Demonstration Project Operating Procedures, and (4) addition of a requirement for close-out ratings for demonstration project employees who are promoted or competitively reassigned with a pay adjustment within the last 120 days of the rating cycle.

All other existing provisions of the project plan will continue. Employees will be notified of these changes through distribution of copies of this notice within the participating organizations. Additional briefings and training for supervisors and employees will highlight the changes made by this notice.

DATES: This notice modifying the DoC Demonstration Project is effective September 30, 1999.

FOR FURTHER INFORMATION CONTACT: Department of Commerce: Darlene F. Haywood, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Room 5118, Washington, DC 20230, (202) 482–3620.

OPM: Gary Hacker, U.S. Office of Personnel Management, 1900 E Street, NW., Room 7460, Washington, DC 20415, (202) 606–4212.

SUPPLEMENTARY INFORMATION:

1. Background

OPM approved the Department of Commerce (DoC) Demonstration Project and published the final plan in the **Federal Register** on Wednesday, December 24, 1997, Volume 62, Number 247, Part II. The project was implemented on March 29, 1998, and it is expected to last for 5 years. The key features of the project involve increased delegation of authority and accountability to line managers, simplified classification and broad banding, pay for performance, hiring and pay-setting flexibilities, and modified RIF procedures.

2. Overview

The Departmental Personnel Management Board (DPMB) recently approved four changes to the DoC Demonstration Project. These involve: (1) Eliminating the assignment of numerical ranks as a factor in determining annual pay increases, (2) expansion of RIF credit to include employees whose scores are in the top 30 percent of scores in a pay pool, (3) including clarifying guidance on bonuses in the Demonstration Project Operating Procedures, and (4) adding a requirement for close-out ratings for employees who are promoted or reassigned with a pay adjustment during the last 120 days of the rating cycle. The changes are responsive to concerns raised by employees, supervisors, unions, and one employee organization. In addition to the policy changes, the notice clarifies the pay-setting policy for new hires into supervisory positions.

Office of Personnel Management.

Janice R. Lachance,

Director.

I. Executive Summary

The Department of Commerce (DoC) Demonstration Project utilizes many features similar to those implemented by the National Institute of Standards and Technology (NIST) Demonstration Project in 1988. The DoC project supports several of the key objectives of the National Performance Review: to simplify the classification system for greater flexibility in classifying work and paying employees; to establish a performance management and rewards system for improving individual and organizational performance; and to improve recruiting and examining to attract highly qualified candidates and hire them more quickly. The DoC project will test whether the interventions of the NIST project, which is now a permanent system, can be successful in other DoC environments. The participating organizations include the Technology Administration, the Bureau of Economic Analysis, the Institute for Telecommunication Sciences, and three units of the National Oceanic and Atmospheric Administration: Office of Oceanic and Atmospheric Research, National Marine Fisheries Service, and the National Environmental Satellite, Data, and Information Service.

II. Basis for Project Plan Modifications

A. Elimination of the Assignment of Numerical Ranks from the Performance Payout Process

Current policy requires that rating officials rate their employees and submit their recommended ratings and rankings to the pay pool manager. Pay pool managers make final determinations on scores recommended by subordinate rating officials and rank employees within the pay pool. All employees having the same score receive the same rank. Using rankings as a guide, pay pool managers make performance pay decisions for all employees in the pay pool. Within a

pool, an employee may not receive a higher relative pay increase than a higher-ranking employee or a lower relative increase than a lower-ranking employee.

Rankings are a major concern for many employees who believe that assigning numerical rankings to employees fosters divisive competition in the work environment and undermines efforts to promote teamwork. For these reasons, the Departmental Personnel Management Board (DPMB) approved a policy change that eliminates the assignment of numerical ranks as a factor associated with payout decisions. Instead, payout decisions will be tied to the employee's relative score within a pay pool and the pay increase ranges in the performance pay tables.

B. Close-Out Ratings

Under current policy, employees who are promoted or reassigned with a pay adjustment within the last 120 days of the rating cycle are considered unratable. Because they are unratable and receive no performance score, these employees are also ineligible for performance-based RIF credit. Since these employees are typically among the highest-performing employees, denying them the opportunity to earn additional RIF credit is inconsistent with the treatment of other employees under the project.

To ensure equitable treatment of all high-performing employees, the DPMB approved a modification to the project plan to require that supervisors prepare close-out ratings of employees who are promoted or reassigned with a pay adjustment within the last 120 days of the rating cycle. The rating (approved by the responsible pay pool manager) will serve as the rating of record for the current appraisal cycle, and the resulting score will be considered in determining eligibility for RIF credit.

C. Expansion of RIF Credit

Prior to conversion to the demonstration project, employees expressed concern that many high-performing employees would not receive any additional RIF credit under the demonstration project. In response to these concerns, the DPMB expanded the percentage of employees eligible for RIF credit from the top 10 percent to the top 20 percent of scores in a pay pool. This change was effected prior to implementation of the project.

The results of the first performance appraisal cycle indicate that current policy on awarding additional performance-based RIF credit under the project still does not provide a fair and equitable basis for recognizing the value of performance contributions made by many high-performing employees. As a result, some employees whose performance is above average may receive no benefit of performance-based RIF credit. Also, loss of a mechanism for recognizing these employees' valuable contributions through earned RIF credit has created a morale issue.

To address this situation, the DPMB authorized modification of demonstration project policy to further expand RIF credit to encompass all employees whose scores are within the top 30 percent of scores in a pay pool. These employees would earn a total of 10 years of credit for the rating cycle and could accumulate a maximum of 30 years.

D. Clarification of Bonus Criteria

Demonstration project policy requires that bonuses be linked to the annual performance appraisal and that they be awarded at the end of the performance year in conjunction with decisions on pay increases. However, after the first appraisal period, there was no consistency across organizational lines in how bonuses were awarded, and absent any definitive guidance, inconsistency in awarding bonuses will likely be a continuing concern for employees. To ensure greater consistency in the awarding of bonuses, the DPMB authorized the inclusion of guidance on awarding bonuses in the Demonstration Project Operating Procedures.

III. Changes to Project Plan

The following directs readers to the substantive changes and a technical clarification in the project plan. The following page numbers refer to the pages in the final plan, published in the **Federal Register** on December 24, 1997.

A. Page 67451: Revise the first sentence in Paragraph C.3, ''Link Between Performance and Retention,'' as follows:

''An employee with an overall performance score in the top 30 percent of scores within a pay pool (See *Performance Evaluation and Rewards* below.) will be credited with 10 additional years of service for retention credit.''

B. Page 67454: Eliminate references to numerical rankings by modifying the following paragraphs in Section E, ''Performance Evaluation and Rewards:''

1. Modify the first section of Paragraph E.1, ''Introduction,'' as follows:

''The most important feature of the performance evaluation system is that it is based on the application of a weighted 100-point scoring system in support of pay for performance. As in the current system, each employee has an individual performance plan composed of several performance elements. Through application of benchmark performance standards and a 100-point scoring system, pay pool managers grant performance pay increases according to employees' relative scores within a pay pool. High-scoring employees within a pay pool receive relatively high pay increases and lower-scoring employees receive relatively lower pay increases.''

2. Eliminate Paragraph E.9, ''Performance Ranking,'' renumber Paragraph E.10, ''Performance Pay Decisions,'' as Paragraph E.9; renumber Paragraph E.11, ''Performance Bonuses'' as E.10, and E.12, ''Actions Based on Unsatisfactory Performance,'' as E.11. Modify Paragraph E.9, ''Performance Pay Decisions,'' as follows:

9. Performance Pay Decisions

''For all employees in a peer group, rating officials submit recommendations on ratings, scores, performance pay increases, and bonuses to pay pool managers. A pay pool manager is a line manager who manages his or her organization's pay increase and bonus funds. The pay pool manager makes final decisions on ratings and scores and determines the final order of scores for all peer groups in a pay pool.

The Performance Pay Table divides each band into three segments or intervals. Each pay interval is linked to a range of potential percentage pay increases beginning at zero and progressing to a maximum performance pay increase (e.g., 0–10 percent). The maximum pay increase an employee may receive, therefore, depends on the interval into which the employee's salary falls. Based on the final order of scores, the pay pool manager makes a performance pay decision for each employee. The payout to an employee is a percentage of basic salary that is all or a portion of the maximum potential pay increase. This amount is known as the ''relative payout'' or the ''proportion-of-the-range.'' Within a pay pool, an employee may not receive a higher relative payout than a higher-scoring employee or a lower relative payout than a lower-scoring employee.''

C. Page 67454: Add the following to Paragraph E.7, ''Performance Ratings.''

''If an employee is permanently promoted or competitively reassigned (with a pay adjustment) from one demonstration project position to another during the last 120 days of the rating cycle, the supervisor of the position from which the employee was promoted or competitively reassigned

will prepare a ''close-out'' rating within 30 days of the promotion or pay adjustment. This rating (when approved by the responsible pay pool manager over the old position) will serve as the rating of record for the current appraisal cycle, and the resulting score will be used in determining the employee's eligibility for reduction-in-force credit.''

D. Page 67454: Add the following to paragraph E.10, ''Performance Bonuses.''

''Guidance on awarding bonuses is contained in the Demonstration Project Operating Procedures, which are available to all rating officials and to all employees covered by the project.''

E. Technical Clarification

Page 67452: In paragraph D.4, ''Supervisory Performance Pay,'' middle column: Modify the first full paragraph as follows:

''Incumbents of supervisory positions will be converted to the project at their basic pay rates (including special rates or locality pay) at the time of conversion. After the date of conversion, new hires into supervisory positions will have their pay set at any salary within the pay range of the applicable pay band, but not higher than the maximum rate of the pay band.''

[FR Doc. 99–25606 Filed 9–28–99; 2:52 pm]

BILLING CODE 6325–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. IC–24051]

Notice of Applications for Deregistration Under Section 8(f) of the Investment Company Act of 1940

September 24, 1999.

The following is a notice of applications for deregistration under section 8(f) of the Investment Company Act of 1940 for the month of September, 1999. A copy of each application may be obtained for a fee at the SEC's Public Reference Branch, 450 Fifth St., N.W., Washington, DC 20549–0102 (tel. 202–942–8090). An order granting each application will be issued unless the SEC orders a hearing. Interested persons may request a hearing on any application by writing to the SEC's Secretary at the address below and serving the relevant applicant with a copy of the request, personally or by mail. Hearing requests should be received by the SEC by 5:30 p.m. on October 19, 1999, and should be accompanied by proof of service on the applicant, in the form of an affidavit or, for lawyers, a certificate of service. Hearing requests should state the nature of the writer's interest, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by writing to the Secretary, SEC, 450 Fifth Street, N.W., Washington, DC 20549–0609.

FOR FURTHER INFORMATION CONTACT: Diane L. Titus, at (202) 942–0564, SEC, Division of Investment Management, Office of Investment Company Regulation, 450 fifth Street, N.W., Washington, DC 20549–0506.

PB Series Trust [File No. 811–7911]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On March 31, 1999, applicant made a liquidating distribution to its shareholders at net asset value per share. No expenses were incurred in connection with the liquidation.

Filing Dates: The application was filed on August 10, 1999, and amended on September 16, 1999.

Applicant's Address: 400 West Market Street, Louisville, Kentucky 40202.

Schroder Capital Funds II [File No. 811–7993]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On July 27, 1999, applicant made a liquidating distribution to its sole remaining shareholder based on net asset value. Approximately $5,000 in expenses incurred in connection with the liquidation were paid by applicant.

Filing Dates: The application was filed on August 2, 1999, and amended on September 15, 1999.

Applicant's Address: 787 Seventh Avenue, 34th Floor, New York, New York 10019.

Select Asset Fund, Series, 1, Inc. [File No. 811–7530]

Huron Investment Fund, Inc. [File No. 811–7555]

Select Asset Fund, Series 2, Inc. [File No. 811–7636]

Lernoult Investment Fund, Inc. [File No. 811–8711]

Central Investment Fund, Inc. [File No. 811–8713]

Central Asset Fund, Inc. [File No. 811–8715]

Great Lakes Fund, Inc. [File No. 811–9042]

Summary: Each applicant, a registered closed-end management investment company, seeks an order declaring that it has ceased to be an investment company. On August 27, 1999, each applicant made a final liquidating distribution to its sole common shareholder at net asset value per share. Each applicant's auction market preferred stock and floating rate notes were redeemed in accordance with the terms of the relevant private placement memorandum. Expenses of $15,000 incurred in connection with each liquidation were paid by each applicant.

Filing Dates: Each application was filed on August 30, 1999.

Applicants' Address: c/o Comerica Bank, 411 W. Lafayette, Detroit, Michigan 48226.

United Gold & Government Fund, Inc. [File No. 811–4261]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On June 30, 1999, applicant transferred its assets to United Asset Strategy Fund, Inc. (the ''Acquiring Fund'') based on net asset value per share. Expenses of $89,940 incurred in connection with the reorganization were shared equally by applicant and the Acquiring Fund.

Filing Date: The application was filed on September 9, 1999.

Applicant's Address: 6300 Lamar Avenue, Overland Park, Kansas 66202.

Wayne Hummer Money Fund Trust [File No. 811–3359]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On July 30, 1999, applicant transferred its assets to the Wayne Hummer Money Market Fund series of Wayne Hummer Investment Trust (the ''Acquiring Fund'') based on net asset value. Expenses of approximately $41,000 were incurred in connection with the reorganization, of which Wayne Hummer Management Company, investment adviser to both applicant and the Acquiring Fund, paid $7,500. Applicant and the Acquiring Fund paid the remaining expenses.

Filing Date: The application was filed on September 1, 1999.

Applicant's Address: 300 South Wacker Drive, 15th Floor, Chicago, Illinois 60606.

UBS Investor Portfolios Trust [File No. 811–7553]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On December 21, 1998, applicant, a master fund in a master-feeder structure, made a liquidating distribution to its feeder funds at net asset value per share. All expenses incurred in connection with

the liquidation were paid by UBS A.G., applicant's investment adviser.

Filing Dates: The application was filed on July 8, 1999, and amended on August 27, 1999.

Applicant's Address: 200 Clarendon Street, Boston, Massachusetts 02116.

UBS Private Investor Funds, Inc. [File No. 811–7431]

Summary: Applicant seeks an order declaring that it has ceased to be an investment company. On December 21, 1998, applicant transferred its assets to The Brinson Funds (the ''Acquiring Fund'') in exchange for shares based on net asset value per share. All expenses incurred in connection with the merger were paid by UBS A.G., applicant's investment adviser, and Brinson Partners, Inc., the Acquiring Fund's investment adviser.

Filing Dates: The application was filed on July 9, 1999, and amended on August 30, 1999, and September 23, 1999.

Applicant's Address: 200 Clarendon Street, Boston, Massachusetts 02116.

For the Commission, by the Division of Investment Management, pursuant to delegated authority.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 99–25382 Filed 9–29–99; 8:45 am]

BILLING CODE 8010–01–M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–41904; File No. SR–CBOE–99–32]

Self-Regulatory Organizations; Notice of Filing of Proposed Rule Change by the Chicago Board Options Exchange, Inc. To Change the Participation Entitlement of Designated Primary Market-Makers

September 22, 1999.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4[2] thereunder, notice is hereby given that on June 23, 1999, the Chicago Board Options Exchange, Inc. (''CBOE'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the CBOE. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The CBOE proposes to change the participation entitlement of designated primary market-makers (''DPMs'').

The text of the proposed rule change is available at the Office of the Secretary, CBOE and at the Commission.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the CBOE included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The CBOE has prepared summaries, set forth in section A, B, and C below, of the most significant aspects of such statements

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

A DPM's right to participate as principal in a transaction is generally governed by the principles of time and price priority as set forth in CBOE Rule 6.45. Under these principles, if a DPM is first to respond with the best bid (offer) in response to a request for a market from a member not acting on behalf of the DPM, the DPM is entitled to participate up to 100% in any resulting transaction. In addition to the rights granted by CBOE Rule 6.45, current CBOE Rule 8.80(c)(7)(ii) grants each DPM a right to participate ''pro rata,'' with the market-makers present in the trading crowd. This pro-rata right applies to any transaction in a security that has been allocated to the DPM if the DPM's previously established principal bid (offer) was equal to the highest bid (lowest offer) in the trading crowd, even if the DPM's bid (offer) is not entitled to priority under CBOE Rule 6.45.[3] Because the term ''pro rata'' is not precisely defined by current CBOE Rule 8.80(c)(7)(ii), the scope of that term, and hence the DPM participation right, has historically been interpreted by the Exchange's Modified Trading System Appointments Committee (''MTS Committee''), which is the Exchange committee responsible for appointing DPMs and overseeing the Exchange's DPM program.

Since 1993, the MTS Committee has interpreted a DPM's participation right in transactions that occur in an allocated security (when the DPM's previously established principal bid (offer) was equal to the highest bid (lowest offer) in the trading crowd) to consist of the following: an initial 40% participation right, a 30% participation right when average daily volume in the security over the previous calendar quarter reaches 2501 contracts, and no guaranteed participation right when average daily volume in the security over the previous calendar quarter reaches 5,000 contracts. Additionally, the MTS Committee determined to maintain all multiply traded securities at the 40% participation level until further notice. This DPM participation entitlement has been communicated to the Exchange's membership in numerous Exchange circulars that have been issued to the Exchange's membership since 1993.

The MTS Committee has now decided to propose that the level of participation that a DPM may assert in transactions that occur at the DPM's previously established principal bid or offer be changed to 30%. Except as described below, this 30% participation right would apply to all classes that are allocated to DPMs regardless of the volume in a particular class and regardless of whether or not the class is multiply listed.

The MTS Committee believes that this proposed single-level DPM participation entitlement will be easier for members to apply than the current DPM participation entitlement formula. Under the current formula, as described above, the participation right varies from class to class based on volume level, which may change the participation right for a class each calendar quarter and based on a class's multiple list status.

Additionally, the MTS Committee believes that the proposed participation entitlement will be more equitable. The primary purpose of the DPM participation right is to provide Exchange members with an incentive to become and remain DPMs. Moreover, DPMs are required to assume additional affirmative obligations which are not imposed on other members. These additional obligations include, among other things, the obligation to be present at the trading post throughout every business day, the obligation to participate at all times in automated execution and order handling systems

[3] The right of a DPM to participate pro-rata, however, does not include trades executed on the Exchange's Retail Automatic Execution System. Telephone call between Arthur Reinstein, Assistant General Counsel, CBOE, and Kelly Riley, Attorney, Division of Market Regulation, SEC, on July 29, 1999.

such as the Exchange's Retail Automatic Execution System (RAES), and the obligation to act as the Exchange's Retail Automatic Execution System (RAES), and the obligation to act as an order book official and to maintain the public order book. Since these obligations exist regardless of the volume level in a DPM allocated class, the 30% DPM participation right is proposed to be applicable regardless of whether the volume level in the class exceeds a certain volume threshold as is required in the current formula. The MTS Committee also believes that a DPM participation right of 30% is sufficient to provide the requisite incentive for members to become and remain DPMs (as opposed to the 40% DPM participation right that is applicable in most classes that are allocated to DPMs under the current participation entitlement formula).

Although a DPM's participation right will generally be 30% as provided above, the MTS Committee would retain its current authority to condition a DPM's appointment in accordance with the Rules by establishing a lower participation right in a class or classes allocated to the DPM. For example, current CBOE Rule 8.80(b)(3) permits the MTS Committee to specify conditions with respect to a DPM appointment at the time the appointment is made, and current CBOE Rule 8.80 generally authorizes the MTS Committee to take remedial action against a DPM (including conditioning the DPM's appointment) if the DPM fails to satisfactorily perform its functions or incurs a material financial, operational, or personnel change.

The Exchange proposes to publish a circular notifying the Exchange's membership of the proposed DPM participation right upon its effectiveness and to publish to the membership and keep current a list setting forth the DPM participation right in any classes for which a DPM's participation entitlement is lower than 30%.

The Exchange recently submitted a rule filing to the Commission which proposes to update and reorganize the Exchange's rules relating to DPMs.[4] One part of the proposed rule change, which is currently pending before the Commission, is proposed CBOE Rule 8.87 which proposes to codify the authority of the MTS Committee to determine the appropriate participation right for DPMs. Specifically, proposed CBOE Rule 8.87 provides that, subject to the review of the Board of Directors, the MTS Committee may establish from time to time a participation entitlement formula that is applicable to all DPMs. In addition, proposed CBOE Rule 8.87 provides that, in accordance with this established formula, each DPM shall have a right to participate for its own account with the market-makers present in the trading crowd in transactions in the DPM's allocated securities that occur at the DPM's previously established principal bid or offer. The DPM participation right proposed by this rule change is consistent with the DPM participation entitlement provided for under proposed CBOE Rule 8.87 and would continue to be applicable following the approval of CBOE's pending rule filing to update and reorganize the DPM rules. The MTS Committee would also continue to have the authority to condition a DPM's appointment by establishing a lower participation right in a class or classes allocated to a DPM in accordance with the proposed DPM rules, including proposed CBOE Rules 8.83(d) and 8.90 (which contain similar provisions to those contained in current CBOE Rule 8.80(b)(3) and current CBOE Rule 8.80 which are discussed above).

The MTS Committee intends to continue to periodically review the DPM participation entitlement to ensure that it remains at an appropriate level given the market environment that prevails at the time, and, accordingly, that the Exchange may propose to the DPM participation entitlement in the future.

2. Basis

The Exchange believes that the proposed rule change will improve the operation of the DPM trading system by making the DPM participation entitlement more equitable and easier for members to apply while retaining the incentive for members to become and remain DPMs. Accordingly, the Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act, in general, and Section 6(b)(5)[5] in particular, in that it is designed to remove impediments to and perfect the mechanism of a free and open market.

B. Self-Regulatory Organization's Statement on Burden on Competition

The CBOE does not believe that the proposed rule change will impose any burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) by order approve such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington DC 20549–0609. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room. Copies of such filing will also be available for inspection and copying at the principal office of the CBOE. All submission should refer to File No. SR–CBOE–99–32 and should be submitted by October 21, 1999.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.[6]

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 99–25385 Filed 9–29–99; 8:45 am]

BILLING CODE 8010–10–M

[4] Securities Exchange Act Release No. 41325 (April 22, 1999), 64 FR 23691 (May 3, 1999) (File No. SR–CBOE–98–54).

[5] 15 U.S.C. 78f(b)(5).

[6] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–41900; File No. SR–CBOE–99–28]

Self-Regulatory Organizations; Notice of Filing and Immediate Effectiveness of Proposed Rule Change by the Chicago Board Options Exchange, Inc. Amending Exchange Rule 9.21 and Issuing a Regulatory Circular To Interpret Rules Relating to Customer Communications

September 22, 1999.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on August 25, 1999, the Chicago Board Options Exchange, Inc. (''CBOE'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the CBOE.[3] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The CBOE proposes to amend Exchange Rule 9.21, *Communications to Customers*, and to issue a Regulatory Circular to its membership setting forth a clarifying interpretation to Exchange Rule 9.21, which governs communications from member firms to customers or members of the public. The text of the rule change and the Regulatory Circular are available at the Office of the Secretary, CBOE, and at the Commission.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

Rule 9.21, *Communications to Customers*, governs communications between Exchange members and their customers and other members of the public. In addition, the Exchange, along with the other options exchanges, has published *Guidelines for Options Communications* (''Guidelines'').[4] The Guidelines explain the customer communications rules of the options exchanges and the interpretations of these rules.

The Exchange proposes to amend Exchange Rule 9.21 and issue a Regulatory Circular to formally install the clarifying interpretation concerning the manner in which a member or member organization may satisfy the requirement of Exchange Rule 9.21, Interpretations and Policies .02 and .03(v), which currently require that the name and address of a person from whom an Options Disclosure Document (''ODD'') may be obtained be disclosed on Advertisements and Educational Materials. The Exchange believes that, given the varied marketing programs that members and member organizations utilize, the existing requirement unnecessarily excludes other reasonable methods for request an ODD. To allow flexibility without diminishing the effectiveness of the disclosure requirement, the Exchange is proposing that other reasonably specific disclosures about how to obtain an ODD be deemed to satisfy the requirements of Rule 9.21, Interpretations and Policies .02 and .03(v). Examples of alternative means of disclosure may include the use of one or more toll-free telephone numbers or directing existing clients to contact their registered representative. A member or member organization may utilize an internet address; however, such an address must be accompanied by either a telephone number or address for use by those investors who do not have access to the internet. A member or member organization may choose to continue to identify the name and address of a person from whom an ODD may be obtained.

2. Statutory Basis

The amendment to Exchange Rule 9.21 and the Regulatory Circular interpretations of Exchange Rule 9.21 are consistent with Section 6(b) of the Act[5] in general and further the objectives of Section 6(b)(5)[6] in particular in that they are designed to promote just and equitable principles of trade and to protect investors and the public interest.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing rule change constitutes a stated policy, practice, or interpretation with respect to the meaning, administration, or enforcement of an existing rule, it has become effective pursuant to Section 19(b)(3)(A)(i) of the Act[7] and subparagraph (f)(1) of Rule 19b–4 thereunder.[8] At any time within 60 days of the filing of the proposed rule change, the Commission may summarily abrogate such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning for foregoing, including whether the proposed rule change is consistent with the Act.[9] Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549–0609. Copies of

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] The CBOE originally submitted the proposal on June 18, 1999. On August 25 1999, the CBOE submitted a letter from Timothy Thompson, Director, Regulatory Affairs, CBOE, to Nancy Sanow, Senior Special Counsel, Division of Market Regulation, Commission (''Amendment No. 1''). In Amendment No. 1, the CBOE proposes to amend Exchange Rule 9.21 to provide member firms with notice on how these firms can comply with the requirement of providing customers or members of the public with the current options disclosure document(s). Because this filing was filed pursuant to Section 19(b)(3)(A) of the Act, it must be complete at the time it is filed. Therefore, the date of filing of Amendment No. 1 is the date of the filing of the proposal.

[4] Securities Exchange Act Release No. 29682 (Sept. 13, 1991), 56 FR 47973 (Sept. 23, 1991) (File No. SR–CBOE–90–27).

[5] 15 U.S.C. 78f(b).

[6] 15 U.S.C. 78f(b)(5).

[7] 15 U.S.C. 78s(b)(3)(A)(i).

[8] 17 CFR 240.19b–4(f)(1).

[9] In reviewing this proposal, the Commission has considered its potential impact on efficiency, competition and capital formation. 15 U.S.C. 78c(f).

the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the Commission's Public Reference Room. Copies of such filing also will be available for inspection and copying at the principal office of the CBOE. All submissions should refer to File No. SR–CBOE–99–28 and should be submitted by October 21, 1999.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.[10]

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 99–25386 Filed 9–29–99; 8:45 am]

BILLING CODE 8010–01–M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–41910; File No. SR–MBSCC–99–07]

Self-Regulatory Organizations; MBS Clearing Corporation; Notice of Filing and Order Granting Accelerated Approval of a Proposed Rule Change Modifying Rules Regarding Year 2000

September 23, 1999.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] notice is hereby given that on September 20, 1999, MBS Clearing Corporation (''MBSCC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which items have been prepared primarily by MBSCC. The Commission is publishing this notice and order to solicit comments from interested persons and to grant accelerated approval of the proposal.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Under the proposed rule change, MBSCC will not activate any new or additional clearing participant accounts or electronic pool notification (''EPN'') participant accounts (other than updating EPN subaccount information) or provide any new or additional services to clearing participants or EPN participants and will freeze all nonemergency code releases after November 30, 1999, through January 26, 2000, which is the completion date of the first settlement cycle in the Year 2000, or such later date as MBSCC reasonably determines.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, MBSCC included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. MBSCC has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of such statements.[2]

(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The proposed rule change provides that MBSCC will not activate any new or additional clearing participant accounts or EPN participant accounts (other than updating EPN subaccount information) or provide any new or additional services to clearing participants or EPN participants and will freeze all nonemergency code release after November 30, 1999, through January 26, 2000, which is the completion date of the first settlement cycle in the Year 2000, or such later date as MBSCC reasonably determines.[3]

MBSCC believes that continuing to activate new or additional participant accounts (other than updating EPN subaccount information) or to provide new or additional services to participants or to implement nonemergency code release after November 30, 1999, could potentially be disruptive to the rest of its Year 2000 efforts. Accordingly, MBSCC believes that the proposed rule change will facilitate a smooth Year 2000 transition.

MBSCC believes that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder. In particular, the proposed rule change is consistent with Section 17A(b)(3)(F) and the Act[4] which requires that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions and, in general, to protect investors and the public interest.

(B) Self-Regulatory Organization's Statement on Burden on Competition

MBSCC does not believe that the proposed rule change will have an impact on or impose a burden on competition.

(C) Self-Regulatory Organization's Statement on Comment on the Proposed Rule Change Received from Members, Participants, or Others

No written comments relating to the proposed rule change have been solicited or received. MBSCC will notify the Commission of any written comments received by MBSCC.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Section 17A(b)(3)(F) of the Act[5] requires that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions. The Commission finds that the proposed rule change is consistent with this obligation because the proposed modifications to MBSCC's Year 2000 rules will permit MBSCC sufficient time before year end to complete its Year 2000 preparations. As a result, MBSCC should be able to continue to provide prompt and accurate clearance and settlement of securities transactions before, on, and after Year 2000 without interruption.

MBSCC requested that the Commission find good cause for approving the proposed rule change prior to the thirtieth day after the publication of notice of the filing. The Commission finds good cause for approving the proposed rule change prior to the thirtieth day after the publication of notice of the filing because such approval will allow MBSCC to better prepare for a smooth Year 2000 transition.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549–0609. Copies of the submission, all subsequent

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[10] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] The Commission has modified the text of the summaries prepared by MBSCC.

[3] The proposed rule change modified Addendum A of MBSCC's rules regarding mandatory Year 2000 testing. *See* Securities Exchange Act Release No. 40889 (January 6, 1999), 64 FR 2691.

[4] 15 U.S.C. 78q–1(b)(3)(F).

[5] 15 U.S.C. 78q–1(b)(3)(F).

amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. § 552, will be available for inspection and copying in the Commission's Public Reference Room, 450 Fifth Street, N.W., Washington, D.C. 20549. Copies of such filing will also be available for inspection and copying at the principal office of MBSCC. All submissions should refer to the File No. SR–MBSCC–99–07 and should be submitted by October 21, 1999.

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[6] that the proposed rule change (file No. SR–MBSCC–99–07) be and hereby is approved.

For the Commission by the Division of Market Regulation, pursuant to delegated authority.[7]

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 99–25384 Filed 9–29–99; 8:45 am]

BILLING CODE 8010–01–M

[6] 15 U.S.C. 78s(b)(2).

[7] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–41907; File No. SR–NASD–99–32]

Self-Regulatory Organizations; Notice of Filing and Order Granting Accelerated Approval of Proposed Rule Change by the National Association of Securities Dealers, Inc. Relating to Firm Quotation Requirements

September 23, 1999.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 17, 1999, the National Association of Securities Dealers, Inc. (''NASD''), through its wholly owned subsidiary, the Nasdaq Stock Market, Inc. (''Nasdaq'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by Nasdaq. On August 25, 1999, Nasdaq filed Amendment No. 1 to the proposal with the Commission.[3] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons and to grant accelerated approval to the proposed rule change.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Nasdaq is proposing to amend NASD Rule 6750 to provide any Nasdaq officer at the executive vice president level or above with limited discretionary authority to reduce the minimum quotation size for securities quoted at a price exceeding $200 in the OTC Bulletin Board (''OTCBB''). Below is the text of the proposed rule change. Proposed new language is in *italics.*

* * *

6750. Minimum Quotation Size Requirements For OTC Equity Securities

(a) Every member firm that functions as a market maker in OTC Equity Securities by entering firm quotations into the OTC Bulletin Board Service (OTCBB) (or any other inter-dealer quotation system that permits quotation updates on a real-time basis) must honor those quotations for the minimum size defined in the table below. In this regard, it is the market maker's responsibility to determine the minimum size requirement applicable to its firm bid and/or offer in each of its registered securities (excluding OTC Equity Securities for which the OTCBB will not accept firm quotations). Depending on the price level of the bid or offer, a different minimum size can apply to each side of the market being quoted by the member firm in a given security.

Price (bid or offer)	Minimum quote size
0 to .50*	5,000
.51 to 1.00	2,500
1.01 to 10.00	500
10.01 to 100.00	200
100.01 to 200.00	100
200.01 plus	50

A Nasdaq officer at the Executive Vice President level or above, within its discretion, may modify the minimum quotation size for those securities with a price exceeding $200.

(b) no change.

*The OTCBB can accept bids/offers expressed in fractions as small as 1/256 or in decimals up to six places. In applying the price test for minimum quotation size, any increment beyond an upper limit in the right hand column will trigger application of the minimum quote size for the next tier. For example, a bid (or offer) of $.505 must be firm for a size of 2,500 shares.

[3] Letter from Robert E. Aber, Senior Vice President and General Counsel, Nasdaq, to Richard Strasser, Assistant Director, Division of Market Regulation, Commission, dated August 24, 1999 (''Amendment No. 1''). Amendment No. 1 was received by the Commission on August 25, 1999, the substance of which is incorporated into this notice.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, Nasdaq included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item III below. Nasdaq has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

Nasdaq is proposing to provide any officer at the executive vice president level or above[4] with limited discretionary authority to modify the minimum quotation size for securities quoted on the OTCBB that exceed a price of $200. Nasdaq believes that this authority is necessary to correct a previously unforeseen problem with the schedule contained in NASD Rule 6750, which presently mandates that securities priced over $200 be traded in units of 50 shares or more. For certain highly priced and/or thinly-traded securities, this rule has had an undesired and detrimental effect on transparency and liquidity.

NASD Rule 6750 was approved by the Commission in 1993[5] as the NASD and market makers were first beginning to gain significant experience in dealing with the OTCBB. Prior to implementation of the rule, all quotations on the OTCBB were required to be firm for 100 shares. This approach soon proved unworkable for lower priced securities because a quote for 100 shares could represent an insignificant aggregate dollar value commitment to the market.

To remedy this situation, the NASD implemented Rule 6750 which specified minimum quotation sizes for securities priced at $200 and below on a

[4] *See* Amendment No. 1.

[5] Exchange Act Release No. 32570 (July 1, 1993); 58 FR 36725 (July 8, 1993).

''graduated'' or ''tiered'' basis.[6] For securities quoted at 50 cents or below, the market maker quoting such security is required to honor that quotation for a minimum of 5,000 shares. This approach was carried through to $200 with decreasing levels of 2,500, 500, 200, and 100 shares. For all quotations exceeding $200, the minimum quote size was determined to be 50 shares.

The ensuing six years since implementation of this rule have witnessed unanticipated changes to the OTCBB. Among those changes has been the quotation of certain securities for thousands of dollars per share, and, in a few isolated instances, securities quoted in excess of $100,000. Obviously, the presence of these highly priced securities was not considered when NASD Rule 6750 was originally proposed with the smallest minimum quotation size of 50 shares. This has resulted in a situation in which market makers have been unwilling to enter priced quotations for such highly priced and thinly traded securities for fear of potentially significant liability to their proprietary accounts.

In order to alleviate the potential exposure of quoting 50 shares of these highly priced securities, market makers have ceased entering quotations and instead post only indications of interest for these securities into the OTCBB. While posting an indication of interest is permitted in the OTCBB, the purpose of the OTCBB or any inter-dealer quotation medium is to permit multiple market participants to quickly and efficiently obtain the best bid or offer in a security and execute the transaction without unnecessary delay. Additionally, posting firm quotations on the OTCBB has the effect of increasing competition among market makers and fostering enhanced price discovery, ultimately benefiting the investing public.

Recognizing these goals and the present problems caused by the lack of flexibility within NASD Rule 6750, Nasdaq is proposing to allow any officer at the executive vice president level or above the flexibility to reduce the minimum display size for certain highly priced securities in the top tier (securities quoted in excess of $200) of the OTCBB schedule. Any modifications would be done within the spirit of NASD Rule 6750 and would be based primarily on the impact that the price of the security has upon liquidity, which would include consideration of the number of shares publicly available. Such quotation size modifications may change from time to time as conditions warrant. However, any modifications to the minimum quotation size will be clearly displayed on the Nasdaq Workstation II screen for the appropriate security to avoid any confusion among market makers or other market participants.

2. Statutory Basis

Nasdaq believes that the proposed rule change is consistent with the provisions of Section 15A(b)(6)[7] and Section 15A(b)(11)[8] of the Act. Nasdaq believes that the proposed rule specifically promotes the objectives of Sections 15A(b)(6) and 15A(b)(11), respectively, by facilitating transactions free of impediments to a free and open market while producing fair and informative quotations. The rule will encourage market makers to display firm quotations in OTCBB securities thereby providing increased transparency, competition, and price discovery.

B. Self-Regulatory Organization's Statement on Burden on Competition

Nasdaq does not believe that the proposed rule change will impose any inappropriate burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Solicitation of Comments

Interested persons are invited to submit written data, views, and argument concerning the foregoing, including whether the proposal is consistent with the Act. Persons making written submission should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549–0609. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the Commission's Public Reference Room. Copies so such filing will also be available for inspection and copying at the principal office of the NASD. All submissions should refer to File No. SR–NASD–99–32 and should be submitted by October 21, 1999.

IV. Commission's Findings and Order Granting Accelerated Approval of Proposed Rule Change

The Commission finds that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities association.[9] Specifically, the Commission believes that the proposal is consistent with Sections 15A(b)(6) and (b)(11) of the Act.[10] Section 15A(b)(6) requires, in part, that the rules of a national securities association be designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national system, and, in general, to protect investors and the public interest.[11] Section 15A(b)(11) requires, among other things, that the rules of a national securities association include provisions governing the form and content of quotations, and that such rules must be designed to produce fair and informative quotations, to prevent fictitious or misleading quotations, and to promote orderly procedures for collecting, distributing, and publishing quotations.[12]

The proposal provides Nasdaq with the flexibility to reduce the minimum quote size of highly priced and thinly traded OTCBB securities when appropriate. Nasdaq asserts and the Commission agrees that market makers may be reluctant to quote 50 shares of a highly priced and thinly traded security and, as a result, may instead post indications of interest that are not firm. Therefore, the Commission supports granting any Nasdaq officer at the executive vice president level or above limited discretionary authority to reduce the minimum quote size for highly priced and thinly traded OTCBB securities as a means to enhance quote activity. The Commission finds that the increased opportunity for priced quotations in highly priced OTCBB securities that may result from this rule

[6] This requirement applies only to market makers entering priced quotations. Market makers are permitted to enter unpriced indications of interest into the OTCBB which are not held to the minimum quotation size standard.

[7] 15 U.S.C. 78*o*–3(b)(6).

[8] 15 U.S.C. 78*o*–3(b)(11).

[9] In approving this proposed rule change, the Commission considered the proposal's impact on efficiency, competition, and capital formation. 15 U.S.C. 78c(f).

[10] 15 U.S.C. 78*o*–3(b)(6) and (b)(11).

[11] 15 U.S.C. 78*o*–3(b)(6).

[12] 15 U.S.C. 78*o*–3(b)(11)

change will help improve liquidity and transparency for these securities. Moreover, with this rule change, market participants may be able to more quickly ascertain the best bid or offer in highly priced OTCBB securities. The Commission also believes that reducing the minimum quotation size for highly priced and thinly traded securities might attract market makers to such securities, thereby enhancing competition, which should result in more efficient pricing of these securities. As a result, the Commission finds that the proposed rule change is consistent with Section 15A(b)(6) of the Act because it will benefit investors and facilitate transactions in securities.

The Commission also finds that the proposal is consistent with Section 15A(b)(11) because it is intended to result in additional priced quotations for highly priced OTCBB securities. This should help produce fair and informative quotations for these highly priced OTCBB securities.

The Commission finds good cause for approving the proposed rule change prior to the thirtieth day after the date of publication of notice thereof in the **Federal Register**. Accelerated approval will permit Nasdaq to quickly redress an unforeseen consequence of NASD 6750, as originally adopted, which made quoting certain OTCBB securities prohibitive. Accordingly, the Commission believes that good cause exists, consistent with Section 15A(b)(6) and Section 19(b)(2) of the Act, to grant accelerated approval to the proposed rule change.[13]

V. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[14] that the proposed rule change (SR–NASD–99–32) is approved.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.[15]

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 99–25383 Filed 9–29–99; 8:45 am]

BILLING CODE 8010–10–M

[13] 15 U.S.C. 78*o*–3(b)(6) and 78s(b)(2).

[14] 15 U.S.C. 78s(b)(2).

[15] 17 CFR 200.30–3(a)(12).

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Proposed Advisory Circular 25–XX, Transport Airplane Propulsion Engine and Auxiliary Power Unit Installation Certification Handbook—The Propulsion Mega AC

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of availability of proposed Advisory Circular (AC) 25–XX and request for comments.

SUMMARY: This document announces the availability of and requests comment on a proposed advisory circular (AC) that provides guidance on methods acceptable to the Administrator for showing compliance with the type certification requirements for propulsion engine and auxiliary power unit (APU) installations as they apply to transport category airplanes. This notice is necessary to give all interested persons an opportunity to present their views on the proposed AC.

DATE: Comments must be received on or before December 29, 1999.

ADDRESS: Send all comments on the proposed AC to: Federal Aviation Administration (FAA), *Attention:* Steve Happenny, Propulsion/Mechanical Systems Branch, ANM–112, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055–4056. Comments may be inspected at the above address between 7:30 a.m. and 4:00 p.m. weekdays, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jill DeMarco, Program Management Branch, ANM–114, FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98055–4056; telephone (425) 227–1313; fax (425) 227–1320.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to comment on the proposed AC by submitting such written data, views, or arguments as they may desire. Commenters must identify the AC by title and submit comments in duplicate to the address specified above. The Transport Airplane Directorate of the Federal Aviation Administration (FAA) will consider all communications received on or before the closing date for comments before issuing the final AC.

Availability of Proposed AC

The proposed AC can be found and downloaded from the Internet at *http://www.faa.gov/avr/air/airhome.htm*, at the link titled ''Draft Advisory Circulars.''

Requests for copies should be directed to the person named above under the caption **FOR FURTHER INFORMATION CONTACT.** Please specify whether a paper copy or a CD–ROM (Microsoft Word Version 6.0/Windows 95 format) copy is needed. Because of the large size of this proposed AC (approximately 1,200 pages) and the time necessary for copying the document, expect extra time for fulfilling requests for paper copies.

Discussion

The proposed advisory circular (AC) provides one comprehensive source of FAA policy and guidance on various methods acceptable to the Administrator for showing compliance with the type certification requirements for propulsion engine and auxiliary power unit (APU) installations on transport category airplanes.

The proposed AC contains information and material concerning all facets of propulsion system certification that have been derived from various sources, such as:

- Title 14, Code of Federal Regulations (commonly referred to as the Federal Aviation Regulations),
- AC's,
- FAA Issue Papers,
- Special Conditions,
- Technical Standard Orders (TSO),
- FAA internal policy memos,
- FAA technical reports,
- documents issued by the Society of Automotive Engineers (SAE), and
- General Aviation Manufacturers Association (GAMA) specifications.

The material contained in the proposed AC is intended for use during propulsion certification activities by airplane manufacturers, modifiers, foreign regulatory authorities, and Federal Aviation Administration (FAA) airplane type certification engineers. The policy and guidance provided in the document has been applied previously and found to be acceptable to the FAA for demonstrating compliance with the certification regulations pertaining to propulsion (engine and APU) installations on transport category airplanes. The methods and procedures described have evolved through many years and represent current certification practice.

The FAA's objective in issuing this AC is to formalize existing policy and guidance so that the public and FAA

personnel have access to this information in one document. In gathering all relevant material into one document, the consequent size of the proposed AC is necessarily large; for this reason, the informal title of ''The Propulsion Mega AC'' is used throughout the document to distinguish it from others that are referenced.

Issued in Renton, Washington, on September 23, 1999.

D. L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–25456 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Proposed Advisory Circular 25.XX, Airworthiness Criteria for the Installation Approval of a Terrain Awareness and Warning System (TAWS) Approved Under Technical Standard Order (TSO) C151

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of availability of proposed Advisory Circular 25.XX and request for comments.

SUMMARY: This notice announces the availability of and requests comment on a proposed advisory circular (AC) that provides guidance on one method for obtaining airworthiness approval for the installation of a Terrain Awareness and Warning System (TAWS) approved under Technical Standard Order (TSO) C151. The guidance provided in the proposed AC is specific to installations of these systems on transport category airplanes. This notice is necessary to give all interested persons an opportunity to present their views on the proposed AC.

DATES: Comments must be received on or before December 29, 1999.

ADDRESSES: Send all comments on the proposed AC to: Federal Aviation Administration, Attn: J. Kirk Baker, ANM–130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Lakewood, California 90712. Comments may be inspected at the above address between 7:30 a.m. and 4:00 p.m. weekdays, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jill DeMarco, Program Management Branch, ANM–114, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98055–4056; telephone (425) 227–1313.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to comment on the proposed AC by submitting such written data, views, or arguments as they may desire. Commenters must identify the AC by title and submit comments in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Transport Airplane Directorate before issuing the final AC.

Availability of Proposed AC

The proposed AC can also be found and downloaded from the Internet at *http://www.faa.gov/avr/air/airhome.htm*, at the link titled ''Draft Advisory Circulars.'' A paper copy of the proposed AC may be obtained by contacting the person named above under the caption **FOR FURTHER INFORMATION CONTACT**.

Discussion

The FAA is proposing to issue an AC that describes an acceptable means, but not the only means, of obtaining airworthiness installation approval of a Terrain Awareness and Warning System (TAWS) that has been approved under Technical Standard Order (TSO) C151, ''Terrain Awareness and Warning System.'' A TAWS is a system that provides the flightcrew with sufficient information and alerting to detect a potentially hazardous terrain situation and take effective action. The guidance provided in the proposed AC is specific to installations of these systems on transport category airplanes.

The FAA's TSO process is a means of obtaining FAA design and performance approval for an appliance, system, or product. However, the TSO does not provide installation approval or procedures for design or implementation of an installation. With heightened interest by manufacturers and operators to equip transport category airplanes with TAWS systems that are compliant with TSO–C151, the FAA has recognized the need to establish guidance material for the design and test requirements for the installation of such systems.

This proposed AC has been developed as the means for providing such guidance for designing an acceptable installation for a TAWS that is compliant with TSO–C151. It describes the airworthiness considerations for such installations as they apply to the unique features of the TAWS and the interface of the TAWS with other systems on the airplane.

Issued in Renton, Washington, on September 23, 1999.

Vi L. Lipski,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–25454 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Manchester Airport, Manchester, New Hampshire; Noise Exposure Map Notice

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice.

SUMMARY: The Federal Aviation Administration (FAA) announces its determination that the noise exposure maps submitted by Manchester Airport under the provisions of Title I of the Aviation Safety and Noise Abatement Act of 1979 (Public Law 96–193) and 14 CFR Part 150 are in compliance with applicable requirements.

EFFECTIVE DATE: The effective date of the FAA's determination on the noise exposure maps is September 17, 1999.

FOR FURTHER INFORMATION CONTACT: John Silva, FAA New England Region, 12 New England Executive Park, Burlington, Massachusetts 01803.

SUPPLEMENTARY INFORMATION: This notice announces that the FAA finds that the noise exposure maps submitted for Manchester Airport are in compliance with applicable requirements of Part 150, effective September 17, 1999.

Under section 103 of the Aviation Safety and Noise Abatement Act of 1979 (hereinafter referred to as ''the Act''), an airport operator may submit to the FAA noise exposure maps which meet applicable regulations and which depict noncompatible land uses as of the date of submission of such maps, a description of projected aircraft operations, and the ways in which such operations will affect such maps. The Act requires such maps to be developed in consultation with interested and affected parties in the local community, government agencies, and persons using the airport.

An airport operator who has submitted noise exposure maps that are found by FAA to be in compliance with the requirements of Federal Aviation Regulations (FAR) Part 150, promulgated pursuant to Title I of the Act, may submit a noise compatibility program for FAA approval which sets forth the measures the operator has

taken or proposes for the reduction of existing noncompatible uses and for the prevention of the introduction of additional noncompatible uses.

The FAA has completed its review of the noise exposure maps and related descriptions submitted by Manchester Airport. The specific maps under consideration are Figure 4–4, Existing (1998) DNL Contours, and Figure 4–8, Forecast (2003) DNL Contours, each of which is published in ''Noise Study for Manchester Airport'', dated May, 1999. FAA has determined that these maps for Manchester Airport are in compliance with applicable requirements. This determination is effective on September 17, 1999. FAA's determination on an airport operator's noise exposure maps is limited to a finding that the maps were developed in accordance with the procedures contained in Appendix A of FAR Part 150. Such determination does not constitute approval of the applicant's data, information or plans, or a commitment to approve a noise compatibility program or to fund the implementation of that program. If questions arise concerning the precise relationship of specific properties to noise exposure contours depicted on a noise exposure map submitted under section 103 of the Act, it should be noted that the FAA is not involved in any way in determining the relative locations of specific properties with regard to the depicted noise contours, or in interpreting the noise exposure maps to resolve questions concerning, for example, which properties should be covered by the provisions of section 107 of the Act. These functions are inseparable from the ultimate land use control and planning responsibilities of local government. These local responsibilities are not changed in any way under Part 150 or through FAA's review of noise exposure maps. Therefore, the responsibility for the detailed overlaying of noise exposure contours onto the map depicting properties on the surface rests exclusively with the airport operator which submitted those maps, or with those public agencies and planning agencies with which consultation is required under section 103 of the Act. The FAA has relied on the certification by the airport operator, under section 150.21 of FAR Part 150, that the statutorily required consultation has been accomplished.

Copies of the noise exposure maps and of the FAA's evaluation of the maps are available for examination at the following locations:

Federal Aviation Administration, New England Region, Airports Division, 16 New England Executive Park, Burlington, Massachusetts 01803.

Manchester Airport, One Airport Road, Suite 300, Manchester, New Hampshire 03103–3395.

Questions may be directed to the individual named above under the heading **FOR FURTHER INFORMATION CONTACT.**

Issued in Burlington, Massachusetts, September 17, 1999.

Vincent A. Scarano,

Manager, Airports Division, New England Region.

[FR Doc. 99–25455 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Maritime Administration

Reports, Forms and Recordkeeping Requirements; Agency Information Collection Activity Under OMB Review

AGENCY: Maritime Administration, DOT.

ACTION: Notice and request for comments.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), this notice announces that the information collection abstracted below has been forwarded to the Office of Management and Budget (OMB) for review and comment. Described below is the nature of the information collection and its expected burden. The **Federal Register** notice with a 60-day comment period soliciting comments on the subject collection was published on June 28, 1999, (64 FR 34696). No comments were received.

DATES: Comments must be submitted on or before November 1, 1999.

FOR FURTHER INFORMATION CONTACT: Daniel Ladd, Financial Analyst, Office of Ship Financing, Maritime Administration, 400 Seventh Street, SW, Room 8122, Washington, DC 20590, telephone number—202–366–5744. Copies of this collection can also be obtained from that office.

SUPPLEMENTARY INFORMATION:

Maritime Administration (MARAD)

Title of Collection: ''Application for Construction Reserve Fund and Annual Statements.''

OMB Control Number: 2133–0032.

Type of Request: Extension of currently approved collection.

Affected Public: Citizens who own or operate vessels in the U.S., foreign, or domestic commerce.

Form(s): N/A.

Abstract: In accordance with Section 511 of the Merchant Marine Act, 1936, as amended, all citizens who own or operate vessels in the U.S. foreign or domestic commerce and desire ''tax'' benefits under the Construction Reserve Fund (CRF) program, are required to submit to MARAD an application for benefits. The annual statement provided to MARAD officials sets forth a detailed analysis of the status of the CRF when each income tax return is filed. Checks for withdrawals from the CRF must be sent to MARAD for countersignature. The application is required in order for MARAD to determine whether the applicant is qualified for the benefits, and the annual statements are required in order for MARAD to assure that the requirements of the program are being satisfied.

Annual Estimated Burden Hours: 153.

Addresses: Send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725–17th Street, NW, Washington, DC 20503, Attention MARAD Desk Officer.

Comments Are Invited On: Whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; the accuracy of the Department's estimate of the burden of the proposed information collection; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology. A comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

Dated: September 27, 1999.

Joel C. Richard,

Secretary, Maritime Administration.

[FR Doc. 99–25446 Filed 9–29–99; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF THE TREASURY

Office of the Secretary

List of Countries Requiring Cooperation With An International Boycott

In order to comply with the mandate of section 999(a)(3) of the Internal Revenue Code of 1986, the Department of the Treasury is publishing a current list of countries which may require participation in, or cooperation with, an international boycott (within the

meaning of section 999(b)(3) of the Internal Revenue Code of 1986).

On the basis of the best information currently available to the Department of the Treasury, the following countries may require participation in, or cooperation with, an international boycott (within the meaning of section 999(b)(3) of the Internal Revenue Code of 1986).

Bahrain
Iraq
Kuwait
Lebanon
Libya
Oman
Qatar
Saudi Arabia
Syria
United Arab Emirates
Yemen, Republic of

Dated: September 24, 1999.

Philip West,

International Tax Counsel, (Tax Policy).

[FR Doc. 99–25396 Filed 9–29–99; 8:45 am]

BILLING CODE 4810–25–M

UNITED STATES INFORMATION AGENCY

NIS Educational Advising Centers; Notice; Request for Proposals

SUMMARY: The Office of Academic Programs/Advising, Teaching, and Specialized Programs Division of the Bureau of Educational and Cultural Affairs of the United States Information Agency announces an open competition to operate educational advising centers in the NIS, including: Erevan, Armenia; Baku, Azerbaijan; Minsk, Belarus; Tbilisi, Georgia; Almaty, Kazakstan; Bishkek, Kyrgyzstan; Chisinau, Moldova; Moscow, Novosibirsk, St. Petersburg, and Vladivostok, Russia; Dushanbe, Tajikistan; Ashgabat, Turkmenistan; Kyiv, Ukraine; and Tashkent, Uzbekistan. Public and private non-profit organizations meeting the provisions described in IRS regulation 26 CFR 1.501C may submit proposals for administering advising centers in the NIS. The educational advising centers would be part of USIA's worldwide network of over 450 affiliated centers. These centers provide comprehensive and unbiased information to interested students, scholars, and other individuals about study opportunities in the U.S.

For applicants' information, on October 1, 1999, the Bureau will become part of the United States Department of State without affecting the content of this announcement or the nature of the program described. At that time, the Advising, Teaching, and Specialized Programs Division will be renamed the Office of Global Educational Programs.

Program Information

Overview

The advising centers in the NIS should provide access to comprehensive and unbiased information about study opportunities in the U.S. Services provided by the centers must include group and/or individual advising informational sessions. The advising centers should provide accurate information and advising on the following topics: all U.S. colleges, universities, and other higher education institutions; accreditation; the application process to a U.S. university; majors and fields of study; testing requirements; life in the U.S.; scholarship programs and financial aid; and pre-departure orientation. Advising centers should also provide information on grant opportunities sponsored by the USG and other institutions and organizations. Advisers will be eligible for training opportunities sponsored by the Bureau, which will also provide a limited selection of reference books and materials to the center.

Guidelines

The period of this grant is January 1, 2000 to December 31, 2000.

Final awards cannot be made until funds have been appropriated by Congress, allocated and committed through internal Bureau procedures.

Programs must comply with J–1 visa regulations. Please refer to Solicitation Package for further information.

Budget Guidelines

Grants awarded to eligible organizations with less than four years of experience in conducting international exchange programs will be limited to $60,000.

Applicants must submit a comprehensive budget for each advising center in their proposal. Applicants may submit a proposal for one, several, or all of the advising centers listed. Awards may not exceed the following amounts for each educational advising center:

Erevan, Armenia—$21,000
Baku, Azerbaijan—$12,000
Minsk, Belarus—$15,000
Tbilisi, Georgia—$11,000
Almaty, Kazakstan—$12,000
Bishkek, Kyrgyzstan—$12,000
Chisinau, Moldova—$6,000
Moscow, Russia—$169,000
Novosibirsk, Russia—$17,000
St. Petersburg, Russia—$21,000
Vladivostok, Russia—$18,000
Dushanbe, Tajikistan—$7,000
Ashgabat, Turkmenistan—$8,000
Kyiv, Ukraine—$33,000
Tashkent, Uzbekistan—$18,000.

All administrative and indirect costs must be included in the maximum award amount for each center. There must be a summary budget as well as breakdowns reflecting both administrative and program budgets.

Allowable costs for the program include the following:

(1) Salaries and benefits.

(2) Office supplies and expenses, including rent, communications, postage and shipping.

(3) Outreach and publicity costs.

(4) Indirect costs.

Please refer to the Solicitation Package for complete budget guidelines and formatting instructions.

Announcement Title and Number: All correspondence with USIA concerning this RFP should reference the above title and number *E/ASA–00–07.*

FOR FURTHER INFORMATION CONTACT: The Education Information and Services Branch—ECA/ASA, (formerly known as the Advising and Student Services Branch—E/ASA), Room 349, U.S. Department of State, 301 4th Street, SW., Washington, DC 20547, phone: (202) 619–4731, email: ssheehan@usia.gov to request a Solicitation Package. The Solicitation Package contains detailed award criteria, required application forms, specific budget instructions, and standard guidelines for proposal preparation. Please specify Bureau Program Officer Sharen Sheehan on all other inquiries and correspondence.

Please read the complete **Federal Register** announcement before sending inquiries or submitting proposals. Once the RFP deadline has passed, Bureau staff may not discuss this competition with applicants until the proposal review process has been completed.

To Download a Solicitation Package Via Internet: The entire Solicitation Package may be downloaded from the Bureau's website at http://e.usia.gov/education/rfps. Please read all information before downloading.

Deadline for Proposals: All proposal copies must be received at the Bureau of Educational and Cultural Affairs by 5 p.m. Washington, DC time on *Monday, November 8, 1999.* Faxed documents will not be accepted at any time. Documents postmarked the due date but received on a later date will not be accepted. Each applicant must ensure that the proposals are received by the above deadline.

Applicants must follow all instructions in the Solicitation Package. The original and 6 copies of the application should be sent to: U.S.

Department of State, Bureau of Educational and Cultural Affairs, Ref.: *E/ASA–00–07*, Program Management Staff, ECA/EX/PM, Room 336, 301 4th Street, SW., Washington, DC 20547.

Applicants must also submit the ''Executive Summary'' and ''Proposal Narrative'' sections of the proposal on a 3.5'' diskette, formatted for DOS. These documents must be provided in ASCII text (DOS) format with a maximum line length of 65 characters. The Bureau will transmit these files electronically to public diplomacy sections at U.S. Embassies overseas for their review, with the goal of reducing the time it takes to get Embassy comments for the Bureau's grants review process.

Diversity, Freedom and Democracy Guidelines

Pursuant to the Bureau's authorizing legislation, programs must maintain a non-political character and should be balanced and representative of the diversity of American political, social, and cultural life. ''Diversity'' should be interpreted in the broadest sense and encompass differences including, but not limited to ethnicity, race, gender, religion, geographic location, socio-economic status, and physical challenges. Applicants are strongly encouraged to adhere to the advancement of this principle both in program administration and in program content. Please refer to the review criteria under the 'Support for Diversity' section for specific suggestions on incorporating diversity into the total proposal. Public Law 104–319 provides that in carrying out programs of educational and cultural exchange in countries whose people do not fully enjoy freedom and democracy, the Bureau shall take appropriate steps to provide opportunities for participation in such programs to human rights and democracy leaders of such countries. Proposals should reflect advancement of this goal in their program contents, to the full extent deemed feasible.

Year 2000 Compliance Requirement (Y2K Requirement)

The Year 2000 (Y2K) issue is a broad operational and accounting problem that could potentially prohibit organizations from processing information in accordance with Federal management and program specific requirements including data exchange with the Bureau. The inability to process information in accordance with Federal requirements could result in grantees being required to return funds that have not been accounted for properly.

The Bureau therefore requires all organizations use Y2K complaint systems including hardware, software, and firmware. Systems must accurately process data and dates (calculating, comparing and sequencing) both before and after the beginning of the year 2000 and correctly adjust for leap years.

Additional information addressing the Y2K issue may be found at the General Services Administration's Office of Information Technology website at http://www.itpolicy.gsa.gov.

Review Process

The Bureau will acknowledge receipt of all proposals and will review them for technical eligibility. Proposals will be deemed ineligible if they do not fully adhere to the guidelines stated herein and in the Solicitation Package. All eligible proposals will be reviewed by the program office, as well as the U.S. Department of State's Office of the Senior Coordinator for the Newly Independent States and the public affairs sections overseas, where appropriate. Eligible proposals will be forwarded to panels of Bureau officers for advisory review. Proposals may also be reviewed by other Bureau elements. Final funding decisions are at the discretion of Department of State's Assistant Secretary for Educational and Cultural Affairs. Final technical authority for assistance awards (grants or cooperative agreements) resides with the Bureau's Grants Officer.

Review Criteria

Technically eligible applications will be competitively reviewed according to the criteria stated below. These criteria are not rank ordered and all carry equal weight in the proposal evaluation:

1. Quality of the program idea: Proposals should exhibit originality, substance, precision, and relevance to the Agency's mission.
2. Program planning: Detailed agenda and relevant work plan should demonstrate substantive undertakings and logistical capacity. Agenda and plan should adhere to the program overview and guidelines described above.
3. Ability to achieve program objectives: Objectives should be reasonable, feasible, and flexible. Proposals should clearly demonstrate how the institution will meet the program's objectives and plan.
4. Multiplier effect/impact: Proposed programs should strengthen long-term mutual understanding, including maximum sharing of information and establishment of long-term institutional and individual linkages.
5. Support of Diversity: Proposals should demonstrate substantive support of the Bureau's policy on diversity. Achievable and relevant features should be cited in both program administration and program content.
6. Institutional Capacity: Proposed personnel and institutional resources should be adequate and appropriate to achieve the program or project's goals.
7. Institution's Record/Ability: Proposals should demonstrate an institutional record of successful programs in international education, including responsible fiscal management and full compliance with all reporting requirements for past USIA grants as determined by the Bureau's Office of Contracts. The Bureau will consider the past performance of prior recipients and the demonstrated potential of new applicants.
8. Project Evaluation: Proposals should include a plan to evaluate the activity's success, both as the activities unfold and at the end of the program. A draft survey questionnaire or other technique plus description of a methodology to use to link outcomes to original project objectives is recommended. Successful applicants will be expected to submit intermediate reports quarterly.
9. Cost-effectiveness: The overhead and administrative components of the proposal should be kept as low as possible. All other items should be necessary and appropriate.
10. Cost-sharing: Proposals should maximize cost-sharing through other private sector support as well as institutional direct funding contributions.
11. Value to U.S.-Partner Country Relations: Proposed projects should receive positive assessments by Bureau's geographic area officers and overseas officers of program need, potential impact, and significance in the partner countries.

Authority

Overall grant making authority for this program is contained in the Mutual Educational and Cultural Exchange Act of 1961, Public Law 87–256, as amended, also known as the Fulbright-Hays Act. The purpose of the Act is ''to enable the Government of the United States to increase mutual understanding between the people of the United States and the people of other countries * * *; to strengthen the ties which unite us with other nations by demonstrating the educational and cultural interests, developments, and achievements of the people of the United States and other nations * * * and thus to assist in the development of friendly, sympathetic and peaceful relations between the United States and the other countries of

the world.'' The funding authority for the program above is provided through the Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act of 1993 (Freedom Support Act).

Notice

The terms and conditions published in this RFP are binding and may not be modified by any Bureau representative. Explanatory information provided by the Bureau that contradicts published language will not be binding. Issuance of the RFP does not constitute an award commitment on the part of the Government. The Bureau reserves the right to reduce, revise, or increase proposal budgets in accordance with the needs of the program and the availability of funds. Awards made will be subject to periodic reporting and evaluation requirements.

Notification

Final awards cannot be made until funds have been appropriated by Congress, allocated and committed through internal Department of State procedures.

Dated: September 21, 1999.

William P. Kiehl,

Acting Deputy Associate Director for Educational and Cultural Affairs.

[FR Doc. 99–25333 Filed 9–29–99; 8:45 am]

BILLING CODE 8230–01–M

UNITED STATES INFORMATION AGENCY

Bureau of Education and Cultural Affairs; Performing Arts Presenters Exchange Program With China

NOTICE: Request for proposals.

SUMMARY: The Office of Citizen Exchanges of the United States Information Agency's Bureau of Educational and Cultural Affairs announces an open competition for a Performing Arts Presenters Exchange Program with China. Public and private non-profit organizations meeting the provisions described in IRS regulation 26 CFR 1.501(c) may submit proposals to facilitate international cultural and educational exchange through a program that will bring performing arts presenters in China and the United States together to exchange strategies for presenting artists, discuss arts management techniques and recruit performing artists from each other's countries for presentation through this exchange. Interested applicants are invited to read the complete solicitation package before submitting their proposals. The solicitation package consists of the RFP; and Project Objectives, Goals and Implementation (POGI) statement; and Proposal Submission Instructions (PSI). On October 1, 1999, the U.S. Information Agency, including the Bureau of Educational and Cultural Affairs, will become part of the United States Department of State without affecting the content of this announcement or the nature of the program described.

Application Deadline and Reference Number: All proposal materials must be received at the Bureau of Educational and Cultural Affairs Grants Office by 5 p.m. Washington, D.C. time on Wednesday, October 27, 1999. Faxed documents will not be accepted, nor will documents postmarked on October 27, 1999, but received at a later date. All communications concerning this announcement should refer to the title and reference number—E/P–00–08. Please see section entitled ''Guidelines''.

Program Information

Overview

Differences in arts management between the U.S. and China may contribute to impediments in artistic exchange between the two countries. Cultural perceptions, contractual misunderstandings and incompatible management styles have, at times, created barriers to the exchange of performing artists between the two countries. The purpose of this program is to assist arts presenters in both countries understand how the other side operates, with the objective of achieving fruitful artistic exchanges. An ideal program should include the following three components:

1. Consultation/assessment visit by American arts presenters to China: A team of arts presenters from the U.S. will visit China to meet with leading arts presenters, increase their knowledge of performing arts presentation in China and assess performance venues.

2. Workshops in the U.S.: To be conducted for Chinese participants, by American experts in performing arts presentation in this country, focusing on legal, contractual, marketing, commercial and logistical issues involved with presenting American performing artists. Workshops should also cover similarities and differences between performing arts organizations in the U.S. and China, and an overview of the difficulties that American performing artists tend to encounter when conducting overseas tours.

3. An opportunity for leading arts presenters in China to attend one of the regional or national conferences for arts presenters in the U.S., where participants would have an opportunity to increase their understanding of trends in the arts presentation field and to view a wide range of American performing artists. At the conclusion of this component, the American and Chinese arts presenters will develop proposals and time lines to present specific artists in each other's country.

Guidelines

Eligible Applicants

The Office of Citizen Exchanges works with U.S. non-profit organizations to develop cooperative international group projects that introduce American and foreign participants to each other's cultural and artistic life and traditions. For this project, we look forward to working with an arts organization that has demonstrated expertise in presenting performing artists in the United States, extensive knowledge of presenting performing artists abroad, and interest and expertise in the performing arts of China.

Project Participants

The grantee organization will recruit American arts presenters for the initial assessment visit and the final phase of the project, which will result in a work plan for presenting performing artists from China in the U.S. The grantee organization must work with our colleagues at the American Embassy in Beijing to recruit appropriate performing arts presenters in China to participate this project. The U.S. Embassy in Beijing will also review the Chinese participants' final work plans to present American artists in China.

Programs must comply with J–1 visa regulations. Please refer to the Solicitation Package for further information regarding visas.

Grant Dates

We anticipate that the grant will begin on our about February 1, 2000, and end on March 1, 2001. However, a final award cannot be made until funds have been appropriated by Congress, and allocated and committed through internal Bureau procedures.

Budget Guidelines

Grants awarded to eligible organizations with less than 4 years of experience in conducting international exchange programs will be limited to $60,000.

Applicants must submit a comprehensive budget for the entire program. The Award may not exceed $100,000, and the Bureau expects to award one grant under the terms of this

competition. There must be a summary budget as well as breakdowns reflecting both administrative and program budgets. Applicants may provide separate sub-budgets for each program component, phase, location, or activity to provide clarification. Please note that strong preference will be given to proposals with a minimum of 30% cost sharing. Strong preference will also be given to proposals with administrative costs of no more than 20% of the total amount requested from the Bureau of Educational and Cultural Affairs.

Allowable costs for the program include the following:

1. International and domestic air fares; visas; transit costs; ground transportation costs.

2. Per Diem. For the activity in the U.S., organizations have the option of using a flat $160/day for program participants or the published U.S. federal per diem rates for individual American Cities. For activities outside the U.S., the published Federal per diem rates must be used. Per diem rates may be accessed at http.state.gov/www/perdiems.

3. Interpreters. If needed, interpreters for the U.S. program are provided by the State Department's Language Services Division. Typically, a pair of simultaneous interpreters is provided for every four visitors who need interpretation. Bureau grants do not pay for foreign interpreters to accompany delegations from their home country. Grant proposal budgets should contain a flat $160/day per diem for each Department of State interpreter, as well as home-to-program round trip air transportation of $400 per interpreter plus any U.S. travel expenses during the program.

4. Book and cultural allowance. Participants are entitled to a one-time cultural allowance of $150 per person, plus a book allowance of $50.

5. Consultants may be used to provide specialized expertise to make presentations. Daily honoraria generally do not exceed $250 per day.

6. Materials development. Proposals may contain costs to purchase, develop and translate materials for participants.

7. All Bureau-funded delegates will be covered under the terms of a Bureau-sponsored health insurance policy.

8. Other costs necessary for the effective administration of the program, including salaries and benefits for grant organization employees, as stated in the detailed instructions in the application package. Please refer to the Solicitation Package for complete budget guidelines and formatting instructions.

FOR FURTHER INFORMATION CONTACT: The Office of Citizen Exchanges, ECA/PE/C/CU, Room 568, United States Department of State, Bureau of Educational and Cultural Affairs, 301 4th Street, SW., Washington, DC 20547, telephone: (202) 205–2209, fax: (202) 619–6315 or e-mail jjohanse@exchanges.usia.gov., to request a Solicitation Package. The Solicitation Package contains detailed award criteria, required application forms, specific budget instructions, and standard guidelines for proposal preparation. Please specify Cultural Programs Officer Jill Johansen Staggs on all other inquires and correspondence.

Please read the complete **Federal Register** announcement before sending inquires or submitting proposals. Once the RFP deadline has passed, Bureau staff may not discuss this competition with applicants until the proposal review process has been completed.

To Download a Solicitation Package Via Internet: The entire Solicitation Package may be downloaded from the Bureau's website at http://e.usia.gov/education/rfps. Please read all information before downloading.

Deadline for Proposals: All proposal copies must be received at the Bureau by 5 p.m. Washington, D.C. time on *October 27, 1999.* Faxed documents will not be accepted at any time. Documents postmarked the due date but received on a later date will not be accepted. Each applicant must ensure that the proposals are received by the above deadline.

Applicants must follow all instructions in the Solicitation Package. The original and *8* copies of the application should be sent to: United States Department of State, The Bureau of Educational and Cultural Affairs, Ref.: *E/P –00–08,* Office of Program Management, ECA/EX/PM, Room 336, 301 4th Street, SW., Washington, DC. 20547.

Applicants must also submit the ''Executive Summary'' and ''Proposal Narrative'' sections of the proposal on a 3.5″ diskette, formatted for DOS. These documents must be provided in ASCII text (DOS) format with a maximum line length of 65 characters. We will transmit these files electronically to our State Department colleagues at the embassy in Beijing for review, with the goal of reducing the time it takes to get posts' comments for the Bureau's grants review process.

Diversity, Freedom and Democracy Guidelines

Pursuant to the Bureau's authorizing legislation, programs must maintain a non-political character and should be balanced and representative of the diversity of American political, social, and cultural life. ''Diversity'' should be interpreted in the broadest sense and encompass differences including, but not limited to ethnicity, race, gender, religion, geographic location, socio-economic status, and physical challenges. Applicants are strongly encouraged to adhere to the advancement of this principle both in program administration and in program content. Please refer to the review criteria under the 'Support for Diversity' section for specific suggestions on incorporating diversity into the total proposal. Public Law 104–319 provides that ''in carrying out programs of educational and cultural exchange in countries whose people do not fully enjoy freedom and democracy,'' the Bureau ''shall take appropriate steps to provide opportunities for participation in such programs to human rights and democracy leaders of such countries.'' Proposals should reflect advancement of this goal in their program contents, to the full extent deemed feasible.

Year 2000 Compliance Requirement (Y2K Requirement)

The Year 2000 (Y2K) issue is a broad operational and accounting problem that could potentially prohibit organizations from processing information in accordance with Federal management and program specific requirements including data exchange with the Bureau. The inability to process information in accordance with Federal requirements could result in grantees' being required to return funds that have not been accounted for properly.

The Bureau therefore requires all organizations use Y2K compliant systems including hardware, software, and firmware. Systems must accurately process data and dates (calculating, comparing and sequencing) both before and after the beginning of the year 2000 and correctly adjust for leap years.

Additional information addressing the Y2K issue may be found at the General Services Administration's Office of Information Technology website at http://www.itpolicy.gsa.gov.

Review Process

The Office of Citizens Exchanges will acknowledge receipt of all proposals and will review them for technical eligibility. Proposals will be deemed ineligible if they do not fully adhere to the guidelines stated herein and in the Solicitation Package. All eligible proposals will be reviewed by the program office, as well as Department of State regional authorities and the embassy overseas. Eligible proposals will be forwarded to panels of Bureau

officers for advisory review. Proposals may also be reviewed by the Office of the Legal Adviser or by other Department of State entities. Final funding decisions are at the discretion of the U.S. Department of State's Assistant Secretary for Educational and Cultural Affairs. Final technical authority for assistance awards (grants or cooperative agreements) resides with the Grants Staff.

Review Criteria

Technically eligible applications will be competitively reviewed according to the criteria stated below. These criteria are not rank ordered and all carry equal weight in the proposal evaluation:

1. Quality and Clarity of Program Objectives: Proposals should exhibit originality, substance, precision, and relevance to the Bureau's mission. All activities should clearly support the project objective.

2. Program Planning: Detailed agenda and relevant work plan should demonstrate substantive undertakings and logistical capacity. Agenda and plan should adhere to the program overview and guidelines described above. Proposals should clearly demonstrate how the institution will meet the program's objectives and plan.

3. Multiplier Effect/Impact: Proposed programs should strengthen long-term mutual understanding, including maximum sharing of information and establishment of long-term institutional and individual linkages.

4. Cross-Cultural Sensitivity: Proposals should reflect an understanding of the complex nature of U.S. Government foreign policy with China, strategies to address cross-cultural sensitivities among participants and relevant knowledge of the performing arts in China.

5. Support of Diversity: Proposals should demonstrate substantive support of the Bureau's policy on diversity. In this project, diversity should be especially evident in the selection of American participants and workshop presenters, and the performing arts presentations both in China and the U.S. to which participants will be exposed.

6. Institutional Capacity/Record: Proposed personnel and institutional resources should be adequate and appropriate to achieve the program or project's goals. Proposals should demonstrate an institutional record of successful exchange programs, including responsible fiscal management and full compliance with all reporting requirements for past Bureau grants as determined by the Bureau's Grants Staff.

7. Follow-on Activities: Proposals should provide a plan for continued follow-on activity (without State Department support) ensuring that Bureau supported programs are not isolated events.

8. Project Evaluation: Proposals should include a plan to evaluate the activity's success, both as the activities unfold and at the end of the program. A draft survey questionnaire or other technique plus description of a methodology to use to link outcomes to original project objectives is recommended. Successful applicants will be expected to submit intermediate reports after each project component is concluded or quarterly, whichever is less frequent.

9. Cost-Effectiveness: The overhead and administrative components of the proposal, including salaries and honoraria, should be kept as low as possible. All other items should be necessary and appropriate.

10. Cost-sharing: Proposals should maximize cost-sharing through other private sector support as well as institutional direct funding contributions.

Authority

Overall grant making authority for this program is contained in the Mutual Educational and Cultural Exchange Act of 1961, Public Law 87–256, as amended, also known as the Fulbright-Hays Act. The propose of the Act is ''to enable the Government of the United States to increase mutual understanding between the people of the United States and the people of other countries * * *; to strengthen the ties which unite us with other nations by demonstrating the educational and cultural interests, developments, and achievements of the people of the United States and other nations * * * and thus to assist in the development of friendly, sympathetic and peaceful relations between the United States and the other countries of the world.'' The funding authority for the program above is provided through legislation.

Notice

The terms and conditions published in this RFP are binding and may not be modified by any Bureau representative. Explanatory information provided by the Bureau that contradicts published language will not be binding. Issuance of the RFP does not constitute an award commitment on the part of the Government. The Bureau reserves the right to reduce, revise, or increase proposal budgets in accordance with the needs of the program and the availability of funds. Awards made will be subject to periodic reporting and evaluation requirements.

Notification

Final awards cannot be made until funds have been appropriated by Congress, allocated and committed through internal Bureau procedures.

Dated: September 23, 1999.

William P. Kiehl,

Acting Deputy Associate Director for Educational and Cultural Affairs.

[FR Doc. 99–25334 Filed 9–29–99; 8:45 am]

BILLING CODE 8230–01–M

federal register

Thursday
September 30, 1999

Part II

Environmental Protection Agency

40 CFR Part 60, et al.

NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 60, 63, 260, 261, 264, 265, 266, 270, and 271

[FRL–6413–3]

RIN 2050–AEO1

NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors

ACTION: Final rule.

SUMMARY: We are promulgating revised standards for hazardous waste incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns. These standards are being promulgated under joint authority of the Clean Air Act (CAA) and Resource Conservation and Recovery Act (RCRA). The standards limit emissions of chlorinated dioxins and furans, other toxic organic compounds, toxic metals, hydrochloric acid, chlorine gas, and particulate matter. These standards reflect the performance of Maximum Achievable Control Technologies (MACT) as specified by the Clean Air Act. These MACT standards also will result in increased protection to human health and the environment over existing RCRA standards.

DATES: This final rule is in effect on September 30, 1999. You are required to be in compliance with these promulgated standards 3 years following the effective date of the final rule (i.e., September 30, 2002). You are provided with the possibility of a site-specific one year extension for the installation of controls to comply with the final standards or for waste minimization reductions. The incorporation by reference of certain publications listed in the rule was approved by the Director of the Federal Register as of September 30, 1999.

ADDRESSES: The official record (*i.e.*, public docket) for this rulemaking is identified as Docket Numbers: F–96–RCSP–FFFFF, F–97–CS2A–FFFFF, F–97–CS3A–FFFFF, F–97–CS4A–FFFFF, F–97–CS5A–FFFFF, F–97–CS6A–FFFFF, F–98–RCSF–FFFFF, and F–1999–RC2F–FFFFF. The official record is located in the RCRA Information Center (RIC), located at Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia. The mailing address for the official record is RCRA Information Center, Office of Solid Waste (5305W), U.S. Environmental Protection Agency Headquarters, 401 M Street, SW, Washington, DC 20460.

Public comments and supporting materials are available for viewing in the RIC. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, you must make an appointment by calling 703–603–9230 or by sending a message via e-mail to: RCRA-Docket@epamail.epa.gov. You may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost 15 cent/page. The index for the official record and some supporting materials are available electronically. See the ''Supplementary Information'' section of this **Federal Register** notice for information on accessing the index and these supporting materials.

FOR FURTHER INFORMATION CONTACT: For general information, you can contact the RCRA Hotline at 1–800–424–9346 or TDD 1–800–553–7672 (hearing impaired). In the Washington metropolitan area, call 703–412–9810 or TDD 703–412–3323. For additional information on the Hazardous Waste Combustion MACT rulemaking and to access available electronic documents, please go to our Web page: www.epa.gov/hwcmact. Any questions or comments on this rule can also be sent to EPA via our Web page.

For more detailed information on technical requirements of this rulemaking, you can contact Mr. David Hockey, 703–308–8846, electronic mail: Hockey.David@epamail.epa.gov. For more detailed information on permitting associated with this rulemaking, you can contact Ms. Patricia Buzzell, 703–308–8632, electronic mail: Buzzell.Tricia@epamail.epa.gov. For more detailed information on compliance issues associated with this rulemaking, you can contact Mr. Larry Gonzalez, 703–308–8468, electronic mail: Gonzalez.Larry@epamail.epa.gov. For more detailed information on the assessment of potential costs, benefits and other impacts associated with this rulemaking, you can contact Mr. Lyn Luben, 703–308–0508, electronic mail: Luben.Lyn@epamail.epa.gov. For more detailed information on risk analyses associated with this rulemaking, you can contact Mr. David Layland, 703–308–0482, electronic mail: Layland.David@epamail.epa.gov.

SUPPLEMENTARY INFORMATION:

Official Record. The official record is the paper record maintained at the address in **ADDRESSES** above. All comments that were received electronically were converted into paper form and placed in the official record, which also includes all comments submitted directly in writing. Our responses to comments, whether the comments are written or electronic, are located in the response to comments document in the official record for this rulemaking.

Supporting Materials Availability on the Internet. The index for the official record and the following supporting materials are available on the Internet as:

—Technical Support Documents for HWC MACT Standards:
  —Volume I: Description of Source Categories
  —Volume II: HWC Emissions Database
  —Volume III: Selection of MACT Standards and Technologies
  —Volume IV: Compliance with the MACT Standards
  —Volume V: Emission Estimates and Engineering Costs
—Assessment of the Potential Costs, Benefits and Other Impacts of the Hazardous Waste Combustion MACT Standards—Final Rule
—Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Information Document
—Response to Comments for the HWC MACT Standards Document

To access the information electronically from the World Wide Web (WWW), type: *www.epa.gov/hwcmact*

Outline

Acronyms Used in the Rule

acfm—Actual cubic feet per minute
BIF—Boilers and industrial furnaces
CAA—Clean Air Act
CEMS—Continuous emissions monitors/monitoring system
CFR—Code of Federal Regulations
DOC—Documentation of Compliance
DRE—Destruction and Removal Efficiency
dscf—Dry standard cubic foot
dscm—Dry standard cubic meter
EPA/USEPA—United States Environmental Protection Agency
gr—Grains
HSWA—Hazardous and Solid Waste Amendments
kg—Kilogram
MACT—Maximum Achievable Control Technology
mg—Milligrams
Mg—Megagrams (metric tons)
NOC—Notification of Compliance
NESHAP—National Emission Standards for HAPs
ng—Nanograms
NODA—Notice of Data Availability
NPRM—Notice of Proposed Rulemaking
POHC—Principal Organic Hazardous Constituent

ppmv—Parts per million by volume
ppmw—Parts per million by weight
RCRA—Resource Conservation and Recovery Act
R & D—Research and Development
SSRA—Site specific risk assessment
TEQ—Toxicity equivalence
µg—Micrograms

Outline

Part One: Overview and Background for This Rule
I. What Is the Purpose of This Rule?
II. In Brief, What Are the Major Features of Today's Rule?
A. Which Source Categories Are Affected By This Rule?
B. How Are Area Sources Affected By This Rule?
C. What Emission Standards Are Established In This Rule?
D. What Are the Procedures for Complying with This Rule?
E. What Subsequent Performance Testing Must Be Performed?
F. What Is the Time Line for Complying with This Rule?
G. How Does This Rule Coordinate With the Existing RCRA Regulatory Program?
III. What Is the Basis of Today's Rule?
IV. What Was the Rulemaking Process for Development of This Rule?
Part Two: Which Devices Are Subject to Regulation?
I. Hazardous Waste Incinerators
II. Hazardous Waste Burning Cement Kilns
III. Hazardous Waste Burning Lightweight Aggregate Kilns
Part Three: How Were the National Emission Standards for Hazardous Air Pollutants (NESHAP) in This Rule Determined?
I. What Authority Does EPA Have to Develop a NESHAP?
II. What Are the Procedures and Criteria for Development of NESHAPs?
A. Why Are NESHAPs Needed?
B. What Is a MACT Floor?
C. How Are NESHAPs Developed?
III. How Are Area Sources and Research, Development, and Demonstration Sources Treated in this Rule?
A. Positive Area Source Finding for Hazardous Waste Combustors
1. How Are Area Sources Treated in this Rule?
2. What Is an Area Source?
3. What Is the Basis for Today's Positive Area Source Finding?
B. How Are Research, Development, and Demonstration (RD&D) Sources Treated in this Rule?
1. Why Does the CAA Give Special Consideration to Research and Development (R&D) Sources?
2. When Did EPA Notice Its Intent to List R&D Facilities?
3. What Requirements Apply to Research, Development, and Demonstration Hazardous Waste Combustor Sources?
IV. How Is RCRA's Site-Specific Risk Assessment Decision Process Impacted by this Rule?
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Part One: Overview and Background for This Rule

I. What Is the Purpose of This Rule?

In this final rule, we adopt hallmark standards to more rigorously control toxic emissions from burning hazardous waste in incinerators, cement kilns, and lightweight aggregate kilns. These emission standards and continuation of our RCRA risk policy create a national cap for emissions that assures that combustion of hazardous waste in these devices is properly controlled.

The standards themselves implement section 112 of the Clean Air Act (CAA) and apply to the three major categories of hazardous waste burners—incinerators, cement kilns, and lightweight aggregate kilns. For purposes of today's rule, we refer to these three categories collectively as hazardous waste combustors. Hazardous waste combustors burn about 80% of the hazardous waste combusted annually within the United States. As a result, we project that today's standards will achieve highly significant reductions in the amount of hazardous air pollutants being emitted each year by hazardous waste combustors. For example, we estimate that 70 percent of the annual dioxin and furan emissions from hazardous waste combustors will be eliminated. Mercury emissions already controlled to some degree under existing regulations will be further reduced by about 55 percent.

Section 112 of the CAA requires emissions standards for hazardous air pollutants to be based on the performance of the Maximum Achievable Control Technology (MACT). The emission standards in this final rule are commonly referred to as MACT standards because we use the MACT concept to determine the levels of emission control under section 112(d) of the CAA.[1] At the same time, these emissions standards satisfy our obligation under the main statute regulating hazardous waste management, the Resource Conservation Recovery Act (RCRA), to ensure that hazardous waste combustion is conducted in a manner adequately protective of human health and the environment. Our use of both authorities as the legal basis for today's rule and details of the MACT standard-setting process are explained more fully in later sections of this preamble. Most significantly, by using both authorities in a harmonized fashion, we consolidate regulatory control of hazardous waste combustion into a single set of regulations, thereby eliminating the potential for conflicting or duplicative federal requirements.

Today's rule also has other important features in terms of our legal obligations and public commitments. First, promulgation of these standards fulfills our legal obligations under the CAA to control emissions of hazardous air pollutants from hazardous-waste burning incinerators and Portland cement kilns.[2] Second, today's rule fulfills our 1993 and 1994 public commitments to upgrade emission standards for hazardous waste combustors. These commitments are the centerpiece of our Hazardous Waste Minimization and Combustion Strategy.[3] Finally, today's rulemaking satisfies key terms of a litigation settlement agreement entered into in 1993 with a number of groups that had challenged our previous rule addressing emissions from hazardous waste boilers and industrial furnaces.[4]

II. In Brief, What Are the Major Features of Today's Rule?

The major features of today's final rule are summarized below.

A. Which Source Categories Are Affected by This Rule?

This rule establishes MACT standards for three source categories, namely: Hazardous waste burning incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns. As mentioned earlier, we refer to these three source categories collectively as hazardous waste combustors.

B. How Are Area Sources Affected by This Rule?

This rule establishes that MACT standards apply to both major sources—sources that emit or have the potential to emit 10 tons or greater per year of any single hazardous air pollutant or 25 tons per year or greater of hazardous air pollutants in the aggregate—and area sources, all others. Area sources may be regulated under MACT standards if we find that the category of area sources ''presents a threat of adverse effects to human health or the environment * * * warranting regulation (under the MACT standards).'' We choose to regulate area sources in today's rule and, as a result, all hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns will be regulated under standards reflecting MACT.

C. What Emission Standards Are Established in This Rule?

This rule establishes emission standards for: Chlorinated dioxins and furans; mercury; particulate matter (as a surrogate for antimony, cobalt, manganese, nickel, and selenium); semivolatile metals (lead and cadmium); low volatile metals (arsenic, beryllium, and chromium); hydrogen chloride and chlorine gas (combined). This rule also establishes standards for carbon monoxide, hydrocarbons, and destruction and removal efficiency as surrogates in lieu of individual standards for nondioxin/furan organic hazardous air pollutants.

D. What Are the Procedures for Complying With This Rule?

This rule establishes standards that apply at all times (including during startup, shutdown, or malfunction), except if hazardous waste is not being burned or is not in the combustion chamber. When not burning hazardous waste (and when hazardous waste does not remain in the combustion chamber), you may either follow the hazardous waste burning standards in this rule or emission standards we promulgate, if any, for other relevant nonhazardous waste source categories.

Initial compliance is documented by stack performance testing. To document continued compliance with the carbon monoxide or hydrocarbon standards, you must use continuous emissions monitoring systems. For the remaining standards, you must document continued compliance by monitoring limits on specified operating parameters. These operating parameter

[1] The MACT standards reflect the ''maximum degree of reduction in emissions of * * * hazardous air pollutants'' that the Administrator determines is achievable, taking into account the cost of achieving such emission reduction and any nonair quality health and environmental impacts and energy requirements. Section 112(d)(2).

[2] In a 1992 **Federal Register** notice, we published the inital list of categories of major and area sources of hazardous air pollutants including hazardous waste incinerators and Portland cement plants. See 57 FR 31576 (July 16, 1992). Today's rule meets our obligation to issue MACT standards for hazardous waste incinerators. Today's rule also partially meets our obligation to issue MACT standards for Portland cement plants. To complete the obligation, we have finalized, in a separate rulemaking, MACT standards for the portland cement industry source category. Those standards apply to all cement kilns except those kilns that burn hazardous waste. See 64 FR 31898 (June 14, 1999). Those standards also apply to other HAP emitting sources at a cement plant (such as clinker coolers, raw mills, finish mills, and materials handling operations) regardless of whether the plant has hazardous waste burning cement kilns.

[3] EPA Document Number 530–R–94–044, Office of Solid Waste and Emergency Response, November 1994.

[4] ''Burning of Hazardous Waste in Boilers and Industrial Furnaces'' (56 FR 7134, February 21, 1991). These groups include the Natural Resources Defense Council, Sierra Club, Environmental Technology Council, National Solid Waste Management Association, and a number of local citizens' groups.

limits[5] are calculated based on performance test conditions using specified procedures intended to ensure that the operating conditions (and by correlation the actual emissions) do not exceed performance test levels at any time. You must also install an automatic waste feed cutoff system that immediately stops the flow of hazardous waste feed to the combustor if a continuous emissions monitoring system records a value exceeding the standard or if an operating parameter limit is exceeded (considering the averaging period for the standard or operating parameter). The standards and operating parameter limits apply when hazardous waste is being fed or remains in the combustion chamber irrespective of whether you institute the corrective measures prescribed in the startup, shutdown, and malfunction plan.

E. What Subsequent Performance Testing Must Be Performed?

You must conduct comprehensive performance testing every five years. This testing regime is referred to as ''subsequent performance testing.'' You must revise the operating parameter limits as necessary based on the levels achieved during the subsequent performance test. In addition, you must conduct confirmatory performance testing of dioxins/furans emissions under normal operating conditions midway between subsequent performance tests.

F. What Is the Time Line for Complying With This Rule?

The compliance date of the standards promulgated in today's rule is three years after the date of publication of the rule in the **Federal Register**, or September 30, 2002 (See CAA section 112(i)(3)(A) indicating that the Environmental Protection Agency (EPA) may establish a compliance date no later than three years from the date of promulgation.) A one-year extension of the compliance date may be requested if you cannot complete system retrofits by the compliance date despite a good faith effort to do so.[6] CAA section 112(i)(3)(B). Continuous emissions monitoring systems and other continuous monitoring systems for the specified operating parameters must be fully operational by the compliance date. You must demonstrate compliance by conducting a performance test no later than 6 months after the compliance date (i.e., three and one-half years from the date of publication of today's rule in the **Federal Register**).

To ensure timely compliance with the standards, by the compliance date you must place in the operating record a Documentation of Compliance identifying limits on the specified operating parameters you believe are necessary and sufficient to comply with the emission standards. These operating parameter limits (and the carbon monoxide or hydrocarbon standards monitored with continuous monitoring systems) are enforceable until you submit to the Administrator a Notification of Compliance within 90 days of completion of the performance test.

The Notification of Compliance must document: (1) Compliance with the emission standards during the performance test; (2) the revised operating parameter limits calculated from the performance test; and (3) conformance of the carbon monoxide or hydrocarbon continuous emissions monitoring systems and the other continuous monitoring systems with performance specifications. You must comply with the revised operating parameter limits upon submittal of the Notification of Compliance.

G. How Does This Rule Coordinate With the Existing RCRA Regulatory Program?

You must have a RCRA permit for stack air emissions (or RCRA interim status) until you demonstrate compliance with the MACT standards. You do so by conducting a comprehensive performance test and submitting a Notification of Compliance to the Administrator, as explained above.[7] Hazardous waste combustors with RCRA permits remain subject to RCRA stack air emission permit conditions until the RCRA permit is modified to delete those conditions. (As discussed later in more detail, we recommend requesting modification of the RCRA permit at the time you submit the Notification of Compliance.) Only those provisions of the RCRA permit that are less stringent than the MACT requirements specified in the Notification of Compliance will be approved for deletion.[8] Hazardous waste combustors still in interim status without a full RCRA permit are no longer subject to the RCRA stack air emissions standards for hazardous waste combustors in Subpart O of Part 265 and subpart H of part 266 once compliance with the MACT standards has been demonstrated and a Notification of Compliance has been submitted to the Administrator.

You must satisfy both sets of requirements during the relatively short period when both RCRA and MACT stack air emissions standards and associated requirements in the RCRA permit or in RCRA interim status regulations are effective.

You also may have existing site-specific permit conditions. On a case-by-case basis during RCRA permit issuance or renewal, we determine whether further regulatory control of emissions is needed to protect human health and the environment, notwithstanding compliance with existing regulatory standards. Additional conditions may be included in the permit in addition to those derived from the RCRA emission standards as necessary to ensure that facility operations are protective of human health and the environment. Any of these risk-based permit provisions more stringent than today's MACT standards (or that address other emission hazards) will remain in the RCRA permit.

After the MACT compliance date, hazardous waste combustors must continue to comply with the RCRA permit issuance process to address nonMACT provisions (*e.g.*, general facility standards) and potentially conduct a risk review under § 270.32(b)(2) to determine if additional requirements pertaining to stack or other emissions are warranted to ensure protection of human health and the environment.

III. What Is the Basis of Today's Rule?

As stated previously, this rule issues final National Emissions Standards for Hazardous Air Pollutants (NESHAPS) under authority of section 112 of the Clean Air Act for three source categories of combustors: Hazardous waste burning incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns. The main purposes of the CAA are to protect and enhance the quality of our Nation's

[5] The term ''operating parameter limit'' and ''operating limit'' have the same meaning and are used interchangeably in the preamble and rule language.

[6] In June 1998, we promulgated a rule to allow hazardous waste combustors also to request a one-year extension to the MACT compliance date in cases where additional time will be needed to install pollution prevention and waste minimization measures to significantly reduce the amount or toxicity of hazardous waste entering combustion feedstreams. See 63 FR at 43501 (June 19, 1998). This provision is recodified in today's rule as 40 CFR 63.1213.

[7] Hazardous waste combustors, of course, also continue to be subject to applicable RCRA requirements for all other aspects of their hazardous waste management activities that are separate from the requirements being deferred to the CAA by this rule.

[8] RCRA permit requirements that may be less stringent than applicable MACT standards are nonetheless enforceable until the RCRA permit is modified.

air resources, and to promote the public health and welfare and the productive capacity of the population. CAA section 101(b)(1). To this end, sections 112(a) and (d) of the CAA direct EPA to set standards for stationary sources emitting (or having the potential to emit) ten tons or greater of any one hazardous air pollutant or 25 tons or greater of total hazardous air pollutants annually. Such sources are referred to as ''major sources.''

Today's rule establishes MACT emission standards for the following hazardous air pollutants emitted by hazardous waste burning incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns: Chlorinated dioxins and furans, mercury, two semivolatile metals (lead and cadmium), three low volatility metals (arsenic, beryllium, and chromium), and hydrochloric acid/chlorine gas. This rule also establishes MACT control for the other hazardous air pollutants identified in CAA section 112(b)(1) through the adoption of standards using surrogates. For example, we adopt a standard for particulate matter as a surrogate to control five metals that do not have specific emission standards established in today's rule. These five metals are antimony, cobalt, manganese, nickel, and selenium. Also, we adopt standards for carbon monoxide, hydrocarbons, and destruction and removal efficiency to control the other organic hazardous air pollutants listed in section 112(b)(1) that do not have specific emission standards established in this rule.

Today's standards meet our commitment under the Hazardous Waste Minimization and Combustion Strategy, first announced in May 1993, to upgrade the emission standards for hazardous waste burning facilities. EPA's Strategy has eight goals: (1) Ensure public outreach and EPA-State coordination; (2) pursue aggressive use of waste minimization measures; (3) continue to ensure that combustion and alternative and innovative technologies are safe and effective; (4) develop and impose more rigorous controls on combustion facilities; (5) continue aggressive compliance and enforcement efforts; (6) enhance public involvement opportunities in the permitting process for combustion facilities; (7) give higher priority to permitting those facilities where a final permit decision would result in the greatest environmental benefit or the greatest reduction in risk; and (8) advance scientific understanding on combustion issues and risk assessment and ensure that permits are issued in a manner that provides proper protection of human health and the environment.

We have made significant progress in implementing the Strategy. Today's rule meets the Strategy goal of developing and implementing rigorous state-of-the-art safety controls on hazardous waste combustors by using the best available technologies and the most current science.[9] We also developed a software tool (*i.e.*, the Waste Minimization Prioritization Tool) that allows users to access relative persistent, bioaccumulative and toxic hazard scores for any of 2,900 chemicals that may be present in RCRA waste streams. We also committed to the reduction of the generation of the most persistent, bioaccumulative and toxic chemicals by 50 percent by 2005. To facilitate this reduction we are developing a list of the persistent, bioaccumulative and toxic chemicals of greatest concern and a plan for working with the regulated community to reduce these chemicals. In addition, we promulgated new requirements to enhance public involvement in the permitting process[10] and performed risk evaluations during the permitting process for high priority facilities. We also made allowances for one-year extensions to the MACT compliance period as incentives designed to promote the installation of cost-effective pollution prevention technologies to replace or supplement emission control technologies for meeting MACT standards.

Finally, with regard to the regulatory framework that will result from today's rule, we are eliminating the existing RCRA stack emissions national standards for hazardous waste incinerators, cement kilns, and lightweight aggregate kilns. That is, after submittal of the Notification of Compliance established by today's rule (and, where applicable, RCRA permit modifications at individual facilities), RCRA national stack emission standards will no longer apply to these hazardous waste combustors. We originally issued air emission standards under the authority of section 3004(a) of RCRA, which calls for EPA to promulgate standards ''as may be necessary to protect human health and the environment.'' In light of today's new MACT standards, we have determined that RCRA emissions standards for these sources would only be duplicative and so are no longer necessary to protect human health and the environment. Under the authority of section 3004(a), it is appropriate to eliminate such duplicative standards.

Emission standards for hazardous waste burning incinerators and other sources burning hazardous wastes as fuel must be protective of human health and the environment under RCRA. We conducted a multipathway risk assessment to assess the ecological and human health risks that are projected to occur under the MACT standards. We have concluded that the MACT standards are generally protective of human health and the environment and that separate RCRA emission standards are not needed. Please see a full discussion of the national assessment of exposures and risk in Part VIII of this preamble.

Additionally, RCRA section 1006(b) directs EPA to integrate the provisions of RCRA for purposes of administration and enforcement and to avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act and other federal statutes. This integration must be done in a way that is consistent with the goals and policies of these statutes. Therefore, section 1006(b) provides further authority for EPA to eliminate the existing RCRA stack emissions standards to avoid duplication with the new MACT standards. Nevertheless, under the authority of RCRA's ''omnibus'' clause (section 3005(c)(3); see 40 CFR 270.32(b)(2)), RCRA permit writers may still impose additional terms and conditions on a site-specific basis as may be necessary to protect human health and the environment.

IV. What Was the Rulemaking Process for Development of This Rule?

We proposed MACT standards for hazardous waste burning incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns on April 19, 1996. (61 FR 17358) In addition, we published five notices of data availability (NODAs):

1. August 23, 1996 (61 FR 43501), inviting comment on information pertaining to a peer review of three aspects of the proposed rule and information pertaining to the since-promulgated ''Comparable Fuels'' rule (see 63 FR 43501 (June 19, 1998));

2. January 7, 1997 (62 FR 960), inviting comment on an updated hazardous waste combustor data base containing the emissions and ancillary

[9] The three source categories covered by today's final rule burn more than 80 percent of the total amount of hazardous waste being combusted each year. The remaining 15–20 percent is burned in industrial boilers and other types of industrial furnaces, which will be addressed in a future NESHAPS rulemaking for hazardous waste burning sources.

[10] See 60 FR 63417 (December 11, 1995).

data that the Agency used to develop the final rule;

3. March 21, 1997 (62 FR 13775), inviting comment on our approach to demonstrate the technical feasibility of monitoring particulate matter emissions from hazardous waste combustors using continuous emissions monitoring systems;

4. May 2, 1997 (62 FR 24212), inviting comment on several topics including the status of establishing MACT standards for hazardous waste combustors using a revised emissions data base and the status of various implementation issues, including compliance dates, compliance requirements, performance testing, and notification and reporting requirements; and

5. December 30, 1997 (62 FR 67788), inviting comment on several status reports pertaining to particulate matter continuous emissions monitoring systems.

Finally, we have had many formal and informal meetings with stakeholders, representing an on-going dialogue on various aspects of the rulemaking.

We carefully considered information and comments submitted by stakeholders on these rulemaking actions and during meetings. We address their comments in our Response to Comments documents, which can be found in the public docket supporting this rulemaking. In addition, we addressed certain significant comments at appropriate places in this preamble.

Part Two: Which Devices Are Subject to Regulation?

I. Hazardous Waste Incinerators

Hazardous waste incinerators are enclosed, controlled flame combustion devices, as defined in 40 CFR 260.10. These devices may be fixed or transportable. Major incinerator designs used in the United States are rotary kilns, fluidized beds, liquid injection and fixed hearth, while newer designs and technologies are also coming into operation. Detailed descriptions of the designs, types of facilities and typical air pollution control devices were presented in the April 1996 NPRM and in the technical background document prepared to support the NPRM. (See 61 FR 17361, April 19, 1996.) In 1997, there were 149 hazardous waste incinerator facilities operating 189 individual units in the U.S. Of these 149 facilities, 20 facilities (26 units) were commercial hazardous waste incinerators, while the remaining 129 facilities (163 units) were on-site hazardous waste incinerators.

II. Hazardous Waste Burning Cement Kilns

Cement kilns are horizontally inclined rotating cylinders, lined with refractory-brick, and internally fired. Cement kilns are designed to calcine, or drive carbon dioxide out of, a blend of raw materials such as limestone, shale, clay, or sand to produce Portland cement. When combined with sand, gravel, water, and other materials, Portland cement forms concrete, a material used widely in many building and construction applications.

Generally, there are two different processes used to produce Portland cement: a wet process and a dry process. In the wet process, raw materials are ground, wetted, and fed into the kiln as a slurry. In the dry process, raw materials are ground and fed dry into the kiln. Wet process kilns are typically longer in length than dry process kilns to facilitate water evaporation from the slurried raw material. Dry kilns use less energy (heat) and also can use preheaters or precalciners to begin the calcining process before the raw materials are fed into the kiln.

A number of cement kilns burn hazardous waste-derived fuels to replace some or all of normal fossil fuels such as coal. Most kilns burn liquid waste; however, cement kilns also may burn bulk solids and small containers containing viscous or solid hazardous waste fuels. Containers are introduced either at the upper, raw material end of the kiln or at the midpoint of the kiln.

All existing hazardous waste burning cement kilns use particulate matter control devices. These cement plants either use fabric filters (baghouses) or electrostatic precipitators to control particulate matter.

In 1997, there were 18 Portland cement plants operating 38 hazardous waste burning kilns. Of these 38 kilns, 27 kilns use the wet process to manufacture cement and 11 kilns use the dry process. Of the dry process kilns, one kiln uses a preheater and another kiln used a preheater and precalciner. Detailed descriptions of the design types of facilities and typical air pollution control devices are presented in the technical background document.[11]

In developing standards, the Agency considered the appropriateness of distinguishing among the different types of cement kilns burning hazardous waste. We determined that distinguishing subcategories of hazardous waste burning cement kilns was not needed to develop uniform, achievable MACT standards. (See Part Four, Section VII of the preamble for a discussion of subcategory considerations.)

III. Hazardous Waste Burning Lightweight Aggregate Kilns

The term ''lightweight aggregate'' refers to a wide variety of raw materials (such as clay, shale, or slate) that, after thermal processing, can be combined with cement to form concrete products. Lightweight aggregate concrete is produced either for structural purposes or for thermal insulation purposes. A lightweight aggregate plant is typically composed of a quarry, a raw material preparation area, a kiln, a cooler, and a product storage area. The material is taken from the quarry to the raw material preparation area and from there is fed into the rotary kiln.

A rotary kiln consists of a long steel cylinder, lined internally with refractory bricks, which is capable of rotating about its axis and is inclined horizontally. The prepared raw material is fed into the kiln at the higher end, while firing takes place at the lower end. As the raw material is heated, it melts into a semiplastic state and begins to generate gases that serve as the bloating or expanding agent. As temperatures reach their maximum, the semiplastic raw material becomes viscous and entraps the expanding gases. This bloating action produces small, unconnected gas cells, which remain in the material after it cools and solidifies. The product exits the kiln and enters a section of the process where it is cooled with cold air and then conveyed to the discharge. Kiln operating parameters such as flame temperature, excess air, feed size, material flow, and speed of rotation vary from plant to plant and are determined by the characteristics of the raw material.

In 1997, there were five lightweight aggregate kiln facilities in the United States operating 10 hazardous waste-fired kilns. Detailed descriptions of the lightweight aggregate process and air pollution control techniques are presented in the technical support document.[12]

[11] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume I: Description of Source Categories,'' July 1999.

[12] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume I: Description of Source Categories,'' July 1999.

Part Three: How Were the National Emission Standards for Hazardous Air Pollutants (NESHAP) in This Rule Determined?

I. What Authority Does EPA Have To Develop a NESHAP?

The 1990 Amendments to the Clean Air Act (CAA) significantly revised the requirements for controlling emissions of hazardous air pollutants. EPA is required to develop a list of categories of major and area sources of the hazardous air pollutants identified in section 112 and to develop, over specified time periods, technology-based performance standards for sources of these hazardous air pollutants. See CAA sections 112(c) and 112(d). These source categories and subcategories are to be listed pursuant to section 112(c)(1). We published an initial list of 174 categories of such major and area sources in the **Federal Register** on July 16, 1992 (57 FR 31576), which was later amended at 61 FR 28197 (June 4, 1996) [13] and 63 FR 7155 (February 12, 1998). That list includes the Hazardous Waste Incineration, Portland Cement Manufacturing, and Clay Products Manufacturing source categories.

Promulgation of technology-based standards for these listed source categories is not necessarily the final step in the process. CAA section 112(f) requires the Agency to report to Congress on the estimated risk remaining after imposition of technology-based standards and make recommendations as to additional legislation needed to address such risk. If Congress does not act on any recommendation presented in this report, we are required to impose additional controls if such controls are needed to protect public health with an ample margin of safety or (taking into account costs, energy, safety, and other relevant factors) to prevent adverse environmental effects. In addition, if the technology-based standards for carcinogens do not reduce the lifetime excess cancer risk for the most exposed individual to less than one in a million (1×10^{-6}), then we must promulgate additional standards.

We prepared the Draft Residual Risk Report to Congress and announced its release on April 22, 1998 (63 FR 19914–19916). In that report, we did not propose any legislative recommendation to Congress. In section 4.2.4 of the report, we state that: ''The legislative strategy embodied in the 1990 CAA Amendments adequately maintains the goal of protecting the public health and the environment and provides a complete strategy for dealing with a variety of risk problems. The strategy recognizes that not all problems are national problems or have a single solution. National emission standards will be promulgated to decrease the emissions of as many hazardous air pollutants as possible from major sources.''

II. What Are the Procedures and Criteria for Development of NESHAPs?

A. Why Are NESHAPs Needed?

NESHAPs are developed to control hazardous air pollutant emissions from both new and existing sources. The statute requires a NESHAP to reflect the maximum degree of reduction of hazardous air pollutant emissions that is achievable taking into consideration the cost of achieving the emission reduction, any nonair quality health and environmental impacts, and energy requirements. NESHAPs are often referred to as maximum achievable control technology (or MACT) standards.

We are required to develop MACT emission standards based on performance of the best control technologies for categories or sub-categories of major sources of hazardous air pollutants. We also can establish lower thresholds for determining which sources are major where appropriate. In addition, we may require sources emitting particularly dangerous hazardous air pollutants such as particular dioxins and furans to control those pollutants under the MACT standards for major sources.

In addition, we regulate area sources by technology-based standards if we find that these sources (individually or in the aggregate) present a threat of adverse effects to human health or the environment warranting regulation. After such a determination, we have a further choice whether to require technology-based standards based on MACT or on generally achievable control technology.

B. What Is a MACT Floor?

The CAA directs EPA to establish minimum emission standards, usually referred to as MACT floors. For existing sources in a category or subcategory with 30 or more sources, the MACT floor cannot be less stringent than the ''average emission limitation achieved by the best performing 12 percent of the existing sources. * * *'' For existing sources in a category or subcategory with less than 30 sources, the MACT floor cannot be less stringent than the ''average emission limitation achieved by the best performing 5 sources. * * *'' For new sources, the MACT floor cannot be ''less stringent than the emission control that is achieved by the best controlled similar source. * * *''

We must consider in a NESHAP rulemaking whether to develop standards that are more stringent than the floor, which are referred to as ''beyond-the-floor'' standards. To do so, we must consider statutory criteria, such as the cost of achieving emission reduction, cost effectiveness, energy requirements, and nonair environmental implications.

Section 112(d)(2) specifies that emission reductions may be accomplished through the application of measures, processes, methods, systems, or techniques, including, but not limited to: (1) Reducing the volume of, or eliminating emissions of, such pollutants through process changes, substitution of materials, or other modifications; (2) enclosing systems or processes to eliminate emissions; (3) collecting, capturing, or treating such pollutants when released from a process, stack, storage, or fugitive emissions point; (4) design, equipment, work practice, or operational standards (including requirements for operator training or certification); or (5) any combination of the above. See section 112(d)(2).

Application of techniques (1) and (2) are consistent with the definitions of pollution prevention under the Pollution Prevention Act and the definition of waste minimization under RCRA. In addition, these definitions are in harmony with our Hazardous Waste Minimization and Combustion Strategy. These terms have particular applicability in the discussion of pollution prevention/waste minimization incentives, which were finalized at 63 FR 33782 (June 19, 1998) and which are summarized in the permitting and compliance sections of this final rule.

C. How Are NESHAPs Developed?

To develop a NESHAP, we compile available information and in some cases collect additional information about the industry, including information on emission source quantities, types and characteristics of hazardous air pollutants, pollution control technologies, data from emissions tests (e.g., compliance tests, trial burn tests) at controlled and uncontrolled facilities, and information on the costs and other energy and environmental impacts of emission control techniques. We use this information in analyzing and developing possible regulatory

[13] A subsequent Notice was published on July 18, 1996 (61 FR 37542) which corrected typographical errors in the June 4, 1996 Notice.

approaches. Of course, we are not always able to assemble the same amount of information per industry and typically base the NESHAP on information practically available.

NESHAPs are normally structured in terms of numerical emission limits. However, alternative approaches are sometimes necessary and appropriate. Section 112(h) authorizes the Administrator to promulgate a design, equipment, work practice, or operational standard, or a standard that is a combination of these alternatives.

III. How Are Area Sources and Research, Development, and Demonstration Sources Treated in This Rule?

A. Positive Area Source Finding for Hazardous Waste Combustors

1. How Are Area Sources Treated in This Rule?

In today's final rule, we make a positive area source finding pursuant to CAA section 112(c)(3) for hazardous waste burning incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns. This rule subjects both major and area sources in these three source categories to the same standards—the section 112(d) MACT standards. We make this positive area source determination because emissions from area sources subject to today's rule present a threat of adverse effects to human health and the environment. These threats warrant regulation under the section 112 MACT standards.

2. What Is an Area Source?

Area sources are sources emitting (or having the potential to emit) less than 10 tons per year of an individual hazardous air pollutant, and less than 25 tons per year of hazardous air pollutants in the aggregate. These sources may be regulated under MACT standards if we find that the sources ''presen[t] a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under this section.'' Section 112(c)(3).

As part of our analysis, we estimate that all hazardous waste burning lightweight aggregate kilns are major sources, principally due to their hydrochloric acid emissions. We also estimate that approximately 80 percent of hazardous waste burning cement kilns are major sources, again due to hydrochloric acid emissions. Only approximately 30 percent of hazardous waste burning incinerators appear to be major sources, considering only the stack emissions from the incinerator. However, major and area source status is determined by the entire facility's hazardous air pollutant emissions, so that many on-site hazardous waste incinerators are major sources because they are but one contributing source of emissions among others (sometimes many others at large manufacturing complexes) at the same facility.

3. What Is the Basis for Today's Positive Area Source Finding?

The consequences of us not making a positive area source finding in this rule would result in an undesirable bifurcated regulation. First, the CAA provides independent authority to regulate certain hazardous air pollutant emissions under MACT standards, even if the emissions are from area sources. These are the hazardous air pollutants enumerated in section 112(c)(6), and include 2,3,7,8 dichlorobenzo-p-dioxins and furans, mercury, and some specific polycyclic organic hazardous air pollutants—hazardous air pollutants regulated under this rule. See 62 FR at 24213–24214. Thus, all sources covered by today's rule would have to control these hazardous air pollutants to MACT levels, even if we were not to make a positive area source determination. Second, because all hazardous air pollutants are fully regulated under RCRA, area source hazardous waste combustors would have not only a full RCRA permit, but also (as just explained) a CAA title V permit for the section 112(c)(6) hazardous air pollutants. One purpose of this rule is to avoid the administrative burden to sources resulting from this type of dual permitting, and these burdensome consequences of not making a positive area source finding have influenced our decision that area source hazardous waste combustors ''warrant regulation'' under section 112(d)(2).

a. Health and Environmental Factors. Our positive area source finding is based on the threats presented by emissions of hazardous air pollutants from area sources. We find that these threats warrant regulation under the MACT standards given the evident Congressional intent for uniform regulation of hazardous waste combustion sources, as well as the common emission characteristics of these sources and amenability to the same emission control mechanisms.

As discussed in both the April 1996 proposal and May 1997 NODA, all hazardous waste combustion sources, including those that may be area sources, have the potential to pose a threat of adverse effects to human health or the environment, although some commenters disagree with this point. These sources emit some of the most toxic, bioaccumulative and persistent hazardous air pollutants—among them dioxins, furans, mercury, and organic hazardous air pollutants. As discussed in these **Federal Register** notices and elsewhere in today's final rule, potential hazardous waste combustor area sources can be significant contributors to national emissions of these hazardous air pollutants. (See 62 FR 17365 and 62 FR 24213.)

Our positive area source finding also is based on the threat posed by products of incomplete combustion. The risks posed by these hazardous air pollutants cannot be directly quantified on a national basis, because each unit emits different products of incomplete combustion in different concentrations. However, among the products of incomplete combustion emitted from these sources are potential carcinogens.[14] The potential threat posed by emissions of these hazardous air pollutants is manifest and, for several reasons, we do not believe that control of these products of incomplete combustion should be left to the RCRA omnibus permitting process. First, we are minimizing the administrative burden on sources from duplicative permitting in this rule by minimizing the extent of RCRA permitting and hence minimizing our reliance on the omnibus process. Second, we are dealing with hazardous air pollutant emissions from these sources on a national rather than a case-by-case basis. We conclude that the control of products of incomplete combustion from all hazardous waste combustors through state-of-the art organic pollution control is the best way to do so from an implementation standpoint. Finally, a basic premise of the CAA is that there are so many uncertainties and difficulties in developing effective risk-based regulation of hazardous air pollutants that the first step should be technology-based standards based on Maximum Available Control Technology. See generally S. Rep. No. 228, 101st Cong. 1st Sess. 128–32 (1990). The positive area source finding and consequent MACT controls is consistent with this primary legislative objective.

The quantitative risk assessment for the final rule did not find risk from

[14] *E.g.*, benzene, methylene chloride, hexachlorobenzene, carbon tetrachloride, vinal chloride, benzo(a)pyrene, and chlorinated dioxins and furans. Energy and Environmental Research Corp., surrogate Evaluation for Thermal Treatment Systems, Draft Report, October 1994. Also see: USEPA, ''Final technical Support Document for HWC MACT Standards, Volume III: Section of MACT Standards and Technologies,'' July 1999.

mercury emissions from hazardous waste burning area source cement kilns to be above levels we generally consider acceptable. However, the uncertainties underlying the analysis are such that only qualitative judgments can be made. We do not believe our analysis can be relied upon to make a definitive quantitative finding about the precise magnitude of the risk. See Part Five, Section XIII for a discussion of uncertainty. Background exposures, which can be quite variable, were not considered in the quantitative assessment and are likely to increase the risk from incremental exposures to mercury from area source cement kilns. Commenters, on the other hand, believed that cement kilns did not pose significant risk and questioned our risk estimates made in the April 1996 NPRM and May 1997 NODA. However, taking into account the uncertainty of our mercury analysis and the likelihood of background exposures, a potential for risk from mercury may exist. Furthermore, the information available concerning the adverse human health effects of mercury, along with the magnitude of the emissions of mercury from area source cement kilns, also indicate that a threat of adverse effects is presumptive and that a positive area source finding is warranted.

b. Other Reasons Warranting Regulation under Section 112. Other special factors indicate that MACT standards are warranted for these sources.

The first reason is Congress's, our, and the public's strong preference for similar, if not identical, regulation of all hazardous waste combustors. Area sources are currently regulated uniformly under RCRA, with no distinction being made between smaller and larger emitters. This same desire for uniformity is reflected in the CAA. CAA section 112(n)(7) directs the Agency, in its regulation of HWCs under RCRA, to ''take into account any regulations of such emissions which are promulgated under such subtitle (*i.e.*, RCRA) and shall, to the maximum extent practicable and consistent with the provisions of this section, ensure that the requirements of such subtitle and this section are consistent.'' Congress also dealt with these sources as a single class by excluding hazardous waste combustion units regulated by RCRA permits from regulation as municipal waste combustors under CAA section 129(g)(1). Thus, a strong framework in both statutes indicates that air emissions from all hazardous waste combustors should be regulated under a uniform approach. Failure to adopt such a uniform approach would therefore be inconsistent with Congressional intent as expressed in both the language and the structure of RCRA and the CAA. Although many disagree, several commenters support the approach to apply uniform regulations for all hazardous waste combustors and assert that it is therefore appropriate and necessary to make the positive area source finding.

Second, a significant number of hazardous waste combustors could plausibly qualify as area sources by the compliance date through emissions reductions of one or more less dangerous hazardous air pollutants, such as total chlorine. We conclude it would be inappropriate to exclude from CAA 112(d) regulation and title V permitting a significant portion of the sources contributing to hazardous air pollutant emissions, particularly nondioxin products of incomplete combustion should this occur.

Third, the MACT controls identified for major sources are reasonable and appropriate for potential area sources. The emissions control equipment (and where applicable, feedrate control) defined as floor or beyond-the-floor control for each source category is appropriate and can be installed and operated at potential area sources. There is nothing unique about the types and concentrations of emissions of hazardous air pollutants from any class of hazardous waste combustors that would make MACT controls inappropriate for that particular class of hazardous waste combustors, but not the others. Commenters also raised the issue of applying generally available control technologies (GACT), in lieu of MACT, to area sources. Consideration of GACT lead us to the conclusion that GACT would likely involve the same types and levels of control as we identified for MACT. We believe GACT would be the same as MACT because the standards of this rule, based on MACT, are readily achievable, and therefore would also be determined to be generally achievable, *i.e.*, GACT.

Finally, we note that the determination here is unique to these RCRA sources, and should not be viewed as precedential for other CAA sources. In the language of the statute, there are special reasons that these RCRA sources warrant regulation under section 112(d)(2)—and so warrant a positive area source finding—that are not present for usual CAA sources. These reasons are discussed above—the Congressional desire for uniform regulation and our desire (consistent with this Congressional objective) to avoid duplicative permitting of these sources wherever possible. We repeat, however, that the positive area source determination here is not meant as a precedent outside the dual RCRA/CAA context.

B. How Are Research, Development, and Demonstration (RD&D) Sources Treated in This Rule?

Today's rule excludes research, development, and demonstration sources from the hazardous waste burning incinerator, cement kiln, and lightweight aggregate kiln source categories. We discuss below the statutory mandate to give special consideration to research and development (R&D) sources, an Advanced Notice of Proposed Rulemaking to list R&D facilities that we published in 1997, and qualifications for exclusion of R&D sources from the hazardous waste combustor source categories.

1. Why Does the CAA Give Special Consideration to Research and Development (R&D) Sources?

Section 112(c)(7) of the Clean Air Act requires EPA to ''establish a separate category covering research or laboratory facilities, as necessary to assure the equitable treatment of such facilities.'' Congress included such language in the Act because it was concerned that research and laboratory facilities should not arbitrarily be included in regulations that cover manufacturing operations. The Act defines a research or laboratory facility as ''any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a *de minimis* manner.''

We interpret the Act as requiring the listing of R&D major sources as a separate category to ensure equitable treatment of such facilities. Language in the Act specifying special treatment of R&D facilities (section 112(c)(7)), along with language in the legislative history of the Act, suggests that Congress considered it inequitable to subject the R&D facilities of an industry to a standard designed for the commercial production processes of that industry. The application of such a standard may be inappropriate because the wide range of operations and sizes of R&D facilities. Further, the frequent changes in R&D operations may be significantly different from the typically large and continuous production processes.

We have no information indicating that there are R&D sources, major or

area, that are required to be listed and regulated, other than those associated with sources already included in listed source categories listed today. Although we are not aware of other R&D sources that need to be added to the source category list, such sources may exist, and we requested information about them in an Advance Notice of Proposed Rulemaking, as discussed in the next section.

2. When Did EPA Notice Its Intent To List R&D Facilities?

In May 1997 (62 FR 25877), we provided advanced notice that we were considering whether to list R&D facilities. We requested public comments and information on the best way to list and regulate such sources. Comment letters were received from industry, academic representatives, and governmental entities. After we compile additional data, we will respond to these comments in that separate docket. As a result we are not deciding how to address the issue in today's rule. The summary of comments and responses will be one part of the basis for our future decision whether to list R&D facilities as a source category of hazardous air pollutants.

3. What Requirements Apply to Research, Development, and Demonstration Hazardous Waste Combustor Sources?

This rule excludes research, development, and demonstration sources from the hazardous waste incinerator, cement kiln, or lightweight aggregate kiln source categories and therefore from compliance with today's regulations. We are excluding research, development, and demonstration sources from those source categories because the emission standards and compliance assurance requirements for those source categories may not be appropriate. The operations and size of a research, development, and demonstration source may be significantly different from the typical hazardous waste incinerator that is providing ongoing waste treatment service or hazardous waste cement kiln or hazardous waste lightweight aggregate kiln that is producing a commercial product as well as providing ongoing waste treatment.

We also are applying the exclusion to demonstration sources because demonstration sources are operated more like research and development sources than production sources. Thus, the standards and requirements finalized today for production sources may not be appropriate for demonstration sources. Including demonstration sources in the exclusion is consistent with our current regulations for hazardous waste management facilities. See § 270.65 providing opportunity for special operating permits for research, development, and demonstration sources that use an innovative and experimental hazardous waste treatment technology or process.

To ensure that research, development, and demonstration sources are distinguished from production sources, we have drawn from the language in section 112(c)(7) to define a research, development, and demonstration source. Specifically, these are sources engaged in laboratory, pilot plant, or prototype demonstration operations: (1) Whose primary purpose is to conduct research, development, or short-term demonstration of an innovative and experimental hazardous waste treatment technology or process; and (2) where the operations are under the close supervision of technically-trained personnel.[15]

In addition, today's rule limits the exclusion to research, development, and demonstration sources that operate for not longer than one year after first processing hazardous waste, unless the Administrator grants a time extension based on documentation that additional time is needed to perform research development, and demonstration operations. We believe that this time restriction will help distinguish between research, development, and demonstration sources and production sources. This time restriction draws from the one-year time restriction (unless extended on a case-by-case basis) currently applicable to hazardous waste research, development, and demonstration sources under § 270.65.

The exclusion of research, development, and demonstration sources applies regardless of whether the sources are located at the same site as a production hazardous waste combustor that is subject to the MACT standards finalized today. A research, development, and demonstration source that is co-located at a site with a production source still qualifies for the exclusion. A research, development, and demonstration source co-located with a production source is nonetheless expected to experience the type and range of operations and be of the size typical for other research, development, and demonstration sources.

Finally, hazardous waste research, development, and demonstration sources remain subject to RCRA permit requirements under § 270.65, which direct the Administrator to establish permit terms and conditions that will assure protection of human health and the environment.

Although we did not propose this exclusion specifically for hazardous waste combustor research, development, and demonstration sources, the exclusion is an outgrowth of the May 1997 notice discussed above. In that notice we explain that we interpret the CAA as requiring the listing of research and development major sources as a separate category to ensure equitable treatment of such facilities. A commenter on the April 1996 hazardous waste combustor NPRM questioned whether we intended to apply the proposed regulations to research and development sources. We did not have that intent, and in response are finalizing today an exclusion of research, development, and demonstration sources from the hazardous waste incinerator, hazardous waste burning cement kiln, and hazardous waste burning lightweight aggregate kiln source categories.

IV. How Is RCRA's Site-Specific Risk Assessment Decision Process Impacted by This Rule?

RCRA Sections 3004(a) and (q) mandate that standards governing the operation of hazardous waste combustion facilities be protective of human health and the environment. To meet this mandate, we developed national combustion standards under RCRA, taking into account the potential risk posed by direct inhalation of the emissions from these sources.[16] With advancements in the assessment of risk since promulgation of the original national standards (*i.e.*, 1981 for incinerators and 1991 for boilers and industrial furnaces), we recognized in the 1993 Hazardous Waste Minimization and Combustion Strategy that additional risk analysis was appropriate. Specifically, we noted that the risk posed by indirect exposure (e.g., ingestion of contamination in the food chain) to long-term deposition of metals,

[15] The statute also qualifies that research and development sources do not engage in the manufacture of products for commercial sale except in a *de minimis* manner. Although this qualification is appropriate for research and development sources, engaged in short-term demonstration of an innovative or experimental treatment technology or process may produce products for use in commerce. For example, a cement kiln engaged in a short-term demonstration of an innovative process may nonetheless produce marketable clinker in other than *de minimis* quantities. Consequently, we are not including this qualification in the definition of a research, development, and demonstration source.

[16] See No CFR part 264, subpart O for incinerator standards and 40 CFR part 266, subpart H for BIF standards.

dioxin/furans and other organic compounds onto soils and surface waters should be assessed in addition to the risk posed by direct inhalation exposure to these contaminants. We also recognized that the national assessments performed in support of the original hazardous waste combustor standards did not take into account unique and site-specific considerations which might influence the risk posed by a particular source. Therefore, to ensure the RCRA mandate was met on a facility-specific level for all hazardous waste combustors, we strongly recommended in the Strategy that site-specific risk assessments (SSRAs), including evaluations of risk resulting from both direct and indirect exposure pathways, be conducted as part of the RCRA permitting process. In those situations where the results of a SSRA showed that a facility's operations could pose an unacceptable risk (even after compliance with the RCRA national regulatory standards), additional risk-based, site-specific permit conditions could be imposed pursuant to RCRA's omnibus authority (section 3005(c)(3)).

Today's MACT standards were developed pursuant to section 112(d) of the CAA, which does not require a concurrent risk evaluation of those standards. To determine if the MACT standards would satisfy the RCRA protectiveness mandate in addition to the requirements of the CAA, we conducted a national RCRA evaluation of both direct and indirect risk as part of this rulemaking. If we found the MACT standards to be sufficiently protective so as to meet the RCRA mandate as well, we could consider modifying our general recommendation that SSRAs be conducted for all hazardous waste combustors, thereby lessening the regulatory burden to both permitting authorities and facilities.

In this section, we discuss: The applicability of both the RCRA omnibus authority and the SSRA policy to hazardous waste combustors subject to today's rulemaking; the implementation of the SSRA policy; the relationship of the SSRA policy to the residual risk requirement of section 112(f) of the CAA; and public comments received on these topics. A discussion of the national risk characterization methodology and results is provided in Part Five, Section XIII of today's notice.

A. What Is the RCRA Omnibus Authority?

Section 3005(c)(3) of RCRA (codified at 40 CFR 270.32(b)(2)) requires that each hazardous waste facility permit contain the terms and conditions necessary to protect human health and the environment. This provision is commonly referred to as the ''omnibus authority'' or ''omnibus provision.'' It is the means by which additional site-specific permit conditions may be incorporated into RCRA permits should such conditions be necessary to protect human health and the environment.[17] SSRAs have come to be used by permitting authorities as a quantitative basis for making omnibus determinations for hazardous waste combustors.

In the April 1996 NPRM and May 1997 NODA, we discussed the RCRA omnibus provision and its relation to the new MACT standards. Commenters question whether the MACT standards supersede the omnibus authority with respect to hazardous waste combustor air emissions. Other commenters agree in principle with the continued applicability of the omnibus authority after promulgation of the MACT standards. These commenters recognize that there may be unique conditions at a given site that may warrant additional controls to those specified in today's notice. For those sources, the commenters acknowledge that permit writers must retain the legal authority to place additional operating limitations in a source's permit.

As noted above, the omnibus provision is a RCRA statutory requirement and does not have a CAA counterpart. The CAA does not override RCRA. Each statute continues to apply to hazardous waste combustors unless we determine there is duplication and use the RCRA section 1006(b) deferral authority to create a specific regulatory exemption.[18] Promulgation of the MACT standards, therefore, does not duplicate, supersede, or otherwise modify the omnibus provision or its applicability to sources subject to today's rulemaking. As indicated in the April 1996 NPRM, a RCRA permitting authority (such as a state agency) has the responsibility to supplement the national MACT standards as necessary, on a site-specific basis, to ensure adequate protection under RCRA. We recognize that this could result in a situation in which a source may be subject to emission standards and operating conditions under two regulatory authorities (*i.e.*, CAA and RCRA). Although our intent, consistent with the integration provision of RCRA section 1006(b), is to avoid regulatory duplication to the maximum extent practicable, we may not eliminate RCRA requirements if a source's emissions are not protective of human health and the environment when complying with the MACT standards.[19]

B. How Will the SSPA Policy Be Applied and Implemented in Light of This Mandate?

1. Is There a Continuing Need for Site-Specific Risk Assessments?

As stated previously, EPA's Hazardous Waste Minimization and Combustion Strategy recommended that SSRAs be conducted as part of the RCRA permitting process for hazardous waste combustors where necessary to protect human health and the environment. We intended to reevaluate this policy once the national hazardous waste combustion standards had been updated. We view today's MACT standards as more stringent than those earlier standards for incinerators, cement kilns and lightweight aggregate kilns. To determine if the MACT standards as proposed in the April 1996 NPRM would satisfy the RCRA mandate to protect human health and the environment, we conducted a national evaluation of both human health and ecological risk. That evaluation, however, did not quantitatively assess the proposed standards with respect to mercury and nondioxin products of incomplete combustion. This was due to a lack of adequate information regarding the behavior of mercury in the environment and a lack of sufficient emissions data and parameter values (*e.g.*, bioaccumulation values) for nondioxin products of incomplete combustion. Since it was not possible to suitably evaluate the proposed standards for the potential risk posed by mercury and nondioxin products of incomplete combustion, we elected in the April 1996 NPRM to continue recommending that SSRAs be conducted as part of the permitting process until we could conduct a further assessment once final MACT standards are promulgated and implemented.

Although some commenters agree with this approach, a number of other commenters question the necessity of a quantitative nondioxin product of incomplete combustion assessment to demonstrate RCRA protectiveness of the MACT standards. These commenters

[17] The risk-based permit conditions are in addition to those conditions required by the RCRA national regulatory standards for hazardous waste combustors (*e.g.*, general facility requirements).

[18] The risk-based permit conditions are in addition to those conditions required by the RCRA national regulatory standards for hazardous waste combustors (*e.g.*, general facility requirements).

[19] RCRA section 1006(b) authorizes deferral of RCRA provisions to other EPA-implemented authorities provided, among other things, that key RCRA policies and protections are not sacrificed. See *Chemical Waste Management* v. *EPA*, 976 F. 2d 2, 23, 25 (D.C. Cir. 1992).

assert that existing site-specific assessments demonstrate that emissions of nondioxin products of incomplete combustion are unlikely to produce significant adverse human health effects. However, we do not agree that sufficient SSRA information exists to conclude that emissions from these compounds are unlikely to produce significant adverse effects on human health and the environment on a national basis. First, only a limited number of completed SSRAs are available from which broader conclusions can be drawn. Second, nondioxin products of incomplete combustion emissions can vary widely depending on the type of combustion unit, hazardous waste feed and air pollution control device used. Third, a significant amount of uncertainty exists with respect to identifying and quantifying these compounds. Many nondioxin products of incomplete combustion cannot be characterized by standard analytical methodologies and are unaccounted for by standard emissions testing.[20] (On a site-specific basis, uncharacterized nondioxin products of incomplete combustion are typically addressed by evaluating the total organic emissions.) Fourth, nondioxin products of incomplete combustion can significantly contribute to the overall risk posed by a particular facility. For example, in the Waste Technologies Industries incinerator's SSRA, nondioxin organics were estimated to contribute approximately 30% of the total cancer risk to the most sensitive receptor located in the nearest subarea to the facility.[21] Fifth, national risk management decisions concerning the protectiveness of the MACT standards must be based on data that are representative of the hazardous waste combustors subject to today's rulemaking. We do not believe that the information afforded by the limited number of SSRAs now available is sufficiently complete or representative to render a national decision.[22]

Some commenters recommend discontinuing conducting SSRAs altogether. Other commenters, however, advocate continuing to conduct SSRAs, where warranted, as a means of addressing uncertainties inherent in the national risk evaluation and of addressing unique, site-specific circumstances not considered in the assessment.

In developing the national risk assessment for the final MAC standards, we expanded our original analysis to include a quantitative assessment of mercury patterned after the recently published Mercury Study Report to Congress.[23] We were unable to perform a similar assessment of nondioxin products of incomplete combustion emissions because of continuing data limitations for these compounds, despite efforts to collect additional data since publication of the April 1996 NPRM . Thus, we conclude that sufficient data are not available to quantitatively assess the potential risk from these constituents on a national level as part of today's rulemaking.

Given the results of the final national risk assessment for other hazardous air pollutants, we generally anticipate that sources complying with the MACT standards will not pose an unacceptable risk to human health or the environment. However, we cannot make a definitive finding in this regard for all hazardous waste combustors subject to today's MACT standards for the reasons discussed.

First, as discussed above, the national risk evaluation did not include an assessment of the risk posed by nondioxin products of incomplete combustion. As reflected in the Waste Technologies Industries SSRA, these compounds can significantly contribute to the overall risk posed by a hazardous waste combustor. Without a quantitative evaluation of these compounds, we cannot reliably predict whether the additional risk contributed by nondioxin products of incomplete combustion would or would not result in an unacceptable increase in the overall risk posed by hazardous waste combustors nationally.

Second, the quantitative mercury risk analysis conducted for today's rulemaking contains significant uncertainties. These uncertainties limit the use of the analysis for drawing quantitative conclusions regarding the risks associated with the national mercury MACT standard. Among others, the uncertainties include an incomplete understanding of the fate and transport of mercury in the environment and the biological significance of exposures to mercury in fish. (See Part Five, Section XIII.) Given these uncertainties, we believe that conducting a SSRA, which will assist a permit writer to reduce uncertainty on a site-specific basis, may be still warranted in some cases.[24] As the science regarding mercury fate and transport in the environment and exposure improves, and greater certainty is achieved in the future, we may be in a better position from which to draw national risk management conclusions regarding mercury risk.

Third, we agree with commenters who indicated that, by its very nature, the national risk assessment, while comprehensive, cannot address unique, site-specific risk considerations[25] As a result of these considerations, a separate analysis or ''risk check'' may be necessary to verify that the MACT standards will be adequately protective under RCRA for a given hazardous waste combustor.

Thus, we are recommending that for hazardous waste combustors subject to the Phase I final MACT standards, permitting authorities should evaluate the need for a SSRA on a case-by-case basis.[26] SSRAs are not anticipated to be necessary for every facility, but should be conducted for facilities where there is some reason to believe that operation

[20] USEPA, ''Development of a Hazardous Waste Incinerator Target Analyte List of Products of Incomplete Combustion'' EPA–600/R–98–076. 1998.

[21] The total cancer risk for this receptor was 1 x 10E–6. The results derived for the Waste Technologies Industries incinerator's SSRA are a combination of measurements and conservative estimates of stack and fugitive emissions, which were developed in tandem with an independent external peer review. USEPA, ''Risk Assessment for the Waste Technologies Industries Hazardous Waste Incineration Facility (East Livepool, Ohio)'' EPA–905–R97–002.

[22] Since publication of the April 1996 NPRM, we have expanded our national risk evaluation of the other hazardous waste combustor emissions (*e.g.*, metals) from 11 facilities to 76 facilities assessed for today's final rulemaking. The 76 facilities were selected using a stratified random sampling approach that allowed for a 90 percent probability of including at least one ''high risk'' facility. However, this larger set of facility assessments does not include an evaluation nondioxin products of incomplete combustion. See Part Five, Section XIII for further discussion.

[23] USEPA, ''Mercury Study Report to Congress, Volume III: Fate and Transport of Mercury in the Environment,'' EPA 452/R–97–005, December 1997.

[24] An example of the possible reduction in uncertainty which may be derived through the performance of a SSRA includes the degree of conversion of mercury to methyl mercury in water bodies. Due to the wide range of chemical and physical properties associated with surface water bodies, there appears to be a great deal of variability concerning mercury methylation. In conducting a SSRA, a risk assessor may choose to use a default value to represent the percentage of mercury assumed to convert to methyl mercury. Conversely, the risk assessor may choose to reduce the uncertainty in the analysis by deriving a site-specific value using actual surface water data. Chemical and physical properties that may influence mercury methylation include, but are not limited to: dissolved oxygen content, pH, dissolved organic content, salinity, nutrient concentrations, and temperature. See USEPA, ''Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities,'' EPA–530–D–98–001A, External Peer Review Draft, 1998.

[25] Including for example, unusual terrain or dispersion features, particularly sensitive ecosystems, unusually high contaminant background concentrations, and mercury methylation rates in surface water.

[26] We continue to recommend that for those HWCs not subject to the Phase I final MACT standards, as SSRA should be conducted as part of the RCRA permitting process.

in accordance with the MACT standards alone may not be protective of human health and the environment. If a SSRA does demonstrate that operation in accordance with the MACT standards may not be protective of human health and the environment, permitting authorities may require additional conditions as necessary. We consider this an appropriate course of action to ensure protection of human health and the environment under RCRA, given current limits to our scientific knowledge and risk assessment tools.

2. How Will the SSRA Policy Be Implemented?

Some commenters suggest that EPA provide regulatory language specifically requiring SSRAs. Adequate authority and direction already exists to require SSRAs on a case-by-case basis through current regulations and guidance (none of which are being reconsidered, revised or otherwise reopened in today's rulemaking). The omnibus provision (codified in 40 CFR 270.32(b)(2)) directs the RCRA permitting authority to include terms and conditions in the RCRA permit as necessary to ensure protection of human health and the environment. Under 40 CFR 270.10(k), the permitting authority may require a permittee or permit applicant to submit information where the permitting authority has reason to believe that additional permit conditions may be warranted under § 270.32(b)(2). Performance of a SSRA is a primary, although not exclusive mechanism by which the permitting authority may develop the information necessary to make the determination regarding what, if any, additional permit conditions are needed for a particular hazardous waste combustor. Thus, for hazardous waste combustors, the information required to establish permit conditions could include a SSRA, or the necessary information required to conduct a SSRA.

In 1994, we provided guidance concerning the appropriate methodologies for conducting hazardous waste combustor SSRAs.[27] This guidance was updated in 1998 and released for publication as an external peer review draft.[28] We anticipate that use of the updated and more detailed guidance will result in a more standardized assessments for hazardous waste combustors.

To implement the RCRA SSRA policy, we expect permitting authorities to continue evaluating the need for an individual hazardous waste combustor risk assessment on a case-by-case basis. We provided a list of qualitative guiding factors in the April 1996 NPRM to assist in this determination. One commenter is concerned that the subjectivity inherent in the list of guiding factors might lead to inconsistencies when determining if a SSRA is necessary and suggested that we provide additional guidance on how the factors should be used. We continue to believe that the factors provided, although qualitative, generally are relevant to the risk potential of hazardous waste combustors and therefore should be considered when deciding whether or not a SSRA is necessary. However, as a practical matter, the complexity of the multipathway risk assessment methodology precludes conversion of these qualitative factors into more definitive criteria. We will continue to compile data from SSRAs to determine if there are any trends which would assist in developing more quantitative or objective criteria for deciding on the need for a SSRA at any given site. In the interim, SSRAs provide the most credible basis for comparisons between risk-based emission limits and the MACT standards.

The commenter further suggests that EPA emphasize that the factors should be considered collectively due to their complex interplay (*e.g.*, exposure is dependent on fate and transport which is dependent on facility characteristics, terrain, meteorological conditions, etc.). We agree with the commenter. The elements comprising multipathway risk assessments are highly integrated. Thus, the considerations used in determining if a SSRA is necessary are similarly interconnected and should be evaluated collectively.

The guiding factors as presented in the April 1996 NPRM contained several references to the proposed MACT standards. As a result, we modified and updated the list to reflect promulgation of the final standards and to re-focus the factors to specifically address the types of considerations inherent in determining if a SSRA is necessary. The revised guiding factors are: (1) Particular site-specific considerations such as proximity to receptors, unique dispersion patterns, *etc.;* (2) identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities (confirmation of which should be made through emissions testing); (3) presence or absence of other off-site sources of pollutants in sufficient proximity so as to significantly influence interpretation of a facility-specific risk assessment; (4) presence or absence of significant ecological considerations, such as high background levels of a particular contaminant or proximity of a particularly sensitive ecological area; (5) volume and types of wastes being burned, for example wastes containing highly toxic constituents both from an acute and chronic perspective; (6) proximity of schools, hospitals, nursing homes, day care centers, parks, community activity centers that would indicate the presence of potentially sensitive receptors; (7) presence or absence of other on-site sources of hazardous air pollutants so as to significantly influence interpretation of the risk posed by the operation of the source in question; and (8) concerns raised by the public. The above list of qualitative guiding factors is not intended to be all-inclusive; we recognize that there may be other factors equally relevant to the decision of whether or not a SSRA is warranted in particular situations.

With respect to existing hazardous waste combustion sources, we do not anticipate a large number of SSRAs will need to be performed after the compliance date of the MACT standards. SSRAs already have been initiated for many of these sources. We strongly encourage facilities and permitting authorities to ensure that the majority of those risk assessments planned or currently in progress be completed prior to the compliance date of the MACT standards. The results of these assessments can be used to provide a numerical baseline for emission limits. This baseline then can be compared to the MACT limits to determine if site-specific risk-based limits are appropriate in addition to the MACT limits for a particular source.

Several commenters suggest that completed risk assessments should not have to be repeated. We do not anticipate repeating many risk assessments. It should be emphasized that changes to comply with the MACT standards should not cause an increase in risk for the vast majority of the facilities given that the changes, in all probability, will be the addition of pollution control equipment or a reduction in the hazardous waste being burned. For those few situations in which the MACT requirements might result in increased potential risk for a particular facility due to unique site-specific considerations, the RCRA permit writer, however, may determine

[27] USEPA. ''Guidance for Performing Screening Level Risk Analyses at Combustion Facilities Burning Hazardous Wastes'' Draft, April 1994; USEPA. ''Implementation of Exposure Assessment Guidance for RCRA Hazardous Waste Combustion Facilities'' Draft, 1994.

[28] USEPA. ''Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities'' EPA–520–D–98–001A, B&C. External Peer Review Draft, 1998.

that a risk check of the projected MACT emission rates is in order.[29] Should the results of the risk check demonstrate that compliance with the MACT requirements does not satisfy the RCRA protectiveness mandate, the permitting authority should invoke the omnibus provision to impose more stringent, site-specific, risk-based permit conditions as necessary to protect human health and the environment.

With respect to new hazardous waste combustors and existing combustors for which a SSRA has never been conducted, we recommend that the decision of whether or not a SSRA is necessary be made prior to the approval of the MACT comprehensive performance test protocol, thereby allowing for the collection of risk emission data at the same time as the MACT performance testing, if appropriate (see Part Five, Section V). In those instances where it has been determined a SSRA is appropriate, the assessment should take into account both the MACT standards and any relevant site-specific considerations.

We emphasize that the incorporation of site-specific, risk-based permit conditions into a permit is not anticipated to be necessary for the vast majority of hazardous waste combustors. Rather, such conditions would be necessary only if compliance with the MACT requirements is insufficient to protect human health and the environment pursuant to the RCRA mandate and if the resulting risk-based conditions are more stringent than those required under the CAA. Risk-based permit conditions could include, but are not limited to, more stringent emission limits, additional operating parameter limits, waste characterization and waste tracking requirements.

C. What Is the Difference Between the RCRA SSRA Policy and the CAA Residual Risk Requirement?

Section 112(f) of the CAA requires the Agency to conduct an evaluation of the risk remaining for a particular source category after compliance with the MACT standards. This evaluation of residual risk must occur within eight years of the promulgation of the MACT standards for each source category. If it is determined that the residual risk is unacceptable, we must impose additional controls on that source category to protect public health with an ample margin of safety and to prevent adverse environmental effects.

Our SSRA policy is intended to address the requirements of the RCRA protectiveness mandate, which are different from those provided in the CAA. For example, the omnibus provision of RCRA requires that the protectiveness determination be made on a permit-by-permit or site-specific basis. The CAA residual risk requirement, conversely, requires a determination be made on a source category basis. Further, the time frame under which the RCRA omnibus determination is made is more immediate; the SSRA is generally conducted prior to final permit issuance. The CAA residual risk determination, on the other hand, is made at any time within the eight-year time period after promulgation of the MACT standards for a source category. Thus, the possibility of a future section 112(f) residual risk determination does not relieve RCRA permit writers of the present obligation to determine whether the RCRA protectiveness requirement is satisfied. Finally, nothing in the RCRA national risk evaluation for this rule should be taken as establishing a precedent for the nature or scope of any residual risk procedure under the CAA.

Part Four: What Is the Rationale for Today's Final Standards?

I. Emissions Data and Information Data Base

A. How Did We Develop the Data Base for This Rule?

To support the emissions standards in today's rule, we use a ''fourth generation'' data base that considers and incorporates public comments on previous versions of the data base. This final data base[24] summarizes emissions data and ancillary information on hazardous waste combustors that was primarily extracted from incinerator trial burn reports and cement and lightweight aggregate kiln Certification of Compliance test reports prepared as part of the compliance process for the current regulatory standards. Ancillary information in the data base includes general facility information (*e.g.*, location) process operating data (*e.g.*, waste, fuel, raw material compositions, feed rates), and facility equipment design and operational information (*e.g.*, air pollution control device temperatures).

The data base supporting the April 1996 proposal was the initial data base released for public comment.[25] We received a substantial number of public comments on this data base including identification of data errors and submission of many new trial burn and compliance test reports not already in the data base. Subsequently, we developed a ''second generation'' data base addressing these comments and, on January 7, 1997, published a NODA soliciting public comment on the updated data base. Numerous industry stakeholders submitted comments on the second generation data base. The data base was revised again to accommodate these public comments resulting in a ''third generation'' data base. We also published for comment a document indicating how specific public comments submitted in response to the January NODA were addressed.[26] In the May 1997 NODA, we used this third generation data base to re-evaluate the MACT standards. Since the completion of the third generation data base, we have incorporated additional data base comments and new test reports resulting in the ''fourth generation'' data base. This final data base is used to support all MACT analyses discussed in today's rule. Compared to the changes made to develop the third generation data base, those changes made in the fourth generation are relatively minor. The majority of these changes (e.g., incorporating a few trial burn reports and incorporating suggested revisions to the third generation data base) were in response to public comments received to May 1997 NODA.

B. How Are Data Quality and Data Handling Issues Addressed?

We selected approaches to resolve several data quality and handling issues regarding: (1) Data from sources no longer burning hazardous waste; (2) assigning values to reported nondetect measurements; (3) data generated under normal conditions versus worst-case compliance conditions; and (4) use of imputation techniques to fill in missing or unavailable data. This section discusses our selected approaches to these four issues.

[29] For example, hazardous waste burning cement kilns that previously monitored hydrocarbons in the main stack may elect to install a mid-kiln sampling port for carbon monoxide or hydrocarbon monitoring to avoid restrictions on hydrocarbon levels in the main stack. Thus, their stack hydrocarbon emissions may increase.

[24] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume II: HWC Emissions Database,'' July 1999.

[25] USEPA, ''Draft Technical Support Document for HWC MACT Standards, Volume II: HWC Emissions Database,'' February 1996.

[26] See USEPA, ''Draft Report of Revisions to Hazardous Waste Combustor Database Based on Public Comments Submitted in Response to the January 7, 1997 Notice of Data Availability (NODA),'' May 1997.

1. How Are Data From Sources No Longer Burning Hazardous Waste Handled?

Data and information from sources no longer burning hazardous waste are not considered in the MACT standards evaluations promulgated today. We note that some facilities have recently announced plans to cease burning hazardous waste. Because we cannot continually adjust our data base and still finalize this rulemaking, we concluded revisions to the data base in early 1998. Announcements or actual facility changes after that date simply could not be incorporated.

Numerous commenters responded to our request for comment on the appropriate approach to handle emissions data from sources no longer burning hazardous waste. In the April 1996 proposal, we considered all available data, including data from sources that had since ceased waste burning operations. However, in response to comments to the April 1996 NPRM, in the May 1997 NODA we excluded data from sources no longer burning hazardous waste and reevaluated the MACT floors with the revised data base. Of the data included in the fourth generation data base, the number of sources that have ceased waste burning operations include 18 incineration facilities comprising 18 sources; eight cement kiln facilities comprising 12 sources; and one lightweight aggregate kiln facility comprising one source.

Several commenters support the inclusion in the MACT analyses of data from sources no longer burning hazardous waste. They believe the performance data from these sources are representative of emissions control achievable when burning hazardous waste because the data were generated under compliance testing conditions. Other commenters suggest that data from sources no longer burning hazardous waste should be excluded from consideration when conducting MACT floor analyses to ensure that the identified MACT floor levels are achievable.

The approach we adopt today is identical to the one we used for the May 1997 NODA. Rather than becoming embroiled in a controversy over continued achievability of the MACT standards, we exercise our discretion and use a data base consisting of only facilities now operating (at least as of the data base finalization date). Ample data exist to support setting the MACT standards without using data from facilities that no longer burn hazardous waste. To the extent that some previous data from facilities not now burning hazardous waste still remain in the data base, we ascribe to the view that these data are representative of achievable emissions control and can be used.

2. How Are Nondetect Data Handled?

In today's rule, as in the May 1997 NODA, we evaluated nondetect values, extracted from compliance test reports and typically associated with feedstream input measurements rather than emissions concentrations, as concentrations that are present at one-half the detection limit. In the proposal, we assumed that nondetect analyses were present at the value of the full detection limit.

Some commenters support our approach to assume that nondetect values are present at one-half the detection limit. The commenter states that this approach is consistent with the data analysis techniques used in other EPA environmental programs such as in the evaluation of groundwater monitoring data. Other commenters oppose treating nondetect values at one-half the detection limit, especially for dioxins/furans because Method 23 for quantitating stack emissions states that nondetect values for congeners be treated as zero when calculating total congeners and the toxicity equivalence quotient for dioxins/furans. As explained in the NODA, the assumption that nondetect measurements are present at one-half the reported detection limit is more technically and environmentally conservative and increases our confidence that standards and risk findings are appropriate. Further, we considered assuming that nondetect values were present at the full detection limit, but found that there were no significant differences in the MACT data analysis results.[27] Therefore, in today's rule, we assume nondetect measurements are present at one-half the detection limit.

3. How Are Normal Versus Worst-Case Emissions Data Handled?

The majority of the available emissions data for all of the hazardous air pollutants except mercury can be considered worst-case because they were generated during RCRA compliance testing. Because limits on operating parameters are established based on compliance test operations, sources generally operate during compliance testing under worst-case conditions to account for variability in operations and emissions. However, the data base also contains some normal data for these hazardous air pollutants. Normal data include those where hazardous waste was burned, but neither spiking of the hazardous waste with metals or chlorine nor operation of the combustion unit and emission control equipment under detuned conditions occurred.

In the MACT analyses supporting today's rule, normal data were not used to identify or define MACT floor control, with the exception of mercury, as discussed below. This approach is identical to the one used in the May 1997 NODA. 62 FR 24216.

Several commenters support the use of normal emissions data in defining MACT controls because the effect of ignoring the potentially lower emitters from these sources would skew the analysis to higher floor results. Other commenters oppose the use of normal data because they would not be representative of emissions under compliance test conditions—the conditions these same sources will need to operate under during MACT performance tests to establish limits on operating conditions.[28]

We conclude that it is inappropriate to perform the MACT floor analysis for a particular hazardous air pollutant using emissions data that are a mixture of normal and worst-case data. The few normal emissions data would tend to dominate the identification of best performing sources while not necessarily being representative of the range of normal emissions. Because the vast majority of our data is based on worst-case compliance testing, the definition of floor control is based on worst-case data.[29] Using worst-case emissions data to establish a MACT

[27] Using dioxins and furans as an example, for those sources using MACT control, this difference is no more than approximately 10 percent of the standard. USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[28] These commenters are concerned that, if the standards were based on normal emissions data, sources would be inappropriately constrained to emissions that are well below what is currently normal. This is because of the double ratcheting effect of the compliance regime whereby a source must first operate below the standard during compliance testing, and then again operate below compliance testing levels (and associated operating parameters) to maintain day-to-day compliance.

[29] We considered adjusting the emissions data to account for spiking to develop a projected normal emissions data base. However, we conclude that this is problematic and have not done so. For example, it is difficult to project (lower) emissions from semivolatile metal-spiked emissions data given that system removal efficiency does not correlate linearly with semivolatile metal feedrate. In addition, we did not know for certain whether some data were spiked. Thus, we would have to use either a truncated data base of despiked data or a mixed data base of potentially spiked data and despiked data, neither of which would be fully satisfactory.

floor also helps account for emissions variability, as discussed in Section V.D. below.

Sources did not generally spike mercury emissions during RCRA compliance testing because they normally feed mercury at levels resulting in emissions well below current limits.[30] Consequently, sources are generally complying with generic, conservative feedrate limits established under RCRA rather than feedrate limits established during compliance testing. Because our data base is comprised essentially of normal emissions, we believe this is one instance where use of normal data to identify MACT floor is appropriate. See discussion in Section V.D. below of how emissions variability is addressed for the mercury floors.

4. What Approach Was Used To Fill In Missing or Unavailable Data?

With respect to today's rule, the term ''imputation'' refers to a data handling technique where a value is filled-in for a missing or unavailable data point. We only applied this technique to hazardous air pollutants that are comprised of more than one pollutant (*i.e.*, semivolatile metals, low volatile metals, total chlorine). We used imputation techniques in both the proposal and May 1997 NODA; however, we decided not to use imputation procedures in the development of today's promulgated standards. We used only complete data sets in our MACT determinations. Several commenters to the proposal and May 1997 NODA oppose the use of imputation techniques. Commenters express concern that the imputation approach used in the proposal did not preserve the statistical characteristics (average and standard deviation) of the entire data set. Thus, commenters suggest that subsequent MACT analyses were flawed. We reevaluated the data base and determined that a sufficient number of data sets are complete without the use of an imputation technique.[31] A complete discussion of various data handling conventions is presented in the technical support document.[32]

II. How Did We Select the Pollutants Regulated by This Rule?

Section 112(b) of the Clean Air Act, as amended, provides a list of 188[33] hazardous air pollutants for which the Administrator must promulgate emission standards for designated major and area sources. The list is comprised of metal, organic, and inorganic compounds.

Hazardous waste combustors emit many of the hazardous air pollutants. In particular, hazardous waste combustors can emit high levels of dioxins and furans, mercury, lead, chromium, antimony, and hydrogen chloride. In addition, hazardous waste combustors can emit a wide range of nondioxin/furan organic hazardous air pollutants, including benzene, chloroform, and methylene chloride.

In today's rule, we establish nine emission standards to control hazardous air pollutants emitted by hazardous waste combustors. Specifically, we establish emission standards for the following hazardous air pollutants: Chlorinated dioxins and furans, mercury, two semivolatile metals (*i.e.*, lead and cadmium), three low volatility metals (*i.e.*, arsenic, beryllium, chromium), and hydrochloric acid/chlorine gas. In addition, MACT control is provided for other hazardous air pollutants via standards for surrogates: (1) A standard for particulate matter will control five metal hazardous air pollutants—antimony, cobalt, manganese, nickel, and selenium; and (2) standards for carbon monoxide, hydrocarbons, and destruction and removal efficiency will control nondioxin/furan organic hazardous air pollutants.

A. Which Toxic Metals Are Regulated by This Rule?[34]

1. Semivolatile and Low Volatile Metals

The Section 112(b) list of hazardous air pollutants includes 11 metals: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium. To establish an implementable approach for controlling these metal hazardous air pollutants, we proposed to group the metals by their relative volatility and established emission standards for each volatility group. We placed six of the eleven metals in volatility groups. The high-volatile group is comprised of mercury, the semivolatile group is comprised of lead and cadmium, and the low volatile group is comprised of arsenic, beryllium, and chromium.[35] We refer to these six metals for which we have established standards based on volatility group as ''enumerated metals.'' We have chosen to control the remaining five metals using particulate matter as a surrogate as discussed in the next section.

Grouping metals by volatility is reasonable given that emission control strategies are governed primarily by a metal's volatility. For example, while semivolatile metals and low volatile metals are in particulate form in the emission control train and can be removed as particulate matter, mercury species are generally emitted from hazardous waste combustors in the vapor phase and cannot be controlled by controlling particulate matter unless a sorbent, such as activated carbon, is injected into the combustion gas. In addition, low volatile metals are easier to control than semivolatile metals because semivolatile metals volatilize in the combustion chamber and condense on fine particulate matter, which is somewhat more difficult to control. Low volatile metals do not volatilize significantly in hazardous waste combustors and are emitted as larger, easier to remove, particles entrained in the combustion gas.[36]

Commenters agree with our proposal to group metals by their relative volatility. We adopt these groupings for the final rule.

We note that the final rule does not require a source to control its particulate matter below the particulate matter standard to control semivolatile and low

[30] Three of 23 incinerators used to define MACT floor (*i.e.*, sources for which mercury feedrate data are available) are known to have spiked mercury. No cement kilns used to define MACT floor (*e.g.*, excluding sources that have stopped burning hazardous waste) are known to have spiked mercury. Only one of ten lightweight aggregate kilns used to define MACT floor is known to have spiked mercury.

[31] This is especially true because antimony is no longer included in the low volatile metal standard.

[32] See USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[33] The initial list consisted of 189 HAPs, but we have removed caprolactam (CAS number 105602) from the list of hazardous air pollutants. See § 63.60.

[34] RCRA standards currently control emissions of three toxic metals that have not been designated as Clean Air Act hazardous air pollutants: Barium, silver, and thallium. These RCRA metals are incidentally controlled by today's MACT controls for metal hazardous air pollutants in two ways. First, the RCRA metals are semivolatile or nonvolatile and will, in part, be controlled by the air pollution control systems used to meet the semivolatile metal and low volatile metal standards in today's rule. Second, these RCRA metals will be controlled by the measures used to meet today's MACT participate matter standard. See text that follows.

[35] Antimony was included in the low volatile group at proposal, but we subsequently determined that the MACT particulate matter standard serves as an adequate surrogate for this metal. See the May 1997 NODA (62 FR at 24216). In making this determination, we noted that antimony is an noncarcinogen with relatively low toxicity compared with the other five nonmercury metals that were placed in volatility groups. To be of particular concern, antimony would have to be present in hazardous waste at several orders of magnitude higher than shown in the available data.

[36] The dynamics associated with the fate of metals in a hazardous waste combustor are much more complex than presented here. For more information, see USEPA, ''Draft Technical Support Document for HWC MACT Standards, Volume VII: Miscellaneous Technical Issues,'' February 1996.

volatile metals. It is true that when we were determining the semivolatile and low volatile metal floor standards, we did examine the feedrates from only those facilities that were meeting the numerical particulate standard. See Part Four, Section V.B.2.c. This is because we believe that facilities, in practice, use both feedrate and particulate matter air pollution control devices in a complementary manner to address metals emissions (except mercury). However, our setting of the semivolatile and low volatile metal floor standards does not require MACT particulate matter control to be installed, either directly or indirectly, as a matter of CAA compliance. We do not think it is necessary to require compliance with a particulate matter standard as an additional express element of the semivolatile/low volatile metal emission standards because the particulate matter standard is already required to control the nonenumerated metals, as discussed below. However, we could have required compliance with a particulate matter standard as part of the semivolatile or low volatile metal emission standard because of the practice of using particulate matter control as at least part of a facility's strategy to control or minimize metal emissions (other than mercury).

2. How Are the Five Other Metal Hazardous Air Pollutants Regulated?

We did not include five metal hazardous air pollutants (*i.e.*, antimony, cobalt, manganese, nickel, selenium) in the volatility groups because of: (1) Inadequate emissions data for these metals [37]; (2) relatively low toxicity of antimony, cobalt, and manganese; and (3) the ability to achieve control, as explained below, by means of surrogates. Instead, we chose the particulate matter standard as a surrogate control for antimony, cobalt, manganese, nickel, and selenium. We refer to these five metals as ''nonenumerated metals'' because standards specific to each metal have not been established. We conclude that emissions of these metals is effectively controlled by the same air pollution control devices and systems used to control particulate matter.

Some commenters suggest that particulate matter is not a surrogate for the five nonenumerated metals. Commenters also note that our own study, as well as investigations by commenters, did not show a relationship between particulate matter and semivolatile metals and low volatile metals when emissions from multiple sources were considered. However, we conclude that such a relationship is not expected when multiple sources are considered because wide variations in source operations can affect: (1) Metals and particulate matter loadings at the inlet to the particulate matter control device; (2) metals and particulate matter collection efficiency; and (3) metals and particulate matter emissions. Factors that can contribute to variability in source operations include metal feed rates, ash levels, waste types and physical properties (*i.e.*, liquid vs. solid), combustion temperatures, and particulate matter device design, operation, and maintenance.

Conversely, emissions of semivolatile metals and low volatile metals are directly related to emissions of particulate matter at a given source when other operating conditions are held constant (*i.e.*, as particulate matter emissions increase, emissions of these metals also increase) because semivolatile metals and low volatile metals are present as particulate matter at the typical air pollution control device temperatures of 200 to 400°F that are required under today's rule.[38] A strong relationship between particulate matter and semivolatile/low volatile metal emissions is evident from our emissions data base of trial burn emissions at individual sources where particulate matter varies and metals feedrates and other conditions that may affect metals emissions were held fairly constant. Other work also has clearly demonstrated that improvement in particulate control leads to improved metals control.[39]

We also requested comment on whether particulate matter could be used as a surrogate for all semivolatile and low volatile metal hazardous air pollutants (*i.e.*, all metal hazardous air pollutants except mercury). See the May 1997 NODA. This approach is strongly recommended by the cement industry. In that Notice, we concluded that, because of varying and high levels of metals concentrations in hazardous waste, use of particulate matter control alone may not provide MACT control for metal hazardous air pollutants.[40] Our conclusion is the same today. Without metal-specific MACT emission standards or MACT feedrate standards, sources could feed high levels of one or more metal hazardous air pollutant metals. This practice could result in high metal emissions, even though the source's particulate matter is controlled to the emission standard (*i.e.*, a large fraction of emitted particulate matter could be comprised of metal hazardous air pollutants). Thus, the use of particulate matter control alone would not constitute MACT control of that metal and would be particularly troublesome for the enumerated semivolatile and low volatile metal because of their toxicity.[41]

Many commenters suggest that particulate matter is an adequate surrogate for all metal hazardous air pollutants. They suggest that, given current metal feedrates and emission rates, particularly in the cement industry, a particulate matter standard is sufficient to ensure that metal hazardous air pollutants (other than mercury) are controlled to levels that would not pose a risk to human health or the environment. While this may be true in some cases as a theoretical matter, it may not be in all cases. Data demonstrating this conclusively were not available for all cement kilns. Moreover, this approach may not ensure MACT control of the potentially problematic (*i.e.*, high potential risk) metals for reasons discussed above (*i.e.*, higher metal feedrates will result in higher metals emissions even though particulate matter capture efficiency remains constant). Consequently, we conclude that semi-volatile metals and low volatile metals standards are appropriate in addition to the particulate matter standard.

Finally, several commenters suggest that a particulate matter standard is not needed to control the five nonenumerated metals because the standards for the enumerated semivolatile and low volatile metals would serve as surrogates for those

[37] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume II: HWC Emissions Database,'' July 1999.

[38] The dioxin/furan emission standard requires that gas temperatures at the inlet to electrostatic precipitators and fabric filters not exceed 400°F. Wet particulate matter control devices reduce gas temperatures to below 400°F by virtue of their design and operation. The vapor phase contribution (*i.e.*, nonparticulate form that will not be controlled by a particulate matter control device) of semivolatile metal and low volatile metal at these temperatures is negligible.

[39] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[40] However, for sources not burning hazardous waste and without a significant potential for extreme variability in metals feedrates, particulate matter is an adequate surrogate for metal hazardous air pollutants (*e.g.*, for nonhazardous waste burning cement kilns).

[41] Using particulate matter as a surrogate for metals is, however, the approach we used in the final rule for five metals: Antimony, cobalt, manganese, nickel, selenium. Technical and practical reasons unique to these metals support this approach. First, these metals exhibit relatively low toxicity. Second, for some of these metals, we did not have emissions data adequate to establish specific standards. Therefore, the best strategy for these particular metals, at this time, is to rely on particulate matter as a surrogate.

metals. Their rationale is that because the nonenumerated metals can be classified as either semivolatile or nonvolatile[42], they would be controlled along with the enumerated semivolatile and low volatile metals. However, MACT control would not be assured for the five nonenumerated metals even though they would be controlled by the same emission control device as the enumerated semivolatile and low volatile metals. For example, a source with high particulate matter emissions could achieve the semivolatile and low volatile metal emission standards (*i.e.*, MACT control) by feeding low levels of enumerated semivolatile and low volatile metals. But, if that source also fed high levels of nonenumerated metals, MACT control for those metals would not be achieved unless the source was subject to a particulate matter MACT standard. Consequently, we do not agree that the semivolatile and low volatile metal standards alone can serve as surrogates for the nonenumerated metals.

We also proposed to use particulate matter as a supplemental control for nondioxin/furan organic hazardous air pollutants that are adsorbed onto the particulate matter. Commenters state, however, that the Agency had not presented data showing that particulate matter in fact contains significant levels of adsorbed nondioxin/furan organic hazardous air pollutants. We now concur with commenters that, for cement kiln and lightweight aggregate kiln particulate matter, particulate matter emissions have not been shown to contain significant levels of adsorbed organic compounds. This is likely because cement kiln and lightweight aggregate kiln particulate matter is primarily inert process dust (*i.e.*, entrained raw material). Although particulate matter emissions from incinerators could contain higher levels of carbon that may adsorb some organic compounds, this is not likely a significant means of control for those organic hazardous air pollutants.[43]

B. How Are Toxic Organic Compounds Regulated by This Rule?

1. Dioxins/Furans

We proposed that dioxin/furan emissions be controlled directly with a dioxin/furan emission standard based on toxicity equivalents. The final rule adopts a TEQ approach for dioxin/furans. In terms of a source determining compliance, we expect sources to use accepted TEQ references.[44]

2. Carbon Monoxide and Hydrocarbons

We proposed that emissions of nondioxin/furan organic hazardous air pollutants be controlled by compliance with continuously monitored emission standards for either of two surrogates: carbon monoxide or hydrocarbons. Carbon monoxide and hydrocarbons are widely accepted indicators of combustion conditions. The current RCRA regulations for hazardous waste combustors use emissions limits on carbon monoxide and hydrocarbons to control emissions of nondioxin/furan toxic organic emissions. See 56 FR 7150 (February 21, 1991) documenting the relationship between carbon monoxide, combustion efficiency, and emissions of organic compounds. In addition, Clean Air Act emission standards for municipal waste combustors and medical waste incinerators limit emissions of carbon monoxide to control nondioxin/furan organic hazardous air pollutants. Finally, hydrocarbon emissions are an indicator of organic hazardous air pollutants because hydrocarbons are a direct measure of organic compounds.

Nonetheless, many commenters state that EPA's own surrogate evaluation[45] did not demonstrate a relationship between carbon monoxide or hydrocarbons and nondioxin/furan organic hazardous air pollutants at the carbon monoxide and hydrocarbon levels evaluated. Several commenters note that this should not have been a surprise given that the carbon monoxide and hydrocarbon emissions data evaluated were generally from hazardous waste combustors operating under good combustion conditions (and thus, relatively low carbon monoxide and hydrocarbon levels). Under these conditions, emissions of nondioxin/furan organic hazardous air pollutants were generally low, which made the demonstration of a relationship more difficult. These commenters note that there may be a correlation between carbon monoxide and hydrocarbons and nondioxin/furan organic hazardous air pollutants, but it would be evident primarily when actual carbon monoxide and hydrocarbon levels are higher than the regulatory levels. We agree, and conclude that carbon monoxide and hydrocarbon levels higher than those we establish as emission standards are indicative of poor combustion conditions and the potential for increased emissions of nondioxin/furan organic hazardous air pollutants. Consequently, we have adopted our proposed approach for today's final rule.[46]

3. Destruction and Removal Efficiency

We have determined that a destruction and removal efficiency (DRE) standard is needed to ensure MACT control of nondioxin/furan organic hazardous air pollutants.[47] We adopt the implementation procedures from the current RCRA requirements for DRE (see §§ 264.342, 264.343, and 266.104) in today's final rule. The rationale for adopting destruction and removal efficiency as a MACT standard is discussed later in Section IV of the preamble.

C. How Are Hydrochloric Acid and Chlorine Gas Regulated by This Rule?

We proposed that hydrochloric acid and chlorine gas emissions be controlled by a combined total chlorine MACT standard because: (1) The test method used to determine hydrochloric acid and chlorine gas emissions may not be able to distinguish between the compounds in all situations;[48] and (2) both of these hazardous air pollutants can be controlled by limiting feedrate of chlorine in hazardous waste and wet scrubbing. We have adopted this approach in today's final rule.

One commenter questions whether it is appropriate to establish a combined standard for hydrochloric acid and chlorine gas because the removal efficiency of emission control equipment is substantially different for the two pollutants. Although we agree that the efficiency of emission control equipment is substantially different for the two pollutants, we conclude that the MACT control techniques will readily

[42] As a factual matter, selenium can be classified as a semivolatile metal and the remaining four nonenumerated metals can be classified as low volatile metals.

[43] We recognize that sorbent (*e.g.*, activated carbon) may be injected into the combustion system to control mercury or dioxin/furan. In these cases, particulate matter would be controlled as a site-specific compliance parameter for these organics. See the discussion in Part Five of this preamble.

[44] For example, USEPA, ''Interim Procedure for Estimating Risks Associated With Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update'', March 1989; Van den Berg, M., *et al.* ''Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife'' *Environmental Health Perspectives*, Volume 106, Number 12, December 1998.

[45] See Energy and Environmental Research Corporation, ''Surrogate Evaluation of Thermal Treatment Systems,'' Draft Report, October 17, 1994.

[46] As discussed at proposal, however, this relationship does not hold for certain types of cement kilns where carbon monoxide and hydrocarbons emissions evolve from raw materials. See discussion in Section VII of Part Four.

[47] Under this standard, several difficult to combust organic compounds would be identified and destroyed or removed by the combustor to at least a 99.99% (or 99.9999%, as applicable) efficiency.

[48] See the proposed rule, 61 FR at 17376.

enable sources to achieve the hydrochloric acid/chlorine gas emission standard. As discussed in Sections VI, VII, and VIII below, MACT control for all hazardous waste combustors is control of the hazardous waste chlorine feedrate. This control technique is equally effective for hydrochloric acid and chlorine gas and represents MACT control for cement kilns. MACT control for incinerators also includes wet scrubbing. Although wet scrubbing is more efficient for controlling hydrochloric acid, it also provides some control of chlorine gas. MACT control for lightweight aggregate kilns also includes wet or dry scrubbing. Although dry scrubbing does not control chlorine gas, chlorine feedrate control combined with dry scrubbing to remove hydrochloric acid will enable lightweight aggregate kilns to achieve the emission standard for hydrochloric acid/chlorine gas.

III. How Are the Standards Formatted in This Rule?

A. What Are the Units of the Standards?

With one exception, the final rule expresses the emission standards on a concentration basis as proposed, with all standards expressed as mass per dry standard cubic meter (*e.g.*, µg/dscm), with hydrochloric acid/chlorine gas, carbon monoxide, and hydrocarbon standards being expressed at parts per million by volume (ppmv). The exception is the particulate matter standard for hazardous waste burning cement kilns where the standard is expressed as kilograms of particulate matter per Mg of dry feed to the kiln.

Several commenters suggest that the standards should be expressed on a mass emission basis (*e.g.*, mg/hour) because of equity concerns across source categories and environmental loading concerns. They are concerned that expressing the standards on a concentration basis allows large gas flow rate sources such as cement kilns to emit a much greater mass of hazardous air pollutants per unit time than smaller sources such as some on-site incinerators. Concomitantly, small sources would incur a higher cost/lb of pollutant removed, they contend, than a large source.[49] Further, they reason that the larger sources would pose a much greater risk to human health and the environment because risk is a function of mass emissions of pollutants per unit of time.

Although we agree with commenters' point about differential environmental loadings attributable to small versus large sources with a concentration-based standard, we note that the mass-based standard urged here is inherently incompatible with technology-based MACT standards for several reasons.[50] A mass-based standard does not ensure MACT control at small sources. Small sources have lower flow rates and thus would be allowed to emit hazardous air pollutants at high concentrations. They could meet the standard with no or minimal control. In addition, this inequity between small and large sources would create an incentive to divert hazardous waste from large sources to small sources (existing and new), causing an increase in emissions nationally.

B. Why Are the Standards Corrected for Oxygen and Temperature?

As proposed, the final standards are corrected to 7 percent oxygen and 20°C because the data we use to establish the standards are corrected in this manner and because the current RCRA regulations for these sources require this correction. These corrections normalize the emissions data to a common base, recognizing the variation among the different combustors and modes of operation.

Several commenters note that the proposed oxygen correction equation does not appropriately address hazardous waste combustors that use oxygen enrichment systems. They recommend that the Agency promulgate the oxygen correction factor equation proposed in 1990 for RCRA hazardous waste incinerators. See 55 FR at 17918 (April 27, 1990). We concur, and adopt the revised oxygen correction factor equation.

C. How Does the Rule Treat Significant Figures and Rounding?

As proposed, the final rule establishes standards and limits based on two significant figures. One commenter notes that a minimum of three significant figures must be used for all intermediate calculations when rounding the results to two significant figures. We concur. Sources should use standard procedures, such as ASTM procedure E–29–90, to round final emission levels to two significant figures.

IV. How Are Nondioxin/Furan Organic Hazardous Air Pollutants Controlled?

Nondioxin/furan organic hazardous air pollutants are controlled by a destruction and removal efficiency (DRE) standard and the carbon monoxide and hydrocarbon standards. Previous DRE tests demonstrating compliance with the 99.99% requirement under current RCRA regulations may be used to document compliance with the DRE standard provided that operations have not been changed in a way that could reasonably be expected to affect ability to meet the standard. However, if waste is fed at a point other than the flame zone, then compliance with the 99.99% DRE standard must be demonstrated during each comprehensive performance test, and new operating parameter limits must be established to ensure that DRE is maintained. A 99.9999% DRE is required for those hazardous waste combustors burning dioxin-listed wastes. These requirements are discussed in Section IV.A. below.

In addition, the rule establishes carbon monoxide and hydrocarbons emission standards as surrogates to ensure good combustion and control of nondioxin/furan organic hazardous air pollutants. Continuous monitoring and compliance with either the carbon monoxide or hydrocarbon emissions standard is required. If you choose to continuously monitor and comply with the carbon monoxide standard, you must also demonstrate during the comprehensive performance test compliance with the hydrocarbon emission standard. Additionally, you must also set operating limits on key parameters that affect combustion conditions to ensure continued compliance with the hydrocarbon emission standard. Alternatively, continuous monitoring and compliance with the hydrocarbon emissions standard eliminates the need to monitor carbon monoxide emissions because hydrocarbon emissions are a more direct surrogate of nondioxin/furan organic hazardous air pollutant emissions. These requirements are discussed in Section IV.B below.

A. What Is the Rationale for DRE as a MACT Standard?

All sources must demonstrate the ability to destroy or remove 99.99

[49] This result is not evident given that the cost of an emission control device is generally directly proportional to the gas flow rate, not the mass emission rate of pollutants per unit time.

[50] Although the particulate matter standard for hazardous waste burning cement kilns in today's rule is the New Source Performance Standard expressed as on a mass basis (*i.e.*, kg of particulate matter per megagram of dry feed to the kiln), this standard is not based on a ''mass of particulate matter emissions per unit of time'' that commenters suggest. Rather, the cement kiln standard can be equated to a concentration basis given that cement kilns emit a given quantity of combustion gas per unit of dry feed to the kiln. In fact, we proposed the cement kiln particulate matter standard on a concentration basis, 0.03 gr/dscf, that was calculated from the New Source Performance Standard when applied to a typical wet process cement kiln.

percent of selected principal organic hazardous compounds in the waste feed as a MACT standard. This requirement, commonly referred to as four-nines DRE, is a current RCRA requirement. We are promulgating the DRE requirement as a MACT floor standard to control the emissions of nondioxin organic hazardous air pollutants. The rule also requires sources to establish limits on specified operating parameters to ensure compliance with the DRE standard. See Part Five Section VII(B).

In the April 1996 NPRM, we proposed that the four-nines DRE test requirement be retained under RCRA and be performed as part of a RCRA approved trial burn because we did not believe that the DRE test could be adequately implemented using the generally self-implementing MACT performance test and notification process.[51] See 61 FR 17447.

In response to the April proposal, however, we received comments that suggest the MACT comprehensive performance test and RCRA DRE trial burn could and should be combined, and that we should combine all stack air emission requirements for hazardous waste combustors into a single permit. Commenters are concerned that our proposed approach required sources to obtain two permits for air emissions and potentially be unnecessarily subject to dual enforcement.

We investigated approaches that would achieve the goals of a single air emission permit and inclusion of DRE in MACT. We determined that the 40 CFR part 63 general provisions, applicable to all MACT regulated sources unless superseded, includes a process similar to the process to develop a RCRA trial burn test plan and allows permitting authorities to review and approve MACT performance test plans. See 40 CFR 63.7. Additionally, we determined that, because all hazardous waste combustors are currently required to achieve four-nines DRE, the DRE requirement could be included as a MACT floor standard rather than a RCRA requirement. In the May 1997 NODA, we discussed an alternative approach that used a modified form of the general provision's performance test plan and approval process. The approach would allow combination of the DRE test with the comprehensive performance test and, therefore, facilitate implementation of DRE as a MACT standard. We also discussed modifying the general approach to extend the performance test plan review period to one year in advance of the date a source plans to perform the comprehensive performance test. This extended review period would provide sufficient time for negotiations between permitting authorities and sources to develop and approve comprehensive performance test plans. These test plans would identify operating parameter limits necessary to ensure compliance with all the proposed MACT standards, as well as, implement the four-nines DRE test as a MACT floor standard. See 62 FR at 24241. Commenters support the process to combine the applicable stack emission requirements into a single permit. As for making the DRE test a MACT standard, we received no negative comments. Many commenters, however, question the need for subsequent DRE testing once a unit demonstrates four-nines DRE. See discussion and our response in Subsection 2 below.

We believe that requiring the DRE test as a MACT standard is appropriate. As we previously noted, the four-nines DRE is firmly grounded statutory and regulatory requirement that has proven to be an effective method to determine appropriate process controls necessary for the combustion of hazardous waste. Specifically, RCRA requires that all hazardous waste incinerators must demonstrate the minimum technology requirement of four-nines DRE (RCRA section 3004(o)(1)(B)). Additionally, the current RCRA BIF regulations require that all boiler and industrial furnaces meet the four-nines DRE standard. Moreover, current RCRA regulations require all sources incinerating certain dioxin-listed contaminated wastes (F020–023 and F026–27) to achieve 99.9999% (six-nines) DRE. See §§ 264.343(a)(2) and 266.104(a)(3).

The statutory requirement for incinerators to meet four-nines DRE can be satisfied if the associated MACT requirements ensure that incinerators will continue to meet the four-nines DRE minimum technology requirement, *i.e.*, that MACT standards provide at least the ''minimum'' RCRA section 3004(o)(1) level of control. To determine if the RCRA statutory requirements could be satisfied, we investigated whether DRE could be replaced with universal standards for key operating parameters based on previous DRE demonstrations (*i.e.*, standards for carbon monoxide and hydrocarbon emissions). We found that, in the vast majority of DRE test conditions, if a unit operated with carbon monoxide levels of less than 100 ppmv and hydrocarbon emissions of less than 10 ppmv, the unit met or surpassed four-nines DRE. In a small number of test conditions, units emitted carbon monoxide and hydrocarbons at levels less than 100 and 10 ppmv respectively, but failed to meet four-nines DRE. Most failed test conditions were either due to questionable test results or faulty test design.[52] See U.S. EPA, ''Draft Technical Support Document for HWC MACT Standards (NODA), Volume II: Evaluation of CO/HC and DRE Database,'' April 1997. Even though we could potentially explain the reasons these units failed to achieve four-nines DRE, we determined that universal carbon monoxide and hydrocarbon emissions limits may not ensure that all units achieve four-nines DRE because carbon monoxide and hydrocarbon emissions may not be representative of good combustion for all operating conditions that facilities may desire to operate. In addition, we could not identify a better method than the DRE test to limit combustion failures modes.

Commenters state that the test conditions under which the DRE failures occurred involved feeding practices that were not common in the hazardous waste combustion industry. They further state that, if it could be ensured that hazardous waste ignited, hydrocarbon and carbon monoxide limits would be sufficient to ensure four-nines DRE is achieved continuously. Therefore, a DRE demonstration would not be warranted. Although we might agree in theory, the fact that tests were performed under these test conditions indicates that a source desired to operate in that fashion. Only the DRE test identified that the combustion failure occurred and was not susceptible to control via carbon monoxide and hydrocarbon emissions. This and other similar failures can lead to increased emissions of products of incomplete combustion and organic hazardous air pollutants. Also, as commenters acknowledge, carbon monoxide and hydrocarbon emissions were effective surrogates to ensure four-nines DRE only when

[51] Historically, under RCRA regulations, the permittiing authority and hazardous waste combustion source found it necessary to go through lengthy negotiations to develop a RCRA trial burn plan that adequately demonstrates the unit's ability to achieve four-nines DRE.

[52] In many of the failed test conditions that we investigated, the facility fed a low concentration of organic compound on which the DRE was being calculated. As has been observed many times, organic compounds can be reformed in the post combustion gas stream at concentrations sufficient to fail DRE. This is not indicative of a failure in the systems ability to destroy the compound, but is more likely the result of a poorly designed test. If the facility had fed a higher concentration of organic compound in the waste to the combustor, the unit would have been more likely to meet four-nines DRE with no change in the operating conditions used during the test. In other cases, poor test design (*i.e.*, firing aqueous organic waste into an unfired secondary combustion chamber) is considered to be the cause.

hazardous waste ignited. However, as we identified in the May 1997 NODA, there are a number of hazardous waste combustion sources that operate in a manner that does not ensure ignition of hazardous waste.

As a result of the DRE test investigation, we determined that a successful DRE demonstration is an effective, appropriate, and necessary method to identify operating parameter limits that ensure proper and achievable combustion of hazardous waste and to limit the emissions of organic hazardous air pollutants. Additionally, the DRE standard is a direct measure to ensure that the RCRA section 3004(o)(1) mandate and its protectiveness goals are being met, and also serves to maintain a consistent test protocol for sources combusting hazardous waste. The DRE demonstration requirement is also reasonable, provides a sound means to allow deferral of a RCRA mandate to the CAA, and simplifies implementation by having all stack emissions-related testing and compliance requirements promulgated under one statute, the CAA. Therefore, we retain the DRE demonstration as part of the MACT comprehensive performance test unless a DRE test has already been performed with no relevant changes.

1. MACT DRE Standard

In today's rule, all affected sources are required to meet 99.99% DRE of selected Principal Organic Hazardous Constituents (POCs) that are as or more difficult to destroy than any organic hazardous pollutant fed to the unit. With one exception discussed in subsection 3 below, this demonstration need be made only once during the operational life of a source, either before or during the initial comprehensive performance test, provided that the design, operation, and maintenance features do not change in a manner that could reasonably be expected to affect the ability to meet the DRE standard.

The DRE demonstration involves feeding a known mass of POHC(s) to a combustion unit, and then measuring for that POHC(s) in stack emissions. If the POHC(s) is emitted at a level that exceeds 0.01% of the mass of the individual POHC(s) fed to the unit, the unit fails to demonstrate sufficient DRE.

Operating limits for key combustion parameters are used to ensure four-nines DRE is maintained. The operating parameter limits are established based on operations during the DRE test. Examples of combustion parameters that are used to set operating limits include minimum combustion chamber temperature, minimum gas residence time, and maximum hazardous waste feedrate by mass. See § 63.1209(j).

Today's MACT DRE requirement is essentially the same as that currently required under RCRA. The main difference is that the vast majority of the MACT DRE demonstrations would not have to be repeated as often as currently required under RCRA, as discussed in section 3 below.

2. How Can Previous Successful Demonstrations of DRE Be Used To Demonstrate Compliance?

Except as discussed below, today's rule requires that, at least once during the operational life of a source during or before the initial comprehensive performance test, the source must demonstrate the ability to achieve 99.99% DRE and must set operating parameter limits to ensure that DRE is maintained. However, we recognize that many sources have already undergone approved DRE testing. Further, many facilities do not intend to modify their units design or operations in such a way that DRE performance or parameters would be adversely affected. Therefore, the Agency is allowing sources to use results from previous EPA or State-approved DRE demonstrations to fulfill the MACT four-nines DRE requirement, as well as to set the necessary operating limits on parameters that ensure continued compliance.

If a facility wishes to operate under new operating parameter limits that could reasonably be expected to affect the ability to meet the standard, a new DRE demonstration must be performed before or concurrent with the comprehensive performance test. If the DRE operating limits conflict with operating parameter limits that are set to ensure compliance with other MACT standards, the unit must comply with the more stringent limits. Additionally, if a source is modified in such a way that its DRE operating limits are no longer applicable or valid, the source must perform a new DRE test. Moreover, if a source is modified in any way such that DRE performance or parameters are affected adversely, the source must perform a new DRE test.

3. DRE for Sources That Feed Waste at Locations Other Than the Flame Zone

Today's rule requires sources that feed hazardous waste in locations other than the flame zone to perform periodic DRE tests to ensure that four-nines DRE continues to be achieved over the life of the unit. As indicated in the May 1997 NODA at 62 FR 25877, the Agency is concerned that these types of sources have a greater potential of varying DRE performance due to their waste firing practices. That is, due to the unique design and operation of the waste firing system, the DRE may vary over time, and those variations cannot be identified or limited through operating limits set during a single DRE test. For these units, we are requiring that DRE be verified during each comprehensive performance test and that new operating parameter limits be established to ensure continued compliance.

4. Sources That Feed Dioxin Wastes

In today's rule, we are requiring all sources that feed certain dioxin-listed wastes (*i.e.*, F020–F023, F026, F027) to demonstrate the ability to achieve 99.9999 percent (six-nines) DRE as a MACT standard. This requirement will serve to achieve a number of goals associated with today's regulations. First, under RCRA, six-nines DRE is required when burning certain dioxin-listed wastes. If we did not promulgate this requirement as a MACT standard, sources that feed dioxin-listed waste would be required to maintain two permits to manage their air emissions. Thus, by including this requirement as a MACT standard, we eliminate any unnecessary duplication. That outcome is contrary to our goal which is to limit, to the greatest extent possible, the need for sources to obtain two permits governing air emissions under different statutory authorities. Second, six-nines DRE helps to improve control of nondioxin organic hazardous air pollutants as well. Finally, this requirement properly reflects floor control for sources that feed dioxin-listed wastes. Currently, all sources that feed dioxin listed wastes must achieve six-nines DRE. Before making the decision to include six-nines DRE as a MACT standard, we considered whether the requirements could be eliminated given that we are issuing dioxin/furan emission standards with today's rule. We concluded, first, that we had not provided sufficient notice and comment to depart from the current regulations applicable to these sources. Second, we also decided that because we currently require other similar highly toxic bioaccumulative and persistent compounds (*e.g.*, PCB wastes) to be fed to units that demonstrate six-nines DRE, a departure from that policy for RCRA dioxin wastes would be inconsistent. Finally, we are in discussions that may cause us to reevaluate our overall approach to dioxin-listed wastes, with the potential to impact this rule and the land disposal restrictions program. Any changes to our approach will be included in a single rulemaking that would be proposed later.

B. What Is the Rationale for Carbon Monoxide or Hydrocarbon Standards as Surrogate Control of Organic Hazardous Air Pollutants?

Today's rule adopts limits on emissions of carbon monoxide and hydrocarbons as surrogates to ensure good combustion and control of nondioxin organic hazardous air pollutants. We require continuous emissions monitoring and compliance with either the carbon monoxide or hydrocarbon emissions standard. Sources can choose which of these two standards it wishes to continuously monitor for compliance. If a source chooses the carbon monoxide standard, it must also demonstrate during the comprehensive performance test compliance with the hydrocarbon emission standard. During this test the source also must set operating limits on key parameters that affect combustion conditions to ensure continued compliance with the hydrocarbon emission standard. These parameters relate to good combustion practices and are identical to those for which you must establish limits under the DRE standard. See § 63.109(a)(7) and 63.1209(j). However, this source need not install and use a continuous hydrocarbon monitor to ensure continued compliance with the hydrocarbon standard. As discussed previously, the limits established for DRE are identical. If a source elects to use the hydrocarbon limit for compliance, then it must continuously monitor and comply with the hydrocarbon emissions standard. However, this type of source need not monitor carbon monoxide emissions or carbon monoxide operating parameters because hydrocarbon emissions are a more direct surrogate of nondioxin organic hazardous air pollutant emissions.

The April 1996 NPRM proposed MACT emission standards for both carbon monoxide and hydrocarbon as surrogates to control emissions of nondioxin organic hazardous air pollutants. We also proposed that cement kilns comply with either a carbon monoxide or hydrocarbons standard due to raw material considerations.[53] See 61 FR at 17375–6. Our reliance on only carbon monoxide or only hydrocarbon has drawbacks, and therefore we proposed that incinerators and lightweight aggregate kilns comply with emissions standards for both. Nonetheless, we also acknowledged that requiring compliance with both carbon monoxide and hydrocarbon standards may be redundant, and requested comment on: (1) Giving sources the option of complying with either carbon monoxide or hydrocarbon emission standards; or (2) establishing a MACT standard for either carbon monoxide or hydrocarbon, but not both.

Comments to our proposed approach question the necessity of two related surrogates to control organic hazardous air pollutants. Many commenters assert they are capable of controlling hydrocarbon emissions effectively, but due to their system's unique design, they could not comply continuously with the carbon monoxide emission standard. In general, commenters prefer an approach that would afford them maximum flexibility in demonstrating compliance with organic control standards, *i.e.*, more like option (1) in the NPRM.

The May 1997 NODA included a refined version of the option that commenters prefer that allowed sources to monitor and comply with either a carbon monoxide or hydrocarbon emission standard. In response to the May 1997 NODA, commenters nearly unanimously support the option that allowed facilities to monitor and comply with either the carbon monoxide or hydrocarbon standard as surrogates to limit emissions of nondioxin organic hazardous air pollutants. However, a few commenters suggest that compliance with carbon monoxide or hydrocarbons in combination with DRE testing is redundant and unnecessary. However, in their comments, they do not address the issue of DRE failures associated with low carbon monoxide or hydrocarbon emissions, other than to state that if ignition failure was avoided, emissions of carbon monoxide or hydrocarbons would be good indicators of combustion efficiency and four-nines DRE. This does not address our concerns, which reflect cases in which ignition failures did not occur and in which destruction and removal efficiencies were not met.

In the May 1997 NODA, we discussed another option that required sources to comply with the hydrocarbon emission standard and establish a site-specific carbon monoxide limit higher than 100 ppmv. This option was developed because compliance with the hydrocarbon standard assures control of nondioxin organic hazardous air pollutants, and a site-specific carbon monoxide limit aids compliance by providing advanced information regarding combustion efficiency. However, we conclude that this option may be best applied as a site-specific remedy in situations where a source has trouble maintaining compliance with the hydrocarbon standard.

Today's final rule modifies the May 1997 NODA approach slightly. Complying with the carbon monoxide standard now requires documentation that hydrocarbon emissions during the performance test are lower than the standard, and requires operating limits on parameters that affect hydrocarbon emissions. We adopt this modification because some data show that high hydrocarbon emissions are possible while simultaneously low carbon monoxide emissions are found.[54]

In the BIF rule (56 FR at 7149–50), we found that both monitoring and compliance with either carbon monoxide or hydrocarbon limits and achieving four-nines DRE is needed to ensure control of products of incomplete combustion (including nondioxin organic hazardous air pollutants) that are a result of hazardous waste combustion. DRE, although sensitive to identifying combustion failure modes, cannot independently ensure that emissions of products of incomplete combustion or organic hazardous air pollutants are being controlled. DRE can only provide the assurance that, if a hazardous waste combustor is operating normally, the source has the capability to transform hazardous and toxic organic compounds into different compounds through oxidation. These other compounds can include carbon dioxide, water, and other organic hazardous air pollutants. Because carbon monoxide provides immediate information regarding combustion efficiency potentially leading to emissions of organic hazardous air pollutants and hydrocarbon provides a direct measure of organic emissions, these two parameters individually or in combination provide additional control that would not be realized with the DRE operating parameter limits alone.[55] Neither our data nor data supplied by commenters show that only monitoring

[53] See discussion regarding cement kilns compliance with the carbon monoxide and/or hydrocarbon standards in Part Four, Section VII.D.

[54] In a number of instances, RCRA compliance test records showed that sources emitting carbon monoxide at less than 100 ppmv emitted hydrocarbons in excess of 10 ppmv.

[55] We acknowledge that although hydrocarbon emissions are a direct measure of organic emissions, they are measured with a continuous emissions monitoring system known as a flame ionization detector. Some data suggest hydrocarbon flame ionization detectors do not respond with the same sensitivity to the full spectrum of organic compounds that may be present in the combustion gas. Additionally, combustion gas conditions also may affect the sensitivity and accuracy of the monitor. Nonetheless, monitoring hydrocarbons with these detectors appears to be the best method reasonably available to provide real-time monitoring of organic emissions from a hazardous waste combustor.

carbon monoxide, hydrocarbons, or DRE by itself can adequately ensure control of nondioxin organics. Therefore, the approach used in the BIF rule still provides the best regulatory model. We conclude in today's rule that hydrocarbons and carbon monoxide monitoring are not redundant with the DRE testing requirement to control emissions of organic hazardous air pollutants and require both standards. For an additional discussion regarding the use of hydrocarbons and carbon monoxide to control emissions of organic hazardous air pollutants, see USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

V. What Methodology Is Used To Identify MACT Floors?

This section discusses: (1) Methods used to identify MACT floor controls and emission levels for the final rule; (2) the rationale for using hazardous waste feedrate control as part of MACT floor control for the metals and total chlorine standards; (3) alternative methods for establishing floor levels considered at proposal and in the May 1997 NODA; and (4) our consideration of emissions variability in identifying MACT floor levels.

A. What Is the CAA Statutory Requirement To Identify MACT Floors?

We identify hazardous waste incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns as source categories to be regulated under section 112. We must, therefore, develop MACT standards for each category to control emissions of hazardous air pollutants. Under CAA section 112, we may distinguish among classes, types and sizes of sources within a category in establishing such standards.

Section 112 prescribes a minimum baseline or ''floor'' for standards. For new sources, the standards for a source category cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. Section 112(d)(3). The standards for existing sources may be less stringent than standards for new sources, but cannot be less stringent than ''(A) * * * the average emissions limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information) * * *, in the category or subcategory for categories and subcategories with 30 or more sources, or (B) the average emissions limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories and subcategories with fewer than 30 sources.'' *Id.*

We also must consider a more stringent standard than the floor, referred to in today's rule as a ''beyond-the-floor'' standard. For each beyond-the-floor analysis, we evaluate the maximum degree in reduction of hazardous air pollutants determined to be achievable, taking into account the cost of achieving those reductions, nonair quality health and environmental impacts, and energy costs. Section 112(d)(2). The object of a beyond-the-floor standard is to achieve the maximum degree of emission reduction without unreasonable economic, energy, or secondary environmental impacts.

B. What Is the Final Rule Floor Methodology?

Today's rule establishes MACT standards for the following hazardous air pollutants, hazardous air pollutant groups or hazardous air pollutant surrogates: dioxin/furans, mercury, two semivolatile metals (lead and cadmium), three low volatile metals (arsenic, beryllium, and chromium), particulate matter, total chlorine (hydrochloric acid and chlorine gas), carbon monoxide, hydrocarbons, and destruction and removal efficiency. This subsection discusses the overall engineering evaluation and data analysis methods we used to establish MACT floors for these standards. Additional detail on the specific application of these methods for each source category and standard is presented in Part Four, Sections VI–VIII, of the preamble and in the technical support document.[56]

1. What Is the General Approach Used in This Final Rule?

The starting point in developing standards is to determine a MACT floor emission level, the most lenient level at which a standard can be set. To identify the floor level, we first identified the control techniques used by the best performing sources. We designate these best performing sources the ''MACT pool'' and the emission control technologies they use we call ''MACT floor controls.''

After identifying the MACT pool and MACT floor controls, we determine the emission level that the MACT floor controls are routinely achieving—that is, an achievable emission level taking into account normal operating variability (*i.e.*, variability inherent in a properly designed and operated control system). This is called the floor emission level. To ensure that the floor emission level is being achieved by all sources using floor controls (*i.e.*, not just the MACT pool sources), we generally consider emissions data from all sources in a source category that use well-designed and properly operated MACT floor controls. (We call the data set of all sources using floor controls the ''expanded MACT pool.'') Floor levels in this rule are generally established as the level achieved by the source in the expanded MACT pool with the highest emissions average[57] using well-designed and properly operated MACT floor controls.

Several commenters oppose considering emissions data from all sources using MACT floor controls (*i.e.*, the expanded MACT pool) because they assert the expansion of the MACT pool results in inflated floors. If we adopt these commenters' recommendation, then many sources using MACT controls would not meet the standard, even though they were using MACT floor control. (Indeed, in some cases, other test conditions from the very system used to establish the MACT pool would not meet the standard, notwithstanding no significant change in the system's design and operation.) This result is inappropriate in that all sources using properly designed and operated MACT floor controls should achieve the floor emission level if the technology is well designed and operated. In the absence of data indicating a design or operation problem, we assume the floor emission level based on an expanded MACT pool reflects an emission level consistently achievable by MACT floor technology. Our resulting limits account for the fact that sources and emissions controls will experience normal operating variability even when properly designed and operated.

The MACT floor methodology in this rule does not use a single uniform data analysis approach consistently across all three source categories and standards. Our data analysis methods vary due to: (1) Limitations of our emissions data and ancillary information; (2) emissions of some hazardous air pollutants being related to the feedrate of the hazardous air pollutant (*e.g.*, semivolatile metal emissions are affected by semivolatile metal feedrates) while emissions of

[56] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[57] Each source's emissions usually are expressed as an average of three or more emission measurements at the same set of operating parameters. This is because compliance is based on the average of three or more runs.

other hazardous air pollutants are not (*e.g.*, dioxin/furan emissions are related to postcombustion dioxin/furan formation rather than dioxin/furan feedrates); (3) the various types of emissions controls currently in use which do not lend themselves to one type of MACT analysis; and (4) consideration of existing regulations as themselves establishing floor levels.

Finally, as discussed in Section D, the MACT floor levels established through our data analysis approaches account for emissions variability without the separate addition of a statistically-derived emissions variability factor.

2. What MACT Floor Approach Is Used for Each Standard?

a. Dioxins and Furans. For dioxins and furans, we adopt the MACT floor methodology discussed in the May 1997 NODA. Based on engineering information and principles, we identify temperature of combustion gas at the particulate matter control device of 400°F or less as MACT floor control of dioxin/furan. This technology and level of control has been selected because postcombustion formation of dioxin/furan is suppressed by lowering postcombustion gas temperatures, and formation is reasonably minimized at gas temperatures of 400°F or below. Sources controlling gas temperatures to 400°F or less at the particulate matter control device represent the level achieved by the median of the best performing 12 percent of sources where the source category has more than 30 sources (or the median of the best performing five sources where the source category has fewer than 30 sources).

The next step is to identify an emissions level that MACT floor control achieved on a routine basis. We analyzed the emissions data from all sources (within each source category) using MACT floor control and establish the floor level equal to the highest test condition average.

As discussed in greater detail in Part Four, Section VI, incinerators with waste heat recovery boilers present a unique situation for dioxin/furan control. Our data base shows that incinerators equipped with waste heat recovery boilers have significantly higher dioxin/furan emissions compared to other incinerators. In the waste heat recovery boiler, combustion gas is exposed to particles on boiler tubes within the temperature window of 450° F to 650° F, which promotes surface-catalyzed formation of dioxin/furan. Therefore, we establish separate dioxin/furan standards for incinerators with waste heat boilers and incinerators without waste heat boilers.[58] The specified floor control for both waste heat boilers and nonwaste heat boilers is combustion gas temperature control to 400°F or less at the particulate matter control device.[59] Floor levels for waste heat boiler incinerators are much higher, however, because of the dioxin/furan formation during the relatively slow temperature quench in the boiler. See the incinerator dioxin/furan discussion in Part Four, Section VI, of today's rule for more details.

b. What MACT Floor Methodology Is Used for Particulate Matter? We adopt a final MACT floor methodology for particulate matter based on the approaches discussed in the May 1997 NODA. For incinerators, the final MACT floor is determined through engineering principles and information, coupled with analysis of the emissions data base. For cement kilns, we base final MACT on the existing requirements of the New Source Performance Standard applicable to Portland cement kilns. Finally, for lightweight aggregate kilns, the final floor level is derived directly from the emissions data base (*i.e.*, the highest test condition average for sources using properly designed and operated floor control).

i. Incinerators. Today's rule identifies MACT floor control as either a well-designed, operated, and maintained fabric filter, ionizing wet scrubber, or electrostatic precipitator, based on engineering information and an evaluation of the particulate matter control equipment used by at least the median of the best performing 12 percent of sources and the emission levels achieved. These types of particulate matter control equipment routinely and consistently achieve superior particulate matter performance relative to other controls used by the incinerator source category and thus represent MACT. Using generally accepted engineering information and principles, we then identify an emission level that well-designed, operated and maintained fabric filters, ionizing wet scrubbers, and electrostatic precipitators routinely achieve.

The floor level is not directly identified from the emissions data base as the highest test condition average for sources using a fabric filter, ionizing wet scrubber, or electrostatic precipitator. The hazardous waste combustor incinerator data base, however, was used as a tool to determine if the identified floor level, established on generally accepted engineering information and principles, is in general agreement with available particulate matter data. This is because we do not have adequate data on the features of the control devices to accurately distinguish only those devices that are well-designed, operated, and maintained and thus representative of MACT. Several sources in the emissions data base that are equipped with fabric filters, ionizing wet scrubbers, or electrostatic precipitators have emission levels well above the emission levels of other sources equipped with those devices. This strongly suggests that the higher levels are not representative of those achieved by well-designed, operated, and maintained units, even when normal operating variability is considered. We accordingly did not use these data in establishing the standard. See *Kennecott* v. *EPA*, 780 F.2d 445, 458 (4th Cir. 1985) (EPA ''can reject data it reasonably believes to be unreliable including performance data that is higher than other plants operating the same control technology.'')

ii. Cement Kilns. As discussed in the May 1997 NODA and in more detail in the standards section for cement kilns in Part Four, Section VII, we base the MACT floor emission level on use of a fabric filter or electrostatic precipitator to achieve the New Source Performance Standard for Portland cement kilns. The MACT floor is equivalent to and expressed as the current New Source Performance Standard of 0.15 kg/Mg dry feed (0.30 lb/ton dry feed). In the NPRM and the May 1997 NODA, we proposed to express the particulate matter standard on a concentration basis. However, because we are not yet requiring sources to document compliance with the particulate matter standard by using a particulate matter continuous emissions monitoring system in this final rule, we establish and express the floor emission level equivalent to the New Source Performance Standard. Commenters' concerns about separate MACT pools for particulate matter, semivolatile metals, and low volatile metals are discussed in Part Four, Section VII.

iii. Lightweight Aggregate Kilns. All lightweight aggregate kilns burning

[58] We concluded that separate standards to control other hazardous air pollutants were not needed for waste heat boiler-equipped incinerators versus other incinerators. That is, whether or not the incinerator is equipped with a waste heat recovery boiler is only of concern for dioxin/furan emissions, not the other hazardous air pollutants.

[59] Wet particulate matter control devices (*e.g.*, venturi scrubbers) inherently preclude dioxin/furan formation because: (1) They do not suspend particulate matter in the combustion gas flow as do fabric filters and electrostatic precipitators, and (2) gas temperatures are below 400°F in the scrubber. Given this, floor control is use of a wet particulate matter control device or control of combustion gas temperature to 400°F or below at the inlet to a dry particulate matter control device.

hazardous waste are equipped with fabric filters. We could not distinguish only those sources with fabric filters better designed, operated, and maintained than others, and thus represent MACT control. Because we could not independently use engineering information and principles to otherwise distinguish which well-designed, operated, and maintained fabric filters are routinely achieving levels below the highest test condition average in the emissions data base (*i.e.*, considering the high inlet grain loadings for lightweight aggregate kilns), we establish the floor level as that highest test condition average emission level. Commenters concerns about a high floor level and separate MACT pools for particulate matter, semivolatile metals, and low volatile metals are discussed in Part Four, Section VIII.

c. Metals and Total Chlorine. This rule establishes MACT standards for mercury; semivolatile metals comprised of combined emissions of lead and cadmium; low volatility metals comprised of combined emissions of arsenic, beryllium, and chromium; and total chlorine comprised of combined emissions of hydrogen chloride and chlorine gas. As shown by the following analysis, these hazardous air pollutants are all controlled by the best performing sources, at least in part, by feedrate control of the metal or chlorine in the hazardous waste. In addition to hazardous waste feedrate control, some of the hazardous air pollutants also are controlled by air pollution control equipment. Both semivolatile metals and low volatile metals are controlled by a combination of hazardous waste metal feedrate control and by particulate matter control equipment. Total chlorine is controlled by a combination of feedrate control and, for hazardous waste incinerators, scrubbing equipment designed to remove acid gases.

i. How Are the Metals and Chlorine Floor Control(s) Identified? We follow the language of CAA section 112(d)(3) to identify the control techniques used by the best performing sources. The hazardous waste incinerator and hazardous waste cement kiln source categories are comprised of 186 and 33 sources, respectively. From the statutory language, we conclude that for this analysis the control techniques used by the best performing 6% of sources represents the average of the best performing 12% of the sources in those categories. It follows, therefore, that floor control for metals and chlorine is the technique(s) used by the best performing 12 incinerators and two cement kilns.

Because the hazardous waste lightweight aggregate kiln source category is comprised of only 10 sources, we follow the language of section 112(d)(3)(B) to identify the control technique(s) used by the three best performing sources, which represents the median of the best performing five sources.

Our floor control analysis indicates that the best performing 12 incinerators, two cement kilns, and three lightweight aggregate kilns all use hazardous waste feedrate control to limit emissions of mercury, semivolatile metal, low volatile metal, and total chlorine. For the semivolatile and low volatile metals, the best performing sources also use particulate matter control as part of the floor control technique. In addition, the best performing incinerator sources also control total chlorine and mercury with wet scrubbing. Accordingly, we identify floor control for semivolatile metal and low volatile metal as hazardous waste feedrate control plus particulate matter control, and floor control for incinerators for total chlorine and mercury as hazardous waste feedrate control plus wet scrubbing.

ii. What is the Rationale for Using Hazardous Waste Feedrate Control as MACT Floor Control Technique? As discussed above, MACT floor control for mercury, semivolatile metals, low volatile metals, and total chlorine is based on, or at least partially based on, feedrate control of metal and chlorine in the hazardous waste. The feedrate of metal hazardous air pollutants will affect emissions of those pollutants, and the feedrate of chlorine will affect emissions of total chlorine (*i.e.*, hydrochloric acid and chlorine gas) because metals and chlorine are elements and are not destroyed during combustion. Emissions controls, if any, control only a percentage of the metal or total chlorine fed. Therefore, as concentrations of metals and total chlorine in the inlet to the control device increase, emissions increase.

At proposal, we identified hazardous waste feedrates as part of the technology basis for the proposed floor emission standards.[60] MACT maximum theoretical emission concentrations[61] (MTECs) were established individually for mercury, semivolatile metals, low volatile metals, and total chlorine at a level equal to the highest MTEC of the average of the best performing 12% of sources. For some hazardous air pollutants, hazardous waste feedrate control of metals and chlorine was identified as the sole component of floor control (*i.e.*, where the best performing existing sources do not use pollution control equipment to remove the hazardous air pollutant). Examples include mercury and total chlorine from cement kilns. For other hazardous air pollutants, we identified hazardous waste feedrate control of metals and chlorine as a partial component of MACT floor control (*e.g.*, floor control for semivolatile metals include good particulate matter control in addition to feedrate control of semivolatile metals in hazardous waste).

In the May 1997 NODA, we continued to consider hazardous waste feedrate control of metals and chlorine as a valid floor control technology. However, rather than defining a specific MACT control feedrate level (expressed as a MTEC), we instead relied on another analysis tool, an emissions breakpoint analysis, to identify sources feeding metals and/or chlorine at high (and not MACT) levels. At the time, we believed that the breakpoint analysis was a less problematic approach to identify sources using MACT floor control than the approaches proposed initially.[62]

Given commenters' subsequent concerns with the emissions breakpoint analysis as well (see discussion in Section C below), we conclude that specifying MTECs as MACT control (partially or solely) is necessary to properly reflect the feedrate component of MACT control.

Notwithstanding how the MACT floor MTEC is defined, many commenters suggest that our consideration of hazardous waste feedrate as a floor control technique is inappropriate in a technology-based rulemaking and not permissible under the CAA. Commenters also state that hazardous waste feedrate control is not a control technique due to the wide variations in metals and chlorine in the hazardous waste generated at a single facility location. Further, they believe even greater variations occur in metals and chlorine levels in the hazardous waste generated at multiple production sites representing different industrial sectors. Thus, commenters suggest that basing a floor emission level on data from sources that feed hazardous waste with low levels of metals or chlorine is tantamount to declaring that wastes with higher levels of metals or chlorine are not to be generated. Other

[60] See 61 FR at 17366.

[61] We developed a term, Maximum Theoretical Emissions Concentration, to compare metals and chlorine feedrates across sources of different sizes. MTEC is defined as the metals or chlorine feedrate divided by the gas flow rate, and is expressed in µg/dscm.

[62] Comments had objected to our proposed approach of defining MTECs as too reliant on engineering inspection of the data.

commenters note, however, that hazardous waste feedrate control must be considered as a floor control technique because feedrate control is being used as a control means to comply with existing RCRA regulations for these combustors. Still other commenters recommend that we establish uniform hazardous waste feedrate limits (*i.e.*, base the standard on an emission concentration coupled with a hazardous waste feedrate limit on metals and chlorine) across all three hazardous waste combustor source categories. Please refer to Part Five, Section VII.D.3.c.iv of today's preamble and the Comment Response Document for detailed responses to these comments.

We do not accept the argument that control of hazardous waste metals and chlorine levels in hazardous waste cannot be part of the floor technology. First, control of hazardous air pollutants in hazardous waste feedstock(s) can be part of a MACT standard under section 112(d)(2)(A), which clearly indicates that material substitution can be part of MACT. Second, hazardous waste combustors are presently controlling the level of metal hazardous air pollutants and chlorine in the hazardous waste combusted because of RCRA regulatory requirements. (See § 266.103(c)(1) and (j) where metal and chlorine feedrate controls are required, and where monitoring of feedrates are required.) Simply because these existing controls are risk-based, rather than technology-based, does not mean that they are not means of controlling air emissions cognizable under the CAA. Floor standards are to be based on ''emission limitation[s]'' achieved by the best existing sources. An ''emission limitation'' includes ''a requirement established by the * * * Administrator which limits the quantity, rate, or concentration of emissions. * * * including any requirement relating to the operation * * * of a source. * * *'' CAA section 302(k). This is precisely what current regulations require to control metal and chlorine levels in hazardous waste feed.

Commenters also note that contemplated floor levels were lower than the feed limits specified in current regulations for boilers and industrial furnaces. This is true, but not an impediment to identifying achievable MACT floor levels. Actual performance levels can serve as a basis for a floor. An analogy would be where a group of facilities achieve better capture efficiency from air pollution control devices than required by existing rule. That level of performance (if generally achievable) can serve as the basis for a floor standard. Accordingly, we use hazardous waste feedrate, entirely or partially, to determine floor levels and beyond-the-floor levels for mercury, semivolatile metals, low volatile metals, and total chlorine.

iii. How Are Feedrate and Emissions Levels Representative of MACT Floor Control Identified? After identifying feedrate control as floor control, we use a data analysis method called the ''aggregate feedrate approach'' to establish floor control hazardous waste feedrate levels and emission levels for mercury, semivolatile metals, low volatile metals, and total chlorine. The first step in the aggregate feedrate approach is to identify an appropriate level of aggregated mercury, semivolatile metals, low volatile metals, and total chlorine feedrate control, expressed as a MTEC, being achieved in practice by the best performing incinerator, cement kiln and lightweight aggregate kiln sources. This aggregate MTEC level is derived only from the sources using MACT floor emission controls.

The aggregate feedrate approach involves four steps: (1) Identifying test conditions in the data base where data are available to calculate hazardous waste feedrate MTECs for all three metal hazardous air pollutant groups and total chlorine; (2) screening out test conditions where a source was not using the MACT floor emission control device for hazardous air pollutants that are cocontrolled by an air pollution control device [63]; (3) ranking the individual hazardous air pollutant MTECs, from the different source test conditions, from lowest to highest and assigning each a numerical rank, with a rank of one being the lowest MTEC; and (4) summing, for each test condition, the individual ranking for each of the hazardous air pollutants to determine a composite ranking. The total sum is used to provide an overall assessment of the aggregate level of hazardous air pollutants in the hazardous waste for each test condition. The hazardous waste feed streams with lower total sums (*i.e.*, hazardous air pollutant levels) are ''cleaner'' in aggregate than those with higher total sums.[64] (See the technical support document for more details on this procedure.[65])

The aggregate MTEC ranking process results in aggregate feedrate data from nine incinerators, 10 cement kilns, and 10 lightweight aggregate kilns from which to select an appropriate level of feedrate control representative of MACT floor control.[66] We considered selecting the source with either the highest or lowest aggregate MTEC in each source category to represent MACT floor control, but did not believe this was appropriate based on concerns about representativeness and achievability. We conclude that it is reasonable, however, to consider the best 50% of the sources for which we have data in each source category as the best performing sources. This is because, for incinerators and cement kilns, we have only a few sources with complete aggregate MTEC data relative to the size of the source category. The best 50% of the sources for these categories equates to five sources, given that we have aggregate MTEC data for nine incinerators and 10 cement kilns. For lightweight aggregate kilns, this equates also to five sources given that we have aggregate MTEC data for 10 lightweight aggregate kiln sources.

Additionally, we conclude it is appropriate to identify a feedrate MTEC representative of floor control based on the median of the best performing five sources. In selecting a representative sample and identifying the appropriate MTEC floor control level, we draw guidance from section 112(d)(3)(B), in which Congress requires the Agency to use the average of the best performing five sources when faced with small source categories (*i.e.*, less than 30 sources), and therefore limited data, to establish a MACT floor. In addition, this methodology is reasonable and appropriate because it allows consideration of a number of best performing sources (*i.e.*, five), which is within the range of reasonable values we could have selected.

We considered an approach that selected both the control technique and level of control as the average of the best performing 12% of incinerator and

[63] For example, to potentially be considered a MACT-controlled incinerator with respect to both the emissions control device and hazardous waste metals and chlorine feedrate, the incinerator must use a wet scrubber for hydrochloric acid and mercury control and must use either a fabric filter, ionizing wet scrubber, or electrostatic precipitator *and* achieve the floor particulate matter level of 0.015 gr/dscf. Similarly, cement kilns must achieve the particulate matter MACT floor (for this analysis only, the New Source Performance Standard was converted to an estimated equivalent stack gas concentration of 0.03 gr/dscf) and lightweight aggregate kilns must meet the particulate matter MACT floor of 0.025 gr/dscf. There is no MACT floor hydrochloric acid emissions control device for cement kilns and lightweight aggregate kilns.

[64] This aggregate hazardous waste MTEC ranking is done separately for each of the three combustor source categories.

[65] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[66] Only nine incinerators were ultimately used because (1) We have complete metal emissions data on relatively few sources, and (2) many sources do not use particulate matter floor control, a major means of controlling semivolatile metals and low volatile metals.

cement kiln sources for which we have aggregate MTEC data. This approach resulted in using only the best single source as representative of MACT floor control for all existing sources because there are only nine incinerators and 10 cement kilns for which we have adequate aggregate data. However, the level of feedrate control achieved by the single best performing existing source is likely not representative of the range of higher feedrate levels achieved by the best performing existing sources and, indeed, would inappropriately establish as a floor what amounts to a new source standard.

The final step of the aggregate feedrate approach is to determine an emission level that is routinely achieved by sources using MACT floor control(s). Similar to the April 1996 NPRM and May 1997 NODA, we evaluated all available data for each test condition to determine if a hazardous air pollutant is fed at levels at or below the MACT floor control MTEC. If so, the test condition is added to the expanded MACT pool for that hazardous air pollutant.[67] We then define the floor emission level for the hazardous air pollutant/hazardous air pollutant group as the level achieved by the source with the highest emissions average in the MACT expanded pool.

The aggregate feedrate approach is a logical and reasonable outgrowth of the aggregate hazardous air pollutant approach to establish floor emission levels that we discussed in the April 1996 NPRM. The initial proposal determined MACT floors separately for each hazardous air pollutant controlled by a different control technology, but we also proposed an alternative whereby floors would be set on the basis of a source's performance for all hazardous air pollutants.

Many commenters prefer the total aggregate hazardous air pollutant approach over the individual hazardous air pollutant approach because it better ensures that floor levels would be simultaneously achievable. However, we reject the total aggregate approach because it tends to result in floors that are likely to be artificially high, reflective of limited emissions data for all hazardous air pollutants at each facility. These floor levels, therefore, would not reflect performances of the best performing sources for particular hazardous air pollutants. We are assured of simultaneous achievability in our final methodology by: (1) Establishing the MACT floor feedrate control levels on an aggregate basis for metals and chlorine, as discussed above, rather than for each individual hazardous air pollutant; (2) using the particulate matter MACT pool to establish floor levels for particulate matter, semivolatile metals, and low volatile metals; and (3) ensuring that floor controls are not technically incompatible. In fact, our resulting floor emission levels are already achieved in practice by 9 to 40 percent of sources in each of the three source categories, clearly indicating simultaneously achievable standards.[68]

C. What Other Floor Methodologies Were Considered?

This is a brief overview of the major features of the MACT floor methodologies that we proposed in the April 1996 NPRM or discussed in the May 1997 NODA, accompanied by our rationale for not pursuing those methodologies in this final rule.

1. April 19, 1996 Proposal

We proposed the same general approach to identify floor control and floor emission levels as used in today's final rule. The proposal contained an approach to identify the controls used by the best performing sources (*i.e.,* the MACT pool) and then identify an emission level that those controls are achieving. To identify the floor emission level, we considered emissions from all sources using properly designed and operated controls (*i.e.,* the expanded MACT pool) and established a preliminary floor level as the highest test condition average for those sources.

There are three major differences between the proposed approach and today's final approach, however:

a. Emissions Variability. At proposal, we added a statistically-derived emissions variability factor to the highest test condition average in the expanded MACT pool. Today we conclude that emissions variability is considered inherently in the floor methodology. (See discussion in section D below for our rationale for not using a statistically-derived variability factor.)

b. MACT Pool for Particulate Matter, Semivolatile Metals, and Low Volatile Metals. At proposal, we identified separate and different MACT pools (and associated MACT controls) for particulate matter, semivolatile metals, and low volatile metals, even though all three are controlled by a particulate matter control device. Commenters said this is inappropriate and we concur. Specifying the MACT floor particulate matter emission control device individually for these pollutants is likely to result in three different definitions of floor control. Thus, the same particulate matter control device would need to meet three different design specifications. As a practical matter, the more stringent specification would prevail. But, this highlights the impracticability of evaluating floor emission control for these standards individually rather than in the aggregate.

As discussed in the May 1997 NODA, today's approach uses the same initial MACT pool to establish the floor levels for particulate matter, semivolatile metals, and low volatile metals. The initial MACT pool is comprised of those sources meeting the emission control component of MACT control. To establish the semivolatile metal and low volatile metal floor levels, the particulate matter MACT pool is then analyzed to consider MACT hazardous waste feedrate control first for semivolatile metals and then for low volatile metals, using the aggregate feedrate approach discussed above.

c. Definition of MACT Control. At proposal, we defined MACT emissions control by specifying the design of the emissions control device. Commenters suggested that this was problematic because: (1) Our data base had limited data on design of the control device; (2) some of our available data were incorrect; and (3) the parameters the Agency was using to characterize MACT control did not adequately correlate with control efficiency. Given these concerns, our May 1997 NODA contained an emissions breakpoint approach to identify those sources that appeared to have anomalously higher emissions than other sources in the potential MACT pool. Our rationale was that given the anomalously high emissions, those sources were not, in fact, using MACT control.

Commenters express serious concerns about the validity of the nonstatistical approach used to identify the breakpoint. After considering various statistical approaches to identify an emissions breakpoint, we conclude that the emissions breakpoint approach is problematic.[69] For these reasons, we are

[67] The expanded MACT pool for each hazardous air pollutant is comprised of test conditions from sources equipped with the prescribed MACT floor emission control device, if any, and feeding hazardous waste at an MTEC not exceeding the MACT floor MTEC for that hazardous air pollutant.

[68] Our analysis shows that approximately nine percent of incinerators, 27 percent of cement kilns, and 40 percent of lightweight aggregate kilns currently operating can meet all of the floor levels simultaneously. See USEPA, ''Final Technical Support Document For HWC MACT Standards, Volume V: Emissions Estimates and Engineering Costs,'' July 1999.

[69] To improve the rigor of our breakpoint approach, we investigated a modified Rosner ''outlier'' test that: (1) Uses a single tailed test to consider only high ''outliers'' (*i.e.,* test conditions

not defining MACT emissions control by design parameters or using an emissions breakpoint approach to identify MACT emissions or feedrate control. Rather, the MACT floor emission control equipment, where applicable, is defined generically (*e.g.*, electrostatic precipitator, fabric filter), and the aggregate feedrate approach is used to define MACT floor feedrates. We believe the aggregate feedrate approach addresses the concerns that commenters raise on the proposed approach because it more clearly defines MACT control and relies less on engineering judgment.

2. May 1997 NODA

We have incorporated into the final rule several of the procedures discussed in the May 1997 NODA. The NODA explained why it is inappropriate to add a statistically-derived emissions variability factor to the highest test condition average of the expanded MACT pool. Despite comments to the contrary, we conclude that emissions variability is inherently considered in the floor methodology. See discussion in section D below.

In addition, the NODA discussed using the same initial MACT pool to establish the floor levels for particulate matter, semivolatile metals, and low volatile metals. We use this same approach in this final rule. Commenters generally concurred with that approach.

As discussed above, we considered using an emissions breakpoint technique, but conclude that this approach is problematic and did not use the approach for this rule.

D. How Is Emissions Variability Accounted for in Development of Standards?

The methodology we use to establish the final MACT emission standards intrinsically accounts for emissions variability without adding statistically-derived emissions variability factors. Many commenters strongly suggest that statistically-derived emissions variability factors must be added to the emission levels we identify from the data base as floor emission levels to ensure that the standards are routinely achievable.[70] Other commenters suggest that our floor methodology inherently accounts for emissions variability. We discuss below the types of emissions variability and why we conclude that emissions variability is inherently accounted for by our methodology.

We account for three types of emissions variability in establishing MACT standards: (1) Within test condition variability among test runs (a test condition is comprised of at least three runs that are averaged); (2) imprecision in the stack test method; and (3) source-to-source emissions variability attributable to source-specific factors affecting the performance of the same MACT control device. (See, *e.g. FMC Corp.* v. *Train*, 539 F.2d 973, 985–86 (4th Cir. 1976), holding that variability in performance must be considered when ascertaining whether a technology-based standard is achievable.) The following sections discuss the way in which we account for these types of variability in the final rule.

1. How Is Within-Test Condition Emissions Variability Addressed?

Inherent process variability will cause emissions to vary from run-to-run within a test condition, even if the stack method is 100 percent precise and even though the source is attempting to maintain constant operating conditions. This is caused by many factors including: Minor changes in the feedrate of feedstreams; combustion perturbations (*e.g.*, uncontrollable, minor fluctuations in combustion temperature or fan velocity); changes in the collection efficiency of the emission control device caused by fluctuations in key parameters (*e.g.*, power input to an electrostatic precipitator); and changes in emissions of materials (*e.g.*, sulfur dioxide) that may cause test method interferences.

At proposal, we used a statistical approach to account for emissions variability. See 61 FR at 17366. The statistical approach identified an emissions variability factor, which was added to the log-mean of the emission level being achieved based on the available ''short-term'' compliance test data. We called this emission level the ''design level.'' The variability factor was calculated to ensure that the design level could be achieved 99 percent of the time, assuming average within-test condition emissions variability for the source using MACT control.

In the May 1997 NODA, we discussed alternative emission standards developed without using a statistically-derived variability factor. Adding such a variability factor was determined inappropriate because it sometimes resulted in nonsensical results. For example, the particulate matter MACT floor level for incinerators under one floor methodology would have been higher than the current RCRA standard allows, simply due to the impact of an added variability factor. In other cases, the floor levels would have been much higher than our experience would indicate are routinely being achieved using MACT control. We reasoned that these inappropriate and illogical results may flow from either the data base used to derive the variability factor (*e.g.*, we did not have adequate information to screen out potentially outlier runs on a technical basis) or selecting an inappropriate floor-setting test condition as the design level (*e.g.*, we did not have adequate information on design, operation, and maintenance of emissions control equipment used by sources in the emissions data base to definitively specify MACT control).

Consequently, we reasoned that adequately accounting for within test condition emissions variability is achieved where relatively large data sets are available to evaluate for identifying the floor level. Large sets of emissions data from MACT sources, which have emissions below the floor level, are likely to represent the range of emissions variability. For small data sets (*e.g.*, dioxin/furan emissions for waste heat recovery boiler equipped incinerators; dioxin/furan emissions data for lightweight aggregate kilns), we acknowledged that the same logic would not apply. For these small data sets, the floor level was set at the highest run for the MACT source with the highest test condition average emissions. Many commenters suggest that our logic was flawed. Commenters say that, if we desire the floor level to be achievable 99 percent of the time (*i.e.*, the basis for the statistically-derived variability factor at proposal), the emissions data base is far too small to identify the floor level as the highest test condition average for sources using MACT control.

We conclude, however, that the final floor levels identified, using the procedures discussed above (*i.e.*, without adding a statistically-derived emissions variability factor), are levels that can be consistently achieved by well designed, operated, and maintained MACT sources. We

that anomalously high emissions, not necessarily true outliers in the statistical sense); (2) presumes that any potential ''outliers'' are at the 80th percentile value or higher; and (3) has a confidence level of 90 percent. We abandoned this statistical approach because: (1) Although modifications to the standard Rosner test were supportable, the modified test has not been peer-reviewed; (2) although the target confidence level was 90 percent, the true significance level of the test, as revised, is inappropriately low—approximately 80 percent; and (3) the ''outlier'' test does not identify MACT-like test conditions because it only identifies anomalously high test conditions rather than the best performing test conditions.

[70] One commenter recommends specific statistical approaches to calculate variability factors and provides examples of how the statistical methods should be applied to our emissions data base. See comment number CS4A–00041.

conclude this because our emissions data base is comprised of compliance test data generated when sources have an incentive to operate under worst case conditions (*e.g.*, spiking metals and chlorine in the waste feed; detuning the emissions control equipment). Sources choose to operate under worst case conditions during compliance testing because the current RCRA regulations require that limits on key operating parameters not exceed the values occurring during the trial burn. Therefore, these sources conduct tests in a manner that will establish a wide envelope for their operating parameter limits in order to accommodate the expected variability (*e.g.*, variability in types of wastes, combustion system parameters, and emission control parameters). See 56 FR at 7146 where EPA likewise noted that certain RCRA operating permit test conditions are to be ''representative of worst-case operating conditions'' to achieve needed operating flexibility. One company that operates several hazardous waste incinerators at three locations comments that, because of the current RCRA compliance regime, which is virtually identical to the compliance procedures of today's MACT rule, ''the result is that units must be tested at rates which are at least three standard deviations harsher than normal operations and normal variability in order to simulate most of the statistical likelihood of allowable emission rates.'' [71] The commenter also states that because of the consequences of exceeding an operating parameter limit under MACT, ''* * * clearly a source will test under the worst possible operating conditions in order to minimize future (exceedances of the limits).'' Finally, the commenter says that ''Because of variability and the stiff consequences of exceeding these limits, operators do not in fact operate their units anywhere near the limits for sustained periods of time, but instead tend to operate several standard deviations below them, or at about 33 to 50% of the limits.'' [72]

We conclude from these comments, which are consistent with engineering principles and with many discussions with experts from the regulated community, that MACT sources with compliance test emissions at or below the selected floor level are achieving those levels routinely because these test conditions are worst-case and are defined by the source itself to ensure 100 percent compliance with the relevant standard.

We acknowledge, however, that mercury is a special case because our mercury emission data may not be representative of worst-case conditions. As discussed in Section I.B.3 above, sources did not generally spike mercury emissions during RCRA compliance testing because they normally feed mercury at levels resulting in emissions well below current limits.[73] Although our data base for mercury is comprised essentially of normal emissions, emissions variability is adequately accounted for in setting floor levels. First, mercury emissions variability is minimal because the source can readily control emissions by controlling the feedrate of mercury.[74] For cement and lightweight aggregate kilns, mercury is controlled solely by controlling feedrate. Given that there is no emission control device that could have perturbations affecting emission rates, emissions variability at a given level of mercury feedrate control is relatively minor. Any variability is attributable to variability in feedrate levels due to feedstream sampling and analysis imprecision, and stack method imprecision (see discussion below).

Second, our emissions data indicate that the mercury floor levels are being achieved by a wide margin, which is a strong indication that a variability factor is not needed. Only one of the 15 incinerators using MACT floor control exceeds the design level for the floor emission level.[75] In addition, only seven of 45 incinerators for which we have mercury emissions data exceed the design level, and two of those eight are know to have spiked mercury in the hazardous waste feed during compliance testing. Only six of the 45 incinerators exceed the floor emission level.

The situation is similar for cement kilns and lightweight aggregate kilns. Only two of 22 cement kilns using floor control exceed the design level, only five of the 33 kilns in the source category exceed the design level, and only one of the 33 kilns exceeds the floor emission level. Only one of nine lightweight aggregate kilns using floor control exceeds the design level, and only two of the 10 kilns in the source category exceed the design level (and one of those kilns is known to have spiked mercury in the hazardous waste feed during compliance testing). Only one of the 10 kilns exceeds the floor emission level, and that kiln spiked mercury.

We conclude from this analysis that the mercury floor emission levels in this rule are readily achieved in practice even though our mercury emissions data were not spiked (*i.e.*, they may not represent worst-case emissions), and therefore a separate variability factor is not needed.

2. How Is Waste Imprecision in the Stack Test Method Addressed?

Method precision is a measure of how closely emissions data are grouped together when measuring the same level of stack emissions (*e.g.*, using a paired or quad test train). Method imprecision is largely a function of the ability of the sampling crew and analytical laboratory to routinely follow best practices. Precision can be affected by: (1) Measurement of ancillary parameters including gas flow rate, pressure, and temperature; (2) recovery of materials from the sampling train; and (3) cleaning, concentrating, and quantitating the analyte.

Several commenters state that we must add a factor to the selected floor level to account for method imprecision in addition to a factor to account for within-test condition emissions variability. We investigated the imprecision for the stack methods used to document compliance with today's rule and determined that method imprecision may be significant for some hazardous air pollutant/method combinations.[76] Our results indicate, however, that method precision is much better than commenters claim, and that as additional data sets become available,

[71] See Comment No. CS4A–00029.A, dated August 16, 1996.

[72] To estimate the compliance cost of today's rule, we assumed that sources would design their systems to meet an emission level that is 70% of the standard, herein after called the ''design level.''

[73] Three of 23 incenerators used to define MACT floor (*i.e.*, sources for which mercury feedrate data are available) are known to have spiked mercury. No cement kilns used to define MACT floor (*e.g.*, excluding sources that have stopped burning hazardous waste) are known to have spiked mercury. Only one of ten lightweight aggregate kilns used to define MACT floor is known to have spiked mercury.

[74] Although incenerators are generally equipped with wet scrubbers that can have a mercury removal efficiency of 15 to 60 percent, feedrate control is nonetheless the primary means of mercury emissions control because of the relatively low removal efficiency provided by wet scrubbers.

[75] Commenters note that the mercury levels fed during RCRA compliance testing may not represent the normal range of feedrates, and thus the compliance test emission levels may not be representative of emission levels achieved in practice. Given that only one of 15 incinerators using floor control exceeds the design level, it appears that the floor emission level is, in fact, being achieved in practice. Some of these 15 sources were likely feeding mercury at the high end of their normal range, even though others may have been feeding mercury at normal or below normal levels. This is also the situation of cement kilns where only two of 2 kilns using floor control exceed the design level, and for lightweight aggregate kilns where only one of nine kilns using floor exceeds the design level.

[76] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

the statistically-derived precision bars for certain pollutants are reasonably expected to be reduced significantly. This is mainly because data should become available over a wider range of emission levels thus reducing the uncertainty that currently results in large precision bar projections for some hazardous air pollutants at emission levels that are not close to the currently available paired and quad-train emissions data.

We conclude that method imprecision, in selecting the floor levels for hazardous waste combustors, is adequately addressed for the same reasons that we accounted for within-test condition emissions variability. Method precision is simply a factor that contributes to within-test condition variability. As discussed above, sources consider emissions variability when defining their compliance test operating conditions to balance emissions standards compliance demonstrations with the need to obtain a wide operating envelope of operating parameter limits.

3. How Is Source-to-Source Emissions Variability Addressed?

If the same MACT control device (*i.e.*, same design, operating, and maintenance features) were used at several sources within a source category, emissions of hazardous air pollutants from the sources could vary. This is because factors that affect the performance of the control device could vary from source to source. Even though a device has the same nominal design, operating, and maintenance features, those features could never be duplicated exactly. Thus, emissions could vary from source to source.

We agree that this type of emissions variability must be accounted for in the standards to ensure the standards are achieved in practice. Source-to-source emissions variability is addressed by identifying the floor emission level as the highest test condition average for sources in the expanded MACT pool, as discussed above.[77]

The test condition average emissions for sources in the expanded MACT pool for most standards often vary over several orders of magnitude. That variability is attributable partially to the type of source-to-source emissions variability addressed here as well as the inclusion of sources with varying levels of MACT control in the pool. Sources are included in the expanded MACT pool if they have controls equivalent to or better than MACT floor controls. We are unable to identify true source-to-source emissions variability for sources that actually have the same MACT controls because we are unable to specify in sufficient detail the design, operating, and maintenance characteristics of MACT control. Such information is not readily available. Therefore, we define MACT control only in general terms. This problem (and others) are addressed in today's rule by selecting the MACT floor level based on the highest test condition average in the expanded MACT pool, which accounts for source-to-source variability.

We also conclude that the characteristics of the emissions data base coupled with the methodology used to identify the floor emission level adequately accounts for emissions variability so that the floor level is routinely achieved in practice by sources using floor control. As further evidence, we note that a large fraction—50 to 100 percent—of sources in the data base currently meet the floor levels regardless of whether they currently use floor control.[78]

VI. What Are the Standards for Existing and New Incinerators?

A. To Which Incinerators Do Today's Standards Apply?

The standards promulgated today apply to each existing, reconstructed, and newly constructed incinerator (as defined in 40 CFR 260.10) burning hazardous waste. These standards apply to all major source and area source incinerator units and to all units whether they are transportable or fixed sources. These standards also apply to incinerators now exempt from RCRA stack emission standards under §§ 264.340(b) and (c).[79] Additionally, these standards apply to thermal desorbers that meet the definition of a RCRA incinerator, and therefore, are not regulated under subpart X of part 264.

B. What Subcategorization Options Did We Evaluate?

We considered whether it would be appropriate to subcategorize incinerators based on several factors discussed below and conclude that subcategorization is not necessary. However, for waste heat recovery boiler-equipped incinerators, we establish a separate emission standard solely for dioxin/furan. We explained our rationale for separate dioxin/furan standards for waste heat recovery boilers in the May 1997 NODA (62 FR 24220). We said that waste heat recovery boilers emit significantly higher dioxin/furan emissions than other incinerators, probably because the heat recovery boiler precludes rapid temperature quench of the combustion gases to below 400°F, therefore warranting separate standards for dioxin/furan only (*i.e.*, the waste heat boiler does not affect achievability of the other emission standards).

We considered several options for subcategorizing the hazardous waste incinerator source category based on: (1) Size of the unit (*e.g.*, small and large incinerators); (2) method of use of the hazardous waste incinerator (*e.g.*, commercial hazardous waste incinerator, captive (on-site) unit); (3) facility design (*e.g.*, rotary kiln, liquid injection, fluidized bed, waste heat boiler), and (4) type of waste fed (*e.g.*, hazardous waste mixed with radioactive waste, munitions, liquid, solid or aqueous wastes). Subcategorization would be appropriate if one or more of these factors affected achievability of emission standards that were established without subcategorization. In the May 1997 NODA (62 FR 24219), we stated that subdividing the hazardous waste incinerator source category by size or method of use (such as commercial or on-site) would be inappropriate because it would not result in standards that are more achievable. Many of the standards would be the same for the subcategories while the remainder would be more stringent. That conclusion is not altered by any of the changes in today's final rule. Therefore, subcategorization would add complexity without any tangible achievability benefits.

In the same notice, we also requested comment on subcategorization and/or a deferral of standards for mixed waste incinerators based on a comment from the Department of Energy that this type of incinerator has several unique features that warrant subcategorization.

[77] Because of the need to account for this type of variability, we disagree with those commenters recommending that: (1) The floor emission level be identified as the average emission level achieved by the 12 percent of source with the lowest emissions; and (2) it is inappropriate to base the floor emission level on sources using floor control but that are not within the 12 percent of sources with the lowest emissions (*i.e.*, the expanded MACT pool should not be used to identify floor emission levels). The floor emission level must be achieved in practice by sources using the appropriately designed and operated floor control. Thus, emission levels being achieved by all sources using the appropriately designed and operated floor control (*i.e.*, including sources using floor control but having emission levels greater than the average of the emissions achieved by the 12 percent of sources with the lowest emissions) must be considered when identifying the floor emission level.

[78] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[79] Sections 264.340(b) and (c) exempt from stack emission standards incinerators (a) burning solely ignitable, corrosive or reactive wastes under certain conditions, and (b) if the waste contains no or insignificant levels of hazardous constituents.

There are three Department of Energy mixed waste incinerators. Each mixed waste incinerator has a different type of operation and different air pollution control devices, and two of the sources have high dioxin/furan and mercury emissions (several times the dioxin/furan standards adopted in today's rule). We received several comments on the mixed waste incinerator issue. These commenters contend that, because of the radioactive component of the wastes, mixed waste incinerators pose greater than average risk, and regulating these facilities should not be deferred. These commenters also note that the MACT controls are not incompatible with mixed waste incinerators and thus these incinerators can readily achieve the emission standards. We agree that MACT controls are compatible with mixed waste incinerators, with one exception discussed below, and do not establish a mixed waste incinerator subcategory.

The standards promulgated today are generally achievable by all types and sizes of incinerators when using MACT controls. We recognize, however, that each of the possible subcategories considered has some unique features. At the same time, upon consideration of each individual issue, we conclude that unique features of a particular hazardous waste incinerator can be better dealt with on an individual basis (through the permit process or through petitions) instead of through extensive subcategorization. As an example, we agree with the Department of Energy's contentions that feedstream testing for metals is problematic for mixed waste incinerators due to radioactivity of the waste and because risk from metal emissions is minimal in mixed waste incinerators that use HEPA filters to prevent radioactive emissions. Section 63.1209(g)(1) of today's rule provides a mechanism for petitioning the Administrator for use of an alternative monitoring method.[80] This petition process appears to be an appropriate vehicle for addressing the concerns expressed by the Department of Energy about feedstream testing for metals and use of HEPA filters at its mixed waste incinerators.

In summary, our decision not to subcategorize hazardous waste incinerators is based on four reasons:

(1) Size differences among hazardous waste incinerators do not necessarily reflect process, equipment or emissions differences among the incinerators. Many small size hazardous waste incinerators have emissions lower than those promulgated today even though they are not regulated to those low levels.

(2) Types and concentrations of uncontrolled hazardous air pollutants are similar for all suggested subcategories of hazardous waste incinerators.

(3) The same type of control devices, such as electrostatic precipitators, fabric filters, and scrubbers, are used by all hazardous waste incinerators to control emissions of particular hazardous air pollutants.

(4) The standards are achievable by all types and sizes of well designed and operated incinerators using MACT controls.

C. What Are the Standards for New and Existing Incinerators?

1. What Are the Standards for Incinerators?

We discuss in this section the basis for the emissions standards for incinerators. The emissions standards are summarized below:

STANDARDS FOR EXISTING AND NEW INCINERATORS

Hazardous air pollutant or hazardous air pollutant surrogate	Emissions standard [1]	
	Existing sources	New sources
Dioxin /Furan	0.20 ng TEQ [2]/dscm; or 0.40 ng TEQ/dscm and temperature at inlet to the initial particulate matter control device ≤ 400°F.	0.20 ng TEQ/dscm.
Mercury	130 µg/dscm	45 µg/dscm.
Particulate Matter	34mg/dscm (0.015gr/dscf)	34mg/dscm (0.015gr/dscf).
Semivolatile Metals	240 µg/dscm	24 µg/dscm.
Low Volatile Metals	97 µg/dscm	97 µg/dscm.
Hydrochloric Acid/Chlorine Gas	77 ppmv	21 ppmv.
Hydrocarbons [3, 4]	10 ppmv (or 100 ppmv carbon monoxide)	10 ppmv (or 100 ppmv carbon monoxide).
Destruction and Removal Efficiency	99.99% for each specific principal organic hazardous constituent, except 99.9999% for specified dioxin-listed wastes.	Same as for existing incinerators.

[1] All emission levels are corrected to 7 percent oxygen.
[2] Toxicity equivalent quotient, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8–TCDD.
[3] Hourly rolling average. Hydrocarbons reported as propane.
[4] Incinerators that elect to continuously comply with the carbon monoxide standard must demonstrate compliance with the hydrocarbon standard of 10ppmv during the comprehensive performance test.

2. What Are the Standards for Dioxins and Furans?

We establish a dioxin/furan standard for existing incinerators of either 0.20 ng TEQ/dscm, or a combination of dioxin/furan emissions up to 0.40 ng TEQ/dscm and temperature at the inlet to the initial dry particulate matter control device not to exceed 400°F.[81] Expressing the standard as a temperature limit as well as a dioxin/furan concentration limit provides better control of dioxin/furan, because sources operating at temperatures below 400°F generally have lower emissions and is consistent with the current practice of many sources. Further, without the lower alternative TEQ limit of 0.20 ng/dscm, sources that may be operating dry particulate matter control devices at temperatures higher than 400°F while achieving dioxin/furan emissions below 0.20 ng TEQ/dscm would nonetheless be required to incur costs to lower gas temperatures. This would not be appropriate because lowering gas temperatures in this case would likely

[80] The petition for an alternative monitoring method should be included in the comprehensive performances test plan submitted for review and approval.

[81] Incinerators that use wet scrubbers as the initial particulate matter control device are presumed to meet the 400°F temperature requirement. Consequently, as a practical matter, the standard for such incinerators is simply 0.4 ng TEQ/dscm.

achieve limited reductions in dioxin/furan emissions (*i.e.*, because emissions are already below 0.20 ng TEQ).

For new incinerators, the dioxin/furan standard is 0.20 ng TEQ/dscm. We discuss below the rationale for these standards.

a. What is the MACT Floor for Existing Sources? We establish the same MACT floor control, as was evaluated in the May 1997 NODA, based on the revised data base and the refinements to the analytical approaches. This floor control is based on quenching of combustion gases to 400°F or below at the dry particulate matter control device.[82] We selected a temperature of 400°F because that temperature is below the temperature range for optimum surface-catalyzed dioxin/furan formation reactions—450°F to 650°F—and most sources operate their particulate matter control device below that temperature. In addition, temperature is an important control parameter because dioxin/furan emissions increase exponentially as combustion gas temperatures at the dry particulate matter control device increase above 400°F.

We identify a MACT floor level of 0.40 ng TEQ/dscm for incinerators other than those equipped with waste heat recovery boilers. As discussed in the May 1997 NODA, the floor level of 0.40 ng TEQ/dscm is based on the highest nonoutlier test condition for sources equipped with dry particulate matter control devices operated at temperatures of 400°F or below or wet particulate matter control devices. We screened out four test conditions from three facilities because they have anomalously high dioxin/furan emissions and are not representative of MACT control practices.[83] Three of these test conditions are from sources that had other test conditions with emission averages well below 0.40 ng TEQ/dscm, indicating that the same facilities can achieve lower emission levels in different operating modes.

We identify a MACT floor level for waste heat boiler-equipped hazardous waste incinerators of 12 ng TEQ/dscm based on the highest emitting individual run for sources equipped with dry particulate matter control devices operated at temperatures of 400°F or below or wet particulate matter control devices. We use the highest run to set the floor level rather than the average of the runs for the test condition to address emissions variability concerns given that we have a very small data set for waste heat boilers. All waste heat boiler-equipped hazardous waste incinerators meet this floor level, except for a new test conducted after the publication of the May 1997 NODA at high temperature conditions that resulted in dioxin/furan emission levels of 47 ng TEQ/dscm. This source is not using MACT control, however, because the temperature at the particulate matter control device exceeded 400°F. Thus, we do not consider emissions from this source in identifying the floor level.

We received numerous and diverse comments on the April 1996 proposal and the May 1997 NODA. While some commenters consider the dioxin/furan standards too high, a large number comment that the standards are too stringent. Many comment that the methodology used for calculating the dioxin/furan MACT floor level is inappropriate and that the cost-effectiveness of the standards is not reasonable. In particular, some commenters suggest separating ''fast quench'' and ''slow quench'' units. We have fully addressed this latter concern because we now establish separate dioxin/furan standards for waste heat boilers given that they are a fundamentally different type of process and that they have higher dioxin/furan emissions because of the slow quench across the boiler. We address the other comments elsewhere in the preamble and in the comment response document.

Approximately 65% of all test conditions at all incinerator sources are achieving the 0.40 ng TEQ/dscm level, and over 50% of all test conditions achieve the 0.20 ng TEQ/dscm level. We estimate that approximately 60 percent of incinerators currently meet the TEQ limit as well as the temperature limit. Under the statute, compliance costs are not to be considered in MACT floor determinations. For purposes of compliance with Executive Order 12866 and the Regulatory Flexibility Act, we calculated the annualized cost for hazardous waste incinerators to achieve the dioxin/furan MACT floor levels. Assuming that no hazardous waste incinerator exits the market due to MACT standards, the annual cost is estimated to be $3 million, and the standards will reduce dioxin/furan emissions nationally by 3.4 g TEQ per year from the baseline emissions level of 24.8 g TEQ per year.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We investigated the use of activated carbon injection, along with limiting temperatures at the inlet to the initial dry particulate matter control device to 400°F,[84] to achieve two alternative beyond-the-floor emission levels: (1) 0.40 ng TEQ/dscm for waste heat boiler-equipped incinerators (*i.e.*, slow quench) to reduce their emissions to the floor level for other incinerators; and (2) 0.20 ng TEQ/dscm for all incinerators. Activated carbon injection technology is feasible and proven to reduce dioxin/furan emissions by 99 percent or greater.[85] It is currently used by one waste heat boiler-equipped hazardous waste incinerator (Waste Technologies Industries in East Liverpool, Ohio) and many municipal waste combustors.[86] The removal efficiency of an activated carbon injection system is affected by several factors including carbon injection rate and adsorption quality of the carbon. Thus, activated carbon injection systems can be used by waste heat boiler-equipped incinerators to achieve alternative beyond-the-floor emissions of either 0.40 ng TEQ/dscm or 0.20 ng TEQ/dscm.

We conclude that a beyond-the-floor emission level of 0.40 ng TEQ/dscm for waste heat boiler-equipped incinerators is cost-effective but a 0.20 ng TEQ/dscm emission level for all incinerators is not cost-effective. We estimate that 23 waste heat boiler-equipped incinerators will need to install activated carbon injection systems at an annualized cost of approximately $6.6 million. This will result in a sizable reduction of 17.9 g TEQ dioxin/furan emissions per year and will provide an 84 percent reduction in emissions from the floor emission level (21.4 g TEQ per year) for all hazardous waste incinerators. This represents a cost-effectiveness of $370,000 per gram TEQ removed.

When we evaluated the alternative beyond-the-floor emission level of 0.20 ng TEQ/dscm for all incinerators, we determined that 80 hazardous waste incinerators would incur costs to reduce dioxin/furan emissions by 19.5 g TEQ from the floor level (21.4 g TEQ) at an annualized cost of $16.1 million. The cost-effectiveness would be $827,000 per gram of TEQ removed. In addition,

[82] The temperature limit applies at the inlet to a dry particulate matter control device that suspends particulate matter in the combustion gas stream (*e.g.*, electrostatic precipitator, fabric filter) such that surface-catalyzed formation of dioxin/furan is enhanced. The temperature limit does not apply to a cyclone control device, for example.

[83] USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999, Section 3.1.1.

[84] Limiting the temperature at the dry particulate matter control device reduces surface-catalyzed formation of dioxin/furan and enhances the adsorption of dioxin/furan on the activated carbon.

[85] USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[86] We have established in a separate rulemaking that activated carbon injection is MACT floor control for municipal waste combustors.

we determined that the vast majority of these emissions reductions would be provided by waste heat boiler-equipped incinerators, and would be provided by the beyond-the-floor emission level of 0.40 ng TEQ/dscm discussed above. The incremental annualized cost of the 0.20 ng TEQ/dscm option for incinerators other than waste heat boiler-equipped incinerators would be $9.5 million, and would result in an incremental reduction of only 1.6 g TEQ per year. This represents a high cost for a very small additional emission reduction from the floor, or a cost-effectiveness of $6.0 million per additional gram of TEQ dioxin/furan removed. Accordingly, we conclude that the 0.20 ng TEQ/dscm beyond-the-floor option is not cost-effective.

We note that dioxin/furan are some of the most toxic compounds known due to their bioaccumulative potential and wide range of adverse health effects, including carcinogenesis, at exceedingly low doses. We consider beyond-the-floor reduction of dioxin/furan emissions a prime environmental and human health consideration. As discussed above, our data base indicates that a small subset of incinerators—those equipped with waste heat recovery boilers—can emit high levels of dioxin/furan, up to 12 ng TEQ/dscm, even when operating the dry particulate matter control device at ≤400°F. We are concerned that such high dioxin/furan emission levels are not protective of human health and the environment, as mandated by RCRA. If dioxin/furan emissions from waste heat boiler-equipped incinerators are not reduced by a beyond-the-floor emission standard, omnibus RCRA permit conditions would likely be needed in many cases. This would defeat our objective of having only one permitting framework for stack air emissions at hazardous waste incinerators (except in unusual cases). Thus, the beyond-the-floor standard promulgated today for waste heat boiler-equipped incinerators is not only cost-effective, but also an efficient approach to meed the Agency's RCRA mandate.

Some commenters suggest that the standard for waste heat boiler-equipped hazardous waste incinerators, which is based on activated carbon injection, be set at levels achieved by activated carbon injection at the Waste Technologies Industries facility—an average of 0.07 ng TEQ/dscm. We determined that this would not be appropriate because of concerns that such a low emission level may not be routinely achievable. An emission level of 0.07 ng TEQ/dscm represents a 99.4 percent reduction in emissions from the floor level of 12 ng TEQ/dscm. Although activated carbon injection can achieve dioxin/furan emissions reductions of 99 percent and higher, we are concerned that removal efficiency may decrease at low dioxin/furan emission levels. We noted our uncertainty about how much activated carbon injection control efficiency may be reduced at low dioxin/furan concentrations in the May 1997 NODA (62 FR at 24220). Several commenters agree with our concern, including Waste Technologies Industries.[87] No commenters provide data or information to the contrary. Because we have data from only one hazardous waste incinerator documenting that an emission level of 0.07 ng TEQ can be achieved, we are concerned that an emission level that low may not be routinely achievable by all sources.

c. What Is the MACT Floor for New Sources? For new sources, the CAA requires that the MACT floor be the level of control used by the best controlled single source. As discussed above, one source, the Waste Technologies Industries (WTI) incinerator in Liverpool, Ohio, uses activated carbon injection. Therefore, we identify activated carbon injection as MACT floor control for new sources. To establish the MACT floor emission level that is being achieved in practice for sources using activated carbon injection, data are available from only WTI. WTI is achieving an emission level of 0.07 ng TEQ/dscm. As discussed above, we are concerned that emission level may not be routinely achievable because the removal efficiency of activated carbon injection may be reduced at such low emission levels. An emission level of 0.20 ng TEQ/dscm is routinely achievable, however. We note that activated carbon injection is MACT floor control for dioxin/furan at new large municipal waste combustors. We established a standard of 13 ng/dscm total mass ''equal to about 0.1 to 0.3 ng/dscm TEQ'' for these sources (60 FR 65396 (December 19, 1995)), equivalent to approximately 0.20 ng TEQ/dscm. We conclude, therefore, that a floor level of 0.20 ng TEQ/dscm is achievable for new sources using activated carbon injection and accordingly set this as the standard.

d. What Are Our Beyond-the-Floor Considerations for New Sources? As discussed in the May 1997 NODA, a beyond-the-floor standard below 0.20 ng TEQ/dscm would not be appropriate. Although installation of carbon beds would enable new hazardous waste incinerators to achieve lower dioxin/furan levels, we do not consider the technology to be cost-effective. The reduction in dioxin/furan emissions would be very small, while the costs of carbon beds would be prohibitively high. In addition, due to the very small dioxin/furan reduction, the benefit in terms of cancer risks reduced also will be very small. Therefore, we conclude that a beyond-the-floor standard for dioxin/furan is not appropriate.

3. What Are the Standards for Mercury?

We establish a mercury standard for existing and new incinerators of 130 and 45 μg/dscm respectively. We discuss below the rationale for these standards.

a. What Is the MACT Floor for Existing Sources? We are establishing the same MACT floor level as proposed, 130 μg/dscm although, as discussed below, the methodology underlying this standard has changed from proposal. At proposal, the floor standard was based on the performance of either: (1) Feedrate control of mercury at a maximum theoretical emission concentration not exceeding 19 μg/dscm; or (2) wet scrubbing in combination with feedrate control of mercury at a level equivalent to a maximum theoretical emission concentration not exceeding 51 μg/dscm. In the May 1997 NODA, we reevaluated the revised data base and defined MACT control as based on performance of wet scrubbing in combination with feedrate control of mercury at a level equivalent to a maximum theoretical emission concentration of 50 μg/dscm and discussed a floor level of 40 μg/dscm.

Several commenters object to our revised methodology and are concerned that we use low mercury feedrates to define floor control. These commenters state that standards should not be based on sources feeding very small amounts of a particular metal, but rather on their ability to minimize the emissions by removing the hazardous air pollutant. As discussed previously, we maintain that hazardous waste feedrate is an appropriate MACT control technique. We agree with commenters' concerns, however, that previous methodologies to define floor feedrate control may have identified sources feeding anomalously low levels of a metal (or chlorine). To address this concern, we have revised the floor determination methodology for mercury, semivolatile metals, low volatile metals and total chlorine. A

[87] Waste Technologies Industries suggested, however, that after experience with activated carbon injection systems has been attained by several hazardous waste incinerators, the Agency could then determine whether an emission level of 0.07 ng TEQ/dscm is routinely achievable. See comment number 064 in Docket F–97–CS4A–FFFFF.

detailed description of this methodology—the aggregate feedrate approach—is presented in Part Four, Section V of this preamble. Adopting this aggregate feedrate approach, we identify a mercury feedrate level that is approximately five times higher than the May 1997 NODA level and higher than approximately 70% of the test conditions in our data base.

Wet scrubbers also provide control of mercury (particularly mercury chlorides). Given that virtually all incinerators are equipped with wet scrubbers (for control of particulate matter or acid gases), we continue to define floor control as both hazardous waste feedrate control of mercury and wet scrubbing. The MACT floor based on the use of wet scrubbing and feedrate control of mercury is 130 µg/dscm.[88]

The floor level is being achieved by 80% of the test conditions in our data base of 30 hazardous waste incinerators. As already discussed above, consideration of costs to achieve MACT floor standards play no part in our MACT floor determinations, but we nevertheless estimate costs to the hazardous waste incinerator universe for administrative purposes. We estimate that 35 hazardous waste incinerators, assuming no market exit by any facility, will need to adopt measures to reduce mercury emissions at their facilities by 3.46 Mg from the current baseline of 4.4 Mg at an estimated annualized cost $12.2 million, yielding a cost-effectiveness of $3.6 million per Mg of mercury reduced.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? As required by statute, we evaluated more stringent beyond-the-floor controls for further reduction of mercury emissions from the floor level. Activated carbon injection systems can achieve mercury emission reductions of over 85 percent and we proposed them as beyond-the-floor control in the April 1996 NPRM. In the May 1997 NODA, we reevaluated the use of activated carbon injection[89] as beyond-the-floor control, but cited significant cost-effectiveness concerns. We reiterate these concerns here. Our technical support document[90] provides details of annualized costs and reductions that can be achieved.

In addition, we considered a beyond-the-floor level of 50 µg/dscm based on limiting the feedrate of mercury in the hazardous waste (*i.e.*, additional feedrate control beyond floor control), and conducted an evaluation of the cost of achieving this reduction to determine if this beyond-the-floor level would be appropriate. The national incremental annualized compliance cost to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $4.2 million for the entire hazardous waste incinerator industry and would provide an incremental reduction in mercury emissions nationally beyond the MACT floor controls of 0.7 Mg/yr, yielding a cost-effectiveness of $10 million per additional Mg of mercury reduced. Thus, potential benefits in relation to costs are disproportionately low, and we conclude that beyond-the-floor mercury controls for hazardous waste incinerators are not warranted. Therefore, we are not adopting a mercury beyond-the-floor standard.

Many commenters object to our beyond-the-floor standards as proposed, citing high costs for achieving relatively small mercury emission reductions, and compare the cost-effectiveness numbers with regulations of other sources (electric utilities, municipal and medical waste incinerators). Although comparison between rules for different sources is not directly relevant (see, *e.g.*, *Portland Cement Association* v. *Ruckelshaus* 486 F.2d 375, 389 (D.C. Cir. 1973)), we nevertheless agree that the cost of a mercury beyond-the-floor standard in relation to benefits is substantial. Some commenters, as well as the peer review panel, state that beyond-the-floor levels are not supported by a need based on risk. Although the issue of residual risk can be deferred under the CAA, an immediate question must be addressed if RCRA regulation of air emissions is to be deferred. Our analysis[91] indicates that mercury emissions at the floor level do not pose a serious threat to the human health and environment and that these standards are adequately protective to satisfy RCRA requirements as a matter of national policy, subject, of course, to the possibility of omnibus permit conditions for individual facilities in appropriate cases.

Some commenters state that the technical performance of activated carbon injection for mercury control is not adequately proven. Activated carbon injection performance has been adequately demonstrated at several hazardous waste incinerators, municipal waste combustors, and other devices.[92] Our peer review panel also states that activated carbon injection can achieve 85% reduction of mercury emissions.[93] Some commenters also state that we underestimate the cost and complexities of retrofitting incinerators to install activated carbon injection systems (*e.g.*, air reheaters would be required in many cases). We reevaluated the modifications needed for retrofits of activated carbon injection systems and have revised the costs of installation.

c. What Is the MACT Floor for New Sources? Floor control must be based on the level of control used by the best controlled single source. The best controlled source in our data base uses wet scrubbing and hazardous waste feedrate control of mercury at a feedrate corresponding to a maximum theoretical emission concentration of 0.072 µg/dscm. We conclude that this feedrate is atypically low, however, given that the next lowest mercury feedrates in our data base are 63, 79, 110, and 130 µg/dscm, expressed as maximum theoretical emission concentrations. Accordingly, we select the mercury feedrate for the second best controlled source under the aggregate feedrate approach to represent the floor control mercury feedrate for new sources. That feedrate is 110 µg/dscm[94] expressed as a maximum theoretical emission concentration, and corresponds to an emission level of 45 µg/dscm after considering the expanded MACT pool (*i.e.*, the highest emission level from all sources using floor control). Therefore, we establish a MACT floor level for mercury for new sources of 45 µg/dscm.[95] We note that, at proposal and in

[88] This is coincidentally the same floor level as proposed, notwithstanding the use of a different methodology.

[89] Flue gas temperatures would be limited to 400°F at the point of carbon injection to enhance mercury removal.

[90] USEPA, ''Technical Support Document for HWC MACT Standards, Volume V: Emission Estimates and Engineering Costs,'' July 1999.

[91] USEPA, ''Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Information Document,'' July 1999.

[92] USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of Proposed MACT Standards and Technologies,'' July 1999.

[93] Memo from Mr. Shiva Garg, EPA to Docket No. F–96–RCSP–FFFFF entitled ''Peer Review Panel Report in support of proposed rule for revised standards for hazardous waste combustors'', dated August 5, 1996.

[94] The test conditions with mercury feedrates of 63 and 79 µg/dscm do not have complete data sets for all metals and chlorine. Thus, these conditions cannot be used under the aggregate feedrate approach to define the floor level of feedrate control. Mercury emissions from those test conditions are used, however, to identify a floor emission level that is being achieved.

[95] In addition, this floor emission level may be readily achievable for new sources using activated carbon injection as floor control for dioxiin/furan without the need for feedrate control of mercury. Activated carbon injection can achieve mercury emissions reductions of 85 percent. Given that the upper bound mercury feedrate for ''normal'' wastes (*i.e.*, without mercury spiking) in our data base corresponds to a maximum theoretical emission concentration of 300 µg/dscm, such sources could

Continued

the May 1997 NODA, mercury standards of 50 and 40 µg/dscm respectively were proposed for new sources. Today's final rule is in the same range as those proposed emission levels.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We evaluated the use of activated carbon injection as beyond-the-floor control for new sources to achieve emission levels lower than floor levels. In the April 1996 NPRM and May 1997 NODA, we stated that new sources could achieve a beyond-the-floor level of 4 µg/dscm based on use of activated carbon injection. We cited significant cost-effectiveness concerns at that level, however. We reiterate those concerns today.

Many commenters object to our beyond-the-floor standards as proposed, citing high costs for achieving relatively small mercury emission reductions. They compare the proposed standards unfavorably with other sources' regulations (*e.g.*, electric utilities, municipal and medical waste incinerators), where the cost-effectiveness values are much lower. As stated earlier, comparison between rules for different sources is not directly relevant. Nonetheless, we conclude that use of activated carbon injection as a beyond-the-floor control for mercury for new sources would not be cost-effective. We also note that the floor levels are adequately protective to satisfy RCRA requirements.

We also considered additional feedrate control of mercury as beyond-the-floor control. We conclude, however, that significant emission reductions using feedrate control may be problematic because the detection limit of routine feedstream analysis procedures for mercury is such that a beyond-the-floor mercury emission limit could be exceeded even though mercury is not present in feedstreams at detectable levels. Although sources could potentially perform more sophisticated mercury analyses, cost-effectiveness considerations would likely come into play and suggest that a beyond-the-floor standard is not warranted.

4. What Are the Standards for Particulate Matter?

We establish standards for existing and new incinerators which limit particulate matter emissions to 0.015 grains/dry standard cubic foot (gr/dscf) or 34 milligrams per dry standard cubic meter (mg/dscm).[96] We chose the particulate matter standard as a surrogate control for the metals antimony, cobalt, manganese, nickel, and selenium. We refer to these five metals as ''nonenumerated metals'' because standards specific to each metal have not been established. We discuss below the rationale for adopting these standards.

a. What Is the MACT Floor for Existing Sources? Our data base consists of particulate matter emissions from 75 hazardous waste incinerators that range from 0.0002 gr/dscf to 1.9 gr/dscf. Particle size distribution greatly affects the uncontrolled particulate matter emissions from hazardous waste incinerators, which, in turn, is affected by incinerator type and design, particulate matter entrainment rates, waste ash content, waste sooting potential and waste chlorine content. Final emissions from the stacks of hazardous waste incinerators are affected by the degree of control provided to uncontrolled particulate matter emissions by the air pollution control devices. Dry collection devices include fabric filters or electrostatic precipitators, while wet collection devices include conventional wet scrubbers (venturi type) or the newer patented scrubbers like hydrosonic, free jet, or the collision type. Newer hazardous waste incinerators now commonly use ionizing wet scrubbers or wet electrostatic precipitators or a combination of both dry and wet devices.

The MACT floor setting procedure involves defining MACT level of control based on air pollution control devices used by the best performing sources. Control devices used by these best performing sources can be expected to routinely and consistently achieve superior performance. Then, we identify an emissions level that well designed, well-operated and well-maintained MACT controls can achieve based on demonstrated performance, and engineering information and principles.

The average of the best performing 12 percent of hazardous waste incinerators use either fabric filters, electrostatic precipitators (dry or wet), or ionizing wet scrubbers (sometimes in combination with venturi, packed bed, or spray tower scrubbers). As explained in Part Four, Section V, we define floor control for particulate matter for incinerators as the use of a well-designed, operated, and maintained fabric filter, electrostatic precipitator, or ionizing wet scrubber. Sources using certain wet scrubbing techniques such as high energy venturi scrubbers, and novel condensation, free-jet, and collision scrubbers can also have very low particulate matter emission levels. We do not consider these devices to be MACT control, however, because, in general, a fabric filter, electrostatic precipitator, or ionizing wet scrubber will provide superior particulate matter control. In some cases, sources using medium or low energy wet scrubbers are achieving very low particulate matter emissions, but only for liquid waste incinerators, which typically have low ash content waste. Thus, this control technology demonstrates high effectiveness only under atypical conditions, and we do not consider it to be MACT floor control for particulate matter.

We conclude that fabric filters, electrostatic precipitators, and ionizing wet scrubbers are routinely achieving an emission level of 0.015 gr/dscf based upon the following considerations:

i. Sources in our data base are achieving this emission level. Over 75 percent of the sources in the expanded MACT pool are achieving an emission level of 0.015 gr/dscf. We investigated several sources in our data base using floor control but failing to achieve this level, and we found that the control devices do not appear to be well-designed, operated, and maintained. Some of these sources are not using superior fabric filter bags (*e.g.*, Gore-tex®, Nomex felt, or tri-lift fabrics), some exhibit salt carry-over and entrainment from a poorly operated wet scrubber located downstream of the fabric filter, and some are poorly maintained in critical aspects (such as fabric cleaning cycle or bag replacements).[97]

ii. Well-designed, operated, and maintained fabric filters and electrostatic precipitators can routinely achieve particulate matter levels lower than the floor level of 0.015 gr/dscf. Levels less than 0.005 gr/dscf were demonstrated on hazardous waste incinerators and municipal waste combustors in many cases. Well-designed fabric filters have a surface collection area of over 0.5 ft^2/acfm and high performance filter fabrics such as Nomex and Gore-tex. Well-designed electrostatic precipitators have advanced power system controls (with intermittent or pulse energization), internal plate and electrode geometry to

achieve the mercury floor emission level of 45 µg/dscm using activated carbon injection alone.

[96] Particulate matter is a surrogate for the metal hazardous air pollutants for which we are not establishing metal emission standards: Antimony, cobalt, manganese, nickel, and selenium.

[97] USEPA, ''Technical Support Document for HWC, MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

allow for high voltage potential, flue gas conditioning by addition of water or reagents such as sulfur trioxide or ammonia to condition particulate matter for lower resistivity, and optimized gas distribution within the electrostatic precipitator. The technical support document identifies many hazardous waste incinerators using such well designed control equipment.

iii. The 0.015 gr/dscf level is well within the accepted capabilities of today's particulate matter control devices in the market place. Vendors typically guarantee emission levels for the particulate matter floor control devices at less than 0.015 gr/dscf and in some cases, as low as 0.005 gr/dscf.

iv. The 0.015 gr/dscf level is consistent with standards promulgated for other incinerator source categories burning municipal solid waste and medical waste, both of which are based on performance of fabric filters or electrostatic precipitators as MACT. Comparison of hazardous waste incinerator floor level to these standards is appropriate because particulate matter characteristics such as particle size distribution, loading and particulate matter type are comparable within the above three types of waste burning source categories.

v. Hazardous waste incinerators that meet the 0.015 gr/dscf particulate matter level also generally achieve semivolatile metal system removal efficiencies of over 99% and low volatile metal system removal efficiencies over 99.9%. This indicates superior particulate matter collection efficiency because these metals are controlled by controlling fine and medium-sized particulate matter.

vi. Over 50 percent of all test conditions in the data base, regardless of the type of air pollution control device used, design of the hazardous waste incinerator, or the type of waste burned, currently meet the 0.015 gr/dscf level. This includes hazardous waste incinerators with high particulate matter entrainment rates (such as fluidized bed and rotary kilns) as well as those with wastes that generate difficult to capture fine particulate matter, such as certain liquid injection facilities.

vii. Many incinerators conducted several tests to develop the most flexible operating envelope for day-to-day operations, keeping in view the existing RCRA particulate matter standard of 0.08 gr/dscf. In many test conditions, they elected to meet (and be limited to) the 0.015 gr/dscf level, although they were only required to meet a 0.08 gr/dscf standard.

Many commenters object to the use of engineering information and principles in the selection of the MACT floor level. Some consider engineering information and principles highly subjective and dependent on reviewers' interpretation of the data, while others suggest the use of accepted statistical methods for handling the data. We performed analyses based on available statistical tools for outlier analysis and variability, as discussed previously, but conclude that those approaches are not appropriate. We continue to believe that the use of engineering information and principles is a valid approach to establish the MACT floor (*i.e.*, to determine the level of performance consistently achievable by properly designed and operated floor control technology).

Some commenters object to the use of ''well-designed, operated and maintained'' MACT controls. They consider the term too vague and want specific parameters and features (*e.g.*, air to cloth ratio for fabric filters and power input for electrostatic precipitators) identified. We understand commenters' concerns but such information is simply not readily available. Further, many parameters work in relation with several others making it problematic to quantify optimum values separate from the other values. The system as a whole needs to be optimized for best control efficiency on a case-by-case basis.

Some commenters object to our justification of particulate matter achievability on the basis of vendors' claims. They contend that: (1) Vendors' claims lack quality control and are driven by an incentive for sales; (2) vendors' claims are based on normal operating conditions, not on trial burn type conditions; and (3) MACT floor should not be based on theoretical performance of state-of-the-art technology. We would agree with the comments if the vendor information were from advertising literature, but instead, our analysis was based on warranties. The financial consequences of vendors' warranties require those warranties to be conservative and based on proven performance records, both during normal operations and during trial burn conditions. In any case, we are using vendor information as corroboration, not to establish a level of performance.

In the May 1997 NODA (62 FR at 24222), we requested comments on the alternative MACT evaluation method based on defining medium and low energy venturi-scrubbers burning low ash wastes as an additional MACT control, but screening out facilities from the expanded MACT floor universe that have poor semivolatile metal system removal efficiency. The resulting MACT floor emission level under this approach would be 0.029 gr/dscf. Many commenters agree with the Agency that this technique is unacceptable because it ignores a majority (over 75 percent) of the available particulate matter data in identifying the MACT standard. This result is driven by the fact that corresponding semivolatile metal data are not available from those sources. Other commenters, however, suggest that venturi scrubbers should be designated as MACT particulate matter control. These commenters suggest that sources using venturi scrubbers are within the average of the best performing 12 percent of sources, and there is no technical basis for their exclusion. As stated above, we agree that well-designed and operated venturi scrubbers can achieve the MACT floor level of 0.015gr/dscf under some conditions (as when burning low ash wastes), but their performance is generally not comparable to that of a fabric filter, electrostatic precipitator, or ionizing wet scrubber. Thus, we conclude that sources equipped with venturi scrubbers may not be able to achieve the floor emission level in all cases, and the floor level would have to be inappropriately increased to accommodate unrestricted use of those units.

Some commenters state that we must demonstrate health or environmental benefits if the rule were to require sources to replace existing, less efficient air pollution control devices (*e.g.*, venturi scrubbers incapable of meeting the standard) with a better performing device, particularly because particulate matter is not a hazardous air pollutant under the CAA. These comments are not persuasive and are misplaced as a matter of law. The MACT floor process was established precisely to obviate such issues and to establish a minimum level of control based on performance of superior air pollution control technologies. Indeed, the chief motivation for adopting the technology-based standards to control emissions of hazardous air pollutants in the first instance was the evident failure of the very type of risk-based approach to controlling air toxics as is suggested by the commenters. (See, *e.g.*, H. Rep. No. 490, 101st Cong. 2d Sess., at 318–19.) Inherent in technology-based standard setting, of course, is the possibility that some technologies will have to be replaced if they cannot achieve the same level of performance as the best performing technologies. Finally, with regard to the commenters' points regarding particulate matter not being a hazardous air pollutant, we explain

above why particulate matter is a valid surrogate for certain hazardous air pollutants, and can be used as a means of controlling hazardous air pollutant emissions. In addition, the legislative history appears to contemplate regulation of particulate matter as part of the MACT process. (See S. Rep. No. 228, 101st Cong. 1st Sess., at 170.[98])

We do not consider cost in selecting MACT floor levels. Nevertheless, for purposes of administrative compliance with the Regulatory Flexibility Act and various Executive Orders, we estimate the cost burden on the hazardous waste incinerator universe to achieve compliance. Approximately 38 percent of hazardous waste incinerators currently meet the floor level of 0.015 gr/dscf. The annualized cost for the remaining 115 incinerators to meet the floor level, assuming no market exits, is estimated to be $17.4 million. Nonenumerated metals and particulate matter emissions will be reduced nationally by 5.1 Mg/yr and 1345 Mg/yr, respectively, or over 50 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the NPRM, we proposed a beyond-the-floor emission level of 69 mg/dscm (0.030 gr/dscf) and solicited comment on an alternative beyond-the-floor emission level of 34 mg/dscm (0.015 gr/dscf) based on improved particulate matter control. (61 FR at 17383.) In the May 1997 NODA, we concluded that a beyond-the-floor standard may not be warranted due to significant cost-effectiveness considerations. (62 FR at 24222.)

In the final rule, we considered more stringent beyond-the-floor controls that would provide additional reductions of particulate matter emissions using fabric filters, electrostatic precipitators, and wet ionizing scrubbers that are designed, operated, and maintained to have improved collection efficiency. We considered a beyond-the-floor level of 16 mg/dscm (0.007 gr/dscf), approximately one-half the floor emission level, for existing incinerators based on improved particulate matter control. We then determined the cost of achieving this reduction in particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The national incremental annualized compliance cost for incinerators to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $6.8 million for the entire hazardous waste incinerator industry and would provide an incremental reduction in nonenumerated metals emissions nationally beyond the MACT floor controls of 1.7 Mg/yr. Based on these costs of approximately $4.1 million per additional Mg of nonenumerated metals emissions removed, we conclude that this beyond-the-floor option for incinerators is not acceptably cost-effective nor otherwise justified. Therefore, we do not adopt this beyond-the-floor standard. Poor cost-effectiveness would be particularly unacceptable here considering that these metals also have relatively low toxicity. Thus, the particulate matter standard for new incinerators is 34 mg/dscm. Therefore, the cost-effectiveness threshold we would select would be less than for more toxic pollutants such as dioxin, mercury or other metals.

c. What Is the MACT Floor for New Sources? We proposed a floor level of 0.030 gr/dscf for new sources based on the best performing source in the data base, which used a fabric filter with an air-to-cloth ratio of 3.8 acfm/ft^2. In the May 1997 NODA, we reevaluated the particulate matter floor level and indicated that floor control for existing sources would also appear to be appropriate for new sources. We are finalizing the approach discussed in the May 1997 NODA whereby floor control is a well-designed, operated, and maintained fabric filter, electrostatic precipitator, or ionizing wet scrubber, and the floor emission level is 0.015 gr/dscf.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls that would provide additional reductions of particulate matter emissions using fabric filters, electrostatic precipitators, and wet ionizing scrubbers that are designed, operated, and maintained to have improved collection efficiency. We considered a beyond-the-floor level of 16 mg/dscm (0.007 gr/dscf), approximately one-half the emissions level for existing sources, for new incinerators based on improved particulate matter control. For analysis purposes, improved particulate matter control assumes the use of higher quality fabric filter bag material. We then determined the cost of achieving this reduction in particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The incremental annualized compliance cost for one new large incinerator to meet this beyond-the-floor level, rather than comply with floor controls, would be approximately $39,000 and would provide an incremental reduction in nonenumerated metals emissions of approximately 0.05 Mg/yr.[99] For a new small incinerator, the incremental annualized compliance cost would be approximately $7,500 and would provide an incremental reduction in nonenumerated metals emissions of approximately 0.008 Mg/yr. Based on these costs of approximately $0.8–1.0 million per additional Mg of nonenumerated metals removed, we conclude that a beyond-the-floor standard of 16 mg/dscm is not warranted due to the high cost of compliance and relatively small nonenumerated metals emission reductions. Poor cost-effectiveness would be particularly unacceptable here considering that these metals also have relatively low toxicity. Thus, the particulate matter standard for new incinerators is 34 mg/dscm.

5. What Are the Standards for Semivolatile Metals?

Semivolatile metals are comprised of lead and cadmium. We establish standards which limit semivolatile metal emissions to 240 µg/dscm for existing sources and 24 µg/dscm for new sources. We discuss below the rationale for adopting these standards.

a. What Is the MACT Floor for Existing Sources? As discussed in Part Four, Section V of the preamble, floor control for semivolatile metals is hazardous waste feedrate control of semivolatile metals plus MACT floor particulate matter control. We use the aggregate feedrate approach to define the level of semivolatile metal feedrate control. We have aggregate feedrate data for 20 test conditions from nine hazardous waste incinerators that are using MACT floor control for particulate matter. The semivolatile metal feedrate levels, expressed as maximum theoretical emission concentrations, for these sources range from 100 µg/dscm to 1.5 g/dscm while the semivolatile emissions range from 1 to 6,000 µg/dscm. The MACT-defining maximum theoretical emission concentration is

[98] Control of particulate matter also helps assure that the standards are sufficiently protective to make RCRA regulation of these sources' air emissions unnecessary (except potentially on a site-specific basis through the omnibus permitting process). See Technical Support Document on Risk Assessment.

[99] Based on the data available, the average emissions in sum of the five nonenumerated metals from incinerators using MACT particulate matter control is approximately 229 µg/dscm. To estimate emission reductions of the nonenumerated metals for specific test conditions, we assume a linear relationship between a reduction in particulate matter and these metals.

5,300 μg/dscm. Upon expanding the MACT pool, only the highest emissions test condition of 6,000 μg/dscm was screened out because the semivolatile metal maximum theoretical emission concentration for this test condition was higher than the MACT-defining maximum theoretical emission concentration. The highest emission test condition in the remaining expanded MACT pool identifies a MACT floor emission level of 240 μg/dscm.

We originally proposed a semivolatile metal floor standard of 270 μg/dscm based on semivolatile metal feedrate control. We subsequently refined the emissions data base and reevaluated the floor methodology, and discussed in the May 1997 NODA a semivolatile metal floor level of 100 μg/dscm. Commenters express serious concerns with the May 1997 NODA approach in two areas. First, they note that the MACT-defining best performing sources have very low emissions, not entirely due to the performance of MACT control, but also due to atypically low semivolatile metal feedrates. Second, they object to our use of a ''breakpoint'' analysis to screen out the outliers from the expanded MACT pool (which was already small due to the screening process to define the feedrate level representative of MACT control). Our final methodology makes adjustments to address these concerns. Under the aggregate feedrate approach, sources with atypically low feedrates of semivolatile metals would not necessarily drive the floor control feedrate level. This is because the aggregate feedrate approach identifies as the best performing sources (relative to feedrate control) those with low feedrates in the aggregate for all metals and chlorine. In addition, the floor methodology no longer uses the breakpoint approach to identify sources not using floor control. These issues are discussed above in detail in Part Four, Section V, of the preamble.

Although cost-effectiveness of floor emission levels is not a factor in defining floor control or emission levels, we have estimated compliance costs and emissions reductions at the floor for administrative purposes. Approximately 66 percent of sources currently meet the semivolatile metal floor level of 240 μg/dscm. The annualized cost for the remaining 64 incinerators to meet the floor level, assuming no market exits, is estimated to be $1.8 million. Semivolatile metal emissions will be reduced nationally by 55.9 Mg per year from the baseline emissions level of 58.5 Mg per year, a reduction of 95.5%.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered more stringent semivolatile metal feedrate control as a beyond-the-floor control to provide additional reductions in emissions. Cost effectiveness considerations would likely come into play, however, and suggest that a beyond-the-floor standard is not warranted. Therefore, we conclude that a beyond-the-floor standard for semivolatile metals for existing sources is not appropriate. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

c. What Is the MACT Floor for New Sources? Floor control for new sources is: (1) The level of semivolatile metal feedrate control used by the source with the lowest aggregate feedrate for all metals and chlorine;[100] and (2) use of MACT floor particulate matter control for new sources (*i.e.*, a fabric filter, electrostatic precipitator, or wet ionizing scrubber achieving a particulate matter emission level of 0.015 gr/dscf). Three sources in our data base are currently using the floor control selected for all new sources and are achieving semivolatile emissions ranging from 2 μg/dscm to 24 μg/dscm. To ensure that the floor level is achievable by all sources using floor control, we are establishing the floor level for semivolatile metals for new sources at 24 μg/dscm.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls (*i.e.*, a more restrictive semivolatile metal feedrate) to provide additional reduction in emissions. We determined that cost-effectiveness considerations would likely be unacceptable due to the relatively low concentrations achieved at the floor. This suggests that a beyond-the-floor standard is not warranted. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

6. What Are the Standards for Low Volatile Metals?

Low volatile metals are comprised of arsenic, beryllium, and total chromium. We establish standards that limit emissions of these metals to 97 μg/dscm for both existing and new incinerators. We discuss below the rationale for adopting these standards.

a. What Is the MACT Floor for Existing Sources? We are using the same approach for low volatile metals as we did for semivolatile metals to define floor control. Floor control for low volatile metals is use of particulate matter floor control and control of the feedrate of low volatile metals to a level identified by the aggregate feedrate approach.

The low volatile metal feedrates for sources using particulate matter floor control range from 300 μg/dscm to 1.4 g/dscm when expressed as maximum theoretical emission concentrations. Emission levels for these sources range from 1 to 803 μg/dscm. Approximately 60 percent of sources using particulate matter floor control have low volatile metal feedrates below the MACT floor feedrate—24,000 μg/dscm, expressed as a maximum theoretical emission concentration.

Upon expanding the MACT pool, the source using floor control with the highest emissions is achieving an emission level of 97 μg/dscm. Accordingly, we are establishing the floor level for low volatile metals for existing sources at 97 μg/dscm to ensure that the floor level is achievable by all sources using floor control.

We identified a low volatile metal floor level of 210 μg/dscm in the April 1996 proposal. The refined data analysis in the May 1997 NODA, based on the revised data base, reduced the low volatile metal floor level to 55 μg/dscm. As with semivolatile metals, commenters express serious concerns with the May 1997 NODA approach, including selection of the breakpoint ''outlier'' screening approach and use of hazardous waste incinerator data with atypically low feedrates for low volatile metals. We acknowledge those concerns and adjusted our methodology accordingly. See discussions above in Part Four, Section V.

We estimated compliance costs to the hazardous waste incinerator universe for administrative purposes. Approximately 63 percent of incinerators currently meet the 97 μg/dscm floor level. The annualized cost for the remaining 69 incinerators to meet the floor level, assuming no market exits, is estimated to be $1.9 million, and would reduce low volatile metal emissions nationally by 6.9 Mg per year from the baseline emissions level of 8 Mg per year.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered more stringent beyond-the-floor controls (*i.e.*, a more restrictive low volatile metal feedrate) to provide additional reduction in emissions. Due to the relatively low concentrations achieved at the floor, we determined that cost-effectiveness considerations would likely be unacceptable. Therefore, we conclude that a beyond-the-floor standard for low volatile metals for existing sources is not

[100] *I.e.*, a semivolatile metal feedrate equivalent to a maximum theoretical emission concentration of 3,500 μg/dscm.

appropriate. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

c. What Is the MACT Floor for New Sources? We identified a floor level of 260 µg/dscm for new sources at proposal based on the best performing source in the data base. That source uses a venturi scrubber with a low volatile metal feedrate equivalent to a maximum theoretical emission concentration of 1,000 µg/dscm. Our reevaluation of the data base in the May 1997 NODA identified a floor level of 55 µg/dscm based on use of floor control for particulate matter and feedrate control of low volatile metals. Other than the comments on the two issues of low feedrate and the inappropriate use of a breakpoint analysis discussed above, no other significant comments challenged this floor level.

Floor control for new sources is the same as discussed in the May 1997 NODA (*i.e.*, use of particulate matter floor control and feedrate control of low volatile metals), except the floor feedrate level under the aggregate feedrate approach used for today's final rule is 13,000 µg/dscm. Upon expanding the MACT pool, the source using floor control with the highest emissions is achieving an emission level of 97 µg/dscm.[101] Accordingly, we are establishing the floor level for low volatile metals for new sources at 97 µg/dscm to ensure that the floor level is achievable by all sources using floor control.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls (*i.e.*, a more restrictive low volatile metal feedrate) to provide additional reduction in emissions. Because of the relatively low concentrations achieved, we determined that cost-effectiveness considerations would likely be unacceptable. Therefore, we conclude that a beyond-the-floor standard for low volatile metals for new sources is not appropriate. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

[101] The emission level for new sources achieving a feedrate control of 13,000 µg/dscm (expressed as a maximum theoretical emission concentration) is the same as the emission level for existing sources achieving a feedrate control of 24,000 µg/dscm because sources feeding low volatile metals in the range of 13,000 to 24,000 µg/dscm have emission levels at or below 97 µg/dscm. Although these sources feel low volatile metals at higher levels than the single best feedrate-controlled source, their emission control devices apparently are more efficient. Thus, they achieved lower emissions than the single best feedrate-controlled source.

7. What Are the Standards for Hydrochloric Acid and Chlorine Gas?

We establish standards for hydrochloric acid and chlorine gas, combined, for existing and new incinerators of 77 and 21 ppmv respectively. We discuss below the rationale for adopting these standards.

a. What Is the MACT Floor for Existing Sources? Almost all hazardous waste incinerators currently use some type of add-on stack gas wet scrubbing system, in combination with control of the feedrate of chlorine, to control emissions of hydrochloric acid and chlorine gas. A few sources use dry or semi-dry scrubbing, alone or in combination with wet scrubbing, while a few rely upon feedrate control only. Wet scrubbing consistently provides a system removal efficiency of over 99 percent for various scrubber types and configurations. Current RCRA regulations require 99% removal efficiency and most sources are achieving greater than 99.9 percent removal efficiency. Accordingly, floor control is defined as wet scrubbing achieving a system removal efficiency of 99 percent or greater combined with feedrate control of chlorine.

The floor feedrate control level for chlorine is 22 µg/dscm, expressed as a maximum theoretical emission concentration, based on the aggregate feedrate approach. The source in the expanded MACT pool (*i.e.*, all sources using floor control) with the highest emission levels of hydrogen chloride and chlorine gas is achieving an emission level of 77 ppmv. Thus, MACT floor for existing sources is 77 ppmv.

At proposal, we also defined floor control as wet scrubbing combined with feedrate control of chlorine. We proposed a floor emission level of 280 ppmv based on a chlorine feedrate control level of 21 µg/dscm, expressed as a maximum theoretical emission concentration. The best performing sources relative to emission levels all use wet scrubbing and feed chlorine at that feedrate or lower. We identified a floor level of 280 ppmv based on all sources in our data base using floor control and after applying a statistically-derived emissions variability factor. In the May 1997 NODA, we again defined floor control as wet (or dry) scrubbing with feedrate control of chlorine. We discussed a floor emission level of 75 ppmv based on the revised data base and break-point floor methodology. Rather than using a break-point analysis in the final rule, we use a floor methodology that identifies floor control as an aggregate chlorine feedrate combined with scrubbing that achieves a removal efficiency of at least 99 percent.

We estimated compliance costs to the hazardous waste incinerator universe for administrative purposes. Approximately 70 percent of incinerators currently meet the hydrochloric acid and chlorine gas floor level of 77 ppmv. The annualized cost for the remaining 57 incinerators to meet that level, assuming no market exits, is estimated to be $4.75 million and would reduce emissions of hydrochloric acid and chlorine gas nationally by 2,670 Mg per year from the baseline emissions level of 3410 Mg per year, a reduction of 78%.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered more stringent beyond-the-floor controls to provide additional reduction in emissions. Due to the relatively low concentrations achieved at the floor, we determined that cost-effectiveness considerations would likely be unacceptable. Therefore, we conclude that a beyond-the-floor standard for hydrochloric acid and chlorine gas for existing sources is not appropriate. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

c. What Is the MACT Floor for New Sources? We identified a floor level of 280 ppmv at proposal based on the best performing source in the data base. That source uses wet scrubbing and a chlorine feedrate of 17 µg/dscm, expressed as a maximum theoretical emission concentration. Our reevaluation of the revised data base in the May 1997 NODA defined a floor level of 75 ppmv. Based on the aggregate feedrate approach used for today's final rule, we are establishing a floor level of 21 ppmv, based on a chlorine feedrate of 4.7 µg/dscm expressed as a maximum theoretical emission concentration.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls to provide additional reduction in emissions. Due to the relatively low concentrations achieved at the floor, we determined that cost-effectiveness considerations would likely be unacceptable. Therefore, we conclude that a beyond-the-floor standard for hydrochloric acid and chlorine gas for new sources is not appropriate. We note that a beyond-the-floor standard is not needed to meet our RCRA protectiveness mandate.

8. What Are the Standards for Carbon Monoxide?

We use carbon monoxide as a surrogate for organic hazardous air pollutants. Low carbon monoxide

concentrations in stack gas are an indicator of good control of organic hazardous air pollutants and are achieved by operating under good combustion practices.

We establish carbon monoxide standards of 100 ppmv for both existing and new sources based on the rationale discussed below. Sources have the option to comply with either the carbon monoxide or the hydrocarbon emission standard. Sources that elect to comply with the carbon monoxide standard must also document compliance with the hydrocarbon standard during the performance test to ensure control of organic hazardous air pollutants. See discussion in Part Four, Section IV.B.

a. What Is the MACT Floor for Existing Sources? As proposed, floor control for existing sources is operating under good combustion practices (*e.g.*, providing adequate excess oxygen; providing adequate fuel (waste) and air mixing; maintaining high temperatures and adequate combustion gas residence time at those temperatures).[102] Given that there are many interdependent parameters that affect combustion efficiency and thus carbon monoxide emissions, we were not able to quantify ''good combustion practices.''

We are identifying a floor level of 100 ppmv on an hourly rolling average, as proposed, because it is being achieved by sources using good combustion practices. More than 80 percent of test conditions in our data base have carbon monoxide levels below 100 ppmv, and more than 60 percent have levels below 20 ppmv. Of approximately 20 test conditions with carbon monoxide levels exceeding 100 ppmv, we know the characteristics of many of these sources are not representative of good combustion practices (*e.g.*, use of rotary kilns without afterburners; liquid injection incinerators with rapid combustion gas quenching). In addition, we currently limit carbon monoxide concentrations for hazardous waste burning boilers and industrial furnaces to 100 ppmv to ensure good combustion conditions and control of organic toxic compounds. Finally, we have established carbon monoxide limits in the range of 50 to 150 ppmv on other waste incineration sources (*i.e.*, municipal waste combustors, medical waste incinerators) to ensure good combustion conditions. We are not aware of reasons why it may be more difficult for a hazardous waste incinerator to achieve carbon monoxide levels of 100 ppmv.

We estimated compliance costs to the hazardous waste incinerator universe for administrative purposes. Because carbon monoxide emissions from these sources are already regulated under RCRA, approximately 97 percent of incinerators currently meet the floor level of 100 ppmv. The annualized cost for the remaining six incinerators to meet the floor level, assuming no market exits, is estimated to be $0.9 million and would reduce carbon monoxide emissions nationally by 45 Mg per year from the baseline emissions level of 9170 Mg per year.[103] Although we cannot quantify a corresponding reduction of organic hazardous air pollutant emissions, we estimate these reductions would be significant based on the carbon monoxide reductions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered more stringent beyond-the-floor controls (*i.e.*, better combustion practices resulting in lower carbon monoxide levels) to provide additional reduction in emissions. Although it is difficult to quantify the reduction in emissions of organic hazardous air pollutants that would be associated with a lower carbon monoxide limit, we concluded that cost-effectiveness considerations would likely come into play, and suggest that a beyond-the-floor standard is not warranted. Therefore, we conclude that a beyond-the-floor standard for carbon monoxide for existing sources is not appropriate. We note that, although control of carbon monoxide (or hydrocarbon) is not an absolute guarantee that nondioxin/furan products of incomplete combustion will not be emitted at levels of concern, this problem (where it may exist) can be addressed through the RCRA omnibus permitting process.

c. What Is the MACT Floor for New Sources? At proposal and in the May 1997 NODA, we stated that operating under good combustion practices defines MACT floor control for new (and existing) sources,[104] and the preponderance of data indicate that a floor level of 100 ppmv over an hourly rolling average is readily achievable. For reasons set forth in the proposal, and absent data to the contrary, we conclude that this floor level is appropriate.

d. What Are Our Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls (*i.e.*, better combustion practices resulting in lower carbon monoxide levels) to provide additional reduction in emissions. For the reasons discussed above in the context of beyond-the-floor controls for existing sources, however, we conclude that a beyond-the-floor standard for carbon monoxide for new sources is not appropriate.

9. What Are the Standards for Hydrocarbon?

Hydrocarbon concentrations in stack gas are a direct surrogate for emissions of organic hazardous pollutants. We establish hydrocarbon standards of 10 ppmv for both existing and new sources based on the rationale discussed below. Sources have the option to comply with either the carbon monoxide or the hydrocarbon emission standard. Sources that elect to comply with the carbon monoxide standard, however, must nonetheless document compliance with the hydrocarbon standard during the comprehensive performance test.

a. What Is the MACT Floor for Existing Sources? We proposed a hydrocarbon emission standard of 12 ppmv[105] based on good combustion practices, but revised it in the May 1997 NODA to 10 ppmv based on refinements of analysis and the corrected data base.

As proposed, floor control for existing sources is operating under good combustion practices (*e.g.*, providing adequate excess oxygen; providing adequate fuel (waste) and air mixing; maintaining high temperatures and adequate combustion gas residence time at those temperatures). Given that there are many interdependent parameters that affect combustion efficiency and thus hydrocarbon emissions, we are not able to quantify good combustion practices.

We are identifying a floor level for the final rule of 10 ppmv on an hourly rolling average because it is being achieved using good combustion practices. More than 85 percent of test conditions in our data base have hydrocarbon levels below 10 ppmv, and nearly 75 percent have levels below 5 ppmv. Although 13 test conditions in our data base representing 7 sources have hydrocarbon levels higher than 10 ppmv, we conclude that these sources

[102] USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[103] As discussed previously in the text, you have the option of complying with the hydrocarbon emission standard rather than the carbon monoxide standard. This is because carbon monoxide is a conservative indicator of the potential for emissions of organic compounds while hydrocarbon concentrations in stack gas are a direct measure of emissions of organic compounds.

[104] Because we cannot quantify good combustion practices, floor control for the single best controlled source is the same as for existing sources (*i.e.*, that combination of design, operation, and maintenance that achieves good combustion as evidenced by carbon monoxide levels of 100 ppmv or less on an hourly rolling average).

[105] Based on an hourly rolling average, reported as propane, corrected to 7 percent oxygen, dry basis.

are not operating under good combustion practices. For example, one source is a rotary kiln without an afterburner. Another source is a fluidized bed type incinerator that operates at lower than typical combustion temperatures without an afterburner while another source is operating at high carbon monoxide levels, indicative of poor combustion efficiency.[106]

Some commenters on the May 1997 NODA object to the 10 ppmv level and suggest adopting a level of 20 ppmv based on the BIF rule (§ 266.104(c)), and an earlier hazardous waste incinerator proposal (55 FR 17862 (April 27, 1990)). These commenters cite sufficient protectiveness at the 20 ppmv level. We conclude that this comment is not on point because the MACT standards are technology rather than risk-based. The MACT standards must reflect the level of control that is not less stringent than the level of control achieved by the best performing sources. Because hazardous waste incinerators are readily achieving a hydrocarbon level of 10 ppmv using good combustion practices, that floor level is appropriate.

Some commenters also object to the requirement to use heated flame ionization hydrocarbon detectors[107] in hazardous waste incinerators that use wet scrubbers. The commenters state that these sources have a very high moisture content in the flue gas that hinders proper functioning of the specified hydrocarbon detectors. We agree that hydrocarbon monitors may be hindered in these situations. For this and other reasons (*e.g.*, some sources can have high carbon monoxide but low hydrocarbon levels), the final rule gives sources the option of: (1) Continuous hydrocarbon monitoring; or (2) continuous carbon monoxide monitoring and demonstration of compliance with the hydrocarbon standard only during the performance test.

We estimated compliance costs to the hazardous waste incinerator universe for administrative purposes. Approximately 97 percent of incinerators currently meet the hydrocarbon floor level of 10 ppmv. The annualized cost for the remaining six incinerators to meet the floor level, assuming no market exits, is estimated to be $0.35 million, and would reduce hydrocarbon emissions nationally by 28 Mg per year from the baseline emissions level of 292 Mg per year. Although the corresponding reduction of organic hazardous air pollutant emissions cannot be quantified, these reductions are qualitatively assessed as significant.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered more stringent beyond-the-floor controls (*i.e.*, better combustion practices resulting in lower hydrocarbon levels) to provide additional reduction in emissions. Although it is difficult to quantify the reduction in emissions of organic hazardous air pollutants that would be associated with a lower hydrocarbon limit, cost-effectiveness considerations would likely come into play, however, and suggest that a beyond-the-floor standard is not warranted. Therefore, we conclude that a beyond-the-floor standard for hydrocarbon emissions for existing sources is not appropriate. We note further that, although control of hydrocarbon emissions is not an absolute guarantee that nondioxin products of incomplete combustion will not be emitted at levels of concern, this problem (where it may exist) can be addressed through the RCRA omnibus permitting process.

c. What Is the MACT Floor for New Sources? At proposal and in the May 1997 NODA, we stated that operation under good combustion practices at new (and existing) hazardous waste incinerators defines the MACT control.[108] As discussed above, sources using good combustion practices are achieving hydrocarbon levels of 10 ppmv or below. Comments on this subject were minor and did not identify any problems in achieving the 10 ppmv level by new sources. Thus, we conclude that a floor level of 10 ppmv on hourly rolling average is appropriate for new sources.

d. What Are Beyond-the-Floor Considerations for New Sources? We considered more stringent beyond-the-floor controls (*i.e.*, better combustion practices) to provide additional reduction in emissions. For the reasons discussed above in the context of beyond-the-floor controls for existing sources, however, we conclude that a beyond-the-floor standard for hydrocarbons for new sources is not appropriate.

10. What Are the Standards for Destruction and Removal Efficiency?

We establish a destruction and removal efficiency (DRE) standard for existing and new incinerators to control emissions of organic hazardous air pollutants other than dioxins and furans. Dioxins and furans are controlled by separate emission standards. See discussion in Part Four, Section IV.A. The DRE standard is necessary, as previously discussed, to complement the carbon monoxide and hydrocarbon emission standards, which also control these hazardous air pollutants.

The standard requires 99.99 percent DRE for each principal organic hazardous constituent (POHC), except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. These wastes are listed as—F020, F021, F022, F023, F026, and F027—RCRA hazardous wastes under Part 261 because they contain high concentrations of dioxins.

a. What Is the MACT Floor for Existing Sources? Existing sources are currently subject to DRE standards under § 264.342 and § 264.343(a) that require 99.99 percent DRE for each POHC, except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. Accordingly, these standards represent MACT floor. Since all hazardous waste incinerators are currently subject to these DRE standards, they represent floor control, *i.e.*, greater than 12 percent of existing sources are achieving these controls.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? Beyond-the-floor control would be a requirement to achieve a higher percentage DRE, for example, 99.9999 percent DRE for POHCs for all hazardous wastes. A higher DRE could be achieved by improving the design, operation, or maintenance of the combustion system to achieve greater combustion efficiency.

Sources will not incur costs to achieve the 99.99 percent DRE floor because it is an existing RCRA standard. A substantial number of existing incinerators are not likely to be routinely achieving 99.999 percent DRE, however, and most are not likely to be achieving 99.9999 percent DRE. Improvements in combustion efficiency will be required to meet these beyond-the-floor DREs. Improved combustion efficiency is accomplished through better mixing, higher temperatures, and longer residence times. As a practical matter, most combustors are mixing-limited. Thus, improved mixing is

[106] USEPA, ''Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[107] See Performance Specification 8A, appendix B, part 60, ''Specifications and test procedures for carbon monoxide and oxygen continuous monitoring systems in stationary sources.''

[108] Because we cannot quantify good combustion practices, floor control for the single best controlled soruce is the same as for existing sources (*i.e.*, that combination of design, operation, and maintenance that achieves good combustion as evidenced by hydrocarbon levels of 10 ppmv or less on an hourly rolling average).

necessary for improved DREs. For a less-than-optimum burner, a certain amount of improvement may typically be accomplished by minor, relatively inexpensive combustor modifications—burner tuning operations such as a change in burner angle or an adjustment of swirl—to enhance mixing on the macro-scale. To achieve higher and higher DREs, however, improved mixing on the micro-scale may be necessary requiring significant, energy intensive and expensive modifications such as burner redesign and higher combustion air pressures. In addition, measurement of such DREs may require increased spiking of POHCs and more sensitive stack sampling and analysis methods at added expense.

Although we have not quantified the cost-effectiveness of a beyond-the-floor DRE standard, we do not believe that it would be cost-effective. For reasons discussed above, we believe that the cost of achieving each successive order-of-magnitude improvement in DRE will be at least constant, and more likely increasing. Emissions reductions diminish substantially, however, with each order of magnitude improvement in DRE. For example, if a source were to emit 100 gm/hr of organic hazardous air pollutants assuming zero DRE, it would emit 10 gm/hr at 90 percent DRE, 1 gm/hr at 99 percent DRE, 0.1 gm/hr at 99.9 percent DRE, 0.01 gm/hr at 99.99 percent DRE, and 0.001 gm/hr at 99.999 percent DRE. If the cost to achieve each order of magnitude improvement in DRE is roughly constant, the cost-effectiveness of DRE decreases with each order of magnitude improvement in DRE. Consequently, we conclude that this relationship between compliance cost and diminished emissions reductions associated with a more stringent DRE standard suggests that a beyond-the-floor standard is not warranted.

c. What Is the MACT Floor for New Sources? The single best controlled source, and all other hazardous waste incinerators, are subject to the existing RCRA DRE standard under § 264.342 and § 264.343(a). Accordingly, we adopt this standard as the MACT floor for new sources.

d. What Are Our Beyond-the-Floor Considerations for New Sources? As discussed above, although we have not quantified the cost-effectiveness of a more stringent DRE standard, diminishing emissions reductions with each order of magnitude improvement in DRE suggests that cost-effectiveness considerations would likely come into play. We conclude that a beyond-the-floor standard is not warranted.

VII. What Are the Standards for Hazardous Waste Burning Cement Kilns?

A. To Which Cement Kilns Do Today's Standards Apply?

The standards promulgated today apply to each existing, reconstructed, and newly constructed Portland cement manufacturing kiln that burns hazardous waste. These standards apply to all hazardous waste burning cement kilns (both major source and area source cement plants). Portland cement kilns that do not engage in hazardous waste burning operations are not subject to this NESHAP. However, these hazardous waste burning kilns would be subject to the NESHAP for other sources of hazardous air pollutants at the facility (*e.g.*, clinker cooler stack) that we finalized in June 1999.[109]

B. How Did EPA Initially Classify Cement Kilns?

1. What Is the Basis for a Separate Class Based on Hazardous Waste Burning?

Portland cement manufacturing is one of the initial 174 categories of major and area sources of hazardous air pollutants listed pursuant to section 112(c)(1) for which section 112(d) standards are to be established.[110] We divided the Portland cement manufacturing source category into two different classes based on whether the cement kiln combusts hazardous waste. This action was taken for two principal reasons: If hazardous wastes are burned in the kiln, emissions of hazardous air pollutants can be different for the two types of kilns in terms of both types and concentrations of hazardous air pollutants emitted, and metals and chlorine emissions are controlled in a significantly different manner.

A comparison of metals levels in coal and in hazardous waste fuel burned in lieu of coal on a heat input basis reveals that hazardous waste frequently contains higher concentrations of hazardous air pollutant metals (*i.e.*, mercury, semivolatile metals, low volatile metals) than coal. Hazardous waste contains higher levels of semivolatile metals than coal by more than an order of magnitude at every cement kiln in our data base.[111] In addition, coal concentrations of mercury and low volatile metals were less than hazardous waste by approximately an order of magnitude at every facility except one. Thus, a cement kiln feeding a hazardous waste fuel is likely to emit more metal hazardous air pollutants than a nonhazardous waste burning cement kiln. Given this difference in emissions characteristics, we divided the Portland cement manufacturing source category into two classes based on whether hazardous waste is burned in the cement kiln.

Today's rule does not establish hazardous air pollutant emissions limits for other hazardous air pollutant-emitting sources at a hazardous waste burning cement plant. These other sources of hazardous air pollutants may include materials handling operations, conveyor system transfer points, raw material dryers, and clinker coolers. Emissions from these sources are subject to the requirements promulgated in the June 14, 1999 Portland cement manufacturing NESHAP. See 64 FR 31898. These standards are applicable to these other sources of hazardous air pollutants at all Portland cement plants, both for nonhazardous waste burners and hazardous waste burners.

In addition, this regulation does not establish standards for cement kiln dust management facilities (*e.g.*, cement kiln dust piles or landfills). We are developing cement kiln dust storage and disposal requirements in a separate rulemaking.

2. What Is the Basis for Differences in Standards for Hazardous Waste and Nonhazardous Waste Burning Cement Kilns?

Today's final standards for hazardous waste burning cement kilns are identical in some respects to those finalized for nonhazardous waste burning cement kilns on June 14, 1999. The standards differ, however, in several important aspects. A comparison of the major features of the two sets of standards and the basis for major differences is discussed below.

a. How Does the Regulation of Area Sources Differ? As discussed earlier, this rule makes a positive area source finding under section 112(c)(3) of the CAA (*i.e.*, a finding that hazardous air pollutant emissions from an area source can pose potential risk to human health and the environment) for existing hazardous waste burning cement kilns and subjects area sources to the same standards that apply to major sources. (See Part Three, Section III.B of today's preamble.) For nonhazardous waste burning cement kilns, however, we regulate area sources under authority of

[109] On June 14, 1999, we promulgated regulations for kiln stack emissions for nonhazardous waste burning cement kilns and other sources of hazardous air pollutants at all Portland manufacturing plants. (See 64 FR 31898.)

[110] EPA published an initial list of 174 categories of area and major sources in the **Federal Register** on July 16, 1992. (See 57 FR at 31576.)

[111] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

section 112(c)(6) of the CAA, and so apply MACT standards only to the section 112(c)(6) hazardous air pollutants emitted from such sources.

The positive finding for hazardous waste burning cement kilns is based on several factors and, in particular, on concern about potential health risk from emissions of mercury and nondioxin/furan organic hazardous air pollutants which are products of incomplete combustion.

However, we do not have this same level of concern with hazardous air pollutant emissions from nonhazardous waste burning cement kilns located at area source cement plants, and so did not make a positive area source finding. As discussed above, mercury emissions from hazardous waste burning cement kilns are generally higher than those from nonhazardous waste burning cement kilns. Also, nondioxin and nonfuran organic hazardous air pollutants emitted from hazardous waste burning cement kilns have the potential to be greater than those from nonhazardous waste burning cement kilns because hazardous waste can contain high concentrations of a wide-variety of organic hazardous air pollutants. In addition, some hazardous waste burning cement kilns feed containers of hazardous waste at locations (*e.g.*, midkiln, raw material end of the kiln) other than the normal coal combustion zone. If such firing systems are poorly designed, operated, or maintained, emissions of nondioxin and furan organic hazardous air pollutants could be substantial (and, again, significantly greater than comparable emissions from nonhazardous waste Portland cement plants). Finally, hazardous air pollutant emissions from nonhazardous waste burning cement kilns currently are not regulated uniformly under another statute as is the case for hazardous waste burning cement kilns which affects which pollutants are controlled at the floor for each class.

Under the June 1999 final rule, existing and new nonhazardous waste burning cement kilns at area source plants are subject to dioxin and furan emission standards, and a hydrocarbon [112] standard for new nonhazardous waste burning cement kilns that are area sources. These standards are promulgated under the authority of section 112(c)(6). That section requires the Agency to establish MACT standards for source categories contributing significantly in the aggregate to emissions of identified, particularly hazardous air pollutants. The MACT process was also applied to the control of mercury, although the result was a standard of no control.

b. How Do the Emission Standards Differ? The dioxin, furan and particulate matter emission standards for nonhazardous waste burning cement kilns are identical to today's final standard for hazardous waste burning cement kilns. The standards for both classes of kilns are floor standards and are identical because hazardous waste burning is not likely to affect emissions of either dioxin/furan [113] or particulate matter. We also conclude that beyond-the-floor standards for these pollutants would not be cost-effective for either class of cement kilns.

Under today's rule, hazardous waste burning cement kilns are subject to emission standards for mercury, semivolatile metals, low volatile metals, and hydrochloric acid/chlorine gas, but we did not finalize such standards for nonhazardous waste burning cement kilns. Currently, emissions of these hazardous air pollutants from hazardous waste burning cement kilns are regulated under RCRA. Therefore, we could establish floor levels for each pollutant under the CAA. These hazardous air pollutants, however, currently are not controlled for nonhazardous waste burning cement kilns and floor levels would be uncontrolled levels (*i.e.*, the highest emissions currently achieved).[114] We considered beyond-the-floor controls and emission standards for mercury and hydrochloric acid for nonhazardous waste burning cement kilns, but conclude that beyond-the-floor standards are not cost-effective, especially considering the lower rates of current emissions for nonhazardous waste burning plants.

Finally, under today's rule, hazardous waste burning cement kilns are subject to emission limits on carbon monoxide and hydrocarbon and a destruction and removal efficiency standard to control nondioxin/furan organic hazardous air pollutants. We identified these controls as floor controls because carbon monoxide and hydrocarbon emissions are controlled for these sources under RCRA regulations, as is destruction and removal efficiency.[115] For nonhazardous waste burning cement kilns, carbon monoxide and hydrocarbon emissions currently are not controlled, and the destruction and removal efficiency standard, established under RCRA, does not apply. Therefore, carbon monoxide, hydrocarbon control and the destruction and removal efficiency standard are not floor controls for this second group of cement kilns. We considered beyond-the-floor controls for hydrocarbon from nonhazardous waste burning cement kilns and determined that beyond-the-floor controls for existing sources are not cost-effective. The basis of this conclusion is discussed in the proposed rule for nonhazardous waste burning cement kilns (see 63 FR at 14202). We proposed and finalized, however, a hydrocarbon emission standard for new source nonhazardous waste cement kilns based on feeding raw materials without an excessive organic content.[116] See 63 FR at 14202 and 64 FR 31898.

We did not consider a destruction and removal efficiency standard as a beyond-the-floor control for nonhazardous waste burning cement kilns because, based historically on a unique RCRA statutory provision, the DRE standard is designed to ensure destruction of organic hazardous air pollutants in hazardous waste fed to hazardous waste combustors. The underlying rationale for such a standard is absent for nonhazardous waste burning cement kilns that do not combust hazardous waste and that feed materials (*e.g.*, limestone, coal) that contain only incidental levels of organic hazardous air pollutants.

c. How Do the Compliance Procedures Differ? We finalized compliance procedures for nonhazardous waste burning cement kilns that are similar to those finalized today for hazardous waste burning cement kilns. For particulate matter, we are implementing a coordinated program to document the feasibility of particulate matter continuous emissions monitoring

[112] Hydrocarbon emissions would be limited as a surrogate for polycyclic organic matter, a category of organic hazardous air pollutants identified in section 112(c)(6).

[113] Later in the text, however, we discuss how hazardous waste burning may potentially affect dioxin and furan emissions and the additional requirements for hazardous waste burning cement kilns that address this concern.

[114] Although semivolatile metal and low volatile metal are controlled by nonhazardous waste burning cement kilns, along with other metallic hazardous air pollutants, by controlling particulate matter. These metals are not individually controlled by nonhazardous waste burning cement kilns as they are for hazardous waste burning cement kilns by virtue of individual metal feedrate limits established under existing RCRA regulations.

[115] For hazardous waste burning cement kilns, existing RCRA carbon monoxide and hydrocarbon standards do not apply to the main stack of a kiln equipped with a by-pass or other means of measuring carbon monoxide or hydrocarbon at mid kiln to ensure good combustion of hazardous waste. Therefore, there is no carbon monoxide or hydrocarbon floor control for such stacks, and we conclude that beyond-the-floor controls would not be cost-effective.

[116] Consistent with the nonhazardous waste burnign cement kiln proposal, however, we subject the main stack of such new source hazardous waste burning cemen tkilns to a hydrocarbon standard.

systems on both nonhazardous waste and hazardous waste burning cement kilns. We plan to establish a continuous emissions monitoring systems-based emission level through future rulemaking that is achievable by sources equipped with MACT control (*i.e.*, an electrostatic precipitator or fabric filter designed, operated, and maintained to meet the New Source Performance Standard particulate matter standard). In the interim, we use the opacity standard as required by the New Source Performance Standard for Portland cement plants under § 60.62 to ensure compliance with the particulate matter standard for both hazardous waste and nonhazardous waste burning cement kilns.

For dioxin/furan, the key compliance parameter will be identical for both hazardous waste and nonhazardous waste burning cement kilns—control of temperature at the inlet to the particulate matter control device. Other factors that could contribute to the formation of dioxins and furans, however, are not completely understood. As a result, hazardous waste burning cement kilns have additional compliance requirements to ensure that hazardous waste is burned under good combustion conditions. These additional controls are necessary because of the dioxin and furan precursors that can be formed from improper combustion of hazardous waste, given the hazardous waste firing systems used by some hazardous waste burning cement kilns and the potential for hazardous waste to contain high concentrations of many organic hazardous air pollutants not found in conventional fuels or cement kiln raw materials.

We also require both hazardous waste and nonhazardous waste burning cement kilns to conduct performance testing midway between the five-year periodic comprehensive performance testing to confirm that dioxin/furan emissions do not exceed the standard when the source operates under normal conditions.

C. What Further Subcategorization Considerations Are Made?

We also fully considered further subdividing the class of hazardous waste burning cement kilns itself. For the reasons discussed below, we decided that subcategorization is not needed to determine achievable MACT standards for all hazardous waste burning cement kilns.

We considered, but rejected, subdividing the hazardous waste burning cement kiln source category on the basis of raw material feed preparation, more specifically wet process versus dry process. In the wet process, raw materials are ground, wetted, and fed into the kiln as a slurry. Approximately 70 percent of the hazardous waste burning cement kilns in operation use a wet process. In the dry process, raw materials are ground dry and fed into the kiln dry. Within the dry process there are three variations: Long kiln dry process, preheater process, and preheater-precalciner process. We decided not to subcategorize the hazardous waste burning cement kiln category based on raw material feed preparation because: (1) The wet process kilns and all variations of the dry process kilns use similar raw materials, fossil fuels, and hazardous waste fuels; (2) the types and concentrations of uncontrolled hazardous air pollutant emissions are similar for both process types;[117] (3) the same types of particulate matter pollution control equipment, specifically either fabric filters or electrostatic precipitators, are used by both process types, and the devices achieve the same level of performance when used by both process types; and (4) the MACT controls we identify are applicable to both process types of cement kilns. For example, MACT floor controls for metals and chlorine include good particulate matter control and hazardous waste feedrate control, as discussed below, the particulate matter standard promulgated today is based on the New Source Performance Standard, which applies to all cement kilns irrespective of process type. Further, a cement kiln operator has great discretion in the types of hazardous waste they accept including the content of metals and chlorine in the waste. These basic control techniques—particulate matter control and feedrate control of metals and chlorine—clearly show that subcategorization based on process type is not appropriate.

Some commenters stated that it is not feasible for wet process cement kilns to use fabric filters, especially in cold climates, and thus subcategorization based on process type is appropriate. The problem, commenters contend, is that the high moisture content of the flue gas will clog the fabric if the cement-like particulate is wetted and subsequently dried, resulting in reduced performance and early replacement of the fabric filter bags. Other commenters disagreed with these assertions and stated that fabric filter technology can be readily applied to wet process kilns given the exit temperatures of the combustion gases and the ease of insulating fabric filter systems to minimize cold spots in the baghouse to avoid dew point problems and minimize corrosion. These commenters pointed to numerous wet process applications currently in use at cement kilns with fabric filter systems located in cold climates to support their claims.[118] In light of the number of wet process kilns already using fabric filters and their various locations, we conclude that wet process cement kilns can be equipped with fabric filter systems and that subdividing by process type on this basis is not necessary or warranted. A review of the particulate matter emissions data for one wet hazardous waste burning cement kiln using a fabric filter shows that it is achieving the particulate matter standard. We do not have data in our data base from the only other wet hazardous waste burning cement kiln using a fabric filter; however, this cement kiln recently installed and upgraded to a new fabric filter system.

We also fully considered, but ultimately rejected, subdividing the hazardous waste burning cement kiln source category between long kilns and short kilns (preheater and preheater-precalciner) technologies, and those with in-line kiln raw mills. This subcategorization approach was recommended by many individual cement manufacturing member companies and a cement manufacturing trade organization. Based on information on the types of cement kilns that are currently burning hazardous waste, these three subcategories consist of the following four subdivisions: (1) Short kilns with separate by-pass and main stacks; (2) short kilns with a single stack that handles both by-pass and preheater or precalciner emissions; (3) long dry kilns that use kiln gas to dry raw meal in the raw mill; and (4) others wet kilns, and long dry kilns not using in-line kiln raw mill drying. Currently, each of the first three categories consists of only one cement kiln facility while

[117] Although dry process kilns with a separate by-pass stack can have higher metals emissions from that stack compared to the main stack of other kilns, today's rule allows such kilns to flowrate-average its emissions between the main and by-pass stack. The average emissions are similar to the emissions from dry and wet kilns that have only one stack. Similarly, kilns with in-line raw mills have higher mercury emissions when the raw mill is off. Today's rule allows such kilns to time-weight average their emissions, however, and the time-weighted emissions for those kilns are similar to emissions from other hazardous waste burning cement kilns.

[118] We are aware of four wet process cement kiln facilities operating with fabric filters: Dragon (Thomaston, ME), Giant (Harleyville, SC), Holnam (Dundee, MI), and LaFarge (Paulding, OH). Commenters also identified kilns in Canada operating with fabric filters.

the kilns at the remaining 15 facilities are in the fourth category: wet kilns or long dry kilns that do not use in-line kiln raw mill drying.

Commenters state that these subcategories should be considered because the unique design or operating features of the different types of kilns could have a significant impact on emissions of one or more hazardous air pollutants that we proposed to regulate. Specifically, commenters noted the potential flue gas characteristic differences for cement kilns using alkali bypasses on short kilns and in-line kiln raw mills. For example, kilns with alkali bypasses are designed to divert a portion of the flue gas, approximately 10–30%, to remove the problematic alkalis, such as potassium and sodium oxides, that can react with other compounds in the cool end of the kiln resulting in operation problems. Thus, bypasses allow evacuation of the undesirable alkali metals and salts, including semivolatile metals and chlorides, entrained in the kiln exit gases before they reach the preheater cyclones. As a result, the commenters stated that the emission concentration of semivolatile metals in the bypass stack is greater than in the main stack, and therefore the difference in emissions supports subcategorization.

We agree, in theory, that the emissions profile for some hazardous air pollutants can be different for the three kilns types—short kilns with and without separate bypass stacks, long kilns with in-line kiln raw mills. To consider this issue further, we analyzed floor control and floor emissions levels based only on the data and information from the other long wet kilns and long dry kilns not using raw mill drying. We then considered whether the remaining three kiln types could apply the same MACT controls and achieve the resulting emission standards. We conclude that these three types of kilns at issue can use the MACT controls and achieve the corresponding emission levels identified in today's rule for the wet kilns and long dry kilns not using raw mill drying.[119] As a result, we conclude that there is no practical necessity driving a subcategorization approach even though one would be theoretically possible. Further, to ensure that today's standards are achievable by all cement kilns, we establish a provision that allows cement kilns operating in-line kiln raw mills to average their emissions based on a time-weighted average concentration that considers the length of time the in-line raw mill is on-line and off line. We also adopt a provision that allows short cement kilns with dual stacks to average emissions on a flow-weighted basis to demonstrate compliance with the emissions standards. (See Part Five, Section X—Special Provisions for a discussion of these provisions.)

In the case of hydrocarbons and carbon monoxide, we developed final standards that reflect the concerns raised by several commenters. We determined that this approach best accommodated the unique design and operating differences between long wet and long dry process and short kilns using either a preheater or a preheater and precalciner.

Existing hazardous waste preheater and preheater-precalciner cement kilns, one of each type is burning hazardous waste, are equipped with bypass ducts that divert a portion of the kiln off-gas through a separate particulate matter control device to remove problematic alkali metals. Long cement kilns do not use bypasses designed to remove alkali metals. The significance of this operational difference is that hydrocarbon and carbon monoxide levels in the bypass gas of short kilns is more representative of the combustion efficiency of burning hazardous waste and other fuels in the kiln than the measurements made in the main stack. Main stack gas measurements of hydrocarbons and carbon monoxide, regardless of process type, also include contributions from trace levels of organic matter volatilized from the raw materials, which can mask the level of combustion efficiency achieved in the kiln.

Today's tailored standards require cement kilns to monitor hydrocarbons and carbon monoxide at the location best indicative of good combustion. For short kilns with bypasses, the final rule requires monitoring of hydrocarbons and carbon monoxide in the bypass. Long kilns are required to comply with the hydrocarbon and carbon monoxide standards in the main stack. However, long kilns that operate a mid-kiln sampling system, for the purpose of removing a representative portion of the kiln off-gas to measure combustion efficiency, can comply with the hydrocarbon and carbon monoxide standards at the midkiln sampling point.

In addition, establishing separate hydrocarbon and carbon monoxide standards reflects the long and short kiln subcategorization approach recommended by some commenters. The standards differ because MACT floor control for hydrocarbons and carbon monoxide is based primarily on the existing requirements of the Boiler and Industrial Furnace rule. In that rule, the unique design and operating features of long and short kilns were considered in establishing type specific emission limits for hydrocarbons and carbon monoxide. Thus, MACT floor control for long and short kilns is different. However, we note these same unique design and operating features were not a factor in establishing standards for other pollutants, including mercury, semivolatile and low volatile metals, and hydrochloric acid/chlorine gas, in the Boiler and Industrial Furnace rule.

For the reasons discussed above, subcategorization would not appear to be needed to establish uniform, achievable MACT standards for all cement kilns burning hazardous waste. Thus, because the differences among kiln types ''does not affect the feasibility and effectiveness of air pollution control technology,'' subcategorization is not appropriate. S. Rep. No. 228, 101st Cong. 1st sess. 166.

D. What Are The Standards for Existing and New Cement Kilns?

1. What Are the Standards for Cement Kilns?

In this section, the basis for the emissions standards for cement kilns is discussed. The kiln emission limits apply to the kiln stack gases, in-line kiln raw mill stack gases if combustion gases pass through the in-line raw mill, and kiln alkali bypass stack gases if discharged through a separate stack from cement plants that burn hazardous waste in the kiln. The emissions standards are summarized below:

[119] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

STANDARDS FOR EXISTING AND NEW CEMENT KILNS

Hazardous air pollutant or hazardous air pollutant surrogate	Emissions standard [1]	
	Existing sources	New sources
Dioxin and furan	0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and control of flue gas temperature not to exceed 400°F at the inlet to the particulate matter control device.	0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and control of flue gas temperature not to exceed 400°F at the inlet to the particulate matter control device.
Mercury	120 μg/dscm	56 μg/dscm.
Particulate matter [2]	0.15 kg/Mg dry feed and 20% opacity	0.15 kg/Mg dry feed and 20% opacity.
Semivolatile metals	240 μg/dscm	180 μg/dscm.
Low volatile metals	56 μg/dscm	54 μg/dscm.
Hydrochloric acid and chlorine gas	130 ppmv	86 ppmv.
Hydrocarbons: kilns without by-pass [3, 6]	20 ppmv (or 100 ppmv carbon monoxide) [3]	Greenfield kilns: 20 ppmv (or 100 ppmv carbon monoxide and 50 ppmv [5] hydrocarbons).
		All others: 20 ppmv (or 100 ppmv carbon monoxide) [3].
Hydrocarbons: kilns with by-pass; main stack [4, 6].	No main stack standard	50 ppmv [5].
Hydrocarbons: kilns with by-pass; by-pass duct and stack [3, 4, 6].	10 ppmv (or 100 ppmv carbon monoxide)	10 ppmv (or 100 ppmv carbon monoxide).
Destruction and removal efficiency	For existing and new sources, 99.99% for each principal organic hazardous constituent (POHC) designated. For sources burning hazardous wastes F020, F021, F022, F023, F026, or F027, 99.9999% for each POHC designated.	

[1] All emission levels are corrected to 7% O_2, dry basis.
[2] If there is an alkali by-pass stack associated with the kiln or in-line kiln raw mill, the combined particulate matter emissions from the kiln or in-line kiln raw mill and the alkali by-pass must be less than the particulate matter emissions standard.
[3] Cement kilns that elect to comply with the carbon monoxide standard must demonstrate compliance with the hydrocarbon standard during the comprehensive performance test.
[4] Measurement made in the by-pass sampling system of any kiln (e.g., alkali by-pass of a preheater and/or precalciner kiln; midkiln sampling system of a long kiln).
[5] Applicable only to newly-constructed cement kilns at greenfield sites (see discussion in Part Four, Section VII.D.9). 50 ppmv standard is a 30-day block average limit. Hydrocarbons reported as propane.
[6] Hourly rolling average. Hydrocarbons are reported as propane.

2. What Are the Dioxin and Furan Standards?

In today's rule, we establish a standard for new and existing cement kilns that limits dioxin/furan emissions to either 0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and temperature at the inlet to the particulate matter control device not to exceed 400°F.[120] Our rationale for these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we identified floor control as either temperature control at the inlet to the particulate matter control device of less than 418°F, or achieving a specific level of dioxin/furan emissions based upon levels achievable using proper temperature control. (61 FR at 17391.) The proposed floor emission level was 0.20 ng TEQ/dscm, or temperature at the inlet to the electrostatic precipitator or fabric filter not to exceed 418°F. In the May 1997 NODA, we identified an alternative data analysis method to identify floor control and the floor emission level. Floor control for dioxin/furan was defined as temperature control at the inlet to the electrostatic precipitator or fabric filter at 400°F, which was based on further engineering evaluation of the emissions data and other available information. That analysis resulted in a floor emission level of 0.20 ng TEQ/dscm, or 0.40 ng TEQ/dscm and temperature at the inlet to the electrostatic precipitator or fabric filter not to exceed 400°F. (62 FR at 24226.) The 0.40 ng TEQ/dscm standard is the level that all cement kilns, including data from nonhazardous waste burning cement kilns, are achieving when operating at the MACT floor control level or better. We considered a data set that included dioxin/furan emissions from nonhazardous waste burning cement kilns because these data are adequately representative of general dioxin/furan behavior and control in either type of kiln. The impacts of hazardous waste constituents (HAPs) on the emissions of those HAPs prevent us from expanding our database for other HAPs in a similar way.

We conclude that the floor methodology discussed in the May 1997 NODA is appropriate and we adopt this approach in today's final rule. We identified two technologies for control of dioxin/furan emissions from cement kilns in the May 1997 NODA. The first technology achieves low dioxin/furan emissions by quenching kiln gas temperatures at the exit of the kiln so that gas temperatures at the inlet to the particulate matter control device are below the temperature range of optimum dioxin/furan formation. For example, we are aware of several cement kilns that have recently added flue gas quenching units upstream of the particulate matter control device to reduce the inlet particulate matter control device temperature resulting in significantly reduced dioxin/furan levels.[121] The other technology is activated carbon injected into the kiln exhaust gas. Since activated carbon injection is not currently used by any hazardous waste burning cement kilns, this technology was evaluated only as part of a beyond-the-floor analysis.

As discussed in the May 1997 NODA, specifying a temperature limitation of 400°F or lower is appropriate for floor control because, from an engineering perspective, it is within the range of

[120] The temperature limit applies at the inlet to a dry particulate matter control device that suspends particulate matter in the combustion gas stream (*e.g.*, electrostatic precipitator, fabric filter) such that surface-catalyzed formation of dioxin/furan is enhanced. The temperature limit does not apply to a cyclone control device, for example.

[121] USEPA, ''Final Technical Support Document for HWC MACT Standards. Volume III: Selection of Proposed MACT Standards and Technologies'', July 1999. See Section 3.2.1.

reasonable values that could have been selected considering that: (1) The optimum temperature window for surface-catalyzed dioxin/furan formation is approximately 450–750°F; and (2) temperature levels below 350°F can cause dew point condensation problems resulting in particulate matter control device corrosion, filter cake cementing problems, increased dust handling problems, and reduced performance of the control device. (62 FR at 24226.)

Several commenters disagreed with our selection of 400°F as the particulate matter control device temperature limitation and stated that other higher temperature limitations were equally appropriate as MACT floor control. Based on these NODA comments, we considered selecting a temperature limitation of 450°F, generally regarded to be the lower end of the temperature range of optimum dioxin/furan formation. However, available data indicate that dioxin/furan formation can be accelerated at kilns operating their particulate matter control device at temperatures between 400–450°F. Data from several kilns show dioxin/furan emissions as high as 1.76 ng TEQ/dscm when operating in the range of 400–450°F. Identifying a higher temperature limit such as 450°F is not consistent with other sources achieving much lower emissions at 400°F, and thus identifying a higher temperature limit would not be MACT floor control.

Some commenters also state that EPA has failed to demonstrate that the best performing 12 percent of existing sources currently use temperature control to reduce dioxin/furan emissions, and therefore, temperature control is more appropriately considered in subsequent beyond-the-floor analyses. However, particulate matter control device operating temperatures associated with the emissions data used to establish the dioxin/furan standard are based on the maximum operating limits set during compliance certification testing required by the Boiler and Industrial Furnace rule. See 40 CFR 266.103(c)(1)(viii). As such, cement kilns currently must comply with these temperature limits on a continuous basis during day-to-day operations, and therefore, these temperature limits are properly assessed during an analysis of MACT floors.

Several commenters also oppose consideration of dioxin/furan emissions data from nonhazardous waste burning cement kilns in establishing the floor standard. Commenters state that pooling the available emissions data from hazardous waste burning cement kiln with data from nonhazardous waste burning cement kilns to determine the MACT floor violates the separate category approach that EPA decided upon for the two classes of cement kilns. Notwithstanding our decision to divide the Portland cement manufacturing source category based on the kiln's hazardous waste burning status, we considered both hazardous waste burning cement kiln and nonhazardous waste burning cement kiln data together because both data sets are adequately representative of general dioxin/furan behavior and control in either type of kiln. This similarity is based on our engineering judgement that hazardous waste burning does not have an impact on dioxin/furan formation, dioxin/furan is formed post-combustion. Though the highest dioxin/furan emissions data point from MACT (*i.e.*, operating control device less than 400°F) hazardous waste and nonhazardous waste burning cement kiln sources varies somewhat (0.28 vs 0.37 ng TEQ/dscm respectively), it is our judgment that additional emissions data, irrespective of hazardous waste burning status, would continue to point to a floor of within the range of 0.28 to 0.37 ng TEQ/dscm. This approach ensures that the floor levels for hazardous waste burning cement kilns are based on the maximum amount of relevant data, thereby ensuring that our judgment on what floor level is achievable is as comprehensive as possible.

We estimate that approximately 70 percent of test condition data from hazardous waste burning cement kilns are currently emitting less than 0.40 ng TEQ/dscm (irrespective of the inlet temperature to the particulate matter control device). In addition, approximately 50 percent of all test condition data are less than 0.20 ng TEQ/dscm. The national annualized compliance cost for cement kilns to reduce dioxin/furan emissions to comply with the floor standard is $4.8 million for the entire hazardous waste burning cement industry and will reduce dioxin/furan emissions by 5.4 g TEQ/yr or 40 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered in the April 1996 proposal and May 1997 NODA a beyond-the-floor standard of 0.20 ng TEQ/dscm based on activated carbon injection at a temperature of less than 400°F. We continue to believe that a beyond-the-floor standard 0.20 ng TEQ/dscm based on activated carbon injection is the appropriate beyond-the-floor standard to evaluate given the risks posed by dioxin/furan emissions.

Carbon injection is routinely effective at removing 99 percent of dioxin/furans for numerous municipal waste combustor and mixed waste incinerator applications and one hazardous waste incinerator application. However, currently no hazardous waste burning cement kilns use activated carbon injection for dioxin/furan removal. For cement kilns, we believe that it is conservative to assume only 95 percent is achievable given that the floor level is already low at 0.40 ng/dscm. As dioxin/furans decrease, activated carbon injection efficiency is expected to decrease. In addition, we assumed for cost-effectiveness calculations that cement kilns needing activated carbon injection to achieve the beyond-the-floor standard would install the activated carbon injection system after the normal particulate matter control device and add a new, smaller fabric filter to remove the injected carbon with the absorbed dioxin/furan and mercury.[122] The costing approach addresses commenter's concerns that injected carbon may interfere with cement kiln dust recycling practices.

The national incremental annualized compliance cost for the remaining cement kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $2.5 million for the entire hazardous waste burning cement industry and would provide an incremental reduction in dioxin/furan emissions nationally beyond the MACT floor controls of 3.7 g TEQ/yr. Based on these costs, approximately $0.66 million per g dioxin/furan removed, we determined that this dioxin/furan beyond-the-floor option for cement kilns is not justified. Therefore, we are not adopting a beyond-the-floor standard of 0.2 ng TEQ/dscm.

We note that one possible explanation of high cost-effectiveness of the beyond-the-floor standard may be due to the significant reduction in national dioxin/furan emissions achieved over the past several years by hazardous waste burning cement kilns due to emissions improving modifications. The hazardous waste burning cement kiln national dioxin/furan emissions estimate for 1997 decreased by nearly

[122] We received many comments on the use of activated carbon injection as a beyond-the-floor control techniques at cement kilns. Since we do not adopt a beyond-the-floor standard based on activated carbon injection in the final rule, these comments and our responses to them are only discussed in our document that responds to public comments.

97% since 1990, from 431 g TEQ/yr to 13.1 g TEQ/yr.[123]

c. What Is the MACT Floor for New Sources? At proposal, we identified floor control for new sources as temperature control at the inlet to the particulate matter control device at 409°F. The proposed floor emission level was 0.20 ng TEQ/dscm, or temperature at the inlet to the particulate matter control device not to exceed 409°F. In the May 1997 NODA, we identified an alternative data analysis method to identify floor control and the floor emission level. The May 1997 NODA dioxin/furan floor control for new sources was defined as temperature control at the inlet to the electrostatic precipitator or fabric filter at 400°F, which was based on an engineering evaluation of the emissions data and other available information. That analysis resulted in a floor emission level of 0.20 ng TEQ/dscm, or 0.40 ng TEQ/dscm and temperature at the inlet to the electrostatic precipitator or fabric filter not to exceed 400°F. We continue to believe that the floor methodology is appropriate for new sources and we adopt this approach in this final rule.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In both the April 1996 proposal and May 1997 NODA, we proposed activated carbon injection as beyond-the-floor control and a beyond-the-floor standard of 0.20 ng TEQ/dscm for new sources. For reasons discussed above for existing sources, we conclude that it is also not cost-effective for new cement kilns to achieve this level. Thus, we do not adopt a beyond-the-floor dioxin/furan standard for new cement kilns.

3. What Are the Mercury Standards?

In today's rule, we establish a standard for existing and new cement kilns that limits mercury emissions to 120 and 56 µg/dscm, respectively. The rationale for these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? All cement kilns use either electrostatic precipitators or fabric filters for particulate matter control. However, since mercury is generally in the vapor form in and downstream of the combustion chamber, including the air pollution control device, electrostatic precipitators and fabric filters do not achieve good mercury control. Mercury emissions from cement kilns are currently regulated by the Boiler and Industrial Furnace rule, which establishes limits on the maximum feedrate of mercury in total feedstreams (e.g., hazardous waste, raw materials, coal). Thus, MACT floor control is based on hazardous waste feed control.

In the April 1996 proposal, we identified floor control as hazardous waste feedrate control not to exceed a feedrate level of 110 µg/dscm, expressed as a maximum theoretical emission concentration, and proposed a floor standard of 130 µg/dscm based on an analysis of data from all cement kilns with a hazardous waste mercury feedrate of this level or lower. (61 FR at 17393.) In May 1997 NODA, we conducted a breakpoint analysis on low to high ranked mercury emissions data from sources floor control and established the floor level as the test condition average emission of the breakpoint source. The breakpoint analysis was intended to reflect an engineering-based evaluation of the data so that the few cement kilns spiking mercury during compliance testing did not drive the floor standard to levels higher than the preponderance of the emissions data. We reasoned that sources with emissions higher than the breakpoint source were not controlling the hazardous waste feedrate of mercury to levels representative of MACT. This analysis resulted in a MACT floor level of 72 µg/dscm. (62 FR at 24227.)

For today's rule, in response to comments questioning our May 1997 NODA approach, we use a revised engineering evaluation and data analysis method to establish the MACT floor for mercury. As discussed in greater detail in the methodology section previously, we use an aggregate feedrate approach to establish MACT floors for the three metal hazardous air pollutant groups and hydrochloric acid/chlorine gas. The aggregate feedrate approach first identifies a MACT floor feedrate level for mercury and then establishes the floor emission level as the highest emissions level achieved by any cement kilns using floor control or better. Using this approach, the resulting mercury floor emission level is 120 µg/dscm.

We received comments on several overarching issues including the appropriateness of considering feedrate control of mercury in hazardous waste as a MACT floor control technique and the specific procedure of identifying breakpoints in arrayed emissions data. These issues and our response to them are discussed in the floor methodology section in Part Four, Section V. In addition, we received comment on a special provision that would allow cement kilns (and lightweight aggregate kilns) to petition the Administrator for an alternative mercury standard for kilns with mercury concentrations in their mineral and related process raw materials that causes an exceedance of the emission standard. This issue and the alternative standard promulgated in the final rule is fully discussed in Part Five, Section X.A.

We also received comments from the cement manufacturing industry indicating that cement kilns with in-line raw mills have unique design and operating procedures that necessitate the use of emission averaging when demonstrating compliance with the emission standards. These commenters stated that the mercury standard is not achievable without a procedure for kilns to emissions average. The commenters supported a provision allowing cement kilns with in-line raw mills to demonstrate compliance with the emission standards on a time-weighted average basis to account for different emission characteristics when the raw mill is active as opposed to when it is inactive. After fully considering comments received, we adopt an emission averaging provision in the final rule. This provision is fully discussed in Part Five, Section X.E.

Several commenters expressed concern that the mercury emissions data base for cement kilns is comprised of normal data, that is, cement kilns did not spike mercury during RCRA compliance testing as they did for other metals and chlorine. Thus, commenters stated that an emissions variability factor should be added to a floor level derived directly from the emissions data to ensure that the floor emission level is being achieved in practice. As discussed in Section V.D.1 above, we conclude that emissions variability is adequately accounted for by the MACT floor methodology finalized today.

We estimate that 85 percent of cement kilns currently meet the floor level. The national annualized compliance cost for cement kilns to reduce mercury emissions to comply with the floor level is $1.1 million for the entire hazardous waste burning cement industry and will reduce mercury emissions by 0.2 Mg/yr or 15 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 NPRM, we proposed a beyond-the-floor standard of 50 µg/dscm based on flue gas temperature reduction to 400 °F followed by activated carbon injection for mercury capture. (61 FR at 17394.) In the May 1997 NODA, we considered a beyond-the-floor standard of 30 µg/dscm based on activated carbon

[123] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume V: Emission Estimates and Engineering Costs'', July 1999. See also 63 FR 17338, April 10, 1998.

injection; however, an evaluation was not conducted to determine if such a level would be cost-effective. (62 FR at 24227.)

In developing the final rule, we identified three techniques for control of mercury as a basis to evaluate a beyond-the-floor standard: (1) Activated carbon injection; (2) limiting the feed of mercury in the hazardous waste; and (3) limiting the feed of mercury in the raw materials. The results of each analysis are discussed below.

i. Activated Carbon Injection. To investigate activated carbon injection, we applied a carbon injection capture efficiency of 80 percent to the floor emission level of 120 µg/dscm. Our basis for selecting a capture efficiency of 80 percent [124] is discussed in the support document.[125] The resulting beyond-the-floor emission level is 25 µg/dscm.

We then determined the cost of achieving this reduction to determine if a beyond-the-floor standard of 25 µg/dscm would be appropriate. The national incremental annualized compliance cost for the remaining cement kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $11.1 million for the entire hazardous waste burning cement kiln industry and would provide an incremental reduction in mercury emissions nationally beyond the MACT floor controls of 0.7 Mg/yr. Based on these costs of approximately $16 million per additional Mg of mercury removed, we conclude that this mercury beyond-the-floor option for cement kilns is not acceptably cost-effective nor otherwise justified. Therefore, we do not adopt this beyond-the-floor standard.

ii. Limiting the Feedrate of Mercury in the Hazardous Waste. We also considered a beyond-the-floor standard of 50 µg/dscm based on limiting the feedrate of mercury in the hazardous waste. An emission level of 50 µg/dscm represents the practicable extent that additional feedrate control of mercury in hazardous waste (beyond feedrate control needed to achieve the floor emission level) can be used and still achieve modest emissions reductions. We investigated the cost of achieving this reduction to determine if this beyond-the-floor standard would be appropriate. The national incremental annualized compliance cost for cement kilns to meet a beyond-the-floor level of 50 µg/dscm, rather than comply with the floor controls, would be approximately $4.2 million for the entire hazardous waste burning cement kiln industry and would provide an incremental reduction in mercury emissions nationally beyond the MACT floor controls of 0.4 Mg/yr. Based on these costs of approximately $10.9 million per additional Mg of mercury removed, we conclude that this mercury beyond-the-floor option for cement kilns is not warranted. Therefore, we did not adopt this mercury beyond-the-floor standard.

iii. Limiting the Feedrate of Mercury in Raw Materials. Finally, we considered a beyond-the-floor standard based on limiting the feedrate of mercury in the raw materials. Cement manufacturing involves the heating of raw materials such as limestone, clay, shale, sand, and iron ore. Limestone, shale, and clay comprise the vast majority of raw material feed to the kiln, and these materials are typically mined at quarries nearby the cement kiln. Since feed materials can contain significant quantities of hazardous air pollutants, we considered establishing a beyond-the-floor standard based on limiting the feedrate of mercury in these raw materials. A source can achieve a reduction in mercury emissions by substituting a feed material containing lower levels of mercury for a primary raw material with higher mercury levels. For example, shale is the primary feed material used as a source of silica. Under this beyond-the-floor option, a source using a high mercury-containing shale could substitute a feed material lower in mercury such as a coal ash to achieve lower mercury emissions. This beyond-the-floor option appears to be less cost-effective compared to either of the options evaluated above, however. This conclusion is based on the fact that cement kilns are sited proximate to primary raw material supply and transporting large quantities of an alternative source of raw material(s) is likely to be cost-prohibitive, thereby making a beyond-the-floor standard not cost-effective. Therefore, we do not adopt this mercury beyond-the-floor standard.

Thus, the promulgated mercury standard for existing hazardous waste burning cement kilns is the floor level of 120 µg/dscm.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we identified floor control for new sources as hazardous waste mercury feedrate control not to exceed a feedrate level of 28 µg/dscm expressed as a maximum theoretical emission concentration. We proposed a floor level of 82 µg/dscm. We discussed a floor emission level for new cement kilns in the May 1997 NODA of 72 µg/dscm, based on a floor feedrate control level of 110 µg/dscm.

Today we identify floor control for new cement kilns as feedrate control of mercury in the hazardous waste, expressed as a maximum theoretical emission concentration, based on the single source with the best aggregate feedrate of mercury in hazardous waste. Using the aggregate feedrate approach to establish this floor level of control and the corresponding floor emission level, we identify a MACT floor emission level of 56 µg/dscm for new hazardous waste burning cement kilns.[126]

d. What Are Our Beyond-the-Floor Considerations for New Sources? At proposal, we based beyond-the-floor control for new cement kilns on activated carbon injection and proposed a standard of 50 µg/dscm. In the May 1997 NODA we considered a beyond-the-floor standard of 30 µg/dscm based on activated carbon injection as done for existing sources.

We identified two techniques for control of mercury as a basis to evaluate a beyond-the-floor standard for new sources: (1) Activated carbon injection; and (2) limiting the feedrate of mercury in the hazardous waste. The results of each analysis are discussed below.

i. Activated Carbon Injection. As discussed above, we conclude that flue gas temperature reduction to 400°F followed by activated carbon injection to remove mercury is an appropriate beyond-the-floor control option for improved mercury control at cement kilns. Based on the MACT floor emission level of 56 µg/dscm and assuming a carbon injection capture efficiency of 80 percent, we identified a beyond-the-floor emission level of 10 µg/dscm. We then determined the cost of achieving this reduction to determine if a beyond-the-floor standard of 10 µg/dscm would be appropriate. The incremental annualized compliance cost for one new large cement kiln to meet this beyond-the-floor level, rather than comply with floor controls, would be approximately $2.3 million and would provide an incremental reduction in mercury emissions beyond the MACT floor controls of approximately 0.17 Mg/yr. For a new small cement kiln, the

[124] We received many comments on the use of activated carbon injection as a beyond-the-floor control technique at cement kilns. Since we do not adopt a beyond-the-floor standard based on activated carbon injection in the final rule, these comments and our responses to them are only discussed in our document that responds to public comments.

[125] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies.'' July 1999.

[126] Given that the emission level is substantially higher than the feedrate level expressed as a maximum theoretical emission concentration, 56 vs 7 µg/dscm, the contributions of mercury from raw materials and coal for the floor-setting source must be substantial.

incremental annualized compliance cost would be approximately $0.9 million and would provide an incremental reduction in mercury emissions beyond the MACT floor controls of approximately 0.04 Mg/yr. Based on these costs of approximately $13–22 million per additional Mg of mercury removed, we concluded that a beyond-the-floor standard of 10 µg/dscm is not justified due to the high cost of compliance and relatively small mercury emissions reductions.

ii. Limiting the Feedrate of Mercury in Hazardous Waste. We also considered a beyond-the-floor standard based on limiting the feedrate of mercury in the hazardous waste. Considering that the floor emission level for new cement kilns is approximately half of the floor emission level for existing kilns (56 versus 120 µg/dscm), we conclude that a mercury beyond-the-floor standard for cement kilns is not warranted. This conclusion is based on the limited incremental emissions reductions achieved [127] and because the cost-effectiveness of beyond-the-floor controls for new cement kilns would be even higher than for existing sources, which we found unacceptable in paragraph (b) above. Therefore, we do not adopt a mercury beyond-the-floor standard based on limiting feedrate of mercury in hazardous waste.

Thus, the promulgated mercury standard for new hazardous waste burning cement kilns is the floor emissions level of 56 µg/dscm.

4. What Are the Particulate Matter Standards?

We establish standards for both existing and new cement kilns which limit particulate matter emissions to 0.15 kg/Mg dry feed.[128] In addition, opacity cannot exceed 20 percent. We chose the particulate matter standard as a surrogate control for the metals antimony, cobalt, manganese, nickel, and selenium. We refer to these five metals as ''nonenumerated metals'' because standards specific to each metal have not been established. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we discussed particulate matter floor control based upon the performance of a fabric filter with an air-to-cloth ratio of 2.3 acfm/f, [2] resulting in a nominal floor emission level of 0.065 gr/dscf. However, we believed it more appropriate to establish the floor standard based on the cement kiln 1971 New Source Performance Standard. (See discussion in 61 FR at 17392.) The 1971 New Source Performance Standard is 0.15 kg/Mg dry feed (0.30 lb/ton of dry feed). (see 40 CFR 60.60.) Cement kilns currently achieve this standard with well-designed and properly operated electrostatic precipitators and fabric filters.

In the May 1997 NODA, we considered two data analysis methods to identify the particulate matter floor emission level. The first method established and expressed the floor level equivalent to the existing New Source Performance Standard promulgated in 1971. We subsequently proposed and finalized this approach for nonhazardous waste burning cement kilns. See 63 FR at 14198–199 and 64 FR 31898, respectively. The second approach discussed expressed the New Source Performance Standard as a stack gas concentration limit, as opposed to a production-based emission limit format. The May 1997 reevaluation suggested that the 1971 New Source Performance Standard was approximately equivalent to a particulate matter concentration of 0.03 gr/dscf (69 mg/dscm).[129] We indicated a preference for expressing the particulate matter standard on a concentration basis because we also proposed that sources would comply with the particulate matter standard with a particulate matter continuous emissions monitoring system.

However, we now conclude that basing the floor on the 1971 New Source Performance Standard is the most appropriate approach. Cement kilns achieve the 1971 New Source Performance Standard with well-designed and properly operated fabric filters and electrostatic precipitators. Since approximately 20% of hazardous waste burning cement kilns now are subject to the 1971 New Source Performance Standard, consideration of this existing federal regulation as a floor is appropriate because greater than 12% of existing sources are achieving it. The available emissions test data show a wide range of particulate matter results—some emissions data are well below while other data are at the 1971 New Source Performance Standard level.[130] Even though the hazardous waste burning cement kiln particulate matter data span two orders of magnitude,[131] we have limited data on design parameters of the particulate matter control device and could not identify a cause (i.e., differentiate among control equipment) for the wide range in particulate matter emissions. We thus believe that the variation reflects normal operating variability. Therefore, the MACT floor emission level for existing cement kilns is the 1971 New Source Performance Standard.

The New Source Performance Standard at § 60.62 also specifies that opacity must be monitored continuously and establishes an opacity standard of 20 percent as a measure to ensure compliance with the particulate matter standard. We are therefore also adopting this opacity standard for today's rule.[132] We are adopting it for the final rule because: (1) We proposed to base the particulate matter standard for hazardous waste burning cement kilns on the New Source Performance Standard, and the opacity standard is an integral component of that standard; and (2) we proposed to base the MACT particulate matter standard for nonhazardous waste burning cement kilns on the New Source Performance Standard and explicitly identified both the particulate emission and opacity components of the standard. Hazardous waste burning cement kiln stakeholders have commented on both the nonhazardous waste and hazardous waste cement kiln proposed rules and suggest that there is little or no difference in emissions from the two classes of kilns and that they should be regulated the same. Although we do not agree that emissions of all hazardous pollutants are the same for both classes of kilns and should be regulated the same, we agree that particulate

[127] Achieving substantial additional mercury emissions reductions by further controls on hazardous waste feedrate may be problematic because the mercury contribution from raw materials and coal represents an even larger proportion of the total mercury fed to the kiln.

[128] Approximately equivalent to a particulate matter concentration of 0.03 gr/dscf (69 mg/dscm) as expressed in the April 1996 NPRM and May 1997 NODA. The calculation is approximate due to the different types of cement kilns and their associated flow rates.

[129] See USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999 for a discussion of the approximate equivalency.

[130] The variation in the particulate matter data is consistent with data from nonhazardous waste burning cement kilns. We neither expect nor have any data indicating that waste-burning operations increase particulate matter emissions at a cement kiln. An estimated 30% of existing nonhazardous waste burning cement kilns are subject to the requirements of the new Source Performance Standard for cement plants. The particulate matter data for these kilns also exhibit a wide range in measurements. (63 FR at 14198.)

[131] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[132] Given that we adopt the New Source Performance Standard for particulate matter and opacity for the MACT standards for hazardous waste burning cement kilns, we exempt these sources from the New Source Performance Standard to avoid duplicative regulation. See § 63.1204(h).

emissions are comprised largely of entrained raw material and are not significantly affected by burning hazardous waste. Thus, we concur that the standard for particulate matter should be the same for both classes of sources and are therefore adopting the New Source Performance Standard opacity standard for the final rule.[133] In the NPRM and the May 1997 NODA, we proposed to express the particulate matter standard on a concentration basis rather than express it as the same format as the 1971 New Source Performance Standard, which is a production-based emission limit format. However, because we are not yet requiring sources to document compliance with the particulate matter standard by using a particulate matter continuous emissions monitoring system in this final rule[134], we establish and express the floor emission level equivalent to the 1971 New Source Performance Standard. Thus, the particulate matter floor is 0.15 kg/Mg dry feed based on the performance of a well-designed and operated fabric filter or electrostatic precipitator.

Several commenters expressed concern in their comments to the NPRM that the Agency identified separate, different MACT pools and associated MACT controls for particulate matter, semivolatile metals, and low volatile metals, even though all three are controlled, at least in part, by a particulate matter control device. Commenters stated that our approach is likely to result in three different design specifications. We agree with the need to use the same pool for particulate matter, semivolatile metals, and low volatile metals and used the same initial MACT pool to establish the floor levels for these pollutants. See Part Four, Section V for a detailed discussion of our floor methodology.

We estimate that over 60 percent of cement kilns currently meet the floor emission level. The national annualized compliance cost for cement kilns to reduce particulate matter emissions to comply with the floor level is $6.2 million for the entire hazardous waste burning cement industry and will reduce nonenumerated metals and particulate matter emissions by 1.1 Mg/yr and 873 Mg/yr, respectively, or over 30 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the proposal and May 1997 NODA, we considered a beyond-the-floor level of 34 mg/dscm (0.015 gr/dscf) based on improved particulate matter control. However, after examining the costs of such control and the relatively low incremental reductions in air emissions that would result, we determined that a beyond-the-floor standard would not likely be cost-effective. (61 FR at 17393.)

Several commenters support a beyond-the-floor option for particulate matter because some cement kilns are readily achieving particulate matter levels well below the floor emission level based on the New Source Performance Standard. Other commenters oppose a beyond-the-floor option for cement kilns because of the high costs and anticipated poor cost-effectiveness. In the final rule, we evaluated a beyond-the-floor emission level for existing cement kilns to determine if such a level would be appropriate.

Improved particulate matter control for existing cement kilns would require the use of high efficiency electrostatic precipitators and fabric filters. These may include fabric filters with low air-to-cloth ratios, high performance fabrics, electrostatic precipitators with large specific collection areas, and advanced control systems. Currently, the majority of hazardous waste burning cement kilns use electrostatic precipitators for particulate matter control and usually achieve removal efficiencies greater than 99.8%. Cement kilns can meet the MACT floor with well designed and properly operated particulate matter control equipment that for many kilns may require only minor system upgrades from their current systems. A beyond-the-floor standard, however, would likely involve more than a minor system upgrade, and may require new control equipment or retrofitting a baghouse with new higher performance fabric materials. The total annualized costs associated with such major system upgrades would be significant, while only achieving modest incremental emissions reductions in particulate matter and nonenumerated metals.

In the final rule, we considered a beyond-the-floor level of 34 mg/dscm, approximately one-half the New Source Performance Standard, for existing cement kilns based on improved particulate matter control. For analysis purposes, improved particulate matter control entails the use of higher quality fabric filter bag material. We then determined the cost of achieving this level of particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The national incremental annualized compliance cost for cement kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $7.4 million for the entire hazardous waste burning cement kiln industry and would provide an incremental reduction in nonenumerated metals emissions nationally beyond the MACT floor controls of 0.7 Mg/yr. Based on these costs of approximately $10.7 million per additional Mg of nonenumerated metals emissions removed, we conclude that this beyond-the-floor option for cement kilns is not acceptably cost-effective nor otherwise justified. Therefore, we do not adopt this beyond-the-floor standard. The promulgated particulate matter standard for existing hazardous waste burning cement kilns is the floor emission level of 0.15 kg/Mg dry feed and opacity not to exceed 20 percent.

c. What Is the MACT Floor for New Sources? In the proposal, we defined floor control based on the performance of a fabric filter with an air-to-cloth ratio of less than 1.8 acfm/ft2. As discussed for existing sources, we proposed the floor level based on the existing cement kiln New Source Performance Standard. 61 FR at 17400. In the May 1997 NODA, we again considered basing the floor emission level on the New Source Performance Standard and solicited comment on the two alternatives to express the standard identical to those discussed above for existing cement kilns. (62 FR at 24228.)

All cement kilns use fabric filters and electrostatic precipitators to control particulate matter. As discussed earlier, we have limited detailed information on the design and operation characteristics of existing control equipment currently used by cement kilns. As a result, we are unable to identify a specific design or technology that can consistently achieve lower emission levels than the controls used by cement kilns achieving the New Source Performance Standard. Cement kilns meet the New Source Performance Standard with well-

[133] We are not adopting the opacity standard component of the New Source Performance Standard for hazardous waste burning lightweight aggregate kilns, however. This is because that opacity standard (see § 60.732) is a measure to ensure compliance with the particulate emissions component of that standard, which is substantially higher than the MACT standard that we promulgate today. Thus, the NSPS opacity standard for lightweight aggregate kilns would not be a useful measure of compliance with today's particulate matter standard for lightweight aggregate kilns.

[134] We anticipate rulemaking on a particulate matter continuous emissions monitoring system requirement for hazardous waste combustors in the near future. Under this rulemaking, combustors would be required to document compliance with national emission standards by complying with continuous emissions monitoring system-based particulate matter levels that are being achieved by sources equipped with MACT controls. See Part Five, Section VII.C. for details.

designed and properly operated fabric filters and electrostatic precipitators. Thus, floor control for new cement kilns is also a well-designed and properly operated fabric filter and electrostatic precipitator. As discussed for existing sources, we conclude that expressing the floor based on the New Source Performance Standards is appropriate for the final rule. Therefore, the MACT floor level for new cement kilns is 0.15 kg/Mg dry feed and opacity not to exceed 20 percent.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 NPRM and May 1997 NODA, we considered a beyond-the-floor standard based on improved particulate matter control to be consistent with existing sources. However, we proposed that such a beyond-the-floor level was not likely cost-effective.

As discussed for existing sources, we considered a beyond-the-floor level of 34 mg/dscm, approximately one-half the New Source Performance Standard, for new cement kilns based on improved particulate matter control. For analysis purposes, improved particulate matter control entails the use of higher quality fabric filter bag material. We then determined the cost of achieving this level of particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The incremental annualized compliance cost for one new large cement kiln to meet this beyond-the-floor level, rather than comply with floor controls, would be approximately $309,000 and would provide an incremental reduction in nonenumerated metals emissions of approximately 0.18 Mg/yr.[135] For a new small cement kiln, the incremental annualized compliance cost would be approximately $120,000 and would provide an incremental reduction in nonenumerated metals emissions of approximately 0.04 Mg/yr. Based on these costs of approximately $1.7–3.0 million per additional Mg of nonenumerated metals removed, we conclude that a beyond-the-floor standard of 0.015 gr/dscf is not justified due to the high cost of compliance and relatively small nonenumerated metals emission reductions. Thus, the particulate matter standard for new cement kilns is the floor level of 0.15 kg/Mg dry feed and opacity not to exceed 20 percent.

5. What Are the Semivolatile Metals Standards?

Today's rule establishes standards for existing and new cement kilns that limit semivolatile metals emissions to 240 and 180 µg/dscm, respectively. The rationale for these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we defined floor control as a fabric filter with an air-to-cloth ratio less than 2.1 acfm/ft^2 and a hazardous waste feedrate level of 84,000 µg/dscm, expressed as a maximum theoretical emission concentration. The proposed floor emission level was 57 µg/dscm, based on the level a source with properly designed and operated floor technology could achieve. In the proposed rule, we also solicited comment on an alternative floor approach whereby ''equivalent technology'' to MACT control is identified and evaluated. This approach resulted in an emission level of 160 µg/dscm (See 61 FR at 17395.) In the May 1997 NODA, we discussed a floor methodology where we used a breakpoint analysis to identify sources that were not using floor control with respect either to semivolatile metals hazardous waste feedrate or emissions control. Under this approach, we ranked semivolatile metals emissions data from sources that were using MACT floor particulate matter control, i.e., sources achieving the New Source Performance Standard or better. We identified the floor level as the test condition average associated with the breakpoint source. Thus, sources with atypically high emissions because of high semivolatile metals feedrates or poor semivolatile metals control even though they appeared to be using floor control for particulate matter were screened from the pool of sources used to define the floor emission level. Based on this analysis, we identified a floor level in the May 1997 NODA of 670 µg/dscm. (See 62 FR at 24228.)

As discussed previously in the methodology section, we use a revised engineering evaluation and data analysis method to establish the MACT floor for semivolatile metals based on the same underlying data previously noticed for comment. The aggregate feedrate approach, in conjunction with floor control for particulate matter, identified a semivolatile metals floor emission level of 650 µg/dscm.

In addition, several commenters stated strongly that the feedrate of semivolatile metals in hazardous waste cannot be considered MACT floor control in conjunction with particulate matter control. These commenters believe that floor control for semivolatile metals is control of particulate matter only. We disagree with these commenters for reasons we discuss in Part Four, Section V of the preamble, mainly that feedrate is currently control for hazardous waste combustors under RCRA regulations, and conclude that control of the feedrate of semivolatile metals in hazardous waste is floor control, in conjunction with particulate matter control.

We estimate that approximately 60 percent of cement kilns currently meet this floor level. The national annualized compliance cost for cement kilns to reduce semivolatile metal emissions to comply with the floor level is $1.3 million for the entire hazardous waste burning cement industry and will reduce semivolatile metal emissions by 19.5 Mg/yr or 65 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the proposal, we considered a beyond-the-floor standard for semivolatile metals based on improved particulate matter control below the New Source Performance Standard. However, we concluded that a beyond-the-floor standard would not be cost-effective, given that the semivolatile metal floor level of 57 µg/dscm alone resulted in an estimated 94 percent semivolatile metal reduction in emissions. (see 61 FR at 17396.) In the May 1997 NODA, we considered a lower particulate matter emissions level of 0.015 gr/dscf, based on improved particulate matter control, as a beyond-the-floor standard to further reduce semivolatile and low volatile metals. Even though we did not quantify cost-effectiveness values, we expressed concern that a beyond-the-floor standard would not likely be cost-effective. (see 62 FR at 24229.)

Commenters believed there were several control techniques that should be considered, therefore, we identified three potential beyond-the-floor control techniques in developing the final rule: (1) Limiting the feedrate of semivolatile metals in hazardous waste; (2) improved particulate matter control; and (3) limiting the feedrate of semivolatile metals in raw materials. We conclude that a beyond-the-floor standard is warranted based on limiting the feedrate of semivolatile metals in hazardous waste. The results of each analysis are discussed below.

i. Limiting the Feedrate of Semivolatile Metals in Hazardous Waste. Under this approach, we selected a beyond-the-floor emission level of 240

[135] Based on the data available, the average emissions in sum of the five nonenumerated metals from cement kilns using MACT particulate matter control is approximately 80 µg/dscm. To estimate emission reductions of the nonenumerated metals, we assume a linear relationship between a reduction in particulate matter and these metals.

μg/dscm from among the range of possible levels that reflect improved feedrate control. This emission level represents a significant increment of emission reduction from the floor of 650 μg/dscm, it is within the range of levels that are likely to be reasonably achievable using feedrate control, and it is consistent with the incinerator standard thereby advancing a potential policy objective of essentially common standards among combustors of hazardous waste.

The national incremental annualized compliance cost for the remaining cement kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $2.7 million for the entire hazardous waste burning cement kiln industry and would provide an incremental reduction, beyond emissions at the MACT floor, in semivolatile metal emissions nationally of 5.5 Mg/yr. The cost-effectiveness of this standard would be approximately $500,000 per additional Mg of semivolatile metals removed. Notwithstanding the relatively poor cost-effectiveness of this standard on a dollar per Mg removed basis, we conclude that additional beyond-the-floor control of the feedrate of semivolatile metals in hazardous waste to achieve an emission level of 240 μg/dscm is warranted because this standard would reduce lead and cadmium emissions which are particularly toxic hazardous air pollutants. See Health Human Effects discussion in USEPA, ''Technical Background Document for HWC MACT Standards: Health and Ecological Risk Assessment'', July 1999. Further, approximately 90% of the lead and cadmium fed to the cement kiln is from the hazardous waste,[136] not the raw material (about 9%) or coal (about 1%). We are willing to accept a more marginal cost-effectiveness to ensure that hazardous waste combustion sources are using the best controls for pollutants introduced almost exclusively for the burning of hazardous waste. We do so to provide a strong incentive for waste minimization of lead and cadmium sent for combustion. By providing stringent limits, we can help assure that hazardous waste with lead does not otherwise move from better controlled units in other subcategories to units in this subcategory because of a lesser degree of control. Moreover, this beyond-the-floor semivolatile metal standard supports our Children's Health Initiative in that lead emissions, which are of highest significance to children's health, will be reduced by another 20–25 percent from today's baseline. As part of this initiative, we are committed to reducing lead emissions wherever and whenever possible. Finally, this beyond-the-floor standard is consistent with European Union standards for hazardous waste incinerators of approximately 200 μg/dscm for lead and cadmium combined. For all these reasons, we accept the cost-effectiveness of this level of feedrate control and adopt a beyond-the-floor standard of 240 μg/dscm for existing cement kilns.

Additionally, we received comments shortly before promulgation from the cement kiln industry that expressed their achievability and economic concerns with a beyond-the-floor standard in the range of 240 μg/dscm based on limiting the feedrate of semivolatile metals in the hazardous waste. We considered their comments in adopting the 240 μg/dscm beyond-the-floor standard and included a copy of their November 18, 1998 presentation to the Office of Management and Budget in the docket along with our responses to their concerns, many of which are addressed above.

ii. Improved Particulate Matter Control. We also evaluated improved particulate matter control as a beyond-the-floor control option for improved semivolatile metals control. Cadmium and lead are volatile at the high temperatures within the cement kiln itself, but typically condense onto the fine particulate at control device temperatures, where they are collected. As a result, control of semivolatile metals emissions is closely associated with particulate matter control. Examples of improved particulate matter control include the use of more expensive fabric filter bags, optimizing the design and operation features of the existing control equipment, and the addition to or the replacement of control equipment with a new fabric filter.

We evaluated the costs to achieve a beyond-the-floor emission level of 240 μg/dscm based on improved particulate matter control. The national incremental annualized compliance cost for cement kilns to meet this beyond-the-floor level, rather the floor level, would be approximately $4.1 million for the entire hazardous waste burning cement kiln industry and would provide an incremental reduction in semivolatile metal emissions beyond the MACT floor controls of 5.5 Mg/yr. Because this beyond-the-floor control option would have a cost-effectiveness of approximately $800,00 per additional Mg of semivolatile metal removed, contrasted to a cost-effectiveness of approximately $500,000 using hazardous waste feedrate control and remove an identical amount of semivolatile metals, we conclude that basing the beyond-the-floor standard on improved particulate matter control is not warranted.

iii. Limiting the Feedrate of Semivolatile Metals in Raw Materials. A source can achieve a reduction in semivolatile metal emissions by substituting a feed material containing lower levels of lead and/or cadmium for a primary raw material with higher levels of these metals. We expect this beyond-the-floor option to be less cost-effective compared to either of the options evaluated above. Cement kilns are sited proximate to primary raw material supply and transporting large quantities of an alternative source of raw material(s) is likely to be cost-prohibitive. Therefore, we are not adopting a semivolatile metal beyond-the-floor standard based on limiting the feedrate of semivolatile metals in raw materials.[137]

Thus, the promulgated semivolatile metals standard for existing hazardous waste burning cement kilns is a beyond-the-floor standard of 240 μg/dscm based on limiting the feedrate of semivolatile metals in the hazardous waste.

c. What Is the MACT Floor for New Sources? In the proposal, we defined floor control as a fabric filter with an air-to-cloth ratio less than 2.1 acfm/ft^2 and a hazardous waste feedrate level of 36,000 μg/dscm, expressed as a maximum theoretical emission concentration. The proposed floor emission level for new cement kilns was 55 μg/dscm. (See 61 FR at 17400.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for semivolatile metals also would be appropriate for new sources. Floor control was based on a combination of good particulate matter control *and* limiting hazardous waste feedrate of semivolatile metals. We used a breakpoint analysis of the semivolatile metal emissions data to exclude sources achieving substantially poorer semivolatile metal control than the majority of sources because of atypically high semivolatile metals feedrates or poor emission control. We established the floor level at the test condition average of the breakpoint source: 670 μg/dscm. (See 62 FR at 24229.)

As discussed above for existing sources, we developed the final rule

[136] USEPA, ''Final Technical Support document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies'', July 1999.

[137] We, however, reject the proposition in comments that we are without legal authority to regulate HAPs in raw materials processed in cement kilns based on legislative history to the 1990 amendments. This legislative history is not reflected in the statutory text, which unambiguously gives us that authority.

using the aggregate feedrate approach to identify MACT floors for the metals. See Methodology Section for detailed discussion of aggregate feedrate approach. Using this approach, we establish the semivolatile metal floor emission level for new sources at 180 µg/dscm.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 NPRM and May 1997 NODA, we considered a semivolatile metal beyond-the-floor emission level for new sources, but determined that it would not be cost-effective.

For the final rule, we do not consider a beyond-the-floor level for new cement kilns because the MACT floor for new cement kilns is already lower than the beyond-the-floor emission standard for existing sources. As a result, a beyond-the-floor standard for new cement kilns is not warranted due to the likely significant costs of control and the minimal incremental emissions reductions. In addition, our policy goal of state of the art control of lead is achieved at the floor standard for new sources. We, therefore, adopt a semivolatile metal floor standard of 180 µg/dscm for new hazardous waste burning cement kilns.

6. What Are the Low Volatile Metals Standards?

We establish standards for existing and new cement kilns in today's rule that limit low volatile metal emissions to 56 and 54 µg/dscm, respectively. The rationale for these standards is discussed below.

a. What Is the MACT Floor tor Existing Sources? In the April 1996 NPRM, we defined floor control as either: (1) A fabric filter with an air-to-cloth ratio less than 2.3 acfm/ft^2 and a hazardous waste feedrate level of 140,000 µg/dscm, expressed as a maximum theoretical emission concentration; or (2) an electrostatic precipitator with a specific collection area of 350 ft^2/kacfm and the same hazardous waste feedrate level of 140,000 µg/dscm. The proposed floor level was 130 µg/dscm. (See 61 FR at 17396.) In the May 1997 NODA, we used a breakpoint analysis to identify sources that were not using floor control with respect either to low volatile metals hazardous waste feedrate or emissions control. Under this approach, we ranked low volatile metals emissions data from sources that were achieving the particulate matter floor of 69 mg/dscm or better. We identified the floor level as the test condition average associated with the breakpoint source. Thus, sources with atypically high emissions because of high low volatile metals feedrates or poor low volatile metals control, even though they were using floor control for particulate matter, were screened from the pool of sources used to define the floor emission level. The May 1977 NODA MACT floor level was 63 µg/dscm. (See 62 FR at 24229.)

We received limited comments in response to the NPRM and May 1997 NODA concerning the low volatile metals floor standard. We received comments, however, on several overarching issues including the appropriateness of considering feedrate control of metals including low volatile metals in hazardous waste as a MACT floor control technique and the specific procedure of identifying breakpoints in arrayed emissions data. These issues and our responses to them are discussed in the floor methodology section in Part Four, Section V.

Today we use a revised engineering evaluation and data analysis method to establish the MACT floor for low volatile metals on the same underlying data previously noticed for comment. As explained earlier, the aggregate feedrate approach, in conjunction with floor control for particulate matter, replaces the breakpoint analysis for metals and results in a low volatile metal floor emission level of 56 µg/dscm.

We estimate that over 76 percent of cement kilns in our data base meet the floor level. The national annualized compliance cost for cement kilns to reduce low volatile metal emissions to comply with the floor level is $0.8 million for the entire hazardous waste burning cement industry, and will reduce low volatile metal emissions by 0.2 Mg/yr or approximately 25 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the proposal, we considered a beyond-the-floor standard for low volatile metals based on improved particulate matter control. However, we concluded that a beyond-the-floor standard would not likely be cost-effective based on the limited emissions reductions of low volatility metals. In the May 1997 NODA, we considered a lower particulate matter emissions level, based on improved particulate matter control, as a beyond-the-floor standard with corresponding beyond-the-floor reductions in low volatile and semivolatile metals. Even though we did not quantify cost-effectiveness values, we expressed concern that a beyond-the-floor standard would not likely be cost-effective. (62 FR at 24229.)

For today's final rule, we identified three potential beyond-the-floor techniques for control of low volatile metals: (1) Improved particulate matter control; (2) limiting the feedrate of low volatile metals in the hazardous waste; and (3) limiting the feedrate of low volatile metals in the raw materials. We discuss the results of our analysis of each option below.

Improved Particulate Matter Control. Our judgment is that a beyond-the-floor standard based on improved particulate matter control would be less cost-effective than a beyond-the-floor standard based on limiting the feedrate of low volatile metals in the hazardous waste. First, our data show that all cement kilns are already achieving greater than a 99% system removal efficiency for low volatile metals, with most attaining 99.99% removal. Thus, equipment retrofit costs for improved control would be significant and result in only a small increment in reduction of emissions. Our beyond-the-floor analysis for semivolatile metals supports this conclusion. There, the semivolatile metals analysis showed that the beyond-the-floor option based on limiting the feedrate of semivolatile metals was approximately 30% more cost-effective than a beyond-the-floor option based on improved particulate matter control. We believe the low volatile metals would require similar particulate matter control device retrofits at cement kilns as for semivolatile metals. However, the total emissions reduction achieved would be less because hazardous waste burning cement kilns emit less low volatile metals than semivolatile metals. We do not have any of the serious concerns present for semivolatile metals that suggest we should accept a more marginal cost-effectiveness. Thus, we conclude that a beyond-the-floor standard for low volatile metals based on improved particulate matter control is not warranted.

Limiting the Feedrate of Low Volatile Metals in the Hazardous Waste. We also considered a beyond-the-floor standard of 40 µg/dscm for low volatile metals based on additional feedrate control of low volatile metals in the hazardous waste. This would reduce the floor emission level by approximately 30 percent. Our investigation shows that this beyond-the-floor option would achieve an incremental reduction in low volatile metals of only 0.1 Mg/yr. Given that this beyond-the-floor level would not achieve appreciable emissions reductions, we conclude that cost-effectiveness considerations would likely come into play suggesting that this beyond-the-floor standard is not warranted.

Limiting the Feedrate of Low Volatile Metals in the Raw Materials. Sources can achieve a reduction in low volatile metal emissions by substituting a feed material containing lower levels of arsenic, beryllium, and/or chromium for a primary raw material with higher levels of these metals. We believe that this beyond-the-floor option would be even less cost-effective than either of the options evaluated above, however. Cement kilns are sited proximate to primary raw material supply and transporting large quantities of an alternative source of raw material(s) is likely to be cost-prohibitive. Therefore, we do not adopt a low volatile metal beyond-the-floor standard based on limiting the feedrate of low volatile metals in raw materials.

For the reasons discussed above, we do not adopt a beyond-the-floor level for low volatile metals and establish the emission standard for existing hazardous waste burning cement kilns at 56 μg/dscm.

c. What Is the MACT Floor for New Sources? In the proposal, we defined floor control as a fabric filter with an air-to-cloth ratio less than 2.3 acfm/ft^2 and a hazardous waste feedrate control level of 25,000 μg/dscm, expressed as a maximum theoretical emission concentration. The proposed floor for new cement kilns was 44 μg/dscm. (61 FR at 17400.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for low volatile metals would also be appropriate for new sources. Floor control was based on a combination of good particulate matter control and limiting hazardous waste feedrate of low volatile metals. We used a breakpoint analysis of the low volatile metal emissions data to exclude sources achieving substantially poorer low volatile metal control than the majority of sources. We established the floor level at the test condition average of the breakpoint source. The NODA floor was 63 μg/dscm. (62 FR at 24230.)

As discussed above for existing sources, in developing the final rule we use the aggregate feedrate approach to identify MACT floors for the metals and hydrochloric acid/chlorine gas in combination with MACT floor control for particulate matter. Based on the low volatile metal feedrate in hazardous waste from the single best performing cement kiln using floor control for particulate matter, the MACT floor for new hazardous waste burning cement kilns is 54 μg/dscm.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the proposal and May 1997 NODA, we considered a low volatile metal beyond-the-floor level for new sources, but determined it would not be cost effective. For reasons similar to those discussed for existing sources, we do not believe that a beyond-the-floor standard is warranted for new cement kilns due to the high expected compliance cost and relatively low reductions in emissions of low volatile metals. Therefore, we adopt a low volatile metals standard of 54 μg/dscm for new hazardous waste burning cement kilns.

7. What Are the Hydrochloric Acid and Chlorine Gas Standards?

In today's rule, we establish standards for existing and new cement kilns that limit hydrochloric acid and chlorine gas emissions to 130 and 86 ppmv, respectively. The rationale for these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the proposal, we identified floor control for hydrochloric acid/chlorine gas as feedrate control of chlorine in the hazardous waste and proposed a floor standard of 630 ppmv. (61 FR at 17396.) In the May 1997 NODA, we used a data analysis method similar to that at proposal and discussed a floor emission level of 120 ppmv. (62 FR at 24230.)

Some commenters to the May 1997 NODA expressed concern that cement kilns may not be able to meet the hydrochloric acid/chlorine gas standard while making low alkali cement. Commenters noted that chlorine is sometimes added specifically to volatilize potassium and sodium compounds that must be removed to produce low alkali cement. One commenter manufacturing a low alkali cement submitted data showing a large range in hydrochloric acid/chlorine gas emissions while operating under varying conditions and production requirements. This commenter stated that they may not be able to meet the NODA hydrochloric acid/chlorine gas standard of 120 ppmv while making low alkali cement. We conclude, however, that the data they submitted do not adequately support this ultimate conclusion. The commenter's emissions data range from 6 ppmv to 83 ppmv while operating under RCRA compliance testing conditions. These emission levels are well below the final standard of 130 ppmv, and the expected operational range in this rule is 70% of the standard. We conclude that the hydrochloric acid/chlorine gas standard of 130 ppmv finalized today is readily achievable by all cement kilns irrespective of the type of cement manufactured.

For today's rule, we use a revised engineering evaluation and data analysis method to establish the MACT floor for hydrochloric acid and chlorine gas on the same underlying data previously noticed for comment. Using the aggregate feedrate approach discussed previously, we establish a hydrochloric acid/chlorine gas floor emission level of 130 ppmv.

We estimate that approximately 88 percent of cement kilns in our data base currently meet the floor level. The national annualized compliance cost for cement kilns to reduce hydrochloric acid/chlorine gas emissions to comply with the floor level is $1.4 million for the entire hazardous waste burning cement industry and will reduce hydrochloric acid/chlorine gas emissions by 383 Mg/yr or 12 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the proposal, we defined beyond-the-floor control as wet scrubbing with a 99 percent removal efficiency, but determined that a beyond-the-floor standard would not be cost-effective. (61 FR at 17397.) In the May 1997 NODA, we identified a more stringent floor standard and therefore reasoned that a beyond-the-floor standard based on wet scrubbing would likely also not be cost-effective. (62 FR at 24230.)

For today's rule, we identified three potential beyond-the-floor techniques for control of hydrochloric acid/chlorine gas emissions: (1) Scrubbing; (2) limiting the feedrate of chlorine in the hazardous waste; and (3) limiting the feedrate of chlorine in the raw materials. We discuss our analysis of each option below.

Scrubbing. We continue to believe that a beyond-the-floor standard based on dry or wet scrubbing is not likely to be cost-effective. Cement kilns achieve control of hydrochloric acid/chlorine gas emissions from alkaline raw materials in the kiln. Control effectiveness varies among kilns based on the alkalinity of the raw materials. Thus, the cement manufacturing process serves essentially as a dry scrubber. We conclude, therefore, that the addition of a dry scrubber will only marginally improve hydrochloric acid/chlorine gas removal and is not warranted as beyond-the-floor control.

It is also our judgment that a beyond-the-floor standard based on wet scrubbing is not warranted. The total estimated engineering retrofit costs would be approximately equivalent to those identified at proposal for this option. However, emissions reductions would be less given that the final MACT floor level is more stringent than the

level proposed. Therefore, the cost-effectiveness of a beyond-the-floor standard would be less attractive than the number we rejected at proposal. As a result, we must reaffirm that conclusion here.

Limiting the Feedrate of Chlorine in the Hazardous Waste. We also considered a beyond-the-floor standard for hydrochloric acid/chlorine gas based on additional feedrate control of chlorine in the hazardous waste. We are concerned, however, that cement kilns making low alkali cement may not be able to achieve a beyond-the-floor standard by controlling feedrate of chlorine in the hazardous waste. As noted above, chlorine is sometimes added specifically to volatilize potassium and sodium compounds that must be removed from the clinker to produce low alkali cement. Based on limited data submitted by a cement facility manufacturing low alkali cement, achievability of a beyond-the-floor standard of 70 ppmv, representing a 45% reduction from the floor level, may not be feasible for this source using feedrate control and others by inference. Therefore, we conclude that a beyond-the-floor standard based on chlorine feedrate control in the hazardous waste is not appropriate.

Limiting the Feedrate of Chlorine in the Raw Materials. A source can achieve a reduction in hydrochloric acid/chlorine gas emissions by substituting a feed material containing lower levels of chlorine for a primary raw material with higher levels of chlorine. This beyond-the-floor option is less cost-effective compared to the scrubbing options evaluated above because cement kilns are sited proximate to the primary raw material supply and transporting large quantities of an alternative source of raw material(s) is not technically achievable. Therefore, we do not adopt a hydrochloric acid/chlorine gas beyond-the-floor standard based on limiting the feedrate of chlorine in raw materials.

In summary, we establish the hydrochloric acid/chlorine gas standard for existing hazardous waste burning cement kilns at the floor level of 130 ppmv.

c. What Is the MACT Floor for New Sources? At proposal, we defined floor control for new sources as hazardous waste feedrate control for chlorine and the proposed floor level was 630 ppmv. (See 61 FR at 17401.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for hydrochloric acid/chlorine gas would also be appropriate for new sources. Floor control was based on limiting hazardous waste feedrates of chlorine. After screening out some data with anomalous system removal efficiencies compared to the majority of sources, we established the floor level at the test condition average of the breakpoint source. We identified a floor level for new kilns of 120 ppmv. (See 62 FR at 24230.)

As discussed above for existing sources, in developing the final rule, we use the aggregate feedrate approach to identify MACT floors for hydrochloric acid/chlorine gas. The resulting MACT emissions floor for new hazardous waste burning cement kilns is 86 ppmv.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the proposal, we considered a beyond-the-floor standard for new cement kilns of 67 ppmv based on wet scrubbing and concluded that it would not be cost-effective. In the May 1997 NODA, we also concluded that a beyond-the-floor standard based on wet scrubbing would likewise not be cost-effective. Considering the level of the floor standard for new kilns, we do not believe that a more stringent beyond-the-floor standard is warranted for the final rule, especially considering our concerns for cement kilns manufacturing low alkali cements.

In summary, we adopt the floor level of 86 ppmv as the standard for hydrochloric acid/chlorine gas for new sources.

8. What Are the Hydrocarbon and Carbon Monoxide Standards for Kilns Without By-Pass Sampling Systems? [138]

See § 63.1205(a)(5) and (b)(5).

In today's rule, we establish hydrocarbon and carbon monoxide standards for new and existing cement kilns without by-pass sampling systems as surrogates to control emissions of nondioxin organic hazardous air pollutants. The standards for existing sources limit hydrocarbon or carbon monoxide concentrations to 20 ppmv [139] or 100 ppmv, [140] respectively. The standards for new sources limit: (1) Hydrocarbons to 20 ppmv; or (2) carbon monoxide to 100. New, greenfield [141] kilns that elect to comply with the 100 ppmv carbon monoxide standard, however, must also comply with a 50 ppmv [142] hydrocarbon standard. New and existing sources that elect to comply with the 100 ppmv carbon monoxide standard, including new greenfield kilns that elect to comply with the carbon monoxide standard and 50 ppmv hydrocarbon standard, must also demonstrate compliance with the 20 ppmv hydrocarbon standard during the comprehensive performance test.[143] (See Part Four, Section IV.B of the preamble for the rationale for this requirement.) We discuss the rationale for these standards below.

a. What Is the MACT Floor for Existing Sources? As discussed in Part Four, Section II.B.2, we proposed limits on hydrocarbon emissions for kilns without by-pass sampling systems as a surrogate to control nondioxin organic hazardous air pollutants. In the April 1996 proposal (61 FR at 17397), we identified a hydrocarbon floor emission level of 20 ppmv for cement kilns not equipped with by-pass sampling systems, and proposed that floor control be based on the current federally-enforceable RCRA boiler and industrial furnace standards, control of organics in raw materials coupled with operating under good combustion practices to minimize fuel-related hydrocarbon. In the May 1997 NODA, we also indicated that this approach was appropriate.

Some commenters stated that a carbon monoxide limit of 100 ppmv was necessary for these cement kilns to better control organic hazardous air pollutants. Commenters also wrote that, alone, neither carbon monoxide nor hydrocarbons is an acceptable surrogate for organic hazardous air pollutant emissions. Additionally, commenters suggested that by requiring both carbon monoxide and hydrocarbon limits, we would further reduce emissions of organic hazardous air pollutants.

We conclude that continuous compliance with both a carbon monoxide and hydrocarbon standard is unwarranted for the following reasons. First, stack gas carbon monoxide levels are not a universally reliable indicator

[138] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume I: Description of Source Categories,'' July 1999, for further explanation of by-pass and midkiln sampling systems. Hydrocarbon and carbon monoxide standards for kilns equipped with by-pass sampling systems are discussed in Section VI.D.9 f the text.

[139] Hourly rolling average, reported as propane, dry basis, and corrected to 7% oxygen.

[140] Hourly rolling average, dry basis, corrected to 7% oxygen.

[141] A greenfield cement kiln is a kiln that commenced construction or reconstruction after April 19, 1996 at a site where no cement kiln previously existed, irrespective of the class of kiln (i.e., nonhazardous waste or hazardous waste burning). A newly constructed or reconstructed cement kiln at an existing site would not be classified as a greenfield cement kiln, and would be subject to the same carbon monoxide and hydrocarbon standards as an existing cement kiln.

[142] Thirty day block average, reported as propane, dry basis, and corrected to 7 percent oxygen.

[143] As discussed in Part 5, Section X.F, sources that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the 20 ppmv hydrocarbon standard i.e., these sources do not have the option to comply with the carbon monoxide standard).

of combustion intensity and efficiency for kilns without by-pass sampling systems. This is due to carbon monoxide generation by disassociation of carbon dioxide to carbon monoxide at the high sintering zone temperatures and evolution of carbon monoxide from the trace organic constituents in raw material feedstock.[144] (See 56 FR at 7150, 7153–55). Thus, carbon monoxide can be a too conservative surrogate for this type of kiln for potential emissions of hazardous air pollutants from combustion of hazardous waste. There are other sources of carbon monoxide unrelated to combustion of hazardous waste.[145]

Second, requiring continuous compliance with both a carbon monoxide and hydrocarbon emission limitation in the stack can be redundant for control of organic emissions from combustion of hazardous waste because: (1) Hydrocarbon alone is a direct and reliable surrogate for organic hazardous air pollutants; and (2) in most cases carbon monoxide is a conservative indicator of good combustion conditions and thus good control of organic hazardous air pollutants. As discussed in the following paragraphs, however, we have concluded that a source must demonstrate compliance with the hydrocarbon standard during the comprehensive performance test if it elects to continuously comply with the carbon monoxide standard to ensure that carbon monoxide is an adequate continuously monitored indicator of combustion efficiency. See Part Four, Section IV of the preamble for a discussion of the merits of using limits on stack gas concentrations of carbon monoxide and hydrocarbon to control organic emissions.

One commenter suggested cement kilns be given the option to comply with a carbon monoxide limit of 100 ppmv instead of the 20 ppmv hydrocarbon limit. The commenter emphasized that this option is currently allowed under the RCRA boiler and industrial furnace regulations, and that it would be conservative because hydrocarbon levels would always be below 20 ppmv when carbon monoxide levels are below 100 ppmv. As discussed below, we agree that cement kilns should be given the option to comply with either standard, but do not agree that compliance with the carbon monoxide standard ensures compliance with the hydrocarbon standard.

We have determined that it is necessary to require a source that elects to continuously comply with the carbon monoxide standard to also demonstrate compliance with the 20 ppmv hydrocarbon standard during the comprehensive performance test. We concluded that this requirement is necessary because we have limited data that shows a source can produce high hydrocarbon emissions while simultaneously producing low carbon monoxide emissions. This requirement to demonstrate compliance with the hydrocarbon standard during the performance test is sufficient to ensure that carbon monoxide alone is an appropriate continuously monitored indicator of combustion efficiency. See Part 4, Section IV.B, for a more detailed discussion. Consistent with this principle, incinerators and lightweight aggregate kilns are also required to demonstrate compliance with hydrocarbon standard during the comprehensive performance test if they elect to comply with the carbon monoxide standard.

In today's final rule, we are identifying a carbon monoxide level of 100 ppmv and a hydrocarbon level of 20 ppmv as floor control for existing sources because they are currently enforceable Federal standards for hazardous waste burning cement kilns. See § 266.104(b) and (c). As current rules allow, sources would have the option of complying with either limit. However, sources that elect to comply with the carbon monoxide standard must also demonstrate compliance with the hydrocarbon standard during the comprehensive performance test.

Given that these are current RCRA rules, all cement kilns without by-pass sampling systems can currently achieve these emission levels. Thus, we estimate no emissions reductions (or new costs) for compliance with these floor levels.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 proposal, we identified beyond-the-floor control levels for carbon monoxide and hydrocarbon in the main stack of 50 ppmv and 6 ppmv, respectively. (See 61 FR at 17397.) These beyond-the-floor levels were based on the use of a combustion gas afterburner. We indicated in the proposal, however, that the beyond-the-floor control was not practical since no kilns currently achieved these emission levels, and because of the high costs to retrofit a kiln with an afterburner.

One commenter wrote that we rejected the 50 ppmv and 6 ppmv beyond-the-floor carbon monoxide and hydrocarbon standards, respectively, without providing any justification. In order to confirm the reasoning discussed above, we have now estimated that the annualized cost for an afterburner for cement kilns will range from $3–8 million dollars per facility.[146] As proposed, and as we reiterated in the May 1997 NODA a beyond-the-floor standard based on an afterburner would be not be cost-effective due to the high retrofit costs and minimal incremental emissions reductions, and we do not adopt a beyond-the-floor standard for existing cement kilns.

In summary, we adopt the floor emission levels as standards for carbon monoxide, 100 ppmv, and hydrocarbons, 20 ppmv.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal (see 61 FR at 17401) and the May 1997 NODA, we identified a new source hydrocarbon floor emission level of 20 ppmv for new cement kilns not equipped with by-pass sampling systems based on the current Federally-enforceable BIF standards. The hydrocarbon limit is based on control of organics in raw materials coupled with good combustion practices.

In developing the final rule, we considered the comment discussed above that the rule should allow compliance with either a carbon monoxide standard of 100 ppmv or a hydrocarbon standard of 20 ppmv. Given that this option is available under the current BIF rule for new and existing sources, we now conclude that it represents MACT floor for new sources, except as discussed below.

As discussed previously, we have also proposed MACT standards for nonhazardous waste burning cement kilns. See 63 FR 14182, March 24, 1998. In that proposal, we determined that some existing sources have used the combination of feed material selection, site location, and feed material blending to optimize operations. We then concluded that site selection based on availability of acceptable raw material hydrocarbon content is a feasible approach to control hydrocarbon emissions at new sources. See 63 FR at 14202–03. We proposed a new source

[144] Raw materials enter the upper end of the kiln and move counter-current to the combustion gas. Thus, as the raw materials are heated in the kiln, organic compounds can evolve from trace levels of organics in the raw materials. These organic compounds can be measured as hydrocarbons and, when only partially oxidized, carbon monoxide. This process is not related to combustion of hazardous waste or other fuels in the combustion zone at the other end of the kiln.

[145] Of course, if a source elects to comply with the carbon monoxide standard, then we are more assured of good combustion conditions in the combustion zone, and thus good control of organic hazardous air pollutants that could be potentially emitted from feeding hazardous waste in the combustion zone.

[146] See 'Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume V: Emission Estimates and Engineering Costs'', February, 1999.

floor hydrocarbon emission level of 50 ppmv at nonhazardous waste burning Portland cement kilns because it is being consistently achieved during thirty-day block averaging periods when high hydrocarbon content raw materials are avoided. We have since promulgated a standard of 50 ppmv for hydrocarbons for new nonhazardous waste burning cement kilns. 64 FR 31898.

We now conclude for the same reasons that site selection is floor control for new source, greenfield hazardous waste burning cement kilns [147] and that the floor hydrocarbon emission level is 50 ppmv.[148] Sources must document compliance with this standard for each thirty-day block period of operation. We reconcile this hydrocarbon floor level of 50 ppmv with the floor levels discussed above of 20 ppmv hydrocarbons or 100 ppmv carbon monoxide by establishing the floor as follows. For new source greenfield kilns, the floor is either: (1) 20 ppmv hydrocarbons; or (2) 100 ppmv carbon monoxide and 50 ppmv hydrocarbons. For other new sources not located at greenfield sites, the floor is either 20 ppmv hydrocarbons or 100 ppmv carbon monoxide, which is identical to the standards for existing sources.

The combined 20 ppmv hydrocarbon and 100 ppmv carbon monoxide standards control organic hazardous air pollutant emissions that originate from the incomplete combustion of hazardous waste. The 50 ppmv hydrocarbon standard for new greenfield kilns controls organic hazardous air pollutant emissions that originate from the raw material. We conclude that the 50 ppmv hydrocarbon standard is necessary to deter new kilns from siting at locations that have on-site raw material that is high in organic content, since siting a cement kiln at such a location could result in elevated hydrocarbon emissions.

We considered whether new greenfield kilns would be required to monitor hydrocarbons continuously, or just document compliance with the 50 ppmv limit during the comprehensive performance test. We determined that hydrocarbons must be continuously monitored because compliance with the 100 ppmv carbon monoxide limit may not always ensure compliance with the 50 ppmv hydrocarbon limit. This is because hydrocarbons could potentially evolve from raw materials in the upper drying zone end of the kiln under conditions that inhibit sufficient oxidation of the hydrocarbons to form carbon monoxide.

As with existing sources, we are requiring new sources that elect to continuously comply with the carbon monoxide standard, and new greenfield sources that elect to comply with the carbon monoxide and 50 ppmv hydrocarbon standard, to also demonstrate compliance with the 20 ppmv hydrocarbon standard during the comprehensive performance test. Consistent with this principle, incinerators and lightweight aggregate kilns are also required to demonstrate compliance with the hydrocarbon standard during the comprehensive performance test if they elect to comply with the carbon monoxide standard.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 proposal, we identified beyond-the-floor emission levels for carbon monoxide and hydrocarbon of 50 ppmv and 6 ppmv, respectively, for new sources. (See 61 FR at 17401.) These beyond-the-floor levels were based on the use of a combustion gas afterburner. We indicated in the proposal, however, that beyond-the-floor control was not practical since none of the kilns in our data base are achieving these emission levels, and because of the high costs to retrofit kilns with an afterburner. We reiterated in the May 1997 NODA that a beyond-the-floor standard based on use of an afterburner would not be cost-effective.

One commenter supported these beyond-the-floor standards for new sources, but did not explain why these were considered to be appropriate standards. As discussed above for existing sources, we continue to believe that a beyond-the-floor standard based on use of an afterburner would not be cost-effective.

In summary, we adopt the floor levels as standards for new sources. For new source greenfield kilns, the standard monitored continuously is either: (1) 20 ppmv hydrocarbons; or (2) 100 ppmv carbon monoxide and 50 ppmv hydrocarbons. For other new source kilns, the standard is either 20 ppmv hydrocarbons or 100 ppmv carbon monoxide monitored continuously. New sources that elect to comply with the carbon monoxide standard, and new greenfield sources that elect to comply with the carbon monoxide and 50 ppmv hydrocarbon standard, must also demonstrate compliance with the 20 ppmv hydrocarbon standard, but only during the comprehensive performance test.

9. What Are the Carbon Monoxide and Hydrocarbon Standards for Kilns With By-Pass Sampling Systems? [149]

See § 63.1204(a)(5) and (b)(5).

We establish carbon monoxide and hydrocarbon standards for existing and new cement kilns with by-pass sampling systems as surrogates to control emissions of nondioxin organic hazardous air pollutants.[150] Existing kilns are required to comply with either a carbon monoxide standard of 100 ppmv or a hydrocarbon standard of 10 ppmv on an hourly rolling average basis. Both standards apply to combustion gas sampled in the by-pass or a midkiln sampling port that samples representative kiln gas. Sources that elect to comply with the carbon monoxide standard, however, must also document compliance with the hydrocarbon standard during the comprehensive performance test.[151] See Part Four, Section IV.B of the preamble for the rationale for this requirement.

New kilns are subject to the same by-pass gas carbon monoxide and hydrocarbon standards as existing sources. But, new, greenfield [152] kilns must also comply with a 50 ppmv hydrocarbon standard continuously monitored in the main stack. Sources must document compliance with this standard for each thirty-day block period of operation.

We discuss the rationale for adopting these standards below.

[147] At least one hazardous waste burning cement kiln in our data base used raw material substitution to control hydrocarbon emissions.

[148] We concluded that this new source hydrocarbon standard of 50 ppms should not apply to new sources that are not located at greenfield sites since these kilns are not capable of using site-selection to control hydrocarbon emissions.

[149] This also includes cement kilns which have midkiln sampling systems. See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume I: Description of Source Categories,'' July 1999, for further explanation of by-pass and midkiln sampling systems.

[150] As discussed in Part 5, Section X.F, cement kilns equipped with bypass sampling systems that feed hazardous waste at a location other than the end where products are normally discharged and at a location downstream of the bypass sampling location (relative to the combustion gas flow direction) must comply with the 20 ppmv main stack hydrocarbon standard discussed in the previous section in lieu of the bypass gas hydrocarbon standard.

[151] As discussed in Part 5, Section X.F, cement kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply wit the 10 ppmv hydrocarbon standard (i.e., these sources do not have the option to comply with the carbon monoxide standard).

[152] A greenfield cement kiln is a kiln that commenced construction or reconstruction after April 19, 1996 at a site where no cement kiln previously existed, irrespective of the class of kiln (i.e., nonhazardous waste or hazardous waste burning). A newly constructed or reconstructed cement kiln at an existing site would not be classified as a greenfield cement kiln, and would be subject to the same carbon monoxide and hydrocarbon standards as an existing cement kiln.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we identified floor carbon monoxide and hydrocarbon emission standards for by-pass gas of 100 ppmv and 6.7 ppmv, respectively. Floor control was good combustion practices. (See 61 FR at 17397.) In the May 1997 NODA, we used an alternative data analysis method to identify a hydrocarbon floor level of 10 ppmv.[153] See 62 FR at 24230. Our decision to use engineering information and principles to set the proposed floor standard was based, in part, on the limited hydrocarbon data in our data base. In addition, we reasoned that the hydrocarbon levels being achieved in an incinerator, (*i.e.,* 10 ppmv) are also being achieved in a cement kiln's by-pass duct.[154]

Some commenters stated that we did not have sufficient hydrocarbon emissions data from cement kilns equipped with by-pass sampling systems to justify a by-pass duct hydrocarbon standard. We disagree and conclude that we have adequate data because the MACT data base includes seven cement kilns that monitored hydrocarbons at the bypass sampling location. These sources are achieving hydrocarbon levels of 10 ppmv or less.[155] The fact that these sources achieve hydrocarbon levels below 10 ppmv supports our use of engineering information and principles to set the floor limit at 10 ppmv.[156]

Many commenters questioned whether cement kilns with by-pass sampling systems should comply with both a hydrocarbon and carbon monoxide standard. Those in favor of requiring cement kilns to comply with both standards wrote that neither carbon monoxide nor hydrocarbons are sufficient surrogates for organic hazardous air pollutant emissions. Commenters also noted that by requiring both a carbon monoxide and hydrocarbon limit, we would achieve appropriate organic hazardous air pollutant emission reductions. Other commenters wrote that continuous compliance with both a hydrocarbon and a carbon monoxide standard would be redundant and unnecessarily costly. We agree with the latter view, in that requiring continuous compliance with both standards for bypass gas is redundant for control of organic emissions from combustion of hazardous waste because, as previously discussed: (1) Hydrocarbon alone is a direct and reliable surrogate for organic hazardous air pollutants; and (2) in most cases, carbon monoxide is a conservative indicator of good combustion conditions and thus good control of organic hazardous air pollutants. However, as discussed earlier, we have concluded that a source must demonstrate compliance with the hydrocarbon standard during the comprehensive performance test if it elects to continuously comply with the carbon monoxide standard to ensure that carbon monoxide is an adequate continuously monitored indicator of combustion efficiency. See discussion in Part Four, Section IV.B of the preamble for more discussion on this issue.

One commenter stated that due to some by-pass gas quenching methods, and the need to correct for moisture and oxygen, it may not be possible to accurately measure hydrocarbons to the level of the proposed standard, i.e., 6.7 ppmv. We disagree with this reasoning because, as explained in the technical support document, cement kiln by-pass hydrocarbon levels should be reasonably achievable and measurable by decreasing the span and increasing the calibration frequency of the hydrocarbon monitor.[157] We also note that a cement kiln has the option to petition the Administrator for alternative monitoring approaches under § 63.8(f) if the source has valid reasons why a total hydrocarbon monitor cannot be used to document compliance.

We conclude that floor control can achieve by-pass gas emission levels of 100 ppmv for carbon monoxide and 10 ppmv for hydrocarbons. As discussed in Part Four, Section IV.B, a source may comply with either standard. If the source elects to comply with the carbon monoxide standard, however, it must also demonstrate compliance with the hydrocarbon standard during comprehensive performance testing.

We estimate that all cement kilns with by-pass sampling systems can currently achieve the carbon monoxide floor of 100 ppmv. We also estimate that approximately 97 percent of cement kilns with by-pass sampling systems meet the hydrocarbon floor level of 10 ppmv. The national annualized compliance cost for cement kilns to comply with the floor level is $37K and hydrocarbon emissions will be reduced by 11 Mg/yr, two percent from current baseline emissions .

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 proposal, we identified a beyond-the-floor control level for carbon monoxide and hydrocarbons in the main stack of 50 ppmv and 6 ppmv, respectively, based on the use of a combustion gas afterburner. (See 61 FR at 17399.) We indicated in the proposal that this beyond-the-floor level was not practical, however, since none of the kilns currently achieve these emission levels and because of the high costs of retrofitting kilns with an afterburner. We estimate that the annualized cost for each cement kiln to operate afterburners range from three to eight million dollars.[158] We continue to believe that it is not cost-effective based on the high retrofit costs and minimal incremental emissions reductions to adopt these beyond-the-floor standards.

In the April 1996 NPRM, we also considered limiting main stack hydrocarbon emissions to a beyond-the-floor level of 20 ppmv based on the use of a low-organic raw material.[159] This was in addition to floor controls limiting carbon monoxide and/or hydrocarbon levels in the by-pass. See 61 FR at 17398. We considered this beyond-the-floor option to address concerns that: (1) organics desorbed from raw materials may contain hazardous air pollutants, even absent any influence from burning hazardous waste; and, (2) it is reasonable to hypothesize that the chlorine released from burning hazardous waste can react with the organics desorbed from the raw material to form generally more toxic chlorinated hazardous air pollutants. Many commenters supported this approach. For the reasons discussed below, however, we conclude it is not appropriate to adopt this beyond-the-

[153] The proposed hydrocarbon standard of 6.7 ppmv was based on a statistical and breakpoint analysis. Today's final rule, consistent with May 1997 NODA, instead uses engineering information and principles to identify the floor hydrocarbon level of 10 ppmv.

[154] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' February, 1999.

[155] Four of these kilns have ceased hazardous waste operations, and one of the kilns collected that data during time periods other than Certification of Compliance testing.

[156] We note that we could have elected to establish this 10 ppmv hydrocarbon standard as a beyond-the-floor standard rather than a floor standard.

[157] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' February, 1999.

[158] See ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume V: Emission Estimates and Engineering Costs'', February, 1999.

[159] The definition of floor control for existing cement kilns equipped with by-pass sampling systems does not include the use of low organic raw material. Although we have limited data indicating that some kilns used low organic raw material to control hydrocarbon emissions, there are enough facilities using this method of control to establish it as a floor control for existing sources.

floor hydrocarbon standard for existing sources.

Also, many commenters stated that we should establish a main stack hydrocarbon standard because, as stated above, hazardous waste combustion byproducts from cement kilns, particularly chlorine, can react with organic compounds desorbed from raw materials to form hazardous air pollutants. Commenters believe that an additional main stack hydrocarbon emission standard would limit the emissions of chlorinated organic hazardous air pollutants that are generated due to the interaction of the hazardous waste combustion byproducts and the organics desorbed from the raw material.

We disagree that a main stack hydrocarbon emission limit is an appropriate beyond-the-floor control for existing sources. First, we do not believe it is cost-effective to require an existing kiln to substitute its raw material with an off-site raw material.[160] Cement kilns are sited proximate to the primary raw material supply and transporting large quantities of an alternative source of raw material(s) is likely to be very costly. Second, establishing a main stack hydrocarbon limit for existing sources is likely to be counter-productive in controlling organic hazardous air pollutants. It may compel the operator to avoid the unacceptable costs of importing low organic raw material by increasing back-end kiln temperatures to oxidize organics desorbed from raw material, thus lowering hydrocarbon levels. This increase in temperature may result in increased dioxin formation and is counter to our dioxin control strategy. Third, it is debatable whether there is a strong relationship between chlorine feedrates and chlorinated organic hazardous air pollutant emissions, as is suggested by commenters.[161] Finally, we anticipate that any potential risks associated with the possible formation of these chlorinated hazardous air pollutants at high hydrocarbon emission levels can be adequately addressed in a site-specific risk assessment conducted as part of the RCRA permitting process. This increased potential for emissions of chlorinated hazardous air pollutants is not likely to warrant evaluation via a site-specific risk assessment under RCRA, however, unless main stack hydrocarbon levels are substantially higher than the 20 ppmv limit currently applicable under RCRA for cement kilns not equipped with by-pass systems.

In summary, we adopt the floor levels as standards for carbon monoxide, 100 ppmv, and hydrocarbons, 10 ppmv. As discussed above, a source may comply with either standard. If the source elects to comply with the carbon monoxide standard, however, it must also demonstrate compliance with the hydrocarbon standard during comprehensive performance testing.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we identified new source floor standards for carbon monoxide and hydrocarbon emissions in the by-pass of 100 ppmv and 6.7 ppmv, respectively. We identified good combustion practices as floor control. (See 61 FR at 17401.) In the May 1997 NODA, we used an alternative data analyses method, in part, to identify an alternative new source hydrocarbon floor level. (See 62 FR at 24230.) As a result of this analysis and the use of engineering information and principles, we identified a floor hydrocarbon emission level of 10 ppmv in the by-pass for new cement kilns. We continue to believe that the new source hydrocarbon floor methodology discussed in the May 1997 NODA, and the new source carbon monoxide floor methodology discussed in the April 1996 proposal, are appropriate. Therefore, we adopt these floor emission levels for by-pass gas in today's final rule.

We also establish a 50 ppmv hydrocarbon floor level for the main stack of new greenfield kilns. As discussed above (Part Four, Section VII.8.c), we concluded during development of the final rule that some cement kilns are currently controlling their feed material selection, site location, and feed material blending to optimize operations. Because these controls can be used to control hydrocarbon content of the raw material and, thus, hydrocarbon emissions in the main stack, they represent floor control for main stack hydrocarbons for new sources.[162] We established a floor hydrocarbon emission level of 50 ppmv because it is being consistently achieved during thirty-day block averaging periods when high hydrocarbon content raw materials are avoided.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 proposal, we identified main stack beyond-the-floor emission levels for carbon monoxide and hydrocarbon of 50 ppmv and 6 ppmv, respectively, for new sources. (See 61 FR at 17401.) These beyond-the-floor levels were based on the use of a combustion gas afterburner. We indicated in the proposal, however, that beyond-the-floor control was not practical since none of the kilns in our data base are achieving these emission levels, and because of the high costs to retrofit kilns with an afterburner. We reiterated in the May 1997 NODA, that a beyond-the-floor standard based on use of an afterburner would not be cost-effective.

One commenter wrote that we rejected these beyond-the-floor carbon monoxide and hydrocarbon standards without providing any justification. Another commenter supported these beyond-the-floor standards for new sources. As discussed above (in greater detail) for existing sources, we continue to believe that a beyond-the-floor standard based on use of an afterburner would not be cost-effective.

In the April 1996 proposal, we considered limiting main stack hydrocarbon emissions at new sources equipped with by-pass sampling systems to a beyond-the-floor level of 20 ppmv.[163] This addressed concerns that: (1) Organics desorbed from raw materials contain hazardous air pollutants, even absent any influence from burning hazardous waste; and (2) it is reasonable to hypothesize that the chlorine released from burning hazardous waste can react with the organics desorbed from the raw material to form generally more toxic chlorinated hazardous air pollutants. Although not explicitly stated, beyond-the-floor control would have been control of feed material selection, site location, and feed material blending to control the hydrocarbon content of the raw material and, thus, hydrocarbon emissions in the main stack. As discussed above, however, we adopt today a main stack hydrocarbon floor standard of 50 ppmv for newly constructed greenfield cement kilns equipped with by-pass systems. We are not adopting a main stack beyond-the floor hydrocarbon standard of 20 ppmv for these kilns because we

[160] We did not quantify actual costs associated with raw material substitution due to the lack of information.

[161] It is true that some studies have shown a relationship between chlorine levels in the flue gas and the generation of chlorobenzene in cement kiln emissions: the more chlorine, the more chlorobenzene is generated. Some full-scale tests, however, have shown that there is no observable or consistent trend when comparing ''baseline'' (*i.e.*, nonhazardous waste operation) organic hazardous air pollutant emissions with organic hazardous air pollutant emissions associated with hazardous waste operations, as well as comparing hazardous waste conditions with varying levels of chlorine. See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999, for further discussion.

[162] At least one hazardous waste burning cement kiln in our data base used raw material substitution to control hydrocarbon emissions.

[163] This was in addition to limiting hydrocarbon and/or carbon monoxide at the by-pass sampling location.

are concerned that it may not be readily achievable using beyond-the-floor control.

In summary, we establish the following standards for new sources based on floor control: (1) By-pass gas emission standards for carbon monoxide and hydrocarbons of 100 ppmv and 10 ppmv, respectively;[164] and (2) a main stack hydrocarbon standard of 50 ppmv at greenfield sites.

10. What Are the Destruction and Removal Efficiency Standards?

We establish a destruction and removal efficiency (DRE) standard for existing and new cement kilns to control emissions of organic hazardous air pollutants other than dioxins and furans. Dioxins and furans are controlled by separate emission standards. See discussion in Part Four, Section IV.A. The DRE standard is necessary, as previously discussed, to complement the carbon monoxide and hydrocarbon emission standards, which also control these hazardous air pollutants.

The standard requires 99.99 percent DRE for each principal organic hazardous constituent (POHC), except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. These wastes are listed as—F020, F021, F022, F023, F026, and F027—RCRA hazardous wastes under part 261 because they contain high concentrations of dioxins.

a. What Is the MACT Floor for Existing Sources? Existing sources are currently subject to DRE standards under § 266.104(a) that require 99.99 percent DRE for each POHC, except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. Accordingly, these standards represent MACT floor. Since all hazardous waste cement kilns are currently subject to these DRE standards, they represent floor control, *i.e.*, greater than 12 percent of existing sources are achieving these controls.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? Beyond-the-floor control would be a requirement to achieve a higher percentage DRE, for example, 99.9999 percent DRE for POHCs for all hazardous wastes. A higher DRE could be achieved by improving the design, operation, or maintenance of the combustion system to achieve greater combustion efficiency.

Sources will not incur costs to achieve the 99.99% DRE floor because it is an existing RCRA standard . A substantial number of existing hazardous waste combustors are not likely to be routinely achieving 99.999% DRE, however, and most are not likely to be achieving 99.9999% DRE. Improvements in combustion efficiency will be required to meet these beyond-the-floor DREs. Improved combustion efficiency is accomplished through better mixing, higher temperatures, and longer residence times. As a practical matter, most combustors are mixing-limited. Thus, improved mixing is necessary for improved DREs. For a less-than-optimum burner, a certain amount of improvement may typically be accomplished by minor, relatively inexpensive combustor modifications—burner tuning operations such as a change in burner angle or an adjustment of swirl—to enhance mixing on the macro-scale. To achieve higher and higher DREs, however, improved mixing on the micro-scale may be necessary requiring significant, energy intensive and expensive modifications such as burner redesign and higher combustion air pressures. In addition, measurement of such DREs may require increased spiking of POHCs and more sensitive stack sampling and analysis methods at added expense.

Although we have not quantified the cost-effectiveness of a beyond-the-floor DRE standard, we do not believe that it would be cost-effective. For reasons discussed above, we believe that the cost of achieving each successive order-of-magnitude improvement in DRE will be at least constant, and more likely increasing. Emissions reductions diminish substantially, however, with each order of magnitude improvement in DRE. For example, if a source were to emit 100 gm/hr of organic hazardous air pollutants assuming zero DRE, it would emit 10 gm/hr at 90 percent DRE, 1 gm/hr at 99 percent DRE, 0.1 gm/hr at 99.9 percent DRE, 0.01 gm/hr at 99.99 percent DRE, and 0.001 gm/hr at 99.999 percent DRE. If the cost to achieve each order of magnitude improvement in DRE is roughly constant, the cost-effectiveness of DRE decreases with each order of magnitude improvement in DRE. Consequently, we conclude that this relationship between compliance cost and diminished emissions reductions associated with a more stringent DRE standard suggests that a beyond-the-floor standard is not warranted.

c. What Is the MACT Floor for New Sources? The single best controlled source, and all other hazardous waste cement kilns, are subject to the existing RCRA DRE standard under § 266.104(a). Accordingly, we adopt this standard as the MACT floor for new sources.

d. What Are Our Beyond-the-Floor Considerations for New Sources? As discussed above, although we have not quantified the cost-effectiveness of a more stringent DRE standard, diminishing emissions reductions with each order of magnitude improvement in DRE suggests that cost-effectiveness considerations would likely come into play. We conclude that a beyond-the-floor standard is not warranted.

VIII. What Are the Standards for Existing and New Hazardous Waste Burning Lightweight Aggregate Kilns?

A. To Which Lightweight Aggregate Kilns Do Today's Standards Apply?

The standards promulgated today apply to each existing, reconstructed, and newly constructed lightweight aggregate plant where hazardous waste is burned in the kiln. These standards apply to major source and area source lightweight aggregate facilities. Lightweight aggregate kilns that do not engage in hazardous waste burning operations are not subject to this NESHAP; however, these kilns will be subject to future MACT standards for the Clay Products source category.

B. What Are the Standards for New and Existing Hazardous Waste Burning Lightweight Aggregate Kilns?

1. What Are the Standards for Lightweight Aggregate Kilns?

In this section, the basis for the emissions standards for hazardous waste burning lightweight aggregate kilns is discussed. The kiln emission limits apply to the kiln stack gases from lightweight aggregate plants that burn hazardous waste. The emissions standards are summarized below:

[164] A source may comply with either bypass gas standard. If the source elects to comply with the carbon monoxide standard, however, it must also demonstrate compliance with the hydrocarbon standard during comprehensive performance testing.

STANDARDS FOR EXISTING AND NEW LIGHTWEIGHT AGGREGATE KILNS

Hazardous air pollutant or hazardous air pollutant surrogate	Emissions standard [1]	
	Existing sources	New sources
Dioxin/furan	0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and rapid quench of the flue gas at the exit of the kiln to less than 400°F.	0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and rapid quench of the flue gas at the exit of the kiln to less than 400°F.
Mercury	47 µg/dscm	43 µg/dscm.
Particulate matter	57 mg/dscm (0.025 gr/dscf)	57 mg/dscm (0.025 gr/dscf).
Semivolatile metals [2]	250 µg/dscm	43 µg/dscm.
Low volatile metals [3]	110 µg/dscm	110 µg/dscm.
Hydrochloric acid/chlorine gas	230 ppmv	41 ppmv.
Hydrocarbons [2,3]	20 ppmv (or 100 ppmv carbon monoxide)	20 ppmv (or 100 ppmv carbon monoxide).
Destruction and removal efficiency	For existing and new sources, 99.99% for each principal organic hazardous constituent (POHC) designated. For sources burning hazardous wastes F020, F021, F022, F023, F026, or F027, 99.9999% for each POHC designated.	

[1] All emission levels are corrected to 7% O_2, dry basis.
[2] Hourly rolling average. Hydrocarbons are reported as propane.
[3] Lightweight aggregate kilns that elect to continuously comply with the carbon monoxide standard must demonstrate compliance with the hydrocarbon standard of 20 ppmv during the comprehensive performance test.

2. What Are the Dioxin and Furan Standards?

In today's rule, we establish a standard for new and existing lightweight aggregate kilns that limits dioxin/furan emissions to either 0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and rapid quench of the flue gas at the exit of the kiln to less than 400°F. Our rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we had dioxin/furan emissions data from only one lightweight aggregate kiln and pooled that data with the dioxin/furan data for hazardous waste burning cement kilns to identify the MACT floor emission level. We stated that it is appropriate to combine the two data sets because they are adequately representative of general dioxin/furan behavior and control in either type of kiln. Consequently, floor control and the floor emission level for lightweight aggregate kilns were the same as for cement kilns. We proposed a floor emission level of 0.20 ng TEQ/dscm, or temperature at the inlet to the fabric filter not to exceed 418°F. (61 FR at 17403.)

Several commenters opposed our proposed approach of pooling the lightweight aggregate kiln data with the cement kiln dioxin/furan data for the MACT floor analysis. In order to respond to commenter concerns, we obtained additional dioxin/furan emissions data from lightweight aggregate kiln sources. In a MACT reevaluation discussed in the May 1997 NODA, we presented an alternative data analysis method to identify floor control and the floor emission level. In that NODA, dioxin/furan floor control was defined as temperature control not to exceed 400°F at the inlet to the fabric filter. That analysis resulted in a floor emission level of 0.20 ng TEQ/dscm, or 4.1 ng TEQ/dscm and temperature at the inlet to the fabric filter not to exceed 400°F. (62 FR at 24231.) An emission level of 4.1 ng TEQ/dscm represents the highest single run from the test condition with the highest run average. We concluded that 4.1 ng TEQ/dscm was a reasonable floor level, from an engineering perspective, given our limited dioxin/furan data base for lightweight aggregate kilns. (We noted that if this were a large data set, we would have identified the floor emission level simply as the highest test condition average.) Due to variability among the runs of the test condition with the highest condition average and because a floor level of 4.1 ng TEQ/dscm is 40 percent higher than the highest test condition average of 2.9 ng TEQ/dscm lightweight aggregate kilns using floor control will be able to meet routinely a floor emission level of 4.1 ng TEQ/dscm.

We maintain that the floor methodology discussed in the May 1997 NODA is appropriate and we adopt this approach in today's rule. In that NODA we identified two technologies for control of dioxin/furan emissions from lightweight aggregate kilns. The first technology controls dioxin/furans by quenching kiln gas temperatures at the exit of the kiln so that gas temperatures at the inlet to the particulate matter control device are below the temperature range of optimum dioxin/furan formation. The other technology is activated carbon injected into the kiln exhaust gas. Because activated carbon injection is not currently used by any hazardous waste burning lightweight aggregate kilns, this technology was evaluated only as part of a beyond-the-floor analysis.

One commenter opposes our approach specifying a MACT floor control temperature limitation of 400°F at the particulate matter control device. Instead, the commenter supports a temperature limitation of 417°F, which is the highest temperature associated with any dioxin/furan test condition in our data base. Although only two of the three test conditions for which we have dioxin/furan emissions data operated the fabric filter at 400°F or lower (the third operated at 417°F), we do have other fabric filter operating temperatures from kilns performing RCRA compliance testing for other hazardous air pollutants that document fabric filter operations at 400°F or lower. From these data, we conclude that lightweight aggregate kilns can operate the fabric filter at temperatures of 400°F or lower. Thus, identifying floor control at a temperature limitation of 400°F ensures that all lightweight aggregate kilns will be operating consistent with sound operational practices for controlling dioxin/furan emissions.

As discussed in the May 1997 NODA, specifying a temperature limitation of 400°F or lower is appropriate for floor control because, from an engineering perspective, it is within the range of reasonable values that could have been selected considering that: (1) The optimum temperature window for surface-catalyzed dioxin/furan formation is approximately 450–750°F; and (2) temperature levels below 350°F can cause dew point condensation problems resulting in particulate matter control device corrosion. Further, lightweight aggregate kilns can operate at air pollution control device temperatures between 350 to 400°F. In

fact, all lightweight aggregate kilns use (or have available) fabric filter ''tempering'' air dilution and water quench for cooling kiln exit gases prior to the fabric filter (some kilns also augment this with uninsulated duct radiation cooling). Thus, the capability of operating fabric filters at temperatures lower than 400°F currently exists and is practical. See the technical support document for further discussion.[165]

In summary, today's floor emission level for dioxin/furan emissions for existing lightweight kilns is 0.20 ng TEQ/dscm or 4.1 ng TEQ/dscm and control of temperature at the inlet to the fabric filter not to exceed 400°F. We estimate that all lightweight aggregate kiln sources currently are meeting the floor level.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? We considered in the April 1996 proposal a beyond-the-floor standard of 0.20 ng TEQ/dscm based on injection of activated carbon at a flue gas temperature of less than 400°F. (61 FR at 17403.) In the May 1997 NODA, we considered a beyond-the-floor standard of 0.20 ng TEQ/dscm standard based on rapidly quenching combustion gases at the exit of the kiln to 400°F, and insulating the duct-work between the kiln exit and the fabric filter to maintain gas temperatures high enough to avoid dew point problems. (62 FR at 24232.)

One commenter, however, disagrees that there is adequate evidence (test data) supporting rapid quench of kiln exit gases to less than 400°F can achieve a level of 0.20 ng TEQ/dscm. Based on these NODA comments and upon closer analysis of all available data, we find that a level of 0.20 ng TEQ/dscm has not been clearly demonstrated for lightweight aggregate kilns with rapid quench less than 400°F prior to the particulate matter control device. The data show that some lightweight aggregate kilns can achieve a level of 0.20 TEQ ng/dscm with rapid quench. In addition, one commenter, who operates two lightweight aggregate kilns with heat exchangers that cool the flue gas to a temperature of approximately 400°F at the fabric filter, stated that they achieve dioxin/furan emissions slightly below 0.20 ng TEQ/dscm. However, because of the small dioxin/furan data base we are concerned that these limited data may not show the full range of emissions. Due to the similarity of dioxin/furan control among cement kilns and lightweight aggregate kilns, we looked to the cement kiln data to complement our limited lightweight aggregate kiln dataset. As discussed earlier, cement kilns are able to control dioxin/furans to 0.40 ng TEQ/dscm with temperature control. Since we do not expect a lightweight aggregate kiln to achieve lower dioxin/furan emissions than a cement kiln with rapid quench, we agree with these commenters and conclude that lightweight aggregate kilns can control dioxin/furans to 0.40 ng TEQ/dscm with rapid quench of kiln exit gases to less than 400°F.

Thus, for the final rule, we considered two beyond-the-floor levels: (1) Either 0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and rapid quench of the kiln exhaust gas to a temperature less than 400°F; and (2) a level of 0.20 ng TEQ/dscm based on activated carbon injection.

The first option is a beyond-the-floor standard of either 0.20 ng TEQ/dscm, or 0.40 ng TEQ/dscm and rapid quench of the kiln exhaust gas to less than 400°F. The national incremental annualized compliance cost for lightweight aggregate kilns to meet this beyond-the-floor level rather than comply with the floor controls would be approximately $50,000 for the entire hazardous waste burning lightweight aggregate kiln industry, and would provide an incremental reduction in dioxin/furan emissions beyond the MACT floor controls of nearly 2 g TEQ/yr.

Based on these costs of approximately $25 thousand per additional g of dioxin/furan removed and on the significant reduction in dioxin/furan emissions achieved, we have determined that this dioxin/furan beyond-the-floor option for lightweight aggregate kilns is justified, especially given our special concern about dioxin/furans. Dioxin/furans are some of the most toxic compounds known due to their bioaccumulation potential and wide range of health effects, including carcinogenesis, at exceedingly low doses. Exposure via indirect pathways is a chief reason that Congress singled out dioxin/furans for priority MACT control in section 112(c)(6) of the CAA. See S. Rep. No. 128, 101st Cong. 1st Sess. at 154–155.

We also evaluated, but rejected, activated carbon injection as a beyond-the-floor option. Carbon injection is routinely effective at removing 99 percent of dioxin/furans at numerous municipal waste combustor and medical waste combustor applications and one hazardous waste incinerator application. However, no hazardous waste burning lightweight aggregate kiln currently uses activated carbon injection for dioxin/furan removal. We believe that it is conservative to assume that only 95 percent is achievable given potential uncertainties in its application to lightweight aggregate kilns. In addition, we assumed for cost-effectiveness calculations that lightweight aggregate kilns needing activated carbon injection would install the activated carbon injection system after the existing fabric filter device and add a new smaller fabric filter to remove the injected carbon with the absorbed dioxin/furans and mercury. This costing approach addresses commenter's concerns that injected carbon may interfere with current dust recycling practices.

The national incremental annualized compliance cost for lightweight aggregate kilns to meet a beyond-the-floor level based on activated carbon injection rather than comply with the floor controls would be approximately $1.2 million for the entire hazardous waste burning lightweight aggregate kiln industry. This would provide an incremental reduction in dioxin/furan emissions beyond the MACT floor controls of 2.2 g TEQ/yr, or 90 percent. Based on these costs of approximately $0.53 million per additional g of dioxin/furan removed and the small incremental dioxin/furan emissions reduction beyond the dioxin/furan beyond-the-floor option discussed above (2.0 g TEQ/yr versus 2.2 g TEQ/ yr), we have determined that this second beyond-the-floor option for lightweight aggregate kilns is not justified. Therefore, we are not promulgating a beyond-the-floor standard of 0.20 ng TEQ/dscm for lightweight aggregate kilns based on activated carbon injection.

Thus, the promulgated dioxin/furan standard for existing lightweight aggregate kilns is a beyond-the-floor standard of 0.20 ng TEQ/dscm; or 0.40 ng TEQ/dscm and rapid quench to a temperature not to exceed 400°F based on rapid quench of flue gas at the exit of the kiln.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, the floor analysis for new lightweight aggregate kilns was the same as for existing kilns, and the proposed standard was the same. The proposed floor emission level was 0.20 ng TEQ/dscm, or temperature at the inlet to the particulate matter control device not to exceed 418°F. (61 FR at 17408.) In the May 1997 NODA, we used an alternative data analysis method to identify floor control and the floor emission level. As done for existing sources, floor control for new sources was defined as temperature control at the inlet to the particulate matter control device to less than 400°F. That

[165] USEPA, ''Final Technical Support document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

analysis resulted in a floor emission level of 0.20 ng TEQ/dscm, or 4.1 ng TEQ/dscm and temperature at the inlet to the fabric filter not to exceed 400°F. Our engineering evaluation indicated that the best controlled source is one that is controlling temperature control at the inlet to the fabric filter at 400°F. (62 FR at 24232.) We continue to believe that the floor methodology discussed in the May 1997 NODA is appropriate for new sources and we adopt this approach in the final rule. The floor level for new lightweight aggregate kilns is 0.20 ng TEQ/dscm, or 4.1 ng TEQ/dscm and temperature at the inlet to the particulate matter control device not to exceed 400°F.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 proposal, we proposed activated carbon injection as beyond-the-floor control and a beyond-the-floor standard of 0.20 ng TEQ/dscm. (61 FR at 17408.) In the May 1997 NODA, we identified a beyond-the-floor standard of 0.20 ng TEQ/dscm based on rapid quench of kiln gas to less than 400°F combined with duct insulation or activated carbon injection operated at less than 400°F. (62 FR at 24232.) These beyond-the-floor considerations are identical to those discussed above for existing sources.

The beyond-the-floor standard identified for existing sources continues to be appropriate for new sources for the same reasons. Thus, the promulgated dioxin/furan standard for new lightweight aggregate kilns is the same as the standard for existing standards, i.e., 0.20 ng TEQ/dscm or 0.40 ng TEQ/dscm and rapid quench of the kiln exhaust gas to less than 400°F.

3. What Are the Mercury Standards?

In the final rule, we establish a standard for existing and new lightweight aggregate kilns that limits mercury emissions to 47 and 33 μg/dscm, respectively. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? All lightweight aggregate kilns use fabric filters, and one source uses a venturi scrubber in addition to a fabric filter. However, since mercury is generally in the vapor form in and downstream of the combustion chamber, including in the air pollution control device, fabric filters alone do not achieve significant mercury control. Mercury emissions from lightweight aggregate kilns are currently controlled under existing regulations through limits on the maximum feedrate of mercury in total feedstreams (e.g., hazardous waste, raw materials). Thus, MACT floor control is based on limiting the feedrate of mercury in hazardous waste.

In the April 1996 proposal, we identified floor control as hazardous waste feedrate control not to exceed a feedrate level of 17 μg/dscm, expressed as a maximum theoretical emissions concentration, and proposed a floor emission level of 72 μg/dscm based on an analysis of data from all lightweight aggregate kilns with a hazardous waste feedrate of mercury of this level or lower. (61 FR at 17404.) In the May 1997 NODA, we conducted a breakpoint analysis on ranked mercury emissions data and established the floor emission level equal to the test condition average of the breakpoint source. (62 FR at 24232.) The breakpoint analysis was intended to reflect an engineering-based evaluation of the data whereby the few lightweight aggregate kilns spiking extra mercury during testing procedures did not drive the floor emission level to levels higher than the preponderance of the emission data. We reasoned that sources with emissions higher than the breakpoint source were not controlling the hazardous waste feedrate of mercury to levels representative of MACT. The May 1997 NODA analysis resulted in a MACT floor level of 47 μg/dscm.

One commenter states that the use of mercury stack gas measurements from RCRA compliance test reports is inappropriate for setting the MACT floor since they are based on feeding normal wastes. With the exception of one source, no mercury spiking was done during the RCRA compliance testing because lightweight aggregate kilns complied with Tier I levels allowable in the Boiler and Industrial Furnace rule. The commenter notes that the Tier I allowable levels are above, by orders of magnitude, the total mercury fed into lightweight aggregate kilns. Thus, to set the mercury MACT floor, the commenter states that we need to consider the potential range of mercury levels in the hazardous waste and raw materials, which may not represented by the RCRA compliance stack gas measurements.

We recognize that stack gas tests generating mercury emissions data were conducted with normal unspiked waste streams containing normal levels of mercury in hazardous waste. However, we concluded that it is appropriate in this particular circumstance to use unspiked data to define a MACT floor. See discussion in Part Four, Section V.D.1. It would hardly reflect MACT to base the floor emission level on a feedrate of mercury greater than that which actually occurs in hazardous waste fuels burned in these units. Furthermore, the final rule standard is projected to be achievable by lightweight aggregate kilns for the vast majority of the wastes they are currently handling. The standard would allow lightweight aggregate kilns to burn wastes with about 0.5 ppmw mercury, without use of add-on mercury control techniques such as carbon injection. Data provided by a commenter indicates that approximately 90% of the waste streams lightweight aggregate kilns currently burn do not contain mercury levels at 2 ppmw. Further, the commenter indicates that these wastes are typically less than 0.02 ppmw mercury when more refined and costly analysis techniques are used. Thus, the standard is consistent with the current practice of lightweight aggregate kilns burning low-mercury waste.

We received comments from the lightweight aggregate kiln industry expressing concern with the stringency of the mercury standard. These commenters oppose a mercury standard of 47 μg/dscm, in part, because of the difficulty and increased cost of demonstrating compliance with day-to-day mercury feedrate limits. One potential problem pertains to raw material mercury detection limits. The commenter states that mercury is generally not measured in the raw material at detectable levels at their facilities. The commenter points out that if a kiln assumes mercury is present in the raw material at the detection limit, the resulting calculated uncontrolled mercury emission concentration could exceed, or be a significant percentage of, the mercury emission standard. This may prevent a kiln from complying with the mercury emission standard even though MACT control is used. Further, the commenter anticipates that more frequent analysis, additional laboratory equipment and staff, and improved testing and analysis procedures will be required to show compliance with a standard of 47 μg/dscm. The commenter states that the costs of compliance will increase significantly at each facility to address this nondetect issue.

Four provisions in the final rule offer flexibility in complying with the mercury standard. For example, one provision allows sources to petition for an alternative mercury standard that only requires compliance with a hazardous waste mercury feedrate limitation, provided that mercury not been present historically in the raw material at detectable levels. This approach ensures that kilns using MACT controls can achieve the mercury standard. The details of this provision are discussed in Part Five, Section

X.A.2. Another provision allows kilns a waiver of performance testing requirements when the source feeds low levels of mercury. Under this provision, a kiln qualifies for a waiver of the performance testing requirements for mercury if all mercury from all feedstreams fed to the combustion unit does not exceed the mercury emission standard. For kilns using this waiver, we allow kilns to assume mercury in the raw material is present at one-half the detection limit whenever the raw materials feedstream analysis determines that mercury is not present at detectable levels. The details of this provision are presented in Part Five, Section X.B. For a discussion of the other two methods that can be used to comply with the mercury emission standard, see Part Five, Section VII.B.6.

For today's rule we use a revised engineering evaluation and data analysis method to establish the MACT floor emission level for mercury. The approach used to establish MACT floors for the three metal hazardous air pollutant groups and hydrochloric acid/chlorine gas is the aggregate feedrate approach. Using this approach, the resulting mercury floor emission level is 47 μg/dscm.

We estimate that approximately 75 percent of lightweight aggregate kiln sources currently are meeting the floor emission level. The national annualized compliance cost for lightweight aggregate kilns to reduce mercury emissions to comply with the floor emission level is $0.7 million for the entire hazardous waste burning lightweight aggregate kiln industry, and will reduce mercury emissions by approximately 0.03 Mg/yr or 47 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 NPRM, we considered a beyond-the-floor standard based on flue gas temperature reduction to 400°F or less followed by activated carbon injection, but determined that a beyond-the-floor level would not be cost-effective and therefore warranted. (61 FR at 17404.) In the May 1997 NODA, we considered a beyond-the-floor standard of 15 μg/dscm based on an activated carbon injection. However, we indicated in the NODA that a beyond-the-floor standard would not likely be justified given the high cost of treatment and the relatively small amount of mercury removed from air emissions. (62 FR at 24232.)

In developing the final rule, we identified three techniques for control of mercury as a basis to evaluate a beyond-the-floor standard: (1) Activated carbon injection; (2) limiting the feed of mercury in the hazardous waste; and (3) limiting the feed of mercury in the raw materials. The results of each analysis are discussed below.

Activated Carbon Injection. To investigate this beyond-the-floor control option, we applied a carbon injection capture efficiency of 80 percent to the floor emission level of 47 μg/dscm. The resulting beyond-the-floor emission level is 10 μg/dscm.

The national incremental annualized compliance cost for lightweight aggregate kilns to meet this beyond-the-floor level rather than comply with the floor controls would be approximately $0.6 million for the entire hazardous waste burning lightweight aggregate kiln industry and would provide an incremental reduction in mercury emissions beyond the MACT floor controls of 0.02 Mg/yr. Based on these costs of approximately $34 million per additional Mg of mercury removed and the small emissions reductions that would be realized, we conclude that this mercury beyond-the-floor option for hazardous waste burning lightweight aggregate kilns is not acceptably cost-effective nor otherwise justified. Therefore, we do not adopt this beyond-the-floor standard.

Limiting the Feedrate of Mercury in Hazardous Waste. We also considered, but rejected, a beyond-the-floor emission level based on limiting the feed of mercury in the hazardous waste. This mercury beyond-the-floor option for lightweight aggregate kilns is not warranted because data submitted by commenters indicate that approximately 90% of the hazardous waste burned by lightweight aggregate kilns contains mercury at levels below method detection limits. We conclude from these data that there are little additional mercury reductions possible by reducing the feed of mercury in the hazardous waste. Therefore, we are not adopting a beyond-the-floor emission level because it will not be cost-effective due to the relatively small amount of mercury removed from air emissions and likely problems with method detection limitations.

Limiting the Feedrate of Mercury in Raw Materials. A source can achieve a reduction in mercury emissions by substituting a feed material containing lower levels of mercury for a primary raw material higher mercury levels. This beyond-the-floor option appears to be less cost effective compared to either of the options evaluated above. Because lightweight aggregate kilns are sited proximate to primary raw material supply and transporting large quantities of an alternative source of raw material(s) is expected to be cost prohibitive. Therefore, we do not adopt this mercury beyond-the-floor standard.

Thus, the promulgated mercury standard for existing hazardous waste burning lightweight aggregate kilns is the floor emission level of 47 μg/dscm.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we identified floor control for new sources as hazardous waste feedrate control of mercury not to exceed a feedrate level of 17 μg/dscm expressed as a maximum theoretical emissions concentration. We proposed a floor emission level of 72 μg/dscm. (61 FR at 17408.) In May 1997 NODA, we conducted a breakpoint analysis on ranked mercury emissions data from sources utilizing the MACT floor technology and established the floor emission level as the test condition average of the breakpoint source. The breakpoint analysis was intended to reflect an engineering-based evaluation of the data so that the one lightweight aggregate kiln spiking extra mercury during testing procedures did not drive the floor emission level to levels higher than the preponderance of the emissions data. This analysis resulted in a MACT floor level of 47 μg/dscm. (62 FR at 24233.)

For the final rule, we identify floor control for new lightweight aggregate kilns as feed control of mercury in the hazardous waste, based on the single source with the best aggregate feedrate of mercury in hazardous waste. Using the aggregate feedrate approach to establish this floor level of control and corresponding floor emission level, we identify a MACT floor emission level of 33 μg/dscm for new lightweight aggregate kilns.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In both the proposal and the NODA, we considered a beyond-the-floor standard for new sources based on activated carbon injection, but determined that it would not be cost-effective to adopt the beyond-the-floor standard given the high cost of treatment and the relatively small amount of mercury removed from air emissions. (61 FR at 17408 and 62 FR at 24233.)

In the final rule, we identified three techniques for control of mercury as a basis to evaluate a beyond-the-floor standard: (1) Activated carbon injection; and (2) limiting the feed of mercury in the hazardous waste. The results of each analysis are discussed below.

Activated Carbon Injection. As discussed above, we conclude that flue gas temperature reduction to 400 °F followed by activated carbon injection to remove mercury is an appropriate beyond-the-floor control option for improved mercury control at

lightweight aggregate kilns. The control of flue gas temperature is necessary to ensure good collection efficiency. Based on the MACT floor emission level of 33 μg/dscm and assuming a carbon injection capture efficiency of 80 percent, we identified a beyond-the-floor emission level of 7 μg/dscm. As discussed above for existing sources, we do not believe that a beyond-the-floor standard of 7 μg/dscm is warranted for new lightweight aggregate kilns due to the high cost of treatment and relatively small amount of mercury removed from air emissions. The incremental annualized compliance cost for one new lightweight aggregate kiln to meet this beyond-the-floor level, rather than comply with floor controls, would be approximately $0.46 million and would provide an incremental reduction in mercury emissions beyond the MACT floor controls of approximately 0.008 Mg/yr. Based on these costs of approximately $58 million per additional Mg of mercury removed, a beyond-the-floor standard of 7 μg/dscm is not warranted due to the high cost of compliance and relatively small mercury emissions reductions. Notwithstanding our goal of reducing the loading to the environment by bioaccumulative pollutants such as mercury whenever possible, these costs are not justified.

Limiting the Feedrate of Mercury in Hazardous Waste. As discussed above for existing sources, we conclude that a beyond-the-floor based on limiting the feed of mercury in the hazardous waste is not justified. Considering that the floor emission level for new lightweight aggregate kilns is approximately one third lower than the floor emission level for existing kilns (33 versus 47 μg/dscm), we again conclude that a mercury beyond-the-floor standard is not warranted because emission reductions of mercury would be less than existing sources at comparable costs. Thus, the cost-effectiveness is higher for new kilns than for existing kilns. Further, achieving substantial additional mercury reductions by further controls on hazardous waste feedrate may be problematic because the mercury contribution from raw materials and coal represents an even larger proportion of the total mercury fed to the kiln. Therefore, we do not adopt a mercury beyond-the-floor standard based on limiting feed of mercury in hazardous waste for new sources.

Thus, the promulgated mercury standard for new hazardous waste burning lightweight aggregate kilns is the floor emission level of 33 μg/dscm.

4. What Are the Particulate Matter Standards?

We establish standards for both existing and new lightweight aggregate kilns that limit particulate matter emissions to 57 mg/dscm. The particulate matter standard is a surrogate control for the metals antimony, cobalt, manganese, nickel, and selenium. We refer to these five metals as ''nonenumerated metals'' because standards specific to each metal have not been established. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 NPRM, we defined floor control based upon the performance of a fabric filter with an air-to-cloth ratio of 2.8 acfm/ft^2. The MACT floor was 110 mg/dscm (0.049 gr/dscf). (61 FR at 17403.) In the May 1997 NODA, we defined the technology basis as a fabric filter for a MACT floor, but did not characterize the design and operation characteristics of the particulate matter control equipment, air-to-cloth ratio of a fabric filter, because we had limited information on these parameters. (62 FR at 24233.) Instead, for each particulate matter test condition, we evaluated the corresponding semivolatile metal system removal efficiency and screened out sources with relatively poor system removal efficiencies as a means to identify and eliminate from consideration those sources not using MACT floor control. Our reevaluation of the lightweight aggregate kiln particulate matter data resulted in a MACT floor of 50 mg/dscm (0.022 gr/dscf).

Some commenters state that a floor emission level of 50 mg/dscm (0.022 gr/dscf) is too high and a particulate matter standard of 23 mg/dscm (0.010 gr/dscf) is more appropriate because it is consistent with the level of performance achieved by incinerators using fabric filters. Even though we agree that well designed and properly operated fabric filters in use at all lightweight aggregate kilns can achieve low levels, we are concerned that an emission level of 23 mg/dscm would not be appropriate given the high inlet grain loading inherent with the lightweight aggregate manufacturing process, typically much higher than the particulate loading to incinerators.

Commenters also express concern that the Agency identified separate, different MACT pools and associated MACT controls for particulate matter, semivolatile metals, and low volatile metals, even though all three are controlled, at least in part, by the particulate matter control device. These commenters stated that our approach is likely to result in three different design specifications. We agree with these commenters and, in the final rule, the same initial MACT pool is used to establish the floor levels for particulate matter, semivolatile metals, and low volatile metals. See discussion in Part Four, Section V.

For the final rule, we conclude that the general floor methodology discussed in the May 1997 NODA is appropriate. MACT control for particulate matter is based on the performance of fabric filters. Since we lack data to fully characterize control equipment from all sources and we lack information on the relationship between the design parameters and the system performance, we evaluated both low and semivolatile metal system removal efficiencies associated with the source's particulate matter emissions to identify those sources not using MACT floor control. Our data show that all lightweight aggregate kilns are achieving greater than 99 percent system removal efficiency for both low and semivolatile metals, with some attaining 99.99 percent removal. Since we found no sources with system removal efficiencies indicative of poor performance, we conclude that all lightweight aggregate kilns are using MACT controls and the floor emission limit is identified as 57 mg/dscm (0.025 gr/dscf).

The performance level of 57 mg/dscm is generally consistent with that expected from well designed and operated fabric filters, and that achieved by other similar types of combustion sources operating with high inlet grain loadings. We have particulate matter data from all lightweight aggregate kiln sources, and multiple test conditions, conducted at 3 year intervals, are available for many of the sources. We conclude that the number of test conditions available adequately covers the range of variability of well operated and designed fabric filters.[166]

We considered, but rejected, basing the particulate matter floor for lightweight aggregate kilns on the New Source Performance Standard. The New Source Performance Standard limits particulate matter emissions to 92 mg/dscm (0.040 gr/dscf), uncorrected for oxygen. (See 40 CFR 60.730, Standards of Performance for Calciners and Dryers in Mineral Industries.) We rejected the New Source Performance Standard as the basis for the floor emission level

[166] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

because our MACT analysis of data from existing sources indicates that a particulate matter floor level lower than the New Source Performance Standard is currently being achieved by existing hazardous waste burning lightweight aggregate kilns. Further, all available emission data for hazardous waste burning lightweight aggregate kilns are well below the New Source Performance Standard particulate matter standard. Thus, the particulate matter floor emission level is 57 mg/dscm based on an analysis of existing emissions data.

We estimate that, based on a design level of 70 percent of the standard, over 90 percent of lightweight aggregate kiln sources currently are meeting the floor level. The national annualized compliance cost for lightweight aggregate kilns to reduce particulate matter emissions to comply with the floor emission level is $18,000 for the entire hazardous waste burning lightweight aggregate kiln industry, and our floor will reduce nonenumerated metals and particulate matter emissions by 0.01 Mg/yr and 2.7 Mg/yr, respectively, or 7 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the NPRM, we proposed a beyond-the-floor emission level of 69 mg/dscm (0.030 gr/dscf) and solicited comment on an alternative beyond-the-floor emission level of 34 mg/dscm (0.015 gr/dscf) based on improved particulate matter control. (61 FR at 17403.) In the May 1997 NODA, we concluded that a beyond-the-floor standard may not be warranted given a reduced particulate matter floor level compared to the proposed floor emission level. (62 FR at 24233.)

In the final rule, we considered a beyond-the-floor level of 34 mg/dscm for existing lightweight aggregate kilns based on improved particulate matter control. For analysis purposes, improved particulate matter control entails the use of higher quality fabric filter bag material. We then determined the cost of achieving this level of particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The national incremental annualized compliance cost for lightweight aggregate kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $110,000 for the entire hazardous waste burning lightweight aggregate kiln industry and would provide an incremental reduction in nonenumerated metals emissions nationally beyond the MACT floor controls of 0.03 Mg/yr. Based on these costs of approximately $3.7 million per additional Mg of nonenumerated metals emissions removed, we conclude that this beyond-the-floor option for lightweight aggregate kilns is not acceptably cost-effective nor otherwise justified. Therefore, we do not adopt this beyond-the-floor standard. Thus, the promulgated particulate matter standard for existing hazardous waste burning lightweight aggregate kilns is the floor emission level of 57 mg/dscm.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we defined floor control for new sources based on the level of performance of a fabric filter with an air-to-cloth ratio of 1.5 acfm/ft2. The MACT floor emission level was 120 mg/dscm (0.054 gr/dscf). (61 FR at 17408.) In the May 1997 NODA, MACT control was defined as a well-designed and properly operated fabric filter, and the floor emission level for new lightweight aggregate kilns was 50 mg/dscm (0.022 gr/dscf). (62 FR at 24233.)

All lightweight aggregate kilns use fabric filters to control particulate matter. As discussed earlier, we have limited information on the design and operation characteristics of existing control equipment currently used by lightweight aggregate kilns. As a result, we are unable to identify a specific technology that can consistently achieve lower emission levels than the controls used by lightweight aggregate kilns achieving the MACT floor level for existing sources. Lightweight aggregate kilns achieve the floor emission level with well-designed and properly operated fabric filters. Thus, floor control for new kilns is likewise a well-designed and properly operated fabric filter. Therefore, as discussed for existing sources, the MACT floor level for new lightweight aggregate kilns is 57 mg/dscm (0.025 gr/dscf).

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 NPRM, we proposed a beyond-the-floor standard of 69 mg/dscm (0.030 gr/dscf) based on improved particulate matter control, which was consistent with existing sources. (61 FR at 17408.) In the May 1997 NODA, we concluded, as we did for existing sources, that a beyond-the-floor level for particulate matter may not be warranted due to the high costs of control and relatively small amount of particulate matter removed from air emissions. (62 FR at 24233.)

As discussed for existing sources, we considered a beyond-the-floor level of 34 mg/dscm for new lightweight aggregate kilns based on improved particulate matter control. For analysis purposes, improved particulate matter control entails the use of higher quality fabric filter bag material. We then determined the cost of achieving this level of particulate matter, with corresponding reductions in the nonenumerated metals for which particulate matter is a surrogate, to determine if this beyond-the-floor level would be appropriate. The incremental annualized compliance cost for one new lightweight aggregate kiln to meet this beyond-the-floor level, rather than comply with floor controls, would be approximately $38 thousand and would provide an incremental reduction in nonenumerated metals emissions of approximately 0.012 Mg/yr.[167] Based on these costs of approximately $3.1 million per additional Mg of nonenumerated metals removed, we conclude that a beyond-the-floor standard of 34 mg/dscm is not justified due to the high cost of compliance and relatively small nonenumerated metals emission reductions. Further, a standard of 57 mg/dscm would adequately control the unregulated hazardous air pollutant metals for which it is being used as a surrogate. Thus, the particulate matter standard for new lightweight aggregate kilns is the floor level of 57 mg/dscm.

5. What Are the Semivolatile Metals Standards?

In the final rule, we establish a standard for existing and new lightweight aggregate kilns that limits semivolatile metal emissions to 250 and 43 μg/dscm, respectively. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? All lightweight aggregate kilns use a combination of particulate matter control, *i.e.*, a fabric filter, and hazardous waste feedrate to control emissions of semivolatile metals. Current RCRA regulations establish limits on the maximum feedrate of lead and cadmium in all feedstreams. Thus, hazardous waste feedrate control is part of MACT floor control.

In the April 1996 proposal, we defined floor control as either (1) a fabric filter with an air-to-cloth ratio of 1.5 acfm/ft^2 and a hazardous waste feedrate level of 270,000 μg/dscm,

[167] Based on the data available, the average emissions in sum of the five nonenumerated metal from lightweight aggregate kilns using MACT particulate matter control is approximately 83 μg/dscm. To estimate emission reductions of the nonenumerated metals, we assume a linear relationship between a reduction in particulate matter and these metals.

expressed as a maximum theoretical emissions concentration; or (2) a combination of a fabric filter and venturi scrubber with an air-to-cloth ratio of 4.2 acfm/ft^2 and a hazardous waste feedrate level of 54,000 µg/dscm. The proposed floor emission level was 12 µg/dscm. (61 FR at 17405.) In the May 1997 NODA, we discussed a floor methodology where we used a breakpoint analysis to identify sources that were not using floor control with respect either to semivolatile metals hazardous waste feedrate or emissions control. Under this approach, we ranked semivolatile metal emissions data from sources that were achieving the particulate matter floor level of 50 mg/dscm or better. We identified the floor level as the test condition average associated with the breakpoint source. Thus, sources with atypically high emissions because of high semivolatile feedrate levels or poor semivolatile metals control were screened from the pool of sources used to define the floor emission level. Based on this analysis, we identified a floor emission level of 76 µg/dscm. (62 FR at 24234.)

We received few public comments in response to the proposal and May 1997 NODA concerning the lightweight aggregate kiln semivolatile metals floor emission level. We did receive comments on the application of techniques to identify breakpoints in the arrayed emissions data. This issue and our response to it are discussed in the floor methodology section in Part Four, Section V. We also received comments that our semivolatile metals analysis in the proposal and May 1997 NODA included several data base inaccuracies that, when corrected, would result in a higher floor level. We agree with the commenters and we revised the data base as necessary for the final rule analysis.

In the final rule, in general response to these comments, we use a revised engineering evaluation and data analysis method to establish the floor emission level for semivolatile metals. We use the aggregate feedrate approach in conjunction with floor control for particulate matter of 57 mg/dscm to identify a semivolatile metal floor emission level of 1,700 µg/dscm. We estimate that all lightweight aggregate kiln sources currently are meeting the floor level.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 NPRM, we considered a beyond-the-floor emission level for semivolatile metals based on improved particulate matter control. We concluded that a beyond-the-floor emission level would not be cost-effective given that the proposed semivolatile metal floor level of 12 µg/dscm alone would result in an estimated 97 percent reduction in semivolatile metal emissions. (61 FR at 17405.) In the May 1997 NODA, we considered a beyond-the-floor emission level based on improved particulate matter control, but indicated that such a standard was not likely to be cost-effective due to the high costs of control. (62 FR at 24234.)

In developing the final rule, we identified three techniques for control of semivolatile metals as a basis to evaluate a beyond-the-floor standard: (1) Limiting the feed of semivolatile metals in the hazardous waste; (2) improved particulate matter control; and (3) limiting the feed of semivolatile metals in the raw materials. The results of each analysis are discussed below.

Limiting the Feedrate of Semivolatile Metals in Hazardous Waste. Under this option, as with cement kilns, we selected for evaluation a beyond-the-floor emission level of 240 µg/dscm to evaluate from among the range of possible levels that reflect improved feedrate control of semivolatile metals in hazardous waste. This emission level represents a significant increment of emission reduction from the floor level of 1700 µg/dscm, it is within the range of levels that are likely to be reasonably achievable using feedrate control, and it is generally consistent with the incinerator and cement kiln standards, thereby advancing a policy objective of essentially common standards among combustors of hazardous waste.

In performing an analysis of the 240 µg/dscm beyond-the-floor limit, we found that additional reductions beyond 250 µg/dscm represent a significant reduction in cost-effectiveness of incremental beyond-the-floor levels. A beyond-the-floor standard of 250 µg/dscm achieves the same goals as a beyond-the-floor standard of 240 µg/dscm in a more cost-effective manner. The national incremental annualized compliance cost for the lightweight aggregate kilns to meet this 250 µg/dscm beyond-the-floor level, rather than comply with the floor controls, would be approximately $88,000 and would provide an incremental reduction beyond emissions at the MACT floor in semivolatile metal emissions of an additional 0.17 Mg/yr. The cost-effectiveness of this emission level is approximately $530,000 per additional Mg of semivolatile metal removed.

We conclude that additional control of the feedrate of semivolatile metals in hazardous waste to achieve an emission level of 250 µg/dscm is warranted because this standard would reduce lead and cadmium emissions, which are particularly toxic hazardous air pollutants. In addition, Solite Corporation, which operates the majority of the hazardous waste burning lightweight aggregate kilns, stated in their public comments that a standard of 213 µg/dscm is achievable and adequately reflects the variability of lead and cadmium in raw material for their kilns. Further, the vast majority of the lead and cadmium fed to the lightweight aggregate kiln is from the hazardous waste,[168] not from the raw material or coal. We are willing to accept a more marginal cost-effectiveness for sources voluntarily burning hazardous waste in lieu of other fuels to ensure that sources are using best controls.

Moreover, this beyond-the-floor semivolatile metal standard better supports our Children's Health Initiative in that lead emissions, which are of highest significance to children's health, will be reduced by another 60 percent from today's baseline. We are committed to reducing lead emissions wherever and whenever possible. Finally, we note that this beyond-the-floor standard is also consistent with European Union standards for hazardous waste incinerators of approximately 200 µg/dscm for lead and cadmium combined. Therefore, we are adopting today a beyond-the-floor standard of 250 µg/dscm for existing lightweight aggregate kilns.

Improved Particulate Matter Control. We also evaluated improved particulate matter control as another beyond-the-floor control option for improved semivolatile metals control. We investigated a beyond-the-floor standard of 250 µg/dscm, an emission level consistent with the preferred option based on limiting the feedrate of semivolatile metals in hazardous waste. The national incremental annualized compliance cost for lightweight aggregate kilns to meet this beyond-the-floor level, rather than comply with the floor controls, would be approximately $88,000 thousand for all lightweight aggregate kilns and would provide an incremental reduction in semivolatile metal emissions beyond the MACT floor controls of 0.17 Mg/yr. Based on these costs of approximately $530,000 per additional Mg of semivolatile metal removed, we determined that this beyond-the-floor option may be warranted. However, as discussed below, the cost-effectiveness for this beyond-the-floor option is approximately equivalent to the costs

[168] USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies'', July 1999.

estimated for a beyond-the-floor option based on limiting the feed of semivolatile metals in the hazardous waste. We decided to base the beyond-the-floor standard for semivolatile metals on the feedrate option to be consistent with the cement kiln approach. Of course light-weight aggregate kilns are free to choose to improve particulate matter control in lieu of feedrate controls as their vehicle to achieve compliance with 250 ug/dscm.

Limiting the Feedrate of Semivolatile Metals in Raw Materials. A source can achieve a reduction in semivolatile metals emissions by substituting a feed material containing lower levels of lead and/or cadmium for a primary raw material higher in lead and/or cadmium levels. This beyond-the-floor option appears to be less cost effective compared to either of the options evaluated above because lightweight aggregate kilns are sited proximate to primary raw material supply. Transporting large quantities of an alternative source of raw material(s) is expected to be cost prohibitive. Therefore, we do not adopt this semivolatile metal beyond-the-floor standard.

Thus, the promulgated semivolatile metals standard for existing hazardous waste burning lightweight aggregate kilns is a beyond-the-floor standard of 250 µg/dscm based on limiting the feedrate of semivolatile metals in the hazardous waste.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we defined floor control as a fabric filter with an air-to-cloth ratio of 1.5 acfm/ft^2 and a hazardous waste feedrate level of 270,000 µg/dscm, expressed as a maximum theoretical emissions concentration. The proposed floor emission level was 5.2 µg/dscm. (61 FR at 17408.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for semivolatile metals would also be appropriate for new sources. Floor control was based on a combination of good particulate matter control and limiting hazardous waste feedrates of semivolatile metals to control emissions. We used a breakpoint analysis of the semivolatile metal emissions data to exclude sources achieving substantially poorer semivolatile metal control than the majority of sources. The NODA floor emission level was 76 µg/dscm for new sources. (62 FR at 24234.)

In the final rule, as discussed previously, we use a revised engineering evaluation and data analysis method to establish the floor emission level for semivolatile metals. We use the aggregate feedrate approach in conjunction with floor control for particulate matter of 57 mg/dscm to identify a semivolatile metal floor emission level of 43 µg/dscm.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 NPRM and May 1997 NODA, we considered a semivolatile metal beyond-the-floor emission level for new sources, but determined that the standard would not be cost-effective because the floor emission levels already achieved significant reductions in semivolatile metals emissions. (61 FR at 17408 and 62 FR at 24234.)

For the final rule, we do not adopt a beyond-the-floor emission level because the MACT floor for new sources is already substantially lower than the beyond-the-floor emission standard for existing sources. As a result, a beyond-the-floor standard for new lightweight aggregate kilns is not warranted due to the high costs of control versus the minimal emissions reductions that would be achieved. Therefore, we adopt the semivolatile metal MACT floor standard of 43 µg/dscm for new hazardous waste burning lightweight aggregate kilns.

6. What Are the Low Volatile Metals Standards?

In the final rule, we establish a standard for both existing and new lightweight aggregate kilns that limits low volatile metal emissions to 110 µg/dscm. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we defined floor control based on the performance of a fabric filter with an air-to-cloth ratio of 1.8 acfm/ft^2 and a hazardous waste feedrate level of 46,000 µg/dscm, expressed as a maximum theoretical emissions concentration. The proposed floor emission level was 340 µg/dscm. (61 FR at 17405.) In the May 1997 NODA, we discussed a floor methodology where we used a breakpoint analysis to identify sources that were not using floor control with respect either to low volatile metals hazardous waste feedrate or emissions control. Under this approach, we ranked low volatile metal emissions data from sources that were achieving the particulate matter floor level of 50 mg/dscm or better. We identified the floor level as the test condition average associated with the breakpoint source. Thus, sources with atypically high emissions because of high low volatile feedrate levels or poor low volatile metals control were screened from the pool of sources used to define the floor emission level. Based on this analysis, we identified a floor emission level of 37 µg/dscm. (62 FR at 24234.)

We received few comments, in response to the April 1996 NPRM and May 1997 NODA, concerning the low volatile metals floor emission level. We received comments, however, on several overarching issues including the appropriateness of considering feedrate control of metals (including low volatile metals) in hazardous waste as a MACT floor control technique and the specific procedure of identifying breakpoints of arrayed emissions data. These issues and our responses to them are discussed in the floor methodology section in Part Four, Section V.

For today's rule, we use a revised engineering evaluation and data analysis method to establish the MACT floor level for low volatile metals. The aggregate feedrate approach in conjunction with MACT particulate matter control to 57 mg/dscm results in a low volatile metal floor emission level of 110 µg/dscm.

We estimate that over 80 percent of existing lightweight aggregate kiln sources in our data base meet the floor level. The national annualized compliance cost for lightweight aggregate kilns to reduce low volatile metal emissions to comply with the floor emission level is $52,000 for the entire hazardous waste burning lightweight aggregate kiln industry, and will reduce low volatile metal emissions by 0.04 Mg/yr or 40 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 NPRM and May 1997 NODA, we considered a beyond-the-floor standard for low volatile metals based on improved particulate matter control. However, we concluded that a beyond-the-floor standard would not be cost-effective due to the high cost of emissions control and relatively small amount of low volatile metals removed from air emissions. (61 FR at 17406 and 62 FR at 24235.)

For today's rule, we identified three potential beyond-the-floor techniques for control of low volatile metals: (1) Improved particulate matter control; (2) limiting the feed of low volatile metals in the hazardous waste; and (3) limiting the feed of low volatile metals in the raw materials. The results of each analysis are discussed below.

Improved Particulate Matter Control. Our judgment is that a beyond-the-floor standard based on improved particulate matter control would be less cost-effective that a beyond-the-floor option based on limiting the feedrate of low

volatile metals in the hazardous waste. Our data show that lightweight aggregate kilns are already achieving a 99.9% system removal efficiency of low volatile metals and some sources are even attaining 99.99%. Thus, pollution control equipment retrofit costs for improved control would be significant. Thus, we conclude a beyond-the-floor emission level for low volatile metals based on improved particulate matter control for lightweight aggregate kilns is not warranted.

Limiting the Feedrate of Low Volatile Metals in the Hazardous Waste. We also considered a beyond-the-floor level of 70 μg/dscm based on additional feedrate control of low volatile metals in the hazardous waste. Our investigation shows that this beyond-the-floor option would achieve an incremental reduction in low volatile metals of only 0.01 Mg/yr. Given that this beyond-the-floor level would not achieve appreciable emissions reductions, significant cost-effectiveness considerations would likely arise, thus suggesting that this beyond-the-floor standard is not warranted.

Limiting the Feedrate of Low Volatile Metals in Raw Materials. A source can achieve a reduction in low volatile metal emissions by substituting a feed material containing lower levels of these metals for a primary raw material higher low volatile metal levels. This beyond-the-floor option appears to be less cost-effective compared to either of the options evaluated above because lightweight aggregate kilns are sited proximate to primary raw material supply. Transporting large quantities of an alternative source of raw material(s) is expected to be very costly and not cost-effective considering the limited emissions reductions that would be achieved. Therefore, we do not adopt this low volatile metals beyond-the-floor standard.

For reasons discussed above, we do not adopt a beyond-the-floor level for low volatile metals, and establish the emissions standard for existing hazardous waste burning lightweight aggregate kilns at 110 μg/dscm.

c. What Is the MACT Floor for New Sources? At proposal, we defined floor control based on the performance of a fabric filter with an air-to-cloth ratio of 1.3 acfm/ft^2 a hazardous waste feedrate level of 37,000 μg/dscm, expressed as a maximum theoretical emissions concentration. The proposed floor level was 55 μg/dscm. (61 FR at 17408.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for low volatile metals would also be appropriate for new sources. Floor control was based on a combination of good particulate matter control and limiting hazardous waste feedrate of low volatile metals to control emissions. We used a breakpoint analysis of the low volatile metal emissions data to exclude sources achieving substantially poorer low volatile metal control than the majority of sources. The NODA floor was 37 μg/dscm. (62 FR at 24235.)

In the final rule, in response to general comments on the May 1997 NODA, we use a revised engineering evaluation and data analysis method to establish the floor emission level for low volatile metals. We use the aggregate feedrate approach in conjunction with floor control for particulate matter of 57 mg/dscm to identify a low volatile metal floor emission level of 110 μg/dscm.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 NPRM and May 1997 NODA, we considered a low volatile metal beyond-the-floor level, but determined that a beyond-the-floor standard would not be cost-effective due to the high cost of treatment and relatively small amount of low volatile metals removed from air emissions. We received no comments to the contrary.

For the final rule, as discussed for existing sources, we do not adopt a beyond-the-floor level for new sources, and conclude that the floor emission level is appropriate. Therefore, we adopt the low volatile metal floor level of 110 μg/dscm as the emission standard for new hazardous waste burning lightweight aggregate kilns.

7. What Are the Hydrochloric Acid and Chlorine Gas Standards?

In the final rule, we establish a standard for existing and new lightweight aggregate kilns that limits hydrochloric acid and chlorine gas emissions to 230 and 41 ppmv, respectively. The rationale for adopting these standards is discussed below.

a. What Is the MACT Floor for Existing Sources? In the April 1996 proposal, we identified floor control for hydrochloric acid/chlorine gas as either: (1) Hazardous waste feedrate control of chlorine to 1.5 g/dscm, expressed as a maximum theoretical emissions concentration; or (2) a combination of a venturi scrubber and hazardous waste feedrate level of 14 g/dscm, expressed as a maximum theoretical emissions concentration. The proposed floor emission level was 2100 ppmv. (61 FR at 17406.) In the May 1997 NODA, we used the same data analysis method as proposed, except that a computed emissions variability factor was no longer added. The floor emission level was 1300 ppmv. (62 FR at 24235.)

We received few comments concerning the hydrochloric acid/chlorine gas floor methodology and emission level. One commenter supports the use of a variability factor in calculating the floor emission level. Generally, the final emission standards, including hydrochloric acid/chlorine gas, already accounts for emissions variability without adding a statistically-derived emissions variability factor. This issue and our response to it are discussed in detail in the floor methodology section in Part Four, Section V.

For today's rule, we use a revised engineering evaluation and data analysis method to establish the MACT floor level for hydrochloric acid and chlorine gas. The aggregate feedrate approach results in a floor emission level of 1500 ppmv.

We estimate that approximately 31 percent of lightweight aggregate kilns in our data base currently meet the floor emission level. The national annualized compliance cost for sources to reduce hydrochloric acid and chlorine gas emissions to comply with the floor level is $350,000 for the entire hazardous waste burning lightweight aggregate kiln industry, and will reduce hydrochloric acid and chlorine gas emissions by 182 Mg/yr or 10 percent from current baseline emissions.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 proposal, we defined beyond-the-floor control as wet or dry lime scrubbing with a control efficiency of 90 percent. We proposed a beyond-the-floor standard of 450 ppmv, which included a statistical variability factor. (61 FR at 17406.) In the May 1997 NODA, the beyond-the-floor standard was 130 ppmv based on wet or dry scrubbing with a control efficiency of 90 percent. (62 FR at 24235.)

We identified three potential beyond-the-floor techniques for control of hydrochloric acid and chlorine gas emissions: (1) Dry lime scrubbing; (2) limiting the feed of chlorine in the hazardous waste; and (3) limiting the feed of chlorine in the raw materials. The result of each analysis is discussed below.

Dry Lime Scrubbing. Based on a joint emissions testing program with Solite Corporation in 1997, dry lime scrubbing at a stoichiometric lime ratio of 3:1 achieved greater than 85 percent removal of hydrochloric acid and chlorine gas. For the final rule, we considered a beyond-the-floor emission level of 230 ppmv based on a 85 percent removal efficiency from the floor level of 1500 ppmv.

The national incremental annualized compliance cost for all lightweight aggregate kilns to meet this beyond-the-floor level is approximately $1.5 million. This would provide an incremental reduction in hydrochloric acid/chlorine gas emissions beyond the MACT floor controls of an additional 1320 Mg/yr, or 80 percent. Based on these costs of approximately $1,100 per additional Mg hydrochloric acid/chlorine gas removed, this hydrochloric acid/chlorine gas beyond-the-floor option for lightweight aggregate kilns is justified. Therefore, we are adopting a beyond-the-floor standard of 230 ppmv for existing lightweight aggregate kilns.

One commenter disagreed with our proposal to base the beyond-the-floor standard on dry lime scrubbing achieving 90% removal. The commenter states that dry lime scrubbing cannot cost-effectively achieve 90 percent control of hydrochloric acid and chlorine gas emissions. To achieve a 90 percent capture efficiency at a stoichiometric ratio of 3:1, the commenter maintains that a source would need to install special equipment and make operational modifications that are less cost-effective than simple dry lime scrubbing at a lower removal efficiency. The commenter identifies this lower level of control at 80 percent based on the joint emissions testing program.[169] The commenter does agree, however, that dry lime scrubbing can achieve 90 percent capture without the installation of special equipment by operating at a stoichiometric lime ratio greater than 3:1. One significant consequence of operating at higher stoichiometric lime ratios, the commenter states, is the adverse impact to the collected particulate matter. Currently, the collected particulate matter is recycled into the lightweight aggregate product. At higher stoichiometric lime ratios, unreacted lime and collected chloride and sulfur salts would prevent this recycling practice and would require the disposal of all the collected particulate matter at significant and unjustified costs.

We agree with the commenter that data from the joint emissions testing program does not support a 90 percent capture efficiency by simple dry lime scrubbing at a stoichiometric lime ratio of 3:1. We disagree with the commenter that the data support an efficiency no greater than 80 percent. In the testing program, we evaluated the capture efficiency of lime during four runs at a stoichiometric lime ratio of approximately 3:1. The results show that hydrochloric acid was removed at rates ranging from 86 to 91 percent with one exception. For that one run, the removal was calculated as 81 percent. For reasons detailed in the Comment Response Document and in the technical support document,[170] we conclude that the data from this run should not be considered because the calculated stoichiometric lime ratio is suspect. When we remove this data point from consideration, the available information clearly indicates that dry lime scrubbing at a stoichiometric ratio of 3:1 can achieve greater than 85 percent removal. Therefore, in the final rule, we base the beyond-the-floor standard of 230 ppmv on 85 percent removal.

Limiting the Feedrate of Chlorine in the Hazardous Waste. We also considered a beyond-the-floor standard for hydrochloric acid/chlorine gas based on additional feedrate control of chlorine in the hazardous waste. This option achieves lower emission reductions and is less cost-effective than the dry lime scrubbing option discussed above. Therefore, we are not adopting a hydrochloric acid/chlorine gas beyond-the-floor standard based on limiting the feed of chlorine in the hazardous waste.

Limiting the Feedrate of Chlorine in the Raw Materials. A source can achieve a reduction in hydrochloric acid/chlorine gas emissions by substituting a feed material containing lower levels of chlorine for a primary raw material higher chlorine levels. This beyond-the-floor option appears to be less cost effective compared to either of the options evaluated above because lightweight aggregate kilns are sited proximate to primary raw material supply. Transporting large quantities of an alternative source of raw material(s) is expected to be very costly and not cost-effective considering the limited emissions reductions that would be achieved. Therefore, we do not adopt this hydrochloric acid/chlorine gas beyond-the-floor standard.

In summary, we establish the hydrochloric acid/chlorine gas standard for existing lightweight aggregate kilns at 230 ppmv based on scrubbing.

c. What Is the MACT Floor for New Sources? In the April 1996 proposal, we defined MACT floor control for new sources as a venturi scrubber with a hazardous waste feedrate level of 14 g/dscm, expressed as a maximum theoretical emissions concentration. We proposed a floor emission level of 62 ppmv. (61 FR at 17409.) In the May 1997 NODA, we concluded that the floor control and emission level for existing sources for hydrochloric acid/chlorine gas would also be appropriate for new sources. Floor control was based on limiting hazardous waste feedrates of chlorine to control hydrochloric acid/chlorine gas emissions. We screened out some data with anomalous system removal efficiencies compared to the majority of sources. The floor emission level for new lightweight aggregate kilns was 43 ppmv. (62 FR at 24235.)

In the final rule, we use a similar engineering evaluation and data analysis method as discussed in the May 1997 NODA to establish the floor emission level for hydrochloric acid/chlorine gas. We identified MACT floor control as wet scrubbing since the best controlled source is using this control technology. One lightweight aggregate facility uses venturi-type wet scrubbers for the control of hydrochloric acid/chlorine gas. We evaluated the chlorine system removal efficiencies achieved by wet scrubbing at this facility. Our data show that this facility is consistently achieving greater than 99 percent control of hydrochloric acid/chlorine gas. Because we have no data with system removal efficiencies indicative of poor performance, we conclude that all data from this facility are reflective of MACT control (wet scrubbers), and, therefore, the floor emission limit for new sources is set equal to the highest test condition average of these data. Thus, the MACT floor emission limit for new lightweight aggregate kilns is identified as 41 ppmv.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 proposal and May 1997 NODA, we did not propose a beyond-the-floor standard for new sources because the floor emission level was based on wet scrubbing, which is the best available control technology for hydrochloric acid/chlorine gas. (61 FR at 17409 and 62 FR at 24235.) We continue to believe that a beyond-the-floor emission level for new sources is not warranted due to the high costs of treatment and the small additional amount of chlorine that would be removed. Therefore, the MACT standard for new lightweight aggregate kilns is identified as 41 ppmv.

8. What Are the Hydrocarbon and Carbon Monoxide Standards?

In the final rule, we establish hydrocarbon and carbon monoxide standards as surrogates to control emissions of nondioxin organic hazardous air pollutants for existing and

[169] See ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

[170] See ''Final Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards and Technologies,'' July 1999.

new lightweight aggregate kilns. The standards limit hydrocarbon and carbon monoxide concentrations to 20 ppmv [171] or 100 ppmv, [172] respectively. Existing and new lightweight aggregate kilns can elect to comply with either the hydrocarbon limit or the carbon monoxide limit on a continuous basis. Lightweight aggregate kilns that choose to comply with the carbon monoxide limit on a continuous basis must also demonstrate compliance with the hydrocarbon standard during the comprehensive performance test. However, continuous hydrocarbon monitoring following the performance test is not required.[173] We discuss the rationale for establishing these standards below.

a. What Is the MACT Floor for Existing Sources? As discussed in Part Four, Section II.A.2, we proposed limits on hydrocarbon and carbon monoxide emissions as surrogates to control nondioxin organic hazardous air pollutants. In the April 1996 NPRM, we identified floor control as combustion of hazardous waste under good combustion practices to minimize the generation of fuel-related hydrocarbons. We proposed a hydrocarbon emission level of 14 ppmv and a carbon monoxide level of 100 ppmv. The hydrocarbon level was based on an analysis of the available emissions data, while the basis of the carbon monoxide level was existing federal regulations (see § 266.104(b)). (61 FR at 17407.) In the May 1997 NODA, we solicited comment a hydrocarbon emission level of 10 ppmv. The hydrocarbon floor level was changed to 10 ppmv from 14 ppmv because of a change in the lightweight aggregate kiln universe of facilities. The lightweight aggregate kiln with the highest hydrocarbon emissions stopped burning hazardous waste. With the exclusion of the hydrocarbon data from this one source, the remaining lightweight aggregate kilns appeared to be able to meet a hydrocarbon standard on the order of 6 ppmv. However, since we were unable to identify an engineering reason why lightweight aggregate kilns using good combustion practices should be able to achieve lower hydrocarbon emissions than incinerators, we indicated that it may be more appropriate to establish the hydrocarbon standard at 10 ppmv, which was equal to the incinerator emission level discussed in that NODA. In the NODA, we also continued to indicate our preference for a carbon monoxide emission level of 100 ppmv. (62 FR at 24235.)

One commenter states that some lightweight aggregate kilns may not be able to meet a 10 ppmv hydrocarbon standard due to organics in raw materials. Notwithstanding our data base of short-term data indicating the achievability of a hydrocarbon standard of 10 ppmv, the commenter states that this standard may be unachievable over the long-term because trace levels of organic matter in the raw materials vary significantly. Hydrocarbon emissions could increase as the source uses raw materials from different on-site quarry locations. Thus, the commenter supports a hydrocarbon emission level consistent with cement kilns (*i.e.*, 20 ppmv), and opposes a floor emission level that is comparable to incinerators for which low temperature organics desorption from raw materials is not a complicating issue.

Our limited hydrocarbon data, as discussed above, indicates that a hydrocarbon level of 10 ppmv is achievable for lightweight aggregate kilns.[174] However, we agree that over long-term operations, lightweight aggregate kilns may encounter variations in the level of trace organics in raw materials, similar to cement kilns, that may preclude some kilns from achieving a hydrocarbon limit of 10 ppmv. Thus, we conclude that a hydrocarbon emission level of 20 ppmv, the same floor level for cement kilns, is also appropriate for lightweight aggregate kilns. A hydrocarbon standard of 20 ppmv also is based on existing federally-enforceable RCRA regulations, to which lightweight aggregate kilns are currently subject. (See § 266.104(c).)

Some commenters also support a requirement for both a carbon monoxide and hydrocarbon limit for lightweight aggregate kilns. These commenters state that requiring both hydrocarbon and carbon monoxide limits would further reduce emissions of organic hazardous air pollutants. One commenter notes that 83 percent of existing lightweight aggregate kilns are currently achieving both a hydrocarbon level of 20 ppmv and a carbon monoxide standard of 100 ppmv.

We carefully considered the merits and drawbacks to requiring both a hydrocarbon and carbon monoxide standard. First, stack gas carbon monoxide levels may not be a universally reliable indicator of combustion intensity and efficiency for some lightweight aggregate kilns due, first, to carbon monoxide generation by disassociation of carbon dioxide to carbon monoxide at high temperatures and, second, to evolution of carbon monoxide from the trace organic constituents in raw material feedstock.[175] One commenter supports our view by citing normal variability in carbon monoxide levels at their kiln with no apparent relationship to combustion conditions, such as temperature, residence time, excess oxygen levels. Thus, carbon monoxide can be overly conservative surrogate for some kilns.[176]

Second, requiring both continuous monitoring of carbon monoxide and hydrocarbon in the stack is at least somewhat redundant for control of organic emissions from combustion of hazardous waste because: (1) Hydrocarbons alone are a direct and reliable surrogate for measuring the destruction of organic hazardous air pollutants; and (2) carbon monoxide is generally a conservative indicator of good combustion conditions and thus good control of organic hazardous air pollutants. See Part Four, Section IV.B of the preamble for a discussion of our approach to using carbon monoxide or hydrocarbons to control organic emissions.

We identify a carbon monoxide level of 100 ppmv and a hydrocarbon level of 20 ppmv as floor control for existing sources because they are existing federally enforceable standards for hazardous waste burning lightweight aggregate kilns. See § 266.104(b) and (c). As current rules allow, sources would have the option of complying with either limit. Given that these are current rules, all lightweight aggregate kilns can currently achieve these emission levels. Thus, we estimate no emissions reductions or costs for these floor levels.

Lightweight aggregate kilns that choose to continuously monitor and

[171] Hourly rolling average, reported as propane, dry basis and corrected to 7 percent oxygen.

[172] Hourly rolling average, dry basis, corrected to 7 percent oxygen.

[173] As discussed in Part 5, Section X.F, lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the 20 ppmv hydrocarbon standards (*i.e.*, these sources do not have the option to comply with the carbon monoxide standard).

[174] Our data base for hydrocarbons consists of short-term emissions data.

[175] Raw materials enter the upper end of the kiln and move counter-current to the combustion gas. Thus, as the raw materials are convectively heated in the upper end kiln above the flame zone, organic compounds can evolve from trace levels of organics in the raw materials. These organic compounds can be measured as hydrocarbons, and when only partially oxidized, carbon monoxide. This process is not related to combustion of hazardous waste or other fuels in the combustion zone at the other end of the kiln.

[176] Of course, if a source elects to comply with the carbon monoxide standard, then we are sure that it is achieving good combustion conditions and good control of organic hazardous air pollutants that could be potentially emitted from hazardous waste fed into the combustion zone.

comply with the carbon monoxide standard must demonstrate during the performance test that they are also in compliance with the hydrocarbon emission standard. In addition, kilns that monitor carbon monoxide alone must also set operating limits on key parameters that affect combustion conditions to ensure continued compliance with the hydrocarbon emission standard. We developed this modification because of some limited data that show a source can produce high hydrocarbon emissions while simultaneously producing low carbon monoxide emissions. We conclude from this information that it is necessary to confirm the carbon monoxide-hydrocarbon emissions relationship for every source that selects to monitor carbon monoxide emissions alone. See discussion in Part Four, Section IV.B.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? In the April 1996 proposal, we identified beyond-the-floor control levels for carbon monoxide and hydrocarbon in the main stack of 50 ppmv and 6 ppmv, respectively. (61 FR at 17407.) These beyond-the-floor levels were based on the use of a combustion gas afterburner. We indicated in the proposal, however, that this type of beyond-the-floor control would be cost prohibitive. Our preliminary estimates suggested that going beyond-the-floor for carbon monoxide and hydrocarbons would more than double the national costs of complying with the proposed standards. We continue to believe that a beyond-the-floor standard for carbon monoxide and hydrocarbons based on an afterburner is not justified and do not adopt a beyond-the-floor standard for existing lightweight aggregate kilns.

In summary, we adopt the floor emission levels for hydrocarbons, 20 ppmv, or carbon monoxide, 100 ppmv, as standards in the final rule.

c. What Is the MACT Floor for New Sources? In the April 1996 NPRM, we identified MACT floor control as operating the kiln under good combustion practices. Because we were unable to quantify good combustion practices, floor control for the single best controlled source was the same as for existing sources. We proposed, therefore, a floor emission level of 14 ppmv for hydrocarbons and a 100 ppmv limit for carbon monoxide. (61 FR at 17409.) In the May 1997 NODA, we continued to identify MACT floor control as good combustion practices and we took comment on the same emission levels as existing sources: 20 ppmv for hydrocarbons and 100 ppmv for carbon monoxide. (62 FR at 24235.)

In developing the final rule, we considered the comment that the rule should allow compliance with either a carbon monoxide standard of 100 ppmv or a hydrocarbon standard of 20 ppmv. Given that this option is available under the existing regulations for new and existing sources, we conclude that this represents MACT floor for new sources. These emission levels are achieved by operating the kiln under good combustion practices to minimize fuel-related hydrocarbons and carbon monoxide emissions. As current rules allow, sources would have the option of complying with either limit. See § 266.104(b) and (c).

We also considered site selection based on availability of acceptable raw material hydrocarbon content as an approach to establish a hydrocarbon emission level at new lightweight aggregate kilns. This approach is similar to that done for new hazardous waste burning cement kilns at greenfield sites (see discussion above). For cement kilns, we finalize a new source floor hydrocarbon emission standard at a level consistent with the proposed standard for nonhazardous waste burning cement kilns. Because we are planning to issue MACT emission standards for nonhazardous waste lightweight aggregate kiln sources, we will revisit establishing a hydrocarbon standard at new lightweight aggregate kilns at that time so that a hydrocarbon standard, if determined appropriate, is consistent for these sources. We are deferring this decision to a later date to ensure that hazardous waste sources are regulated no less stringently than nonhazardous waste lightweight aggregate kilns.

In summary, we are identifying a carbon monoxide level of 100 ppmv and a hydrocarbon level of 20 ppmv as floor control for new sources because they are existing federally enforceable standards for hazardous waste burning lightweight aggregate kilns. As discussed for existing sources above, lightweight aggregate kilns that choose to continuously monitor and comply with the carbon monoxide standard must demonstrate during the performance test that they are also in compliance with the hydrocarbon emission standard.

d. What Are Our Beyond-the-Floor Considerations for New Sources? In the April 1996 proposal, we identified beyond-the-floor emission levels for hydrocarbons and carbon monoxide of 6 ppmv and 50 ppmv, respectively for new sources. These beyond-the-floor levels were based on the use of a combustion gas afterburner. (61 FR at 17409.) We indicated in the proposal, however, that beyond-the-floor control was not justified due to the significant costs to retrofit kilns with afterburner controls. We estimated that going beyond-the-floor for hydrocarbons and carbon monoxide would more than double the national costs of complying with the proposed standards. We concluded that beyond-the-floor standards were not warranted. In the May 1996 NODA, we again indicated that a beyond-the-floor standard based on use of an afterburner would not be cost-effective and, therefore, justified. As discussed above for existing sources, we conclude that a beyond-the-floor standard for carbon monoxide and hydrocarbons based on use of an afterburner would not be justified and do not adopt a beyond-the-floor standard for new lightweight aggregate kilns. (62 FR 24235.)

In summary, we adopt the floor emission levels for hydrocarbons, 20 ppmv, or carbon monoxide, 100 ppmv, as standards in the final rule.

9. What Are the Standards for Destruction and Removal Efficiency?

We establish a destruction and removal efficiency (DRE) standard for existing and new lightweight aggregate kilns to control emissions of organic hazardous air pollutants other than dioxins and furans. Dioxins and furans are controlled by separate emission standards. See discussion in Part Four, Section IV.A. The DRE standard is necessary, as previously discussed, to complement the carbon monoxide and hydrocarbon emission standards, which also control these hazardous air pollutants.

The standard requires 99.99 percent DRE for each principal organic hazardous constituent (POHC), except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. These wastes—F020, F021, F022, F023, F026, and F027—are listed as RCRA hazardous wastes under part 261 because they contain high concentrations of dioxins.

a. What Is the MACT Floor for Existing Sources? Existing sources are currently subject to DRE standards under § 266.104(a) that require 99.99 percent DRE for each POHC, except that 99.9999 percent DRE is required if specified dioxin-listed hazardous wastes are burned. Accordingly, these standards represent MACT floor. Since all hazardous waste lightweight aggregate kilns must currently achieve these DRE standards, they represent floor control.

b. What Are Our Beyond-the-Floor Considerations for Existing Sources? Beyond-the-floor control would be a requirement to achieve a higher

percentage DRE, for example, 99.9999 percent DRE for POHCs for all hazardous wastes. A higher DRE could be achieved by improving the design, operation, or maintenance of the combustion system to achieve greater combustion efficiency.

Even though the 99.99 percent DRE floor is an existing RCRA standard, a substantial number of existing hazardous waste combustors are not likely to be routinely achieving 99.999 percent DRE, however, and most are not likely to be achieving 99.9999 percent DRE. Improvements in combustion efficiency will be required to meet these beyond-the-floor DREs. Improved combustion efficiency is accomplished through better mixing, higher temperatures, and longer residence times. As a practical matter, most combustors are mixing-limited and may not easily achieve 99.9999 percent DRE. For a less-than-optimum burner, a certain amount of improvement may typically be accomplished by minor, relatively inexpensive combustor modifications—burner tuning operations such as a change in burner angle or an adjustment of swirl—to enhance mixing on the macro-scale. To achieve higher DREs, however, improved mixing on the micro-scale may be necessary. This involves significant, energy intensive and expensive modifications such as burner redesign and higher combustion air pressures. In addition, measurement of such DREs may require increased spiking of POHCs and more sensitive stack sampling and analysis methods at added expense.

Although we have not quantified the cost-effectiveness of a beyond-the-floor DRE standard, it would not appear to be cost-effective. For reasons discussed above, the cost of achieving each successive order-of-magnitude improvement in DRE will be at least constant, and more likely increasing. Emissions reductions diminish substantially, however, with each order of magnitude improvement in DRE. For example, if a source were to emit 100 gm/hr of organic hazardous air pollutants assuming zero DRE, it would emit 10 gm/hr at 90 percent DRE, 1 gm/hr at 99 percent DRE, 0.1 gm/hr at 99.9 percent DRE, 0.01 gm/hr at 99.99 percent DRE, and 0.001 gm/hr at 99.999 percent DRE. If the cost to achieve each order of magnitude improvement in DRE is roughly constant, the cost-effectiveness of DRE decreases with each order of magnitude improvement in DRE. Consequently, we conclude that this relationship between compliance cost and diminished emissions reductions suggests that a beyond-the-floor standard is not warranted in light of the resulting, poor cost-effectiveness.

c. What Is the MACT Floor for New Sources? The single best controlled source, and all other hazardous waste lightweight aggregate kilns, are subject to the existing RCRA DRE standard under § 266.104(a). Accordingly, we adopt this standard of 99.99% DRE for most wastes and 99.9999% DRE for dioxin listed wastes as the MACT floor for new sources.

d. What Are Our Beyond-the-Floor Considerations for New Sources? As discussed above, although we have not quantified the cost-effectiveness of a more stringent DRE standard, diminishing emissions reductions with each order of magnitude improvement in DRE suggests that cost-effectiveness considerations would likely come into play. We conclude that a beyond-the-floor standard is not warranted.

Part Five: Implementation

I. How Do I Demonstrate Compliance with Today's Requirements?

If you operate a hazardous waste burning incinerator, cement kiln, or lightweight aggregate kiln, you are required to comply with the standards and requirements in today's rule at all times, with one exception. If you are not feeding hazardous waste to the combustion device and if hazardous waste does not remain in the combustion chamber, these rules do not apply under certain conditions discussed below. You must comply with all of the notification requirements, emission standards, and compliance and monitoring provisions of today's rule by the compliance date, which is three years after September 30, 1999. As referenced later, the effective date of today's rule is September 30, 1999. The compliance and general requirements of this rule are discussed in detail in the follow sections. Also, we have included the following time line that will assist you in determining when many of the notifications and procedures, discussed in the later sections of this part, are required to be submitted or accomplished.

A. What Sources Are Subject to Today's Rules?

Sources affected by today's rule are defined as all incinerators, cement kilns and lightweight aggregate kilns burning hazardous waste on, or following September 30, 1999. This definition is essentially the same as we proposed in the April 1996 NPRM. Comments, regarding this definition, suggested that there was confusion as to when and under what conditions you would be subject to today's hazardous waste MACT regulations. In this rule, we specify that once you are subject to today's regulations, you remain subject to these regulations until you comply with the requirements for sources that permanently suspend hazardous waste burning operations, as discussed later.

However, just because you are subject to today's regulations does not mean that you must comply with the emission standards or operating limits at all times. In later sections of today's rule, we identify those limited periods and situations in which compliance with today's emission standards and operating limits may not be required.

1. What Is an Existing Source?

Today's rule clarifies that existing sources are sources that were constructed or under construction on the publication date for our NPRM—-April 19, 1996. This is consistent with the current regulatory definition of existing sources, but is different from the definition in our April 1996 NPRM. In the April 1996 NPRM, we defined existing sources as those burning hazardous waste on the proposal date (April 19, 1996) and defined new sources as sources that begin burning hazardous waste after the proposal date. Commenters note that the proposed definition of new sources is not consistent with current regulations found in 40 CFR part 63 or the Clean Air Act. Commenters also believe that our definition does not consider the intent of Congress, i.e., to require only those sources that incur significant costs during upgrade or modification to meet the most stringent new source emission standards. Commenters note that a large number of sources that are currently not burning hazardous waste could modify their combustion units to burn hazardous waste at a cost that would not surpass the reconstruction threshold and therefore they should not be required to meet the new source emission standards. Commenters suggest we use the statutory definition of an existing source found at section 112(a)(4) of the CAA and codified at 40 CFR 63.2. We agree with commenters and therefore adopt the definition of an existing source found at 40 CFR 63.2.

2. What Is a New Source?

Today's rule clarifies that new sources are those that commence construction or meet the definition of a reconstructed source following the proposal date of April 19, 1996. In the proposal, we define new sources as those that newly begin to burn hazardous waste after the proposal date. However, as noted earlier, commenters object to the

proposed definition because of conflicts with the statutory language of the CAA and the current definition found in MACT regulations. In the CAA regulations, we define new sources as those that are newly constructed or reconstructed after a rule is proposed. Here again, we agree with commenters and adopt the current regulatory definition of new sources. We also adopt the CAA definition of reconstruction. This definition also is generally consistent with the RCRA definition of reconstruction and should avoid any confusion regarding what standards apply to reconstructed sources.

B. How Do I Cease Being Subject to Today's Rule?

Once you become an affected source as defined in § 63.2, you remain an affected source until you: (1) Cease hazardous waste burning operations, (*i.e.*, hazardous waste is not in the combustion chamber); (2) notify the Administrator, and other appropriate regulatory authorities, that you have ceased hazardous waste burning operations; and (3) begin complying with other applicable MACT standards and regulations, if any, including notifications, monitoring and performance tests requirements.

If you permanently stop burning hazardous waste, the RCRA regulations require you to initiate closure procedures within three months of the date you received your last shipment of hazardous waste, unless you have obtained an extension from the Administrator. The requirement to initiate closure pertains to your RCRA status and should not be a barrier to operational changes that affect your regulatory status under today's MACT requirements. This approach is a departure from the requirements proposed in the April 1996 NPRM, but is consistent with the approach we identified in the May 1997 NODA.

Once you permanently stop burning hazardous waste, you may only begin burning hazardous waste under the procedures outlined for new or existing sources that become affected sources following September 30, 1999. See later discussion.

C. What Requirements Apply If I Temporarily Cease Burning Hazardous Waste?

Under today's rule, if you temporarily cease burning hazardous waste for any reason, you remain subject to today's requirements as an affected source. However, even as an affected source, you may not have to comply with the emission standards or operating limits of today's rule when hazardous waste is not in the combustion chamber. Today's standards, associated operating parameter limits, and monitoring requirements are applicable at all times unless hazardous waste is not in the combustion chamber and either: (1) You elect to comply with other MACT standards that would be applicable if you were not burning hazardous waste (e.g. the nonhazardous waste burning Portland Cement Kiln MACT, the nonhazardous waste burning lightweight aggregate kiln MACT (Clay Products Manufacturing), or the Industrial Incinerator MACT); or (2) you are in a startup, shutdown, or malfunction mode of operation. We note that until these alternative MACT standards are promulgated, you need to comply only with other existing applicable air requirements if any. This approach is consistent with the current RCRA regulatory approach for hazardous waste combustion sources, but differs from our April 1996 proposed approach.

In our April 1996 NPRM, we proposed that sources always be subject to all of the proposed regulatory requirements, regardless of whether hazardous waste was in the combustion chamber. Commenters question the legitimacy of this requirement because the requirement was: (1) more stringent than current requirements; (2) not based on CAA statutory authority; and (3) contrary to current allowances under current MACT general provisions.

In response, we agree with commenters on issues (1) and (3) above. However, we disagree with commenters on issue number (2). The CAA does not allow sources to be subject to multiple MACT standards simultaneously. Because current CAA regulations also allow sources to modify their operations such that they can become subject to different MACT rules so long as they provide notification to the Administrator, our proposed approach appears to further complicate a situation that it was intended to resolve. One of the main reasons we proposed to subject hazardous waste burning sources to the final standards at all times was to eliminate the ability of sources to arbitrarily switch between regulation as a hazardous waste burning source and regulation as a nonhazardous waste burning source. We were concerned about the compliance implications associated with numerous notifications to the permitting authority to govern operations that may only occur for a short period of time. However, our concern appears unfounded because the MACT general provisions currently allow sources to change their regulatory status following notification, and we cannot achieve this goal without restructuring the entire MACT program. Therefore, consistent with the current program, we adopt an approach that allows a source to comply with alternative compliance requirements, while remaining subject to today's rule. This regulatory approach eliminates the reporting requirements and compliance determinations we intended to avoid with our proposed approach, while preserving the essence of the current RCRA approach, which applies more stringent emissions standards when hazardous waste is in the combustor.

1. What Must I Do to Comply with Alternative Compliance Requirements?

If you wish to comply with alternative compliance requirements, you must: (1) Comply with all of the applicable notification requirements of the alternative regulation; (2) comply with all the monitoring, record keeping and testing requirements of the alternative regulation; (3) modify your Notice Of Compliance (or Documentation of Compliance) to include the alternative mode(s) of operation; and (4) note in your operating record the beginning and end of each period when complying with the alternative regulation.

If you intend to comply with an alternative regulation for longer than three months, then you also must comply with the RCRA requirements to initiate RCRA closure. You may be able to obtain an extension of the date you are required to begin RCRA closure by submitting a request to the Administrator.

2. What Requirements Apply If I Do Not Use Alternative Compliance Requirements?

If you elect not to use the alternative requirements for compliance during periods when you are not feeding hazardous waste, you must comply with all of the operating limits, monitoring requirements, and emission standards of this rule at all times.[177] However, if you are a kiln operator, you also may be able to obtain and comply with the raw material variance discussed later.

D. What Are the Requirements for Startup, Shutdown and Malfunction Plans?

Sources affected by today's rule are subject to the provisions of 40 CFR 63.6 with regard to startup, shutdown and malfunction plans. However, the plan applies only when hazardous waste is

[177] The operating requirements do not apply during startup, shutdown, or malfunction provided that hazardous waste is not in the combustion chamber. See the discussion below in the text.

not in the combustion chamber. If you exceed an operating requirement during startup, shutdown, or malfunction when hazardous waste is in the combustion chamber, your exceedance is not excused by following your plan. If you exceed an operating requirement during startup, shutdown, or malfunction when hazardous waste is not in the combustion chamber, you must follow your startup, shutdown, and malfunction plan to come back into compliance as quickly as possibly, unless you have elected to comply with the requirements of alternative section 112 or 129 regulations that would apply if you did not burn hazardous waste. Failure to comply with the operating requirements to follow your startup, shutdown, and malfunction plan during the applicable periods is representative of a violation and may subject you to appropriate enforcement action.

In the April 1996 NPRM (see 63 FR at 17449), we proposed that startup, shutdown, and malfunction plans would not be applicable to sources affected by the proposed rule because affected sources must be in compliance with the standards at all times hazardous waste is in the combustion chamber. We reasoned that hazardous waste could not be fired unless you were in compliance with the emission standards and operating requirements, and stated that the information contained in the plan and the purpose of the plan was not intended to apply to sources affected by this rule.

In response, commenters state that startup, shutdown, and malfunction plans are appropriate for hazardous waste burning sources because malfunctioning operations are going to occur, and these plans are designed to reestablish compliant or steady state operations as quickly as possible. Furthermore, commenters maintain that because sources must prepare and follow facility-specific plans to address situations that could lead to increased emissions, rather than just note such an occurrence in the operating record, the public and we are better assured that the noncompliant operations are being remedied rather than awaiting for an after-the-fact enforcement action. Commenters also note that hazardous waste burning sources are no different than other MACT sources who are required to use such plans.

After considering comments, we agree with commenters that startup, shutdown, and malfunction plans are valuable compliance tools and should be applicable to hazardous waste burning sources. However, we are concerned that some sources may attempt to use startup, shutdown, and malfunction plans to circumvent enforcement actions by claiming they were never out of compliance if they followed their plan. Therefore, we restrict the applicability of startup, shutdown, and malfunction plans to periods when hazardous waste is not in the combustion chamber. This restriction addresses the concern that operations under startup, shutdown, and malfunction could lead to increased emissions of hazardous air pollutants.

We considered whether to specifically prohibit sources from feeding hazardous waste during periods of startup and shutdown. However, we decided not to adopt this requirement because of a potential regulatory problem. The requirement could have inadvertently subjected sources that experience unscheduled shutdowns to enforcement action if hazardous waste remained in the combustion chamber during the shutdown process even if operating requirements were not exceeded. Additionally, we decided that the prohibition was unnecessary because performance test protocols restrict the operations of all sources when determining operating parameter limits. The following factors are pertinent in this regard: (1) Sources are required to be in compliance with their operating parameter limits at all times hazardous waste is in the combustion chamber; (2) operating parameter limits are determined through a performance test which must be performed under steady-state conditions (see § 63.1207(g)(1)(iii)); and (3) periods of startup and shutdown are not steady state conditions and therefore operating parameter limits determined through performance testing would not be indicative of those periods. Accordingly, burning hazardous waste during startup or shutdown would significantly increase the potential for a source to exceed an operating parameter limit, and we expect that sources would be unwilling to take that chance as a practical matter.

E. What Are the Requirements for Automatic Waste Feed Cutoffs?

As proposed, you must operate an automatic waste feed cutoff system that immediately and automatically cuts off hazardous waste feed to the combustion device when:

(1) Any of the following are exceeded: Operating parameter limits specified in § 63.1209; an emission standard monitored by a continuous emissions monitoring system; and the allowable combustion chamber pressure; (2) The span value of any continuous monitoring system, except a continuous emissions monitoring system, is met or exceeded; (3) A continuous monitoring system monitoring an operating parameter limit under § 63.1209 or emission level malfunctions; or (4) Any component of the automatic waste feed cutoff system fails.

These requirements are provided at § 63.1206(c)(3). The system must be fully functional on the compliance date and interlocked with the operating parameter limits you specify in the Document of Compliance (as discussed later) as well as the other parameters listed above.

Also as proposed, after an automatic waste feed cutoff, you must continue to route combustion gases through the air pollution control system and maintain minimum combustion chamber temperature as long as hazardous waste remains in the combustion chamber. These requirements minimize emissions of regulated pollutants, including organic hazardous air pollutants, that could result from a perturbation caused by the waste feed cutoff. Additionally, you must continue to calculate all rolling averages and cannot restart feeding hazardous waste until all operating limits are within allowable levels.

Additionally, as currently required for BIFs, we proposed that the automatic waste feed cutoff system and associated alarms must be tested at least once every seven days. This must be done when hazardous waste is burned to verify operability, unless you document in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, you must conduct operational testing at least once every 30 days.

Commenters express the following concerns with the proposed automatic waste feed cutoff requirements: (1) Violations of the automatic waste feed cutoff linked operating parameters should not constitute a violation of the associated emission standard; (2) apparent redundancy exists between the proposed MACT requirements with the current RCRA requirements; (3) the proposed automatic waste feed cutoff requirements are inappropriate for all sources; and (4) uncertainty exists about how ''instantaneous'' is defined with regard to the nature of the automatic waste feed cutoff requirement.

We address issue (1) later in this section. With respect to issue (2), our permitting approach (*i.e.*, a single CAA title V permit to control all stack emissions) minimizes the potential redundancy of two permitting programs.

In response to issue (3), we acknowledge that not all sources may be capable of setting operating limits or

continuously monitoring all of the prescribed operating parameters due to unique design characteristics inherent to individual units. However, you may take advantage of the provisions found in § 63.8(f) which allow you to request the use of alternative monitoring techniques. See also § 63.1209(g)(1).

For issue (4), commenters express concern that requiring an immediate, instantaneous, and abrupt cutoff of the entire waste feed can cause perturbations in the combustion system that could result in exceedances of additional operating limits. We agree with commenters that a ramping down of the waste feedrate could preclude this problem in many cases and in the final rule allow a one-minute ramp down for pumpable wastes. To ensure that your ramp down procedures are bona fide and not simply a one-minute delay ending in an abrupt cutoff, you must document your ramp down procedures in the operating and maintenance plan. The procedures must specify that the ramp down begins immediately upon initiation of automatic waste feed cutoff and provides for a gradual ramp down of the hazardous waste feed. Note that if an emission standard or operating limit is exceeded during the ramp down, you nonetheless have failed to comply with the emission standards or operating requirements. The ramp down is not applicable, however, if the automatic waste feed cutoff is triggered by an exceedance of any of the following operating limits: minimum combustion chamber temperature; maximum hazardous waste feedrate; or any hazardous waste firing system operating limits that may be established for your combustor on a site-specific basis. This is because these operating conditions are fundamental to proper combustion of hazardous waste and an exceedance could quickly result in an exceedance of an emission standard. We restrict the ramp down to pumpable wastes because: (1) Solids are often fed in batches where ramp down is not relevant (*i.e.*, ramp down is only relevant to continuously fed wastes); and (2) incinerators burning solids also generally burn pumpable wastes and ramping down on pumpables only should preclude the combustion perturbations that could occur if all wastes were abruptly cutoff.

Finally, with respect to issue number (1), if you exceed an operating parameter limit while hazardous waste is in the combustion chamber, then you have failed to ensure compliance with the associated emission standard. Accordingly, appropriate enforcement action on the exceedance can be initiated to address the exceedance. This enforcement process is consistent with current RCRA enforcement procedures regarding exceedances of operating parameter limits. However, as commenters note, we acknowledge that an exceedance of an operating parameter limit does not necessarily demonstrate that an associated emissions standard is exceeded. Nevertheless, in general, an exceedance of an operating parameter limit in a permit or otherwise required is an actionable event for enforcement purposes.

Operating parameter limits are developed through performance tests that successfully demonstrate compliance with the standards. If a source exceeds an operating limit set during the performance test to show compliance with the standard, the source can no longer assure compliance with the associated standard. Furthermore, these operating parameter limits appear in enforceable documents, such as your NOC or your title V permit.

F. What Are the Requirements of the Excess Exceedance Report?

In today's rule, we finalize the requirement to report to the Administrator when you incur 10 exceedances of operating parameter limits or emissions standards monitored with a continuous emissions monitoring system within a 60 day period. See § 63.1206(c)(3)(vi). If a source has 10 exceedances within the 60 day period, the 60 day period restarts after the notification of the 10th exceedance. This provision is intended to identify sources that have excess exceedances due to system malfunction or performance irregularities. This notification requirement both highlights the source to regulatory officials and provides an added impetus to the facility to correct the problem(s) that may exist to limit future exceedances. For example, a source that must submit an excess exceedance report may be unable to operate under its current operating limits, which suggests that the source may need to perform a new comprehensive performance test to establish more appropriate operating limits.

We discussed this provision in the April 1996 NPRM. Some commenters may have misunderstood our proposal while others felt that 10 exceedances in sixty days was not a feasible number to set the reporting limit. Other commenters state that an industry wide MACT-like analysis is necessary to identify an achievable or appropriate number of exceedances upon which to set the reporting limit.

We disagree with such comments. A MACT-like analysis is not called for in this case because this requirement is not an emission standard. This is a notification procedure that is a compliance tool to identify sources that cannot operate routinely in compliance with their operating parameter limits and emissions standards monitored with a continuous emissions monitoring system. Ideally, all sources should operate in compliance with all the standards and operating parameter limits at all times. Because, in the past, sources have been able to exceed their operating limits without having to notify the Agency, this does not mean that we condone, expect, or are unconcerned with such activity. In fact, the main reason we require this notification is because such activity exists to the current extent and because the Regions and States have identified it as a problem. We select 10 exceedances in sixty days as the value that triggers reporting after discussions with Regional and State permit writers. Our discussions revealed that many hazardous waste combustion sources are required to notify regulatory officials following a single exceedance of an operating limit, while others don't have any reporting requirements linked to exceedances. Regions and States noted that because there is no current regulatory requirement for exceedance notifications, it is very difficult to require such notifications on a site-specific basis. Following these discussions, we contemplated requiring a notification following a single exceedance, but decided that the such a reporting limit might unnecessarily burden regulatory officials with reports from facilities that have infrequent exceedances. Therefore, our approach of 10 exceedances in a 60 day period is a reasonably implementable limit and is not overly burdensome. Adopting this approach achieves an appropriate balance between burden on facilities and regulators and the need to identify underlying operational problems that may present unacceptable risks to the public and environment.

To reiterate, this provision applies to any 10 exceedances of operating parameter limits or emission standards monitored with a continuous emissions monitoring system.

G. What Are the Requirements for Emergency Safety Vent Openings?

In today's rule, we finalize requirements that govern the operation of emergency safety vents. See § 63.1206(c)(4). These requirements: clarify the regulatory status of emergency safety vent events; require

development of an emergency safety vent operating plan that specifies procedures to minimize the frequency and duration of emergency safety vent openings; and specify procedures to follow when an emergency safety vent opening occurs.

Key requirements regarding emergency safety vent openings include:

(1) Treatment of combustion gases—As proposed, you must route combustion system off-gases through the same emission control system used during the comprehensive performance test. Any bypass of the pollution control system is considered an exceedance of operating limits defined in the Documentation of Compliance (DOC) or Notification of Compliance (NOC);

(2) Emergency safety vent operating plan—As proposed, if you use an emergency safety vent in your system design, you must develop and submit with the DOC and NOC an emergency safety vent operating plan that outlines the procedures you will take to minimize the frequency and duration of emergency safety vent openings and details the procedure you will follow during and after an emergency safety vent opening; and

(3) Emergency safety vent reporting requirements—As proposed, if you operate an emergency safety vent, you must submit a report to the appropriate regulatory officials within five days of an emergency safety vent opening. In that report, you must detail the cause of the emergency safety vent opening and provide information regarding corrective measures you will institute to minimize such events in the future.

Commenters on the April 1996 NPRM (61 FR at 17440) state that emergency safety vent openings are safety devices designed to prevent catastrophic failures, safeguard the unit and operating personnel from pressure excursions and protect the air pollution control train from high temperatures and pressures. They suggest that restricting these operations is contrary to common sense. Furthermore, they state that emergency safety vent openings are most often due to local power outages and fluctuations in water flows going to the air pollution equipment. Commenters believe that emergency safety vent openings should not be considered violations and that not every emergency safety vent opening should be reportable for a variety of reasons including:

—Emergency safety vent openings have not been shown to be acutely hazardous. A study finds that they will not have any short-term impact on the health of workers on-site or residents of the nearby off-site community.
—Proper use of emergency safety vent systems minimizes the potential for impacts on operators and the neighboring public.
—Many emergency safety vents are downstream of the secondary combustion chamber and thus have low organic emissions.
—Some facilities have emergency safety vents connected to the air pollution control system and should be considered in compliance as long as the continuous emissions monitoring systems monitoring data does not indicate an exceedance.

Commenters propose several alternatives:

—Recording emergency safety vent openings (including the time, duration and cause of each event) in the operating record, available to the Administrator, or any authorized representative, upon request.
—Making emergency safety vent openings a part of startup, shutdown, malfunction and abatement plans.
—Reporting openings that occurs more frequently than once in any 90 day period, whereupon the Administrator may require corrective measures.
—Reporting only emergency safety vent openings in excess of 10 in a 60 day period.
—Conditions relating to an emergency safety vent operation should be a part of the site-specific permit.
—Rely on the present RCRA permit process which provides the opportunity for permit writers and hazardous waste combustion device owner/operators to review emergency safety vent system designs.

We agree that emergency safety vents are necessary safety devices for some incinerator designs that are intended to safeguard employees and protect the equipment from the dangers associated with system over-pressures or explosions. However, simply because emergency safety vents are necessary safety devices for some incinerator designs in the event of a major malfunction does not mean that their routine use is acceptable. We cannot overlook an event when combustion gases are emitted into the environment prior to proper treatment by the pollution control system. Therefore, an emergency safety vent opening is evidence that compliance is not being achieved. Nonetheless, we expect sources to continue to use safety vents when the alternative could be a catastrophic failure and substantial liability even though opening the vent is evidence of failure to comply with the emission standards.

Today's requirements are based on the fundamental need to ensure protection of human health and the environment against unquantified and uncontrolled hazardous air pollutant emissions. We do not agree that a change in the proposed emergency safety vent reporting requirement is warranted. These events are indicative of serious operational problems, and each event should be reported and investigated to reduce the potential of future similar events. As for including the emergency safety vent operating plan in the source-specific startup, shutdown, and malfunction plan, we see no reason to discourage that practice provided that a combined plan specifically addresses the events preceding and following an emergency safety vent opening.

H. What Are the Requirements for Combustion System Leaks?

You must prevent leaks of gaseous, liquid or solid materials from the combustion system when hazardous waste is being fed to or remains in the combustion chamber. To demonstrate compliance with this requirement you must either: (1) Maintain the combustion system pressure lower than ambient pressure at all times; (2) totally enclose the system; or (3) gain approval from the Administrator to use an alternative approach that provides the same level of control achieved by options 1 and 2.

Currently, these requirements exist for all sources under RCRA regulations. Many commenters question whether they were capable of meeting this requirement for various technical reasons. We acknowledge that certain situations may exist that prevent or limit a source from instantaneously monitoring pressure inside the combustion system, but in such situations, we can approve alternative techniques (under § 63.1209(g)(1)) that allow sources to achieve the objectives of the requirements. Because this requirement is identical to the current RCRA requirements, and because we have specifically provided alternative techniques to demonstrate compliance, modifications to this provision are not warranted.

I. What Are the Requirements for an Operation and Maintenance Plan?

You must prepare and at all times operate according to a operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous

air pollutants. The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test. You must record the plan in the operating record. See § 63.1206(c)(7)(i).

In addition, if you own or operate a hazardous waste incinerator or hazardous waste burning lightweight aggregate kiln equipped with a baghouse, your operation and maintenance plan for the baghouse must include a prescribed inspection schedule for baghouse components and use of a bag leak detection system to identify malfunctions. This baghouse operation and maintenance plan must be submitted to the Administrator with the initial comprehensive performance test for review and approval. See § 63.1206(c)(7)(ii).

We require an operation and maintenance plan to implement the provisions of § 63.6(e). That paragraph requires you to operate and maintain your source in a manner consistent with good air pollution control practices for minimizing emissions. That paragraph, as all Subpart A requirements, applies to all MACT sources unless requirements in the subpart for a source category state otherwise. In addition, § 63.6(e)(2) states that the Administrator will determine whether acceptable operation and maintenance procedures are used by reviewing information including operation and maintenance procedures and records. Thus, paragraph (e)(2) effectively requires you to develop operation and maintenance procedures. Consequently, explicitly requiring you to develop an operation and maintenance plan is a logical outgrowth of the proposed rule.

Similarly, although we did not prescribe baghouse inspection requirements or require a bag leak detection system at proposal for incinerators and lightweight aggregate kilns, this is a logical outgrowth of the proposed rule. Section 63.6(e) requires sources to operate and maintain emission control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Inspection of baghouse components is required to provide adequate maintenance, and a bag leak detection system is a state-of-the-art monitoring system that identifies major baghouse malfunctions. Absent use of a particulate matter CEMS or opacity monitor, use of a bag leak detection system is an essential monitoring approach to ensure that the baghouse continues to operate in a manner consistent with good air pollution control practices. Bag leak detection systems are required under the MACT standards for secondary lead smelters. See § 63.548. We have also proposed to require them as MACT requirements for several other source categories including primary lead smelters (see 63 FR 19200 (April 17, 1998)) and primary copper smelters (see 63 FR 19581 (April 20, 1998)). In addition, we have published a guidance document on the installation and use of bag leak detection systems: USEPA, ''Fabric Filter Bag Leak Detection,'' September 1997, EPA–454/R–98–015. Thus, although not explicitly required at proposal, a requirement to use bag leak detection systems is a logical outgrowth of the (proposed) requirements of § 63.6(e).

We are not prescribing a schedule for inspection of baghouse components or requiring a bag leak detection system for cement kilns because cement kilns must use a continuous opacity monitoring system (COMS) to demonstrate compliance with an opacity standard. A COMS is a better indicator of baghouse performance than a bag leak detection system. We could not use COMS for incinerators and lightweight aggregate kilns, however, because we do not have data to identify an opacity standard that is achievable by MACT sources (i.e., sources using MACT control and achieving the particulate matter standard).

We are not specifying the type of sensor that must be used other than: (1) The system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter; and (2) the sensor must provide output of relative particulate matter loadings. Several types of instruments are available to monitor changes in particulate emission rates for the purpose of detecting fabric filter bag leaks or similar failures. The principles of operation of these instruments include electrical charge transfer and light scattering. The guidance document cited above applies to charge transfer monitors that use triboelectricity to detect changes in particle mass loading, but other types of monitors may be used. Specifically, opacity monitors may be used.

The economic impacts of requiring fabric filter bag leak detection systems are minimal. These systems are relatively inexpensive. They cost less than $11,000 to purchase and install. Further, we understand that most hazardous waste burning lightweight aggregate kilns are already equipped with triboelectric sensors. Finally, there are few hazardous waste incinerators that are currently equipped with fabric filters.

II. What Are the Compliance Dates for this Rule?

A. How Are Compliance Dates Determined?

In today's rule, as with other MACT rules, we specify the compliance date and then provide you additional time to demonstrate compliance through performance testing. Generally, you must be in compliance with the emission standards on September 30, 2002 unless you are granted a site-specific extension of the compliance date of up to one year. By September 30, 2002, you must complete modifications to your unit and establish preliminary operating limits, which must be included in the Documentation of Compliance (DOC) and recorded in the operating record. Following the compliance date you have up to 180 days to complete the initial comprehensive performance test and an additional 90 days to submit the results of the performance test in the Notification of Compliance (NOC). In the NOC, you also must certify compliance with applicable emission standards and define the operating limits that ensure continued compliance with the emission standards.

In the April 1996 NPRM, we proposed that sources comply with all the substantive requirements of the rule on the compliance date. This required sources to conduct their performance test as well as submit results in the NOC by the compliance date. The compliance date discussed in the April 1996 NPRM contained a statutory limitation of three years following the effective date of the final rule (*i.e.*, the publication date of the final rule) with the possibility of a site-specific extension of up to one year for the installation of controls to comply with the final standards, or to allow for waste minimization reductions.

In the May 1997 NODA, we acknowledged that the April 1996 NPRM definition of compliance date and our approach to implementation created a number of unforseen difficulties (see 63 FR at 24236). Commenters note that the proposed compliance date definition and the ramifications of noncompliance create the potential for an unnecessarily large number of source shut-downs due to an insufficient period to perform all the required tasks. Commenters recommend we follow the general provisions applicable to all MACT regulated sources, which allow sources to demonstrate compliance through

performance testing and submission of emission test results up to 270 days following the compliance date.

In the May 1997 NODA, we outlined an approach that allowed facilities to use the Part 63 general approach, which requires sources to complete performance testing within 180 days of the compliance date and submit test results 90 days after completing the performance test.[178] Today, we adopt this approach to foster consistent implementation of this rule as a CAA regulation.

Your individual dates for: (1) Compliance; (2) comprehensive performance testing; (3) submittal of test results; and (4) submittal of your NOC and title V permit requests depend on whether you were an existing source on April 19, 1996. Compliance dates for existing and new sources are discussed in the following two subsections.

B. What Is the Compliance Date for Sources Affected on April 19, 1996?

The compliance date for all affected sources constructed, or commencing construction or reconstruction before April 19, 1996 is September 30, 2002.

C. What Is the Compliance Date for Sources That Become Affected After April 19, 1996?

If you began construction or reconstruction after April 19, 1996, your compliance date is the latter of September 30, 1999 or the date you commence operations. If today's final emission standards are less stringent or as stringent as the standards proposed on April 19, 1996, you must be in compliance with the 1996 proposed standards upon startup. If today's final standards are more stringent than the proposed standards, you must be in compliance with the more stringent standards by September 30, 2002.

III. What Are the Requirements for the Notification of Intent to Comply?

For the reader's convenience, we summarize here the Notice of Intent to Comply (NIC) requirements finalized in the ''fast-track'' rule of June 19, 1998. (See 63 FR at 33782.)

The NIC requires you to prepare an implementation plan that identifies your intent to comply with the final rule and the basic means by which you intend to do so. That plan must be released to the public in a public forum and formally submitted to the Agency. The notice of intent certifies your intentions—either to comply or not to comply—and identifies milestone dates that measure your progress toward compliance with the final emission standards or your progress toward closure, if you choose not to comply. Prior to submitting the NIC to the regulatory Agency, you must provide notice of a public meeting and conduct an informal public meeting with your community to discuss the draft NIC and your plans for achieving compliance with the new standards.

We have redesignated the existing NIC provisions to meld them into the appropriate sections of subpart EEE. We have also revised the regulatory language to include references to the new provisions promulgated today. See Part Six, Section IX of today's preamble.

IV. What Are the Requirements for Documentation of Compliance?

A. What Is the Purpose of the Documentation of Compliance?

The purpose of the Documentation of Compliance [179] (DOC) is for you to certify by the compliance date that: (1) You have made a good faith effort to establish limits on the operating parameters specified in § 63.1209 that you believe ensure compliance with the emissions standards; (2) required continuous monitoring systems are operational and meet specifications; and (3) you are in compliance with the other operating requirements. See § 63.1211(d). This is necessary because all sources must be in compliance by the compliance date even though they are not required to demonstrate compliance, through performance testing, until 180 days after the compliance date. To fulfill the requirements of the DOC, you must place it in the operating record by the compliance date, September 30, 2002. (See compliance dates in Section II above.) Information that must be in the DOC includes all information necessary to determine your compliance status (e.g., operating parameter limits; functioning automatic waste feed cutoff system). All operating limits identified in the DOC are enforceable limits. However, if these limits are determined, after the initial comprehensive performance test, to have been inadequate to ensure compliance with the MACT standards, you will not be deemed to be out of compliance with the MACT emissions standards, if you complied with the DOC limits.[180]

B. What Is the Rationale for the DOC?

In the May 1997 NODA, we discussed the concept of the precertification of compliance (Pre-COC). The discussion required sources to precertify their compliance status on the compliance date by requiring them to submit a notification to the appropriate regulatory agency. This notification would detail the operating limits under which a source would operate during the period following the compliance date, but before submittal of the initial comprehensive performance test results in the Notification of Compliance.

Commenters question this provision since the Pre-COC operating limits would be effective only for the 270 days following the compliance date. Other commenters support the Pre-COC requirements provided the process is focused, straightforward, and limited to the minimum operating parameters necessary to document compliance. Commenters also stress that the Agency needed to specify the requirements of the prenotification, using appropriate sections of 40 CFR 266.103(b) and Section 63.9 when developing the specific regulatory requirements. In addition, commenters suggest that the Agency clarify the relationship between the Pre-COC and the title V permit, and indicate how or if the Pre-COC operating limits would be placed in the title V permit.

Other commenters state that the rationale underlying the Pre-COC is faulty because sources would remain subject to the RCRA permit conditions until the NOC is submitted or until the title V permit is issued, which was our proposed approach to permitting at that time. Therefore, the Agency's concern that sources could be between regulatory regimes is not relevant. Commenters also state that Pre-COC requirements would be resource intensive and a needless exercise that diverted time and attention from preparing to come into compliance with MACT standards.

The DOC requirements and process adopted today provide the Agency and public a sound measure of assurance

[178] The general provisions of part 63 allow for 180 days after the compliance date to conduct a performance test and 60 days to submit its results to the appropriate regulatory agency. However, as commenters note, dioxin/furan analyses can require 90 days to complete. Therefore, the time allowed for submission of test results should be extended to 90 days, increasing the total time following the compliance date to 270 days. We agree with commenters and increase the time allowed for submission of test results from 60 to 90 days.

[179] We renamed the proposed Precertification of Compliance as the Documentation of Compliance to avoid any confusion with the RCRA requirement of similar name.

[180] Once you determine that you failed to demonstrate compliance during the performance test, all monitoring data is subject to potential case-by-case use as credible evidence to show noncompliance following that determination. Therefore, you could potentially find yourself in noncompliance for the period which the DOC limits were in effect following that determination, but before submission of the NOC.

that, on the compliance date, combustion sources are operated within limits that should ensure compliance with the MACT standards and protection to human health and the environment. We agree that operating limits in the DOC will be in effect only for a short period of time and that affected sources will not be between regulatory regimes at any time. Given the relatively short period of time the DOC conditions will be in effect, however, we chose for the final rule not to specify whether the conditions need to be incorporated into a title V permit and do not require the permitting authority to do so. We provide flexibility for agencies implementing title V programs to determine the appropriate level of detail to include in the permit, thereby allowing them to minimize the potential need for permit revisions. In addition, we do not require that the DOC be submitted to the permitting authority, to avoid burdening the permitting agency with unnecessary paper work during the period that they are reviewing site-specific performance test plans. In today's rule, we better define the period during which the DOC applies by specifying that the DOC is superseded by the NOC upon the postmark date for submittal of the NOC. Once you mail the NOC, its contents become enforceable unless and until superseded by test results submitted within 270 days following subsequent performance testing. This approach provides clarity on when the NOC supersedes the DOC.

C. What Must Be in the DOC?

You must complete your site-specific DOC and place it in your operating record by the compliance date. The DOC must contain all of the information necessary to determine your compliance status during periods of operation including all operating parameter limits. You must identify the DOC operating limits through the use of available data and information. If your unit requires modification or upgrades to achieve compliance with the emission standards, you can base this judgment on results of shakedown tests and/or manufacturers assertions or specifications. If your unit does not require modifications or upgrades to meet the emission standards of today's rule, you can develop the operating limits through analysis of previous performance tests or knowledge of the performance capabilities of your control equipment.

Your limitations on operating parameters must be based on an engineering evaluation prepared under your direction or supervision in accordance with a system designed. This evaluation must ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams, and available emissions data.

This requirement should not involve a significant effort because your decisions on whether to upgrade and modify your units will be based on the current performance of your control equipment and the performance capabilities of new equipment you purchase. We expect that, by the compliance date, you will have an adequate understanding of your unit's capabilities, given the three years to develop this expertise. Therefore, by the compliance date, you are expected to identify operating limits that are based on technical or engineering judgment that should ensure compliance with the emission standards.

V. What Are the Requirements for MACT Performance Testing?

A. What Are the Compliance Testing Requirements?

Today's final rule requires two types of performance testing to demonstrate compliance with the MACT emission standards: Comprehensive and confirmatory performance testing. See § 63.1207. The purpose of comprehensive performance testing is to demonstrate compliance and establish operating parameter limits. You must conduct your initial comprehensive performance tests by 180 days (i.e., approximately six months) after your compliance date. You must submit results within 90 days (i.e., approximately 3 months) of completing your comprehensive performance test. If you fail a comprehensive performance test, you must stop burning hazardous waste until you can demonstrate compliance with today's MACT standards. Comprehensive performance testing must be repeated at least every five years, but may be required more frequently if you change operations or fail a confirmatory performance test.

The purpose of confirmatory performance tests is to confirm compliance with the dioxin/furan emission standard during normal operations. You must conduct confirmatory performance tests midway between comprehensive performance tests. Confirmatory performance tests may be conducted under normal operating conditions. If you fail a confirmatory performance test, you must stop burning hazardous waste until you demonstrate compliance with the dioxin/furan standard by conducting a comprehensive performance test to establish revised operating parameter limits.

The specific requirements and procedures for these two performance tests are discussed later in this section. In addition, this section discusses the interaction between the RCRA permitting process and the MACT performance test.

1. What Are the Testing and Notification of Compliance Schedules?

Section 63.7 of the CAA regulations contains the general requirements for testing and notification of compliance. In today's rule, we adopt some § 63.7 requirements without change and adopt others with modifications. As summarized earlier, you must commence your initial comprehensive performance test within 180 days after your compliance date, consistent with the general § 63.7 requirements. You must complete testing within 60 days of commencement, unless a time extension is granted. This requirement is necessary because testing and notification of compliance deadlines are based on the date of commencement or completion of testing. Those deadlines could be meaningless if a source had unlimited time to complete testing. Although we propose to require testing to be completed within 30 days of commencement, commenters state that unforeseen events could occur (e.g., system breakdown causing extensive repairs; loss of samples from breakage of equipment or other causes requiring additional test runs) that could extend the testing period beyond normal time frames. We concur, and provide for a 60-day test period as well as a case-by-case time extension that may be granted by permit officials if warranted because of problems beyond our control.

Additionally, you must submit comprehensive performance test results to the Administrator within 90 days of test completion, unless a time extension is granted. We are allowing an additional 30 days for result submittal beyond the §§ 63.7(g) and 63.8(e)(5) 60-day deadlines because the dioxin/furan analyses required in today's rule may take this additional time to complete. We also are including a provision for a case-by-case time extension in the final rule because commenters express concern that the limited laboratory facilities nationwide may be taxed by the need to handle analyses simultaneously for many hazardous

waste combustors. The available analytical services may not be able to handle the workload, that could cause some sources to miss the proposed 90-day deadline. We concur with commenters' concerns and have added a provision to allow permit officials to grant a case-by-case time extension, if warranted.

Test results must be submitted as part of the notification of compliance (NOC) submitted to the Administrator under §§ 63.1207(j) and 63.1210(d) documenting compliance with the emission standards and continuous monitoring system requirements, and identifying applicable operating parameter limits. These provisions are similar to §§ 63.7(g) and 63.8(e)(5), except that the NOC must be postmarked by the 90th day following the completion of performance testing and the continuous monitoring system performance evaluation.

Overall, the initial NOC must be postmarked within 270 days (i.e., approximately nine months) after your compliance date. You must initiate subsequent comprehensive performance tests within 60 months (i.e., five years) of initiating your initial comprehensive performance test. You must submit subsequent NOCs, containing test results, within 90 days after the completion of subsequent tests.

The rule allows you to initiate subsequent tests any time up to 30 days after the deadline for the subsequent performance test. Thus, you can modify the combustor or add new emission control equipment at any time and conduct new performance testing to document compliance with the emission standards. In addition, this testing window allows you to plan to commence testing well in advance of the deadline to address unforseen events that could delay testing.[181] This testing window applies to both comprehensive performance tests and confirmatory performance tests. For example, if the deadline for your second comprehensive performance test is January 10, 2008, you may commence the test at any time after completing the initial comprehensive performance test but not later than February 10, 2008. The deadline for subsequent comprehensive and confirmatory performance tests are based on the commencement date of the previous comprehensive performance test.

[181] We note that a case-by-case time extension for commencement of subsequent performance testing is also provided under § 63.1207(i).

2. What Are the Procedures for Review and Approval of Test Plans and Requirements for Notification of Testing?

In the April 1996 NPRM, we proposed in § 63.7(b)(1) to require submittal of a ''notification of performance test'' to the Administrator 60 days prior to the planned test date. This notification included the site-specific test plan itself for review and approval by the Administrator (§ 63.8(e)(3)). In the May 1997 NODA, to ensure coordination of destruction removal efficiency (DRE) and MACT performance testing, we considered requiring you to submit the test plan one year rather than 60 days prior to the scheduled test date to allow the regulatory official additional time to consider DRE testing in context with MACT comprehensive performance testing. This one-year test review period would only have applied to sources required to perform a DRE test.

In today's final rule, we maintain the requirement for you to submit the test plan one year prior to the scheduled test date, but apply that requirement to all sources, not just those performing a DRE test. After consideration of comments (described below), we determined that this one-year period is needed to provide regulatory officials sufficient time (i.e., nine months) to review and approve or notify you of intent to disapprove the plan. Nine months is needed for the review for all sources given the amount of technical information that would be included in the test plan, and would also allow time to assess whether a source is required to perform a DRE test (see Part IV, Section IV, for discussion of DRE testing requirements; see also § 63.1206(b)(8)). During this nine-month period, the regulatory officials will review your test plan and determine if it is adequate to demonstrate compliance with the emission standards and establish operating requirements.

After submittal of the test plan, review and approval or notification of intent to deny approval of the test plan will follow the requirements of § 63.7(c)(3). That section provides procedures for you to provide additional information before final action on the plan. It also requires you to comply with the testing schedule even if permit officials have not approved your test plan. The only exception to this requirement is if you proposed to use alternative test methods to those specified in the rule. In that case, you may not conduct the performance test until the test plan is approved, and you have 60 days after approval to conduct the test.

Several commenters suggest that it would be difficult for permit officials to review and approve test plans within the nine-month window given that many test plans may be submitted at about the same time. They cite experiences under RCRA trial burn plan approvals where permit officials have taken much longer than nine months to approve a plan, and have requested that the final rule allow for a longer review period. Commenters are concerned with the consequences of being required to conduct the performance test even though permit officials may not have had time to approve the test plan. They recite various concerns that permit officials may at a later date determine that the performance test was inadequate and require retesting. Commenters suggest that the rule establish the date for the initial comprehensive performance test as 60 days following approval of the test plan, whenever that may occur, thus extending the deadline for the performance test indefinitely from the current requirement of six months after the compliance date.

We maintain that the nine-month review period is appropriate for several reasons. First, we are unwilling to build into the regulations an indefinite period for review. This would have the potential to delay implementation of the MACT emission standards without any clear and compelling reason to do so.

Second, the RCRA experience with protracted approval schedules, sometimes over a decade ago, is not applicable or analogous to the MACT situation. Under the RCRA regulatory regime, particularly at the early stages, there were few incentives for either permit officials or owners or operators to expeditiously negotiate acceptable test plans. No statutory deadlines existed for a compliance date, and existing facilities operated under interim status (a type of grand fathering tantamount to a permit). This interim status scheme placed at least some controls on hazardous waste combustors during the permit application and trial burn test plan review periods. As a result, regulatory officials could take significant amounts of time to address what was then a new type of approval, that for trial burn testing to meet RCRA final permit standards.

Under MACT, the situation today is quite different. In light of the statutory compliance date of 3 years and the existing regulatory framework, sources know as of today's final rule that they need to respond promptly and effectively to permit officials' concerns about the test plan because the performance test must be conducted

within six months after the compliance date whether or not the test plan is approved. And they have at least two years to prepare and submit these plans, and to work with regulatory officials even before doing so. For their part, permit officials recognize that they have the responsibility to review and approve the plan or notify the source of their intent to deny approval within the nine-month window given that the source must proceed with expensive testing on a fixed deadline whether or not the plan is approved. To the extent regulatory officials anticipate that many test plans will be submitted at about the same time, the agencies have at least two years to figure out ways to accommodate this scenario from a resource and a prioritization standpoint. If permit officials nevertheless fail to act within the nine-month review and approval period, a source could argue that this failure is tacit approval of the plan and that later ''second-guessing'' is not allowable. This should be a very strong incentive for regulatory officials to act within the nine months, especially with a two-year lead time to avoid this type of situation

In addition, the RCRA experience is not a particularly good harbinger of the future MACT test plan approval, as commenters suggest, because most sources will have already completed trial burn testing under RCRA. Thus, both the regulatory agencies and the facilities have been through one round of test plan submittal, review, and approval for their combustion units. Given that MACT testing is very similar to RCRA testing, approved RCRA test protocols can likely be modified as necessary to accommodate any changes required under the MACT rule. Although some of these changes may be significant, we expect that many will not be. For example, RCRA trial burn testing always included DRE testing. Under the MACT rule, DRE testing will not be required for most sources. And for sources where DRE testing is required under MACT, most will have already been through a RCRA approval of the DRE test protocol, which should substantially simplify the process under MACT.

The third reason that we maintain the nine-month review and approval window is appropriate is that discussions with several states leads us to conclude that they are prepared to meet their obligations under this provision. This is a highly significant indicator that the nine-month review and approval period is a reasonable period of time, particularly since all permitting agencies have at least two years to plan for submittal of test plans from the existing facilities in their jurisdictions.

In summary, sound reasons exist to expect that today's final rule provides sufficient time for the submittal, review, and approval of test plans. Furthermore, clear incentives exist for both owners and operators and permit officials to work together expeditiously to ensure that an approval or notice of intent to disapprove the test plan can be provided within the nine-months allotted.

On a separate issue, we also retain, in today's final rule, the 60-day time frame and requirements of § 63.7(b)(1) for submittal of the notification of performance test. Additionally, the final rule continues to provide an opportunity for, but does not require, the regulatory agency to review and oversee testing.

3. What Is the Provision for Time Extensions for Subsequent Performance Tests?

The Administrator may grant up to a one year time extension for any performance test subsequent to the initial comprehensive performance test. This enables you to consolidate MACT performance testing and any other emission testing required for issuance or reissuance of Federal/State permits.[182]

At the time of proposal, we were concerned about how to allow coordination of MACT performance tests and RCRA trial burns. As discussed elsewhere, the RCRA trial burn is superseded by MACT performance testing. However, a one-year time extension may still be necessary for you to coordinate performance of a RCRA risk burn. In addition, commenters state that there may be additional reasons to grant extension requests (*e.g.* some TSCA-regulated hazardous waste combustors may be required to perform stack tests beyond those required by MACT). Furthermore, some sources may have to comply with state programs requiring RCRA trial burn testing. To address these situations, to promote coordinated testing, and to avoid unnecessary source costs, the final rule allows up to a one-year time extension for the performance test.

When performance tests and other emission tests are consolidated, the deadline dates for subsequent comprehensive performance tests are adjusted correspondingly. For example, if the deadline for your confirmatory performance test is January 1 and your state-required trial burn is scheduled for September 1 of the same year, you can apply to adjust the deadline for the confirmatory performance test to September 1. If granted, this also would delay by a corresponding time period the deadline dates for subsequent comprehensive performance tests.

The procedures for granting or denying a time extension for subsequent performance tests are the same as those found in § 63.6(i), which allow the Administrator to grant sources up to one additional year to comply with standards.[183] These are also the same procedures apply to a request for a time extension for the initial NOC.

4. What Are the Provisions for Waiving Operating Parameter Limits During Subsequent Performance Tests?

Operating parameter limits are automatically waived during subsequent comprehensive performance tests under an approved performance test plan. See § 63.1207(h). This waiver applies only for the duration of the comprehensive performance test and during pretesting for an aggregate period up to 720 hours of operation. You are still required to be in compliance with MACT emissions standards at all times during these tests, however.

In the April 1996 NPRM, we proposed to allow the burning of hazardous waste only under the operating limits established during the previous comprehensive performance test (to ensure compliance with emission standards not monitored with a continuous emissions monitoring system). Two types of waivers from this requirement would have been provided during subsequent comprehensive performance tests: (1) An automatic waiver to exceed current operating limits up to 5 percent; and (2) a waiver that the Administrator may grant if warranted to allow the source to exceed the current operating limits without restriction. We proposed an automatic waiver because, without the waiver, the operating limits would become more and more stringent with subsequent comprehensive performance tests. This is because sources would be required to operate within the more stringent conditions to ensure that they did not exceed a current operating limit. This would result in a shrinking operating envelope over time.

A number of commenters question the comprehensive performance test's 5%

[182] In addition, this provision also may assist you when unforseen events beyond your control (*e.g.*, power outage, natural disaster) prevent you from meeting the testing deadline.

[183] Note, however, that § 63.6(i) applies to an entirely different situation: extension of time for initial compliance with the standards, not subsequent performance testing.

limit over existing permit conditions. Some commenters state that the EPA should not limit a facility's operating envelope from test to test based on operating conditions established during the previous test. The operator should be free to set any conditions for the comprehensive performance test, short of what the regulator deems to pose a short-term environmental or health threat or inadequate to ensure compliance with an emission standard. Commenters also state that the requirement that the facility accept the more stringent of the existing 5% limit or the test result will inevitably result in the ratcheting down of limits over time. Since certain conditions have much greater variation than 5% over a limit, sufficient variability must be allowed so the operator can run a test under the conditions it wishes to use as the basis for worst case operation.

We agree that a waiver is necessary to avoid ratcheting down the operating limits in subsequent tests. Further, in view of the natural variability in hazardous waste combustor operations, a 5% waiver may be insufficient. Because you are required to comply with the emission standards, there does not appear to be any reason to establish national restrictions on operations during subsequent performance tests. Therefore, the final rule allows a waiver from previously established operating parameter limits, as long as you comply with MACT emission standards and are operating under an approved comprehensive performance test plan. Operating parameter limits will be reset based on the new tests. Furthermore, the permitting authority will review and has the opportunity to disapprove any proposed test conditions which may result in an exceedance of an emission standard.

B. What Is the Purpose of Comprehensive Performance Testing?

The purposes of the comprehensive performance test are to: (1) Demonstrate compliance with the continuous emissions monitoring systems-monitored emission standards for carbon monoxide and hydrocarbons; (2) conduct manual stack sampling to demonstrate compliance with the emission standards for pollutants that are not monitored with a continuous emissions monitoring system (e.g., dioxin/furan, particulate matter, DRE, mercury, semivolatile metal, low volatile metal, hydrochloric acid/chlorine gas); (3) establish limits on the operating parameters required by § 63.1209 (Monitoring Requirements) to ensure compliance is maintained with those emission standards for which a continuous emissions monitoring system is not used for compliance monitoring; and (4) demonstrate that performance of each continuous monitoring system is consistent with applicable requirements and the quality assurance plan. In general, the comprehensive performance test is similar in purpose to the RCRA trial burn and BIF interim status compliance test, but with relatively less Agency oversight and a higher degree of self-implementation, as discussed below.

The basic framework for comprehensive performance testing is set forth in the existing general requirements of subpart A, part 63. Therefore, for convenience of the reader, we will review key elements of those regulations and highlight any modifications made specifically for hazardous waste combustors.

1. What Is the Rationale for the Five Year Testing Frequency?

As discussed earlier, you must perform comprehensive performance testing every five years. We require periodic comprehensive performance testing because we are concerned that long-term stress to the critical components of a source (e.g., firing systems, emission control equipment) could adversely affect emissions.

In the April 1996 NPRM, we proposed that large sources (i.e., those with a stack gas flow rate greater than 23,127 acfm) and sources that accept off-site wastes would be required to perform comprehensive performance testing every three years. We also proposed that small, on-site sources perform comprehensive performance testing every five years unless the Administrator determined otherwise on a case-specific basis. Commenters suggest that the proposed three year testing frequency is too restrictive. They said that test plan approval time, bad weather, mechanical failure, and the testing itself combine to make the proposed test frequency too tight for tests of this magnitude.

We agree that, due to the magnitude of the comprehensive performance test, a more appropriate testing schedule is required. Therefore, we adopt a comprehensive performance testing frequency of every five years for small and large sources. In addition, this comprehensive performance testing schedule should correspond to the renewal of the title V permit. More frequent comprehensive performance testing is required, however, if there is a change in design, operation, or maintenance that may adversely affect compliance. See § 63.1206(b)(6).

2. What Operations Are Allowed During a Comprehensive Performance Test?

Because day-to-day limits are established for operating parameters during the comprehensive performance test, we allow operation during the performance test as necessary provided the unit complies with the emission standards. Accordingly, you can spike feedstreams with metals or chlorine, for example, to ensure that the feedrate limits are sufficient to accommodate normal operations while allowing some flexibility to feed higher rates. See Part Four, Section I. B. above for further discussion of normal operations. We note that this differs from § 63.7(e) which requires performance testing under ''normal'' operating conditions. See § 63.1207(g).

Most commenters agree that the comprehensive performance test should be conducted under extreme conditions at the edge of the operating envelope. Commenters point out that they needed to operate in this mode to establish operating parameter limits to cover all possible normal operating emissions values. Commenters also state that feedstreams may need to be spiked with metals or chlorine to ensure limits high enough to allow operational flexibility. We agree that these modes of operation are needed to establish operating parameter limits that cover all possible normal operating emissions values.[184] There is precedent for this approach in current rules regulating hazardous waste combustors (e.g., the RCRA incinerator and BIF rules).

In addition, two or more modes of operation may be identified, for which separate performance tests must be conducted and separate limits on operating conditions must be established. If you identify two modes of operation for your source, you must note in the operating record which mode you are operating under at all times. For example, two modes of operation must be identified for a cement kiln that routes kiln off-gas through the raw meal mill to help dry the raw meal. When the raw meal mill is not operating (perhaps 15% of the time), the kiln gas bypasses the raw meal mill. Emissions of particulate matter and other hazardous air

[184] Allowing sources to operate during MACT comprehensive performance testing under the worst-case conditions, as allowed during RCRA compliance testing, rather than under normal conditions as provided by § 63.7(e) for other MACT sources, ensures that the emissions standards do not restrict hazardous waste combustors using MACT control to operations resulting in emissions that are lower than normal. Therefore, allowing performance testing on a worst-case basis provides that the MACT emission standards are achievable in practice by sources using MACT control.

pollutants or surrogates may vary substantially depending on whether the kiln gas bypasses the raw meal mill.

As discussed below for confirmatory testing, when conducting the comprehensive performance test, you also must operate under representative conditions for specified parameters that may affect dioxin/furan emissions. These conditions must ensure that emissions are representative of normal operating conditions. Also, when demonstrating compliance with the particulate matter, semivolatile metal, and low volatile metal emission standards, when using manual stack sampling, and when demonstrating compliance with the dioxin/furan and mercury emission standards using carbon injection or carbon bed, you must operate under representative conditions for the cleaning cycle of the particulate matter control device. This is because particulate matter emissions increase momentarily during cleaning cycles and can affect emissions of these pollutants.

3. What Is the Consequence of Failing a Comprehensive Performance Test?

If you determine that you failed any emission standard during the performance test based on: (1) Continuous emissions monitoring systems recordings; (2) results of analysis of samples taken during manual stack sampling; or (3) results of the continuous emissions monitoring systems performance evaluation, you must immediately stop burning hazardous waste. However, if you conduct the comprehensive performance test under two or more modes of operation, and you meet the emission standards when operating under one or more modes of operation, you are allowed to continue burning under the mode of operation for which the standards were met.

If you fail one or more emission standards during all modes of operation tested, you may burn hazardous waste only for a total of 720 hours and only for the purposes of pretesting (i.e., informal testing to determine if the combustor can meet the standards operating under modified conditions) or comprehensive performance testing under modified conditions. The same standards apply for the retest as applied for the original test. These conditions apply when you fail the initial or subsequent comprehensive performance test.

A number of commenters suggest that the 720 operating hours allowed after a failed performance test should be renewable, as they are under existing incinerator and BIF rules. We are persuaded by the commenters' rationale and will adopt this practice in today's rule. The final rule allows the 720 hours of operation following a failed performance test to be renewed as often as the Administrator deems reasonable. We note that hazardous waste combustors are currently subject to virtually these same requirements under RCRA rules.

If you fail a comprehensive performance test, you must still submit a NOC as required indicating the failure. We want to ensure that the regulatory authorities are fully aware of a failure and the need for the facility to initiate retesting.

We do not specifically address other consequences of failing the comprehensive performance test in the regulatory language. We will instead rely on the regulating agency's enforcement policy to govern the type of enforcement response at a facility that exceeds an emission standard, fails to ensure compliance with the standards, or fails to meet a compliance deadline.

C. What Is the Rationale for Confirmatory Performance Testing?

Confirmatory performance testing for dioxin/furan is required midway between the cycle required for comprehensive performance testing to ensure continued compliance with the emission standard. We require such testing only for dioxin/furan given: (1) The health risks potentially posed by dioxin/furan emissions; (2) the lack of a continuous emissions monitoring system for dioxin/furan; (3) the lack of a material that directly and unambiguously relates to dioxin/furan emissions which could be monitored continuously by means of feedrate control (as opposed to, for example, metals feedrates, which directly relate to metals emissions); and (4) wear and tear on the equipment, including any emission control equipment, which over time could result in an increase in dioxin/furan emissions even though the source stays in compliance with applicable operating limits.

Although emissions of dioxins/furans appear to be primarily a function of whether particulate matter is retained in post-combustion regions of the combustor (e.g., in an electrostatic precipitator or fabric filter, or on boiler tubes) in the temperature range that enhances dioxin/furan formation, the factors that affect dioxin/furan formation are imperfectly understood. Certain materials seem to inhibit formation while others seem to enhance formation. Some materials seem to be precursors (e.g., PCBs). Changes in the residence time of particulate matter in a control device may affect the degree of chlorination of dioxins/furans, and thus the toxicity equivalents of the dioxins/furans. Given these uncertainties, the health risks posed by dioxins/furans, and the relatively low cost of dioxin/furan testing, it appears prudent to require confirmatory testing to determine if changes in feedstocks or operations that are not limited by the MACT rule may have increased dioxin/furan emissions to levels exceeding the standard. We also note that confirmatory dioxin/furan testing is required for municipal waste combustors (60 FR at 65402 (December 19, 1995)).

Confirmatory testing differs from comprehensive testing, however, in that you are required to operate under normal, representative conditions during confirmatory testing. This will reduce the cost of the test, while providing the essential information, because you will not have to establish new operating limits based on the confirmatory test.

1. Do the Comprehensive Testing Requirements Apply to Confirmatory Testing?

The following comprehensive performance testing requirements discussed above also apply to confirmatory testing: Agency oversight, notification of performance test, notification of compliance, time extensions, and failure to submit a timely notice of compliance. However, we modify some of the comprehensive test requirement for confirmatory tests, as discussed below.

2. What Is the Testing Frequency for Confirmatory Testing?

You are required to conduct confirmatory performance testing 30 months (i.e., 2.5 years) after the previous comprehensive performance test. The same two-month testing window, applicable for comprehensive tests, also applies to confirmatory tests.

Several commenters state that the proposed schedule for confirmatory tests is too frequent. The April 1996 NPRM would have required large and off-site sources to conduct confirmatory performance testing 18 months after the previous comprehensive performance test. Small, on-site sources would have been required to conduct the testing 30 months after the previous comprehensive performance test. One commenter suggests that the frequency should be at multiples of 12 months to avoid seasonal weather problems in many locations. Other commenters state that EPA's justification for confirmatory tests is not supported by evidence

showing increased emissions due to equipment aging and that the performance of combustion practice parameters is already assured through continuous monitoring systems.

We agree that due to the magnitude and expense of the test, a more appropriate testing schedule would be every 2.5 years, mid-way between the comprehensive performance test cycle. In addition, we agree that testing in certain locations at certain times of the year (e.g., northern states in the winter) can be undesirable. Although possible, it would add to the difficulty and expense of the testing. As previously discussed, sources can request a time extension to allow for a more appropriate testing season. However, the regulatory date for confirmatory testing remains midcycle to the comprehensive performance testing.

3. What Operations Are Allowed During Confirmatory Performance Testing?

As proposed, you are required to operate under normal conditions during confirmatory performance testing. Normal operating conditions are defined as operations during which: (1) The continuous emissions monitoring systems that measure parameters that could relate to dioxin/furan emissions—carbon monoxide or hydrocarbons—are recording emission levels within the range of the average value for each continuous emissions monitoring system (the sum of all one-minute averages, divided by the number of one minute averages) over the previous 12 months to the maximum allowed; (2) each operating parameter limit established to maintain compliance with the dioxin/furan emission standard (see discussion in Part Five, Section VI.D.1 below and § 63.1209(k)) is held within the range of the average values over the previous 12 months and the maximum or minimums, as appropriate, that are allowed; (3) chlorine feedrates are set at normal or greater; and (4) when using carbon injection or carbon bed, the test is conducted under representative conditions for the cleaning cycle of the particulate matter control device. See § 63.1207(g)(2).

We define normal operating conditions in this manner because, otherwise, sources could elect to limit levels of the regulated dioxin/furan operating parameters (e.g., hazardous waste feedrate, combustion chamber temperature, temperature at the inlet to the dry particulate matter control device) to ensure minimum emissions. Thus, without specifying what constitutes normal conditions, the confirmatory test could be meaningless. On the other hand, the definition of normal conditions is broad enough to allow adequate flexibility in operations during the test. The confirmatory test confirms that your under day-to-day operations are meeting the dioxin/furan standard. Thus, the confirmatory test differs from the comprehensive performance test in which you may choose to extend to the edge of the operating envelope to establish operating parameters.

The April 1996 NPRM would have required normal operating conditions for particulate matter continuous emissions monitoring systems. For the final rule, particulate matter levels are limited during confirmatory testing to ensure normal operations only when your source is equipped with carbon injection or carbon bed for dioxin/furan emissions control (see dioxin/furan operating limits discussion below).

The April 1996 NPRM also would have required you to operate under representative conditions for types of organic compounds in the waste (e.g., aromatics, aliphatics, nitrogen content, halogen/carbon ratio, oxygen/carbon ratio) and volatility of wastes when demonstrating compliance with the dioxin/furan emission standard. Several commenters object to this requirement. We agree that restrictions on these organic compounds in the waste are redundant and not necessary to assure good combustion. In addition, the requirement would be impracticable because in most cases measured data would not be available on these parameters. Therefore, the final rule does not require ''representative'' wastes with regard to these organic compounds for confirmatory testing.

It is prudent to require that chlorine be fed at normal levels or greater during the dioxin/furan confirmatory performance test. Although most studies show poor statistical correlation between dioxin/furan emissions and chlorine feedrate, some practical considerations are important. Chlorinated dioxin/furan obviously contain chlorine and some level of chlorine is necessary for its formation. During the confirmatory testing for dioxin/furan, we want you to operate your combustor under normal conditions relative to factors that can affect emissions of dioxin/furan. Therefore, you must feed chlorine at normal or greater levels given the potential for chlorine feedrates to affect dioxin/furan emissions. For the confirmatory performance test, normal is defined as the average chlorine fed over the previous 12 months. If you have established a maximum chlorine value for metals or total chlorine compliance in your previous comprehensive performance test, then that value can be used in the confirmatory test.

Several commenters suggest that when defining normal operation, a provision should be made to exclude inappropriate data, such as those occurring during instrument malfunction, at unit down time, or during instrument zero/calibration adjustment. The April 1996 NPRM did not allow for any data to be excluded. To define ''normal'' operation, we agree it is reasonable to exclude inappropriate data. For the final rule, calibration data, malfunction data, and data obtained when not burning hazardous waste do not fall into the definition of ''normal'' operation.

4. What Are the Consequences of Failing a Confirmatory Performance Test?

If you determine that you failed the dioxin/furan emission standard based on results of analysis of samples taken during manual stack sampling, you must immediately stop burning hazardous waste. You must then modify the design or operation of the unit, conduct a new comprehensive performance test to demonstrate compliance with the dioxin/furan emission standard (and other standards if the changes could adversely affect compliance with those standards), and establish new operating parameter limits. Further, prior to submitting a NOC based on the new comprehensive performance test, you can burn hazardous waste only for a total of 720 hours (renewable based on the discretion of the Administrator) and only for purposes of pretesting or comprehensive performance testing. These conditions apply when you fail the initial or any periodic confirmatory performance test.

However, if you conduct the comprehensive performance test under two or more modes of operation, and meet the dioxin/furan emission standards during confirmatory testing when operating under one or more modes of operation, you may continue burning under the modes of operation for which you meet the standards.

Other than stopping burning of hazardous waste, we do not specifically address the consequences of failing the confirmatory performance test in the regulatory language but will instead rely on the regulating agency's enforcement policy to govern the type of enforcement response at a facility that exceeds an emission standard, fails to ensure compliance with the standards, or fails to meet a compliance deadline. This approach is consistent with the way

other MACT standards are implemented.

Some commenters suggest that the requirement to stop burning waste after a failed confirmatory test is overly harsh. They suggest that temporarily restricted burning should be allowed, conservative enough to insure compliance, while a permanent solution is developed. We continue to believe that a source should stop burning hazardous waste until it reestablishes operating parameter limits that ensure compliance with the dioxin/furan emission standard. We note that hazardous waste combustors are currently subject to virtually these same requirements under RCRA rules.

D. What Is the Relationship Between the Risk Burn and Comprehensive Performance Test?

1. Is Coordinated Testing Allowed?

Traditionally, a RCRA trial burn serves three primary functions: (1) Demonstration of compliance with performance standards such as destruction and removal efficiency; (2) determination of operating conditions that assure the hazardous waste combustor can meet applicable performance standards; and (3) collection of emissions data for incorporation into a SSRA that, subsequently, is used to establish risk-based permit conditions where necessary.[185] Today's rulemaking transfers the first two functions of a RCRA trial burn from the RCRA program to the CAA program. The responsibility for collecting emissions data needed to perform a SSRA is not transferred because SSRAs are exclusively a RCRA matter.

Generally speaking, the type of emissions data needed to conduct a SSRA includes concentration and gas flow rate data for dioxin/furans, nondioxin/furan organics, metals, hydrogen chloride, and chlorine gas. Additionally, particle-size distribution data are normally needed for the air modeling component of the SSRA. We have recently published guidance on risk burns and the data to be collected. See USEPA, ''Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities'' External Peer Review Draft, EPA–530–D–98–001A, B & C and USEPA, ''Guidance on Collection of Emissions Data to Support Site-Specific Risk Assessments at Hazardous Waste Combustion Facilities,'' EPA 530–D–98–002, August 1998.

A large number of hazardous waste combustors subject to today's rule will have completed a RCRA trial burn and SSRA emissions testing prior to the date of the MACT comprehensive performance test. There may exist, however, some facilities for which this is not the case. For these facilities, the Agency proposed, in both the April 1996 NPRM and the May 1997 NODA, an option of coordinating SSRA emissions data collection with MACT performance testing. Facilities choosing to perform coordinated testing would be expected to factor SSRA data collection requirements into the MACT performance test plan. Commenters support this approach, emphasizing that coordinated testing would conserve the resources of both the regulatory authority and regulated source. The Agency agrees with the commenters and continues to support coordinated testing. There is no need, however, for today's final rule to include regulatory language for coordinated testing since it is simply matter of submitting and implementing a test plan which accomplishes the objectives of both a risk burn and MACT performance test.

Coordinated testing may not be possible for all hazardous waste combustors subject to today's MACT standards. Some sources may not be able to test under one set of conditions that addresses all data needs for both MACT implementation and SSRAs. SSRA emissions testing traditionally is performed under worst-case conditions, but may be obtained under normal testing conditions when necessary.[186] As noted in the April 1996 NPRM, as well as in this preamble, we generally anticipate sources will conduct MACT performance testing under conditions that are at the edge of the operating envelope or the worst-case to ensure operating flexibility. Regardless of which test conditions are used to collect SSRA emissions data, under the coordinated testing scenario, those conditions should be consistent with the MACT performance test to the extent possible.

Similarly, a source may experience difficulty integrating MACT performance testing with SSRA emissions testing due to conflicting goals in establishing enforceable operating parameters, i.e., a parameter cannot be maximized for purposes of the SSRA data collection while at the same time be properly maximized or minimized for purposes of performance testing. It is additionally important to ensure that the feed material used during the performance testing is appropriate for SSRA emissions testing. When collecting emissions data for a SSRA, testing with actual worst-case waste is preferred to ensure that the testing material is representative of the toxic, persistence and bioaccumulative characteristics of the waste that ultimately will be burned. However, even if multiple tests need to be performed to accomplish all of the objectives, it is still advantageous to conduct these tests in the same general time frame to minimize mobilization and sampling costs.

The timing of the required tests may cause difficulty for some sources wishing to use coordinated testing. As we discussed in the May 1997 NODA, if the timing of the SSRA data collection does not coincide with the MACT performance test requirement, the performance test should not be unduly delayed. Commenters agree with this approach.

2. What Is Required for Risk Burn Testing?

We expect that sources for which coordinated testing is not possible will need to obtain SSRA emissions data through a separate risk burn. Similar to a traditional RCRA trial burn, risk burn testing should be conducted pursuant to a test plan that is reviewed and approved by the RCRA permitting authority. 40 CFR 270.10(k) provides that the permitting authority may require the submittal of information to establish permit conditions to ensure a facility's operations will be protective of human health and the environment. This regulatory requirement provides for the collection of emissions data, as appropriate, for incorporation into a SSRA as well as for the performance of the SSRA itself. We clarify in amendments to §§ 270.19, 270.22, 270.62 and 270.66 that the Director may apply provisions from those sections, on a case-by-case basis, to establish a regulatory framework for conducting the risk burn under § 270.10(k) and imposing risk-based conditions under § 270.32(b)(2) (omnibus provisions). This clarifying language is intended to prevent any confusion from other language added to §§ 270.19, 270.22, 270.62 and 270.66 today stating that

[185] Under 40 CFR 270.10(k), which is the RCRA Part B information requirement that supports implementation of the RCRA omnibus permitting authority, a regulatory authority may require a RCRA permittee or an applicant to submit information to establish permit conditions as necessary to protect human health and the environment. Under this authority, risk burns and SSRAs may be required.

[186] Criteria for determining the circumstances under which SSRA emissions data should be collected using normal versus worst-case testing conditions are provided in EPA's Guidance on Collection of Emissions Data to Support Site-Specific Risk Assessments at Hazardous Waste Combustion Facilities (EPA 530–D–98–002, August 1998).

these provisions otherwise no longer apply once a source has demonstrated compliance with the MACT standards and limitations of 40 CFR part 63, subpart EEE. (See Part Five, Section XI.B.3 for further discussion.) Facilities and regulatory authorities may consult existing EPA guidance documents for information regarding the elements of risk burn testing.[187]

E. What Is a Change in Design, Operation, and Maintenance? (See § 63.1206(b)(6).)

The April 1996 NPRM noted that sources may change their design, operation, or maintenance practices in a manner that may adversely affect their ability to comply with the emission standards. These sources would be required to conduct a new comprehensive performance test to demonstrate compliance with the affected emission standards and would be required to re-establish operating limits on the affected parameters specified in § 63.1209. (See 61 at FR 17518.) The proposal stated that until a complete and accurate revised NOC is submitted to the Administrator, sources would be permitted to burn hazardous waste following such changes for time a period not to exceed 720 hours and only for the purposes of pretesting or comprehensive performance testing. The approach in the April 1996 NPRM remains appropriate, and we are adopting it in today's final rule with minor modifications.

For changes made after submittal of your NOC that may adversely affect compliance with any emission standard, as defined later in this section, today's rule requires you to notify the Administrator at least 60 days prior to the change unless you document circumstances that dictate that such prior notice is not reasonably feasible. The notification must include a description of the changes and which emission standards may be affected. The notification must also include a comprehensive performance test schedule and test plan that will document compliance with the affected emission standard(s). You must conduct a comprehensive performance test to document compliance with the affected emission standard(s) and establish operating parameter limits as required and submit a revised NOC to the Administrator. You also must not burn hazardous waste for more than a total of 720 hours after the change and prior to submitting your NOC, and you must burn hazardous waste during this time period only for the purposes of pretesting or comprehensive performance testing.

Some commenters are uncomfortable with the proposed regulatory language, stating that it was too generic and that the Agency could require a comprehensive performance test even after minor changes in maintenance practices. One commenter suggests that EPA incorporate a list of changes significant enough to affect compliance, similar to what is currently done in the RCRA permit modification classification scheme in Appendix I of § 270.42.

We intentionally proposed an approach that provides some degree of flexibility to permit authorities. Individual facilities will need to consult with these permit authorities who will make the decision on the site-specific facts. We do not intend to require a comprehensive performance test after minor modifications to system design, or after implementing minor changes to operating or maintenance practices. We considered incorporating sections of Appendix I of § 270.42 to further clarify when comprehensive performance tests would be required.[188] However, it is impossible to envision all scenarios in which changes in design, operation, or maintenance practices may or may not trigger the requirement of a complete, or even partial, comprehensive performance test. Discussion of specific scenarios is more suitable in an Agency guidance document as opposed to regulatory provisions, and implemented on a site-specific basis. Thus, the April 1996 NPRM set out the regulatory approach as well as can be done, and we are adopting it today with minor modifications.

In the April 1996 NPRM, we did not address what must be done when you change design, operation, or maintenance practices during the time period between the compliance date and when you submit your NOC. If you make a change during this time period, today's rule requires you to revise your DOC, which is maintained on-site, to incorporate any revised limits necessary to comply with the standards. For purposes of this provision, today's rule defines ''change'' as any change in reported design, operation, or maintenance practices you previously documented to the Administrator in your comprehensive performance test plan, NOC, DOC, or startup, shutdown, and malfunction plan.

Commenters point out that the proposal did not discuss recordkeeping requirements necessary for the Administrator to determine if you are adequately concluding that changes in design, operation, or maintenance practices do not trigger a comprehensive performance test requirement[189]. As a result, today's rule requires you to document in your operating record whenever you make a change (as defined above) in design, operation, or maintenance practices, regardless of whether the change may adversely affect your ability to comply with the emission standards. See § 63.1206(b)(6)(ii). You are also required to maintain on site an updated comprehensive performance test plan, NOC, and startup, shutdown, and malfunction plan that reflect these changes. See § 63.1211(c).

F. What Are the Data In Lieu Allowances?

You are allowed to submit data from previous emissions tests in lieu of performing a MACT performance test to set operating limits. See § 63.1207(c)(2). To use previous emissions test data, the data must have been collected less than 5 years before the date you intend to submit your notification of compliance. The data must also have been collected as part of a test that was for the purpose of demonstrating compliance with RCRA or CAA requirements. Additionally, you must submit your request to use previous test data in your comprehensive performance test plan which is submitted 1 year in advance of the MACT performance test. Finally, you must schedule your subsequent MACT performance test and MACT confirmatory test 5 years and 2.5 years respectively following the date the emissions test data your submitting was collected.

We developed this allowance in response to comments that suggested we should allow previous RCRA testing to be used in lieu of performing a new MACT performance test if the data could be used to demonstrate compliance and establish operating limits to ensure compliance with the MACT emissions standards. Commenters reasoned, and we agreed, that such an allowance was reasonable and necessary for those sources that

[187] USEPA. ''Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities'' External Peer Review Draft. EPA–530–D–98–001A,B&C. Date.; USEPA, ''Guidance on Collection of Emissions Data to Support Site-Specific Risk Assessments at Hazardous Waste Combustion Facilities'' EPA 530–D–98–002. August 1998.

[188] One approach would be to require performance tests for modifications covered by the class 2 and class 3 permit modifications associated with combustion source design and operating parameter changes.

[189] We cannot determine if a source has accurately concluded that a change does not adversely affect its ability to comply with the emission standards if we are never aware that changes were made to the source.

must perform emissions tests to satisfy other state or federal requirements. As we developed this allowance, we decided that it is necessary to limit the age of the data and specify the date of the following performance test because we need to be consistent with the MACT performance test requirements with respect to testing frequency. We can further justify the time and testing limitations of the data in lieu of allowance by acknowledging that we don't want some sources gaining an advantage over others by extending the date between performance tests. However, we also weighed the fact that some sources may be required to perform RCRA testing fairly close to the compliance date or promulgation date of today's rule and we didn't want to penalize them by forcing them to perform a new performance test before five years had elapsed since their previous test. So we settled on an approach that allows the use of previous emissions test data and effectively sets the same testing frequency as is applied to test data collected via a MACT performance test following the compliance date. This approach doesn't penalize or favor any source over another and it allows each source to take advantage of this provision when it makes sense. For instance, a source may be granted approval to use data from a RCRA trial burn performed 1 year before today's date, thus not requiring the source to perform a comprehensive performance test 270 days following the compliance date. Instead, the source must schedule its next MACT performance test five years after the date the test was performed. However, the source must perform a confirmatory test 270 days following the compliance date because the test schedule for the confirmatory test is also linked to the date of the performance test. So in this situation the source must determine if its better to run the comprehensive performance test on a normal schedule after the compliance date or delay the comprehensive test and perform a confirmatory test instead.

VI. What Is the Notification of Compliance?

A. What Are the Requirements for the Notification of Compliance?

You must submit to the Administrator the results of the comprehensive performance test in a notification of compliance (NOC) no later than three months after the conclusion of the performance test. You must submit the initial NOC later than nine months following the compliance date.

B. What Is Required in the NOC?

You must include the following information in the NOC:

—Results of the comprehensive performance test, continuous monitoring system performance evaluation, and any other monitoring procedures or methods that you conducted;
—Test methods used to determine the emission concentrations and feedstream concentrations, as well as a description of any other monitoring procedures or methods that you conducted;
—Limits for the operating parameters;
—Procedures used to identify the operating parameter limits specified in § 63.1209;
—Other information documenting compliance with the operating requirements, including but not limited to automatic waste feed cutoff system operability and operator training;
—A description of the air pollution control equipment and the associated hazardous air pollutant that each device is designed to control; and
—A statement from you or your company's responsible official that the facility is in compliance with the standards and requirements of this rule.

C. What Are the Consequences of Not Submitting a NOC?

The normal CAA enforcement procedures apply if you fail to submit a timely notification of compliance. We do not adopt our proposed approach that would have required you to immediately stop burning hazardous waste if you failed to submit a timely NOC.

We proposed regulatory language stating that failure to submit a notification of compliance by the required date would result in the source being required to immediately stop burning hazardous waste. This proposal was similar to requirements applied to BIFs certifying compliance under RCRA. Under the proposal, if you wanted to burn hazardous waste in the future, you would be required to comply with the standards and permit requirements for new MACT and RCRA sources.

In the 1997 NODA, however, we proposed to rely on the regulating agency's policy regarding enforcement response to govern the type of enforcement response at a facility that fails to submit a notification of compliance. Based on NODA comments and review of this enforcement process, we are not including in the final rule regulatory language addressing the consequences of failure to submit a timely or complete NOC. Instead, we rely on the regulating agency's policy regarding enforcement response to govern the type of enforcement response at a facility that fails to meet a compliance deadline. This approach is more practical to implementing today's MACT standards and is more consistent with the way other MACT standards are implemented.

D. What Are the Consequences of an Incomplete Notification of Compliance?

In response to our April 1996 NPRM, commenters state that we were unclear as to the consequences of an incomplete NOC. Furthermore, commenters state that it was important that we specify what is needed and the consequences if an NOC is incomplete or more information is needed. Additionally, commenters recommend that if the NOC contains emission information, the certification statement, and a signature, we should judge the NOC to be administratively complete and an acceptable submission. In addition, commenters suggest that if the regulatory official reviewing the NOC determines that additional information is required, the source should be given ample time to submit that information.

Our enforcement approach to incomplete submissions, under RCRA or the CAA, is generally determined on a site-specific basis. We will not attempt to foresee and develop enforcement responses to all the possible levels of incompleteness for the NOC. This is beyond the scope of our national rulemaking. Furthermore, defining what constitutes an incomplete submission requires us to specifically prescribe a complete submission, which is not possible for all situations or all source designs. Some sources may require more detail than others in defining the parameters necessary to determine compliance on a continuous basis. Therefore, we instead define the minimum information necessary in the submission and allow the implementing agency to determine if more information is necessary in a facility's site-specific NOC.

In response to comments advocating that facilities be given ample time to submit additional information required by the regulatory official, we prefer to allow the implementing agency to determine the time periods that will be granted to submit additional information because some information requests may require widely varying degrees of time and effort to develop. Many potential problems associated with incomplete submissions can be prevented through interaction between

the source and the regulatory agency during the test plan review and approval process. We do not want our rules to act as disincentive to those discussions by providing a complete shield, regardless of the severity of the omission.

E. Is There a Finding of Compliance?

We adopt the requirement we proposed for the regulatory agencies to make a finding of compliance based on performance test results (see § 63.1206(b)(3)). This provision specifies that the regulatory agency must determine whether an affected source is in compliance with the emissions standards and other requirements of subpart EEE, as provided by the general provisions governing findings of compliance in § 63.6(f)(3). Thus, the regulatory agency is obligated to make this finding upon obtaining all the compliance information required by the standards, including the written reports of performance test results, monitoring results, and other applicable information. This includes, but may not be limited to, the information submitted by the source in its NOC.

VII. What Are the Monitoring Requirements?

In this section, we discuss the following topics: (1) The compliance monitoring hierarchy that places a preference on compliance with a CEMS; (2) how limits on operating parameters are established from comprehensive performance test data; (3) status and use of CEMS other than carbon monoxide, hydrocarbon, and oxygen CEMS; and (4) final compliance monitoring requirements for each emission standard.

A. What Is the Compliance Monitoring Hierarchy?

We proposed the following three-tiered compliance monitoring hierarchy in descending order of preference to ensure compliance with the emission standards: (1) Use of a continuous emission monitoring system (CEMS) for a hazardous air pollutant; (2) absent a CEMS for that hazardous air pollutant, use of a CEMS for a surrogate of that hazardous air pollutant and, when necessary, setting limits on operating parameters to account for the limitations of using surrogates; and (3) lacking a CEMS for either, requiring periodic emissions testing and site-specific limits on operating parameters. Accordingly, we proposed to require the use of carbon monoxide, hydrocarbon, oxygen, particulate matter, and total mercury CEMS. We also proposed performance specifications for multimetal, hydrochloric acid, and chlorine gas CEMS to give sources the option of using a CEMS for compliance with the semivolatile and low volatile metal emissions standards, and the hydrochloric acid/chlorine gas emission standard.

Commenters question the availability and reliability of CEMS other than those for carbon monoxide, hydrocarbon, and oxygen. We concur with some of the commenters' concerns and are not requiring use of a total mercury CEMS in the final rule or specifying the installation deadline and performance specifications for particulate matter CEMS. In addition, we have not promulgated performance specifications for these CEMS or multimetal, hydrochloric acid, and chlorine gas CEMS. We nonetheless continue to encourage sources to evaluate the feasibility of using these CEMS to determine the performance specifications, correlation acceptance criteria, and detector availability that can be achieved. Sources may request approval from permitting officials under § 63.8(f) to use CEMS to document compliance with the emission standards in lieu of periodic performance testing and compliance with limits on operating parameters. See discussion in Section VII.C below on these issues.

B. How Are Comprehensive Performance Test Data Used To Establish Operating Limits?

In this section, we discuss: (1) The definitions of terms related to monitoring and averaging periods; (2) the rationale for the averaging periods for operating parameter limits, (3) how comprehensive performance test data are averaged to calculate operating parameter limits; (4) how the various types of operating parameters are monitored/established; (5) how nondetect performance test feedstream data are handled; and (6) how rolling averages are calculated initially, upon intermittent operations, and when the hazardous waste feed is cut off.

1. What Are the Definitions of Terms Related to Monitoring and Averaging Periods?

In the April 1996 NPRM, we proposed definitions for several terms that relate to monitoring and averaging periods. For the reasons discussed below, we conclude that the proposed definitions are appropriate and are adopting them in today's rule. We also finalize definitions for ''average run average'' and ''average highest or lowest rolling average'' which were not proposed. We conclude these new definitions are necessary to clarify the meaning and intent of regulatory provisions associated with the monitoring requirements that are discussed in Part 5, Section VII.D. of this preamble.

We promulgate the following definitions in today's rule (see § 63.1201).

''Average highest or lowest rolling average'' means the average of each run's highest or lowest rolling average run within the test condition for the applicable averaging period.

''Average run average'' means the average of each run's average of all associated one minute values.

''Continuous monitor'' means a device that: (1) Continuously samples a regulated parameter without interruption; (2) evaluates the detector response at least once every 15 seconds; and (3) computes and records the average value at least every 60 seconds, except during allowable periods of calibration and as defined otherwise by the CEMS Performance Specifications in appendix B of part 60.

''Feedrate operating limits'' means limits on the feedrate of materials (e.g., metals, chlorine) to the combustor that are established based on comprehensive performance testing. The limits are established and monitored by knowing the concentration of the limited material (e.g., chlorine) in each feedstream and the flow rate of each feedstream.

''Feedstream'' means any material fed into a hazardous waste combustor, including, but not limited to, any pumpable or nonpumpable solid, liquid, or gas.

''Flowrate'' means the rate at which a feedstream is fed into a hazardous waste combustor.

''Instantaneous monitoring'' means continuously sampling, detecting, and recording the regulated parameter without use of an averaging period.

''One-minute average'' means the average of detector responses calculated at least every 60 seconds from responses obtained at least each 15 seconds.

''Rolling average'' means the average of all one-minute averages over the averaging period.

One commenter opposes the requirement to take instrument readings every 15 seconds. This commenter contends that such an approach is simply impractical, unnecessary, and imposes a harsh burden upon members of the regulated community. Another commenter maintains that the CEMS Data Acquisition System should be capable of sampling the analyzer outputs at least every 15 seconds. With today's processing power and speed, the commenter states that this can easily be achieved. We agree with the second commenter and are requiring instrument

readings at least every 15 seconds because this is currently required in the Boilers and Industrial Furnace rulemaking. (See § 266.102(e)(6))

Another commenter states that the Agency's definition of ''instantaneous monitoring'' of combustion chamber pressure to control combustion system leaks is not clear.[190] The commenter states that, although an instantaneous limit cannot be exceeded at any time, continuous monitoring systems are required to detect parameter values only once every 15 seconds. We note that the final rule requires instantaneous monitoring only for the combustion chamber pressure limit to control combustion system leaks. The rule requires an automatic waste feed cutoff if the combustion chamber pressure at any time (i.e., instantaneously) exceeds ambient pressure (see § 63.1209(p)). The definition of a continuous monitoring system is that it must record instrument readings at least every 15 seconds. For instantaneous monitoring of pressure, the detector must clearly record a response more frequently than every 15 seconds.[191] It must detect and record pressure constantly without interruption and without any averaging period.

2. What Is the Rationale for the Averaging Periods for the Operating Parameter Limits?

The final rule establishes the following averaging periods: (1) No averaging period (i.e., instantaneous monitoring) for maximum combustion chamber pressure to control combustion system leaks; (2) 12-hour rolling averages for maximum feedrate of mercury, semivolatile metals, low volatile metals, chlorine, and ash (for incinerators); and, (3) one-hour averaging periods for all other operating parameters. As discussed later in this section, we conclude that the proposed ten-minute averaging periods are not necessary, on a national basis, to better ensure compliance with the emission standards at hazardous waste combustors, and have not adopted these averaging periods in this rulemaking.

a. When Is an Instantaneous Limit Used? An instantaneous limit is required only for maximum combustion chamber pressure to control combustion system leaks. This is because any perturbation above the limit may result in uncontrolled emissions exceeding the standards.

b. When Is an Hourly Rolling Average Limit Used? An hourly rolling average limit is required for all parameters that are based on operating data from the comprehensive performance test, except combustion chamber pressure and feedrate limits. Hourly rolling averages are required for these parameters rather than averaging periods based on the duration of the performance test because we are concerned that there may be a nonlinear relationship between operating parameter levels and emission levels of hazardous air pollutants.

c. Why Has the Agency Decided Not to Adopt Ten-Minute Averaging Periods? Dual ten-minute and hourly rolling averages were proposed for most parameters for which limits are based on the comprehensive performance test. See 61 FR at 17417. We proposed ten-minute rolling averages in addition to hourly rolling averages for these parameters because short term excursions of the parameter can result in a disproportionately large excursion of the hazardous air pollutant being controlled.

Commenters claim that the Agency's concerns with emission excursions due to short term perturbations of these operating parameters were not supported with data and are therefore unjustified, and claim that averaging periods shorter than those required in the existing BIF regulations would provide no environmental benefit.

We acknowledge that the Agency does not have extensive short-term emission data that show operating parameter excursions can result in disproportionately large excursions of hazardous air pollutants being emitted. These short-term data cannot be obtained without the use of continuous emission monitors that measure dioxin/furans, metals, and chlorine on a real-time basis. Such monitors, for the most part, are not currently used for compliance purposes at hazardous waste combustors. However, known relationships between operating parameters and hazardous air pollutant emissions indicate that a nonlinear relationship exists between operating parameter levels and emissions. This nonlinear relationship can result in source emissions that exceed levels demonstrated in the performance test if the operating parameters are not properly controlled. An explanation of these nonlinear relationships, including examples that explain why this relationship can result in daily emissions that exceed levels demonstrated in the performance test, are included in the Final Technical Support Document.[192] Thus, at least in theory, an environmental benefit can result from shorter averaging periods, including ten-minute rolling averages and perhaps instantaneous readings in certain situations.

We also acknowledge, however, that the Agency's ability to assess this potential benefit in practice for all hazardous waste combustors affected by this final rule is limited significantly by the paucity of short-term, minute-by-minute, operating parameter data. Without this data we cannot effectively evaluate whether operating parameter excursions occur to an extent that warrant national ten-minute averaging period requirements for all hazardous waste combustors. We therefore conclude that averaging period requirements shorter than those required by existing BIF regulations are not now appropriate for adoption on a national level, and do not adopt ten-minute averaging period requirements in this rulemaking.

We maintain, however, that there may be site-specific circumstances that warrant averaging periods shorter than one hour in duration, including possibly instantaneous measurements. Regulatory officials may determine, on a site-specific basis, that shorter averaging periods are necessary to better assure compliance with the emission standards. The provisions in § 63.1209(g)(2) authorize the regulatory official to make such a determination. Factors that may be considered when determining whether shorter averaging periods are appropriate include (1) the ability of a source to effectively control operating parameter excursions to levels achieved during the performance test; (2) the source's previous compliance history regarding operating parameter limit exceedances; and (3) the difference between the source's performance test emission levels and the relevant emission standard. For additional information, see the Final Technical Support Document, Volume 4, Chapter 2.

d. What Is the Basis for 12-Hour Rolling Averages for Feedrates? The rule requires 12-hour averages for the feedrate of mercury, semivolatile metals, low volatile metals, chlorine, and ash (for incinerators) because feedrate and emissions are, for the most part, linearly

[190] ''Combustion system leaks'' is the term used in today's rule to refer to leaks that are called fugitive emissions under current RCRA regulations. We use the term combustion system leaks to refer to those emissions because the term fugitive emissions has other meanings under part 63.

[191] Typical pressure transducers in use today are capable of responding to pressure changes once every fifty milliseconds. See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standard,'' July 1999.

[192] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance With the Hazardous Waste Combustor Standards, July 1999, Chapters 2 and 3.

related. A 12-hour averaging period for feedrates is appropriate because it is the upper end of the range of time required to perform three runs of a comprehensive performance test. Thus, a 12-hour averaging period will ensure (if all other factors affecting emissions are constant) that emissions will not exceed performance test levels during any interval of time equivalent to the time required to conduct a performance test. A 12-hour averaging period is also achievable and appropriate from a compliance perspective because the emission standards are based on emissions data obtained over (roughly) these sampling periods.[193]

e. Has the Agency Over-Specified Compliance Requirements? Some commenters state that the Agency is over-specifying compliance requirements by requiring limits on many operating parameters, requiring dual ten-minute and hourly rolling average limits on many parameters, and requiring that sources interlock the operating parameter limits with the automatic waste feed cutoff system. These commenters wrote that this compliance regime may lead to system over-control and instability, and an unreasonable and unnecessary increase in automatic waste feed cutoffs, a result that is contrary to good process control principles. They propose that we work with industry to develop a process control system and performance specification regulatory approach to establish minimum system standards. These would include: (1) Minimum process instrument sampling time; (2) maximum calculation capability for output signals; (3) minimum standard for process control sequences; and (4) minimum requirements for incorporating automatic waste feed cutoffs into the control scheme. The specifications would be incorporated into guidance, rather than regulation. Commenters suggest that the rule should only specify general goals, similar to the guidance approach we took for hazardous waste incinerators in the 1981 RCRA regulations.[194]

We evaluated these comments carefully, balancing the need to provide industry with operational flexibility with the need for compliance assurance. As previously discussed, we are not adopting ten-minute averaging period requirements in this rulemaking, although it can be imposed on a site-specific basis under appropriate circumstances. This addresses commenter's concerns that relate to the complexity of the proposed dual averaging period requirements. We acknowledge, however, that today's rule requires that more operating parameter limits be interlocked to the automatic waste feed cutoff system than is currently required by RCRA regulations. Nonetheless, we conclude that the compliance regime of today's final rule is necessary to ensure compliance with the emission standards and will not overly constrain process control systems for the following reasons.

Automatic waste feed cutoffs are (by definition) automatic, and the control systems used to avoid automatic waste feed cutoffs require adequate response time and are primarily site-specific in design. The closer a source pushes the edge of the operating envelope, the better that control system must perform to ensure that an operating parameter limit (and emission standard) is not exceeded. Therefore, a source has extensive control over the impact of these requirements.

Under the compliance regime of today's rule, sources will continue to perform comprehensive performance testing under ''worst case'' conditions as they currently do under RCRA requirements to establish limits on operating parameters that are well beyond normal levels. This cushion between normal operating levels and operating parameter limits enables the source to take corrective measures well before a limit is about to be exceeded, thus avoiding an automatic waste feed cutoff.

Regulatory officials do not have the extensive resources that would be required to develop and implement industry-specific control guidelines and we are not confident that this approach would provide adequate compliance assurance. Although specifying only emissions standards and leaving the compliance method primarily up to the source and the permit writer (aided by guidance) would provide flexibility, it would place a burden on the permit writers and the source during the development and approval of the performance test plan and the finding of compliance subsequent to Notification of Compliance. In addition, this level of interaction between permitting officials and the source is contrary to our policy of structuring the MACT standards to be as self-implementing as possible.[195] The Agency therefore maintains its position that the compliance scheme adopted in today's rule, is appropriate.

f. Why Isn't Risk Considered in Determining Averaging Periods? Several commenters state that long averaging periods (e.g., monthly metal feedrate rolling averages) for the operating parameter limits and CEMS-monitored emission standards would be appropriate. These commenters believe that long averaging periods would be appropriate given that the Agency has performed a risk assessment and concluded that the emission standards would be protective over long periods of exposure. They state that long averaging periods would ensure that emissions are safe and reduce compliance costs.

Consideration of risk is not an appropriate basis for determining averaging periods to ensure compliance with the technology-based MACT emission standards.[196] As previously stated, we must establish averaging periods that ensure compliance with the emission standard for time durations equivalent to the emission sampling periods used to demonstrate compliance. Longer averaging periods would not ensure compliance with the emission standard because many of the operating parameters do not relate to emissions linearly.

In addition, a longer averaging period is not warranted even for those operating parameters than may relate linearly to emissions because this would allow a source to emit hazardous air pollutants in excess of the emission standard for times periods equivalent to the stack emission sampling periods used to demonstrate compliance. For example, a monthly averaging period for metal feedrates could result in a source emitting metals at a level three times the regulatory standard continuously for a one week period.[197] This would not be consistent with the level of control that was achieved by the best performing sources in our data base. Modifying the results of the MACT process based on risk considerations is thus contrary to Congressional intent that MACT

[193] See *Chemical Waste Management* v. *EPA*, 976 F.2d, 2, 34 (D.C. Cir. 1992) (It is inherently reasonable to base compliance on the same type of data used to establish the requirement).

[194] The incinerator regulations promulgated in 1981, at the outset of the RCRA regulatory program, used such a general guidance approach. However, sources have had over 15 years since then to gain experience with process control techniques associated with the combustion of hazardous waste.

[195] The time that would be associated with this type of review and negotiation between permit writer and source would be better spent on developing, reviewing, and approving the comprehensive performance test plan under today's compliance regime.

[196] We note, however, that within eight years of promulgating MACT standards for a source category, we must consider risk in determining under section 112(f) whether standards more stringent than MACT are necessary to provide an ample margin of safety to protect public health and the environment.

[197] For this to occur, the source would have to emit metals far below the standard for time periods before and after this one-week period.

standards, at a minimum, must represent the level of control being achieved by the average of the best performing 12 percent of the sources. We therefore conclude that we must limit averaging times at least to time durations equivalent to the emission sampling periods used to demonstrate compliance.

g. Will Relaxing Feedrate Averaging Times Increase Environmental Loading? One commenter questions whether relaxing the averaging time for the feedrate of metals and chlorine from an hourly rolling average under current RCRA regulations to the 12-hour rolling average of today's rule would increase total environmental loading of pollutants and be counter to the Agency's pollution prevention objectives. Contrary to the commenter's concern, we conclude that today's rule will decrease environmental loading of hazardous air pollutants because the emission standards are generally more stringent than current RCRA standards. Today's standards more than offset any difference in environmental loading associated with longer averaging times. As previously discussed, the averaging periods in today's rule were chosen to ensure compliance with the emission standard for intervals of time equivalent to the time required to conduct a performance test.

Although current RCRA standards generally establish hourly rolling averages for the feedrate of metals, sources are actually allowed to establish up to 24-hour rolling averages for arsenic, beryllium, chromium, cadmium, and lead, provided they restrict the feedrate of these metals at any time to ten times what would be normally allowed under an hourly rolling average basis. For these reasons, the commenter's concern is not persuasive.

3. How Are Performance Test Data Averaged To Calculate Operating Parameter Limits?

The rule specifies which of two techniques you must use to average data from the comprehensive performance test to calculate limits on operating parameters: (1) Calculate the limit as the average of the maximum (or minimum, as specified) rolling averages for each run of the test; or (2) calculate the limit as the average of the test run averages for each run of the test.

Hourly rolling averages for two parameters—combustion gas flowrate (or kiln production rate as a surrogate) and hazardous waste feedrate—are based on the average of the maximum hourly rolling averages for each run. Hourly rolling average and 12-hour rolling average limits for all other parameters, however, are based on the average level occurring during the comprehensive performance test. We determined that this more conservative approach is appropriate for these parameters because they can have a greater effect on emissions, and because it is consistent with how manual method emissions results are determined.[198]

These are examples of how the averages work. The hourly rolling average hazardous waste feedrate limit for a source is calculated using the first technique. If the highest hourly rolling averages for each run of the comprehensive performance test were 200 lbs/hour, 210 lbs/hr, 220 lbs/hr, the hourly rolling average feedrate limit would be 210 lbs/hr.

The second approach uses the average of the test run averages for a given test condition to calculate the limit. Each test run average is calculated by summing all the one-minute readings within the test run and dividing that sum by the number of one-minute readings. For example, if: (1) The sum of all the one-minute semivolatile metal feedrate readings for each run within a test condition is 2,400 lbs/hour, 2,500 lbs/hour, and 2,600 lbs/hour; and (2) there are 240, 250, and 200 one-minute readings in each run, respectively; then (3) the average feedrate for each of these three runs is 10 lbs/hour, 10 lbs/hour, and 13 lbs/hour, respectively. The 12-hour rolling average semivolatile metal feed rate limit for this example is the average of these three values: 11 lbs/hour. This averaging methodology is not equivalent to an approach where the limit is calculated by taking the time-weighted average over all three runs within the test condition, because, as noted by the example, sampling times may be different for each run. The time-weighted average feedrate over all three test runs for the previous example is equivalent to 10.9 lbs/hr.[199] Although the two averaging techniques may not result in averages that are significantly different, we conclude that basing the limits on the average of the test run averages is more appropriate, because this approach is identical to how we determine compliance with the emission standards.

These averaging techniques are the same as we proposed (see 61 FR at 17418).[200] A number of commenters object to the more conservative second technique of basing the limits on the average levels that occur during the test. The commenters claim that this approach ensures a source would not comply with the limits 50% of the time when operating under the same conditions as the performance test. Further, they are concerned that this approach would establish operating parameter limits that would ''ratchet'' emissions to levels well below the standards, and further ratcheting would occur with each subsequent performance test (i.e., because the current operating limits could not be exceeded during subsequent performance testing). Some commenters prefer the approach of setting the limit as the average of the highest (or lowest) rolling average from each run, technique one above, which is the same approach used in the BIF rule.

Notwithstanding the conservatism of the promulgated approach (technique two above) for many operating parameter limits, we maintain that the approach results in achievable limits and is necessary to ensure compliance with the emission standards. Comprehensive performance tests are designed to demonstrate compliance with the emission standards and establish corresponding operating parameter limits. Thus, sources will operate under ''worst-case'' conditions during the comprehensive performance tests, just as they do currently for RCRA trial burns. Given that the source can readily control (during the performance test and thereafter) the parameters for which limits are established based on the average of the test run averages during performance testing (i.e., rather than on the average of the highest (or lowest) hourly rolling averages), and that these parameters will be at their extreme levels during the performance test, the limits are readily achievable.

There may be situations, however, where a source cannot simultaneously demonstrate worst-case operating conditions for all the regulated operating parameters. An example of this may be minimum combustion chamber temperature and maximum temperature at the inlet to the dry particulate matter control device because when the combustion chamber temperature is minimized, the inlet temperature to the control device may also be minimized. Sources should consult permitting officials to resolve

[198] Manual method emission test results for each run represents average emissions over the entire run.

[199] This time weighted average is calculated by summing all the one-minute feedrate values in the test condition and dividing that sum by the number of one minute readings in the test condition.

[200] Except that average hourly rolling average limits are calculated as the average of the test run averages rather than simply the average over all runs as proposed.

compliance difficulties associated with conflicting operating parameters. Potential solutions to conflicting parameters could be to conduct the performance test under two different modes of operation to set these conflicting operating parameter limits, or for the Administrator to use the discretionary authority provided by § 63.1209(g)(2) to set alternative operating parameter limits.

We address commenters' concern that subsequent performance tests would result in a further ratcheting down of operating parameter limits by waiving the operating limits during subsequent comprehensive performance tests (see § 63.1207(h)). The final rule also waives operating limits for pretesting prior to comprehensive performance testing for a total operating time not to exceed 720 hours. See discussion in Part Five, Section VI for more information on this provision.

Some commenters suggest that we use a statistical analysis to determine rolling average limits, such that the limits are calculated as the mean plus or minus three standard deviations of all rolling averages for all runs. Commenters state that this would ensure that the operating parameter limits are achievable. If such an approach were adopted, there would be no guarantee that a source is maintaining compliance with the emission standards for the time durations of the manual stack sampling method used to demonstrate compliance during the comprehensive performance test. Such an approach could conceivably encourage a source to intentionally vary operating parameter levels during the comprehensive performance test to such an extent that the statistically-derived rolling average limits would be significantly higher than the true average of the test condition. This could also result in widely varying statistical correction factors from one source to another, which is undesirable for reasons of consistency and fairness.

Such a statistical approach prevents us from establishing the minimum emission standards that Congress generally envisioned under MACT because we would not be assured that the sources are achieving the emission standard. We would also have difficulty estimating environmental benefits if this statistical approach were used because we would not know what level of emission control each source achieves. Again, the methodology promulgated for averaging performance test data to calculate operating parameter limits results in limits that are achievable and necessary to ensure compliance with the emission standards for time durations equivalent to emission sampling periods.

Several commenters oppose the compliance regime whereby limits on operating parameters are established during performance testing. They are concerned that this approach encourages sources to operate under worst-case conditions during testing. One commenter states that this approach effectively punishes sources for demonstrating emissions during their performance test that are lower than the standards (i.e., by establishing limits on operating parameters that would be well below those needed to comply with the standards).

We understand these concerns, but absent the availability of continuous emissions monitoring systems, we are unaware of another compliance assurance approach that effectively addresses the (perhaps unique) problem posed by hazardous waste combustors. The Agency is using this same approach to implement the RCRA regulations for these sources. Compliance assurance for hazardous waste combustors cannot be maintained using the general provisions of Subpart A in Part 63—procedures that apply to all MACT sources unless we promulgate superseding provisions for a particular source category. Those procedures require performance testing under normal operating conditions, but operating limits are not established based on performance test operations. This approach is appropriate for most industrial processes because process constraints and product quality typically limit ''normal'' operations to a fairly narrow range that is easily defined.

Hazardous waste combustors may be somewhat unique MACT sources, however, in that the characteristics of the hazardous waste feed (e.g., metals concentration, heating value) can vary over a wide range and have a substantial effect on emissions of hazardous air pollutants. In addition, system design, operating, and maintenance features can substantially affect pollutant emissions. This is not the same situation for many other MACT source categories where feedstream characteristics and system design, operation, and maintenance features must be confined to a finite range so that the source can continue to produce a product. Hazardous waste incinerators do not have such inherent controls (i.e., because they provide a waste treatment service rather than produce a product), and cement and lightweight aggregate kilns can vary substantially hazardous waste characteristics in the fuel, as well as system design, operation, and maintenance features and still produce marketable product.

To address commenters' concerns at least in part, however, we have included a metals feedrate extrapolation provision in the final rule. This will reduce the incentive to spike metals in feedstreams during performance testing (and thus reduce the cost of testing, the hazard to test crews, and the environmental loading) by explicitly allowing sources to request approval to establish metal feedrate limits based on extrapolating upward from levels fed during performance testing. See discussion in Section VII.D.4 below, and §§ 63.1209(l)(1) and 63.1209(n)(2)(ii).

4. How Are the Various Types of Operating Parameters Monitored or Established?

The operating parameters for which you must establish limits can be categorized according to how they are monitored or established as follows: (1) Operating parameters monitored directly with a continuous monitoring system; (2) feedrate limits; and (3) miscellaneous operating parameters. (Each of these parameters is discussed in Section VII.D below.)

a. What Operating Parameters Are Monitored Directly with a Continuous Monitoring System? Operating parameters that are monitored directly with a continuous monitoring system include: Combustion gas temperature in the combustion chamber and at the inlet to a dry particulate matter control device; baghouse pressure drop; for wet scrubbers, pressure drop across a high energy wet scrubber (*e.g.*, venturi, calvert), liquid feed pressure, pH, liquid-to-gas ratio, blowdown rate (coupled with either a minimum recharge rate or a minimum scrubber water tank volume or level), and scrubber water solids content; minimum power input to each field of an electrostatic precipitator; flue gas flowrate or kiln production rate; hazardous waste flowrate; and adsorber carrier stream flowrate. These operating parameters are monitored and recorded on a continuous basis during the comprehensive performance test and during normal operations. The continuous monitoring system also transforms and equates the data to its associated averaging period during the performance test so that operating parameter limits can be established. The continuous monitoring system must operate in conformance with § 63.1209(b).

b. How Are Feedrate Limits Monitored? Feedrate limits are monitored by knowing the concentration of the regulated parameter

in each feedstream and continuously monitoring the flowrate of each feedstream. See § 63.1209(c)(4). You must establish limits on the feedrate parameters specified in § 63.1209, including: semivolatile metals, low volatile metals, mercury; chlorine, ash (for incinerators), activated carbon, dioxin inhibitor, and dry scrubber sorbent. The flowrate continuous monitoring system must operate in conformance with § 63.1209(b).

c. How Are the Miscellaneous Operating Parameters Monitored/Established? Other operating parameters specified in § 63.1209 include: Specifications for activated carbon, acid gas sorbent, catalyst for catalytic oxidizers, and dioxin inhibitor; and maximum age of carbon in a carbon bed. Because each of these operating parameters may be unique to your source, you are expected to characterize the parameter (*e.g.,* using manufacturer specifications) and determine how it will be monitored and recorded. This information must be included in the comprehensive performance test plan that will be reviewed and approved by permitting officials.

5. How Are Rolling Averages Calculated Initially, Upon Intermittent Operations, and When the Hazardous Waste Feed Is Cut Off?

a. How Are Rolling Averages Calculated Initially? You must begin complying with the limits on operating parameters specified in the Documentation of Compliance on the compliance date.[201] See § 63.1209(b)(5)(i). Given that the one-hour, and 12-hour rolling averages for limits on various parameters must be updated each minute, this raises the question of how rolling averages are to be calculated upon initial startup of the rolling average requirements. We have determined that an operating parameter limit will not become effective on the compliance date until you have recorded enough monitoring data to calculate the rolling average for the limit. For example, the hourly rolling average limit on the temperature at the inlet to an electrostatic precipitator does not become effective until you have recorded 60 one-minute average temperature values on the compliance date. Given that compliance with the standards begins nominally at 12:01 am on the compliance date, the hourly rolling average temperature limit does not become effective as a practical matter until 1:01 am on the compliance date. Similarly, the 12-hour rolling average limit on the feedrate of mercury does not become effective until you have recorded 12 hours of one-minute average feedrate values after the compliance date. Thus, the 12-hour rolling average feedrate limits become effective as a practical matter at 12:01 pm on the compliance date.

Although we did not specifically address this issue at proposal, commenters raised the question in the context of CEMS. Given that the same issue applies to all continuous monitoring systems, we adopt the same approach for all continuous monitoring systems, including CEMS. See discussion below in Section VII.C.5.b. We adopt the approach discussed here because a rolling average limit on an operating parameter does not exist until enough one-minute average values have been obtained to calculate the rolling average.

b. How Are Rolling Averages Calculated upon Intermittent Operations? We have determined that you are to ignore periods of time when one-minute average values for a parameter are not recorded for any reason (*e.g.,* source shutdown) when calculating rolling averages. See § 63.1209(b)(5)(ii). For example, consider how the hourly rolling average for a parameter would be calculated if a source shuts down for yearly maintenance for a three week period. The first one-minute average value recorded for the parameter for the first minute of renewed operations is added to the last 59 one-minute averages before the source shutdown for maintenance to calculate the hourly rolling average.

We adopt this approach for all continuous monitoring systems, including CEMS (see discussion below in Section VII.C.5.b) because it is simple and reasonable. If, alternatively, we were to allow the ''clock to be restarted'' after an interruption in recording parameter values, a source may be tempted to ''clean the slate'' of high values by interrupting the recording of the parameter values (*e.g.,* by taking the monitor off-line for a span or drift check). Not only would this mean that operating limits would not be effective again until an averaging period's worth of values were recorded, but it would be contrary to our policy of penalizing a source for operating parameter limit exceedances by not allowing hazardous waste burning to resume until the parameter is within the limit. Not being able to burn hazardous waste during the time that the parameter exceeds its limit is intended to be an immediate economic incentive to minimize the frequency, duration, and intensity of exceedances.

c. How Are Rolling Averages Calculated when the Hazardous Waste Feed Is Cut Off? Even though the hazardous waste feed is cut off, you must continue to monitor operating parameters and calculate rolling averages for operating limits. See § 63.1209(b)(5)(iii). This is because the emission standards and operating parameter limits continue to apply even though hazardous waste is not being burned. See, however, the discussion in Part Five, Sections I.C and I.D above for exceptions (*i.e.,* when a hazardous waste combustor is not burning hazardous waste, the emission standards and operating requirements do not apply: (1) During startup, shutdown, and malfunctions; or (2) if you document compliance with other applicable CAA section 112 or 129 standards).

6. How Are Nondetect Performance Test Feedstream Data Handled?

You must establish separate feedrate limits for semivolatile metal, low volatile metal, mercury, total chlorine, and/or ash for each feedstream for which the comprehensive performance test feedstream analysis determines that these parameters are not present at detectable levels. The feedrate limit must be defined as nondetect at the full detection limit achieved during the performance test. See § 63.1207(n).

You will not be deemed to be exceeding this feedrate limit when detectable levels of the constituent are measured, provided that: (1) Your total system constituent feedrate, considering the detectable levels in the feedstream (whether above or below the detection limit achieved during the performance test) that is limited to nondetect levels, is below your total system constituent feedrate limit; or (2) except for ash, your uncontrolled constituent emission rate for all feedstreams, calculated in accordance with the procedures outlined in the performance test waiver provisions (see § 63.1207(m)) are below the applicable emission standards.

We did not address in the April 1996 NPRM how you must handle nondetect compliance test feedstream results when determining feedrate limits, nor did commenters suggest an approach. After careful consideration, we conclude that the approach presented above is reasonable and appropriate.

The LWAK industry has expressed concern about excessive costs with compliance activities that would be needed for the mercury standard. They

[201] The operating parameters for which you must specify limits are provided in § 63.1209. You must include these limits in the Documentation of Compliance, and you must record the Documentation of Compliance in the operating record.

claim that the increased costs associated with achieving lower mercury detection limits are large, and does not result in significant environmental benefits.

The final rule includes four different methods an LWAK can use to comply with the mercury emission standard in order to provide maximum flexibility. The basic compliance approach (described below) does not require an LWAK to achieve specified minimum mercury detection limits for mercury standard compliance purposes.[202] Under this approach, analytical procedures that achieve given detection limits are evaluated on a site-specific basis as part of the waste analysis plan review and approval process, which is submitted as part of the performance test plan. An LWAK can make the case to the regulatory official that the increased costs associated with achieving a very low mercury detection limit is not warranted. We therefore do not believe that the LWAK industry will incur significant additional analytical costs over current practices for daily mercury compliance activities. We acknowledge, however, that site-specific circumstances may lead a regulatory official to conclude that lower detection limits are warranted. To better understand this concept, the following paragraphs summarize this basic mercury emission standard compliance scheme and discusses why a regulatory official may determine, on a site-specific basis, that lower detection limits are needed to better assure compliance with the emission standard.

Under this basic approach, the source conducts a performance test and samples the emissions for mercury to demonstrate compliance with the emission standard. To ensure compliance with the emission standard during day-to-day operations, the source must comply with mercury feedrate limits that are based on levels achieved during the performance test. A source must establish separate mercury feedrate limits for each feed location. As previously discussed in this section, for feedstreams where mercury is not present at detectable levels, the feedrate limit must be defined as ''nondetect at the full detection limit''.

There is no regulatory requirement for a source to achieve a given detection limit under this approach. We acknowledge, however, that feedstream detection limits can be high enough such that a mercury feedrate limit that is based on nondetect performance test results may not completely ensure compliance with the emission standard during day-to-day operations. For example, the LWAK industry has indicated that a hazardous waste mercury detection limit of 2 ppm is reasonably achievable at an on-site laboratory. If we assume that mercury is present in the hazardous waste at a concentration of 1.99 ppm (just below the detection limit), the expected mercury emission concentration would be approximately 80 μg/dscm, which is above the standard.[203] (Note also that this does not consider mercury emission contributions from the raw material.) This is not to say that this LWAK will be exceeding the mercury emission standard during day-to-day operations. However, their inability to achieve low mercury detection limits results in less assurance that the source is continuously complying with the emission standard.

The regulatory official should consider such emission standard compliance assurance concerns when reviewing the waste analysis plan to determine if lower detection limits are appropriate (if, in fact such lower detection limits are reasonably achievable). Factors that should be considered in this review should include: (1) The costs associated with achieving lower detection limits; and (2) the estimated maximum mercury concentrations that can occur if the source's feedstreams contain mercury just below the detection limit (as described above).

C. Which Continuous Emissions Monitoring Systems Are Required in the Rule?

Although the final rule does not require you to use continuous emissions monitoring systems (CEMS) for parameters other than carbon monoxide, hydrocarbon, oxygen, and particulate matter[204] we have a strong preference for CEMS because they: (1) Are a direct measure of the hazardous air pollutant or surrogate for which we have established emission standards; (2) lead to a high degree of certainty regarding compliance assurance; and (3) allow the public to be better informed of what a source's emissions are at any time. Additionally, from a facility standpoint, CEMs provide you with real time feedback on your combustion operations and give you a greater degree of process control. Therefore, we encourage you to use CEMS for other parameters such as total mercury, multimetals, hydrochloric acid, and chlorine gas. You may use the alternative monitoring provision of § 63.8(f) to petition the Administrator (i.e., permitting officials) to use CEMS to document compliance with the emission standards in lieu of emissions testing and the operating parameter limits specified in § 63.1209. You may submit the petition at any time, such as with the comprehensive performance test plan. See Section VII.C.5.c below for a discussion of the incentives for using CEMS.

In this section, we discuss the status of development of particular CEMS and provide guidance on issues that pertain to case-by-case approval of CEMS in lieu of compliance using operating parameter limits and periodic emissions testing. Key issues include appropriate CEMS performance specifications, reference methods for determining the performance of CEMS, averaging periods, and temporary waiver of emission standards if necessary to enable sources to correlate particulate matter CEMS to the reference method.

1. What Are the Requirements and Deferred Actions for Particulate Matter CEMS?

In the April 1996 NPRM, we proposed the use of particulate matter CEMS to document compliance with the particulate matter emission standards. Particulate matter CEMS are used for compliance overseas[205], but are not yet a regulatory compliance tool in the U.S. Concurrent with this proposal, we undertook a demonstration of particulate matter CEMS at a hazardous waste incinerator to determine if these CEMS were feasible in U.S. applications. We selected the test incinerator as representative of a worst-case application for a particulate matter CEMS at any hazardous waste

[202] The other three approaches are (1) performance test waiver provisions (see preamble, part 5, section X.B); (2) alternative standards when raw materials cause an exceedance of the emission standard (see preamble, part 5, section X.A); and, (3) alternative mercury standards for kilns that have non-detect levels of mercury in the raw material (see preamble, part 5, section X.A). These mercury standard compliance alternatives require a source to achieve feedstream detection limits that either ensure compliance with an emission standard or ensure compliance with a hazardous waste feedrate limit that is used in lieu of a numerical emission standard. See previous referenced preamble for further discussion.

[203] This assumes that all the mercury fed to the unit is emitted, and is based on typical LWAK gas emission rates.

[204] The final rule requires that particulate matter CEMS be installed, but defers the effective date of the requirement to install, calibrate, maintain, and operate PM CEMS until these actions can be completed.

[205] The EU guidelines for hazardous waste combustion state that particulate matter is a parameter for which compliance must be documented continuously. In addition, proposals from vendors that we received in response to our February 27, 1996 NODA (see 61 FR 7262) indicate that there are many installations elsewhere overseas where particulate matter CEMS are used for compliance assurance.

combustor. It was important to document feasibility of the CEMS at a worst-case application to minimize time and resources needed to determine whether the CEMS were suitable for compliance assurance at all hazardous waste combustors.

We published preliminary results of our CEMS testing and sought comment on our approach to demonstrating particulate matter CEMS in the March 1997 NODA. We then revised our approach and sought comment on the final report in the December 1997 NODA. The December 1997 NODA also clarified several issues that came to light during the demonstration test pertaining to the manual reference method, particulate matter CEMS, and general quality assurance issues. These clarifications were embodied in a new manual method, Method 5–I (Method 5i), a revision to the proposed Performance Specification 11 for particulate matter CEMS, and a new quality assurance procedure, Procedure 2.

We believe that our tests adequately demonstrate that particulate matter CEMS are a feasible, accurate, and reliable technology that can and should be used for compliance assurance. In addition, preliminary analyses of the cost of PM CEMS applied to hazardous waste combustors suggest that these costs are reasonable. Accordingly, the final rule contains a requirement to install PM CEMS. However, we agree with comments that indicate a need to develop source-specific performance requirements for particulate matter CEMS and to resolve other outstanding technical issues. These issues include all questions related to implementation of the particulate matter CEMS requirement (i.e. relation to all other testing, monitoring, notification, and recordkeeping), relation of the particulate matter CEMS requirement to the PM emission standard, as well as technical issues involving performance, maintenance and correlation of the particulate matter CEMS itself. These issues will be addressed in a subsequent rulemaking. Therefore, we defer the effective date of this requirement pending further testing and additional rulemaking.

As a result, in today's final rule, we require that particulate matter CEMS be installed at all hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns. However, since we have not finalized the performance specifications for the use of these instruments or resolved some of the technical issues noted above, we are deferring the effective date of the requirement to install, calibrate, maintain and operate particulate matter CEMS until these actions can be completed. The particulate matter CEMS installation deadline will be established through future rulemaking, along with other pertinent requirements, such as final Performance Specification 11, Appendix F Procedure 2. Finally, it should be noted that EPA has a concurrent rulemaking process underway for nonhazardous waste burning cement kilns and plans to adopt the same approach in that rule.

2. What Are the Test Methods, Specifications, and Procedures for Particulate Matter CEMS?

a. What Is Method 5i? We promulgate in the final rule a new manual method for measuring particulate matter, Method 5i. See appendix A to part 60. We first published this new method in the December 1997 NODA. One outgrowth of these particulate matter CEMS demonstration tests is that we made significant improvements in making low concentration Method 5 particulate measurements. We first discussed these improvements in the preliminary report released in the March 1997 NODA, and commenters to that NODA ask that these improvements be documented. We documented these improvements by creating Method 5i.

We incorporated the following changes to Method 5 into Method 5i: Improved sample collection; minimization of possible contamination; Improved sample analysis; and an overall emphasis on elimination of systemic errors in measurement. These improvement achieved significant improvements in method accuracy and precision at low particulate matter concentrations, relative to Method 5.

We are promulgating Method 5i today, in advance of any particulate matter CEMS requirement, for several reasons. We expect this new method will be preferred in all cases where low concentration (i.e., below 45 mg/dscm (~0.02 gr/dscf)[206]) measurements are required for compliance with the standard. Given that all incinerators, nearly all lightweight aggregate kilns, and some cement kilns are likely to have emissions lower than 45 mg/dscm, we expect that Method 5i will become the particulate method of choice for most hazardous waste combustors. In addition, we expect that Method 5i will be used to correlate manual method results to particulate matter CEMS outputs for those sources that elect to petition the Administrator to use a CEMS in lieu of operating parameter limits for compliance assurance with the particulate matter standard.[207] This is because, unlike the worst-case particulate matter measurements normally used to verify compliance with the standard, low (or lower than normal) concentration particulate matter data are required to develop a good correlation between the CEMS output and the manual, reference method.

Many of the issues commenters raise relate to how Method 5i should be used to correlate particulate matter CEMS outputs to manual method measurements. Even though we are deferring a CEMS requirement, we address several key issues here given that sources may elect to petition the Administrator under § 63.8(f) to use a CEMS. This discussion may provide a better understanding on our thinking on particulate matter CEMS issues. In addition, certain comments are specific to how Method 5i is performed. These comments and our responses are relevant even if you use Method 5i only as a stack particulate method and not to correlate a particulate matter CEMS to the reference method.

i. Why Didn't EPA Validate Method 5i Against Method 5? Several commenters recommend that we perform a full Method 301 validation to confirm that Method 5i is equivalent to Method 5. We determined that a full Method 301 validation is not necessary because the differences in the two methods do not constitute a major change in the way particulate samples are collected from an operational or an analytical standpoint. We validated the filter extraction and weighting process—the only modification from Method 5 (see ''Particulate Matter CEMS Demonstration Test Final Report,'' Appendix A, in the Technical Support Document[208]) '' and documented that Method 5i gives nearly identical results as Method 5. Therefore, we disagree with the commenters' underlying concern and conclude that Method 5i has been validated.

ii. When Are Paired Trains Required? We have included in Method 5i a requirement that paired trains must be

[206] As noted later in the text, the filter and assembly used for Method 5i is smaller than the one used for Method 5. This means that the Method 5i filter plugs more easily than the one used for Method 5. This issue becomes important at particulate matter concentrations above 45 mg/dscm, or 0.02 gr/dscf.

[207] As alluded to previously, sources may elect to use a CEMS to comply with the numerical value of the particulate matter emission standard on a six-hour rolling average in lieu of complying with operating parameter limits specified by § 63.1209(m).

[208] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance With the Hazardous Waste Combustor Standards,'' July 1999.

used to increase method precision. This requirement applies whether you use Method 5i to demonstration compliance with the emission standard or to correlate a particulate matter CEMS. In addition, if you elect to petition the Administrator for approval to use a particulate matter CEMS and elect to use Method 5 to correlate the CEMS, you must also obtain paired Method 5 data to improve method precision and, thus, the correlation.

During our CEMS testing, we collected particulate matter data using two simultaneously-conducted manual method sampling trains. We called the results from these simultaneous runs ''paired data.'' We discussed the use of paired trains in the December 1997 NODA as being optional but requested comment on whether we should require paired trains, state a strong preference for them, or be silent on the issue. Many commenters believe paired trains should be used at all times so precision can be documented. With these comments in mind, and consistent with our continued focus on the collection of high quality emission measurements, we include a requirement in Method 5i to obtain paired data. Method 5i also includes a minimum acceptable relative standard deviation between these data pairs. As discussed below, both data in the pair are rejected if the data exceed the acceptable relative standard deviation.

To improve the correlation between the manual method and a particulate matter CEMS, we also recommend that sources electing to use Method 5 also obtain paired Method 5 data. Again, data sets that exceed an acceptable relative standard deviation, as discussed below, should be rejected. This recommendation will be implemented during the Administrator's review of your petition requesting use a particulate matter CEMS. If you elect to correlate the CEMS using Method 5, you are expected to include in your petition a statement that you will obtain paired data and will conform with our recommended relative standard deviation for the paired data.

iii. What Are the Procedures for Identifying Outliers? We have established maximum relative standard deviation values for paired data for both Method 5i and Method 5. If a data pair exceed the relative standard deviation, the pair is identified as an outlier and is not considered in the correlation of a particulate matter CEMS with the reference method. In addition, Method 5i pairs that exceed the relative standard deviation are considered outliers and cannot be used to document compliance with the emission standard.

In the initial phase of our CEMS tests, we established a procedure for eliminating imprecise data. This consisted of eliminating a set of paired data if the data disagree by more than some previously established amount. Two identical methods running at the same time should yield the same result; if they do not, the precision of both data is suspect. Commenters agree with the need to identify and eliminate imprecise data to enhance method precision. This is an especially important step when comparing manual particulate matter measurements to particulate matter CEMS measurements. As a result, we include criteria in Method 5i to ensure data precision.

When evaluating the particulate matter CEMS Demonstration Test data, we screened the data to remove these precision outliers. Data outliers at that time were defined as paired data points with a relative standard deviation [209] of greater than 30 percent. We developed this 30% criterion by analyzing historical Method 5 data. Several commenters, including a particulate matter CEMS vendor with extensive European experience with correlation programs, recommend that we tighten the relative standard deviation criteria. We concur, because Method 5i is more precise than Method 5 given the improvements discussed above. Therefore, one would logically expect a reasonable precision criterion such as the relative standard deviation derived from Method 5i data to be less than a similarly reasonable one derived from Method 5 data. We investigated the particulate matter CEMS Demonstration Test data base as well other available Method 5i data (such as the data from a test program recently conducted at another US incinerator). We conclude that a 10% relative standard deviation for particulate matter emissions greater than or equal to 10 mg/dscm, increased linearly to 25% for concentrations down to 1 mg/dscm, is a better representation of acceptable, precise Method 5i paired data [210]. Data obtained at concentrations lower than 1 mg/dscm have no relative standard deviation limit.

The relative standard deviation criterion for Method 5 data used for particulate matter CEMS correlations continues to be 30%.

iv. Why Didn't EPA Issue Method 5i as Guidance Rather than Promulgating It as a Method? Most commenters state that Method 5i should be guidance rather than a published method and it should not be a requirement for performing particulate matter CEMS correlation testing or documenting compliance with the emission standard. In particular, several commenters in the cement kiln industry express concern over the limitations of Method 5i regarding the mass of particulate it could collect. This section addresses these concerns.

We have promulgated Method 5i as a method because it provides significant improvement in precision and accuracy of low level particulate matter measurements relative to Method 5. Consequently, although Method 5i is not a required method, we expect that permitting officials will disapprove comprehensive performance test plans that recommend using Method 5 for low level particulate levels. Further, we expect that petitions to use a particulate matter CEMS that recommend performance acceptance criteria (e.g., confidence level, tolerance level, correlation coefficient) based on correlating the CEMS with Method 5 measurements will be disapproved. This is because we expect the CEMS to be able to achieve better acceptance criteria values using Method 5i (because it is more accurate and precise than Method 5), and expect better relative standard deviation between test pairs (resulting in lower cost of correlation testing because fewer data would be screened out as outliers).

Given that we expect and want widespread use of Method 5i, and to ensure that its key provisions are followed, it is appropriate to promulgate it as a method rather than guidance. If the procedure were issued only as guidance, the source or stack tester could choose to omit key provisions, thus negating the benefits of the method.

Relative to the direct reference in Method 5i that the method is ''most effective for total particulate matter catches of 50 mg or less,'' this means the method is most effective at hazardous waste combustors with particulate matter emissions below approximately 45 mg/dscm (~0.02 gr/dscf). This applicability statement is not intended to be a bright line; total train catches exceeding 50 mg would not invalidate

[209] RSD, or ''relative standard deviation'', is a dimensionless number greater than zero defined as the standard deviation of the samples, divided by the mean of the samples. In the special case where only 2 data represent the sample, the mathematics of determining the relative standard deviation simplifies greatly to $|C_A - C_B|/(C_A + C_B)$, where C_A and C_B are the concentration results from the two trains that represent the pair.

[210] See Chapter 11, Section 2 of the technical background document for details on the statistical procedures used to derive these benchmarks: USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance With the Hazardous Waste Combustor Standards,'' July 1999.

the method. Rather, we include this guidance to users of the method to help them determine whether the method is applicable for their source. Note that this statement is found in the applicability section of the method, rather than the method description sections that follow. As such, the reference is clearly an advisory statement, not a quality assurance criterion. Total train catches above 50 mg are acceptable with the method and the results from such trains can be used to document compliance with the emission standard and for correlating CEMS. But, users of Method 5i are advised that problems (such as plugging of the filter) may arise when emissions are expected to exceed 45 mg/dscm.[211]

v. What Additional Costs Are Associated with Method 5i? Commenters raise several issues regarding the additional costs of performing Method 5i testing relative to using Method 5. There is an added cost for the purchase of new Method 5i filter housings. These new lightweight holders are the key addition to the procedure needed to improve precision and accuracy and represent a one-time expense that emission testing firms or sources that perform testing in-house will have to incur to perform Method 5i. We do not view this cost as significant and conclude that the use of a light-weight filter housing is a reasonable and appropriate feature of the method.

Other commenters suggest that the requirement for pesticide-grade acetone in the version of Method 5i contained in the December 1997 NODA unnecessarily raises the cost of performing the method. Instead, they ask us to identify a performance level for the acetone instead of a grade requirement because it would allow test crews to meet that performance in the most economical manner. We agree that prescribing a certain type of acetone may unnecessarily increase costs and removed the requirement for pesticide-grade acetone. Accordingly, the same purity requirements cited in Method 5 for acetone are maintained for Method 5i. The prescreening of acetone purity in the laboratory prior to field use, consistent with present Method 5 requirements, is also maintained in Method 5i.

Commenters make similar cost-related comments relative to the requirement for Teflon® beakers. At the request of several commenters, we have expanded the requirement for Teflon® beakers to allow the use of beakers made from other similar light-weight materials. Because materials other than Teflon® can be used to fabricate light-weight breakers, changing the requirement from a technology basis to a performance basis will reduce costs while achieving the performance goals of the method.

There were no significant comments regarding the added cost of paired-train testing.

vi. What Is the Practical Quantification Limit of the Method 5i Filter Sample? We received several comments related to the minimum detection limit of Method 5i, including: the minimum sample required, guidance on how long to sample, what mass should ideally be collected on any filter, and the practical quantification limit.

Commenters are concerned that while we address the maximum amount of particulate matter the method could handle, we are silent on the issue of what minimum sample is required. This is important because analytical errors, such as weighing of the filters, tend to have the same error value associated with it irrespective of the mass loading. To address this concern, Method 5i provides guidance on determining the minimum mass of the collected sample based on estimated particulate matter concentrations.

Related to the particulate mass collection issue is the issue of how long a user of Method 5i needs to sample in order to an adequate amount of particulate on the filter. The amount of particulate matter collected is directly related to time duration of the sampling period, i.e., the longer one samples, the more particulate is collected and vice-versa. Therefore, Method 5i provides guidance on selecting a suitable sampling time based on the estimated concentration of the gas stream.

Both these issues directly relate to how much particulate matter should ideally be collected on any individual filter. Our experience indicates a minimum target mass is 10 to 20 mg.

Finally, we conclude that the targeted practical quantification limit for Method 5i is 3.0 mg of sample. Discussion of how this quantification limit is determined is highly technical and beyond the scope of this preamble. See the technical support document for more details.[212]

vii. How Are Blanks Used with Method 5i? Several commenters question the use of acetone blanks or made recommendations for additional blanks. We clarify in this section the collection and use of sample blank data.

We recognize that high blank results can adversely effect the analytical results, especially at low particulate matter concentrations. To avoid the effect high blank results can have on the analytical results, today's Method 5i adopts a strategy similar to several of the organic compound test procedures (such as Method 23 in part 60 and Method 0010 in SW–846) that require collection of blanks but do not permit correction to the analytical results. Collection and analysis of blanks remains an important component in the sampling and analysis process for documenting the quality of the data, however. If a test run has high blank results, the data may be suspect. Permitting officials will address this issue on a case-by-case basis.

The importance of minimizing contamination is stressed throughout Method 5i for both sample handling and use of high purity sample media. If proper handling procedures are observed, we expect that the blank values will be less than the method detection limit or within the value for constant weight determination (0.5 mg). Therefore, the allowance for blank correction that is provided in Method 5 is not permitted in Method 5i. The method also recommends several additional types of blanks to provide further documentation of the integrity and purity of the acetone throughout the duration of the field sampling program.

b. What Is the Status of Particulate Matter CEMS Performance Specification 11 and Quality Assurance/Quality Control Procedure 2? We are not finalizing proposed Performance Specification 11 and Quality Assurance/Quality Control Procedure 2 because the final rule does not require the use of particulate matter CEMS. We considered stakeholder comments on these documents, however, and have incorporated many comments into the current drafts. We plan to publish these documents when we address the particulate matter CEMS requirement. In the interim, we will make them available as guidance to sources that are

[211] Stack testers have developed ways to deal with plugging of a filter. Many stack testers simply remove the filter before it plugs, install a new, clean filter, and continue the sampling process where they left off with the old filter. The mass gain is then the total mass accumulated on all filters during the run. However, using multiple filters for a single run takes more time, not only to install the new filter but also to condition and weigh multiple filters for a single run. For Method 5i, it would also involve more capital cost because the stack tester would need more light-weight filter assemblies to perform the same number of runs. For these reasons and even though the situation can be acceptably managed, it is impractical to have the filter plug. This led to our recommendation that Method 5i is best suited for particulate matter (i.e., filter) loadings of at most 50 mg, or stack concentrations of less than 45 mg/dscm (roughly 0.02 gr/dscf).

[212] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance With the Hazardous Waste Combustor Standards,'' July 1999.

considering the option of using a particulate matter CEMS to document compliance.

c. How Have We Resolved Other Particulate Matter CEMS Issues? In this section we discuss two additional issues: (1) Why didn't we require continuous opacity monitors for compliance with the particulate matter standard for incinerators and lightweight aggregate kilns; and (2) can high correlation emissions testing runs exceed the particulate matter standard?

i. Why Didn't We Require Continuous Opacity Monitors for Compliance Assurance for Incinerators and Lightweight Aggregate Kilns? As discussed elsewhere in today's notice, we require cement kilns to use continuous opacity monitors (COMS) to comply with a 20 percent opacity standard to ensure compliance with the particulate matter emission standard. This is the opacity component of the New Source Performance Standard for particulate matter for Portland cement plants. See § 60.62. Because we are adopting the mass-based portion of the New Source Performance Standard for particulate matter as the MACT standard (i.e., 0.15 kg/Mg dry feed), the opacity component of the New Source Performance Standard is useful for compliance assurance.

We do not require that incinerators and lightweight aggregate kilns use opacity monitors for compliance assurance because we are not able to identify an opacity level that is achievable by sources using MACT control and that would ensure compliance with the particulate matter standards for these source categories. This is the same issue discussed above in the context of particulate matter CEMS and is the primary reason that we are not requiring use of these CEMS at this time.

Although we are requiring that cement kilns use COMS for compliance assurance, these monitors cannot provide the same level of compliance assurance as particulate matter CEMS. Opacity monitors measure a characteristic of particulate matter (i.e., opacity) and cannot correlate with the manual stack method as well as a particulate matter CEMS. COMS are particularly problematic for sources with small stack diameters (e.g., incinerators) and low emissions because both of these factors contribute to very low opacity readings which results in high measurement error as a percentage of the opacity value. Thus, we are obtaining additional data to support rulemaking in the near future to require use of particulate matter CEMS for compliance assurance.

Approximately 80 percent of hazardous waste burning cement kilns are not currently subject to the New Source Performance Standard and many of these sources may not be equipped with COMS that meet Performance Specification 1 in appendix B, part 60. Thus, many hazardous waste burning cement kilns will be required to install COMS, even though we intend to require use of particulate matter CEMS in the near future. We do not believe that this requirement will be overly burdensome, however, because sources may request approval to install particulate matter CEMS rather than COMS. See § 63.8(f). Our testing of particulate matter CEMS at a cement kiln will be completed well before sources need to make decisions on how best to comply with the COMS requirement of the rule. We will develop regulations and guidance on performance specifications and correlation criteria for particulate matter CEMS as a result of that testing, and sources can use that guidance to request approval to use a particulate matter CEMS in lieu of a COMS. We expect that most sources will elect to use this approach to minimize compliance costs over the long term.

ii. Can High Correlation Runs Exceed the Particulate Matter Standard? The final rule states that the particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 (i.e., all applicable parts of Title 40) do not apply during particulate matter CEMS correlation testing, provided that you comply with certain provisions discussed below that ensure that the provision is not abused. This provision, as the rest of the rule, is effective immediately. Thus, you need not wait for the compliance date to take advantage of this particulate matter CEMS correlation test provision.

We include this provision in the rule because many commenters question whether high correlation test runs that exceed the particulate matter emission standard constitute noncompliance with the standard. We have responded to this concern previously by stating that a single manual method test run that exceeds the standard does not constitute noncompliance with the standard because compliance is based on the average of a minimum of three runs.[213] We now acknowledge, however, that during high run correlation testing a source may need to exceed the emission standard even after averaging emissions across runs. Similarly, a source may need to exceed a particulate matter operating parameter limit. Given the benefits of compliance assurance using a CEMS, we agree with commenters that short-term excursions of the particulate matter standard or operating parameter limits for the purpose of CEMS correlation testing is warranted. The benefits that a CEMS provides for compliance assurance outweighs the short-term emissions exceedances that may occur during high end emissions correlation testing. Consequently, we have included a conditional waiver of the applicability of all Federal particulate matter and opacity standards (and associated operating parameter limits).

The waiver of applicability of the particulate matter and opacity emission standards and associated operating parameter limits is conditioned on the following requirements to ensure that the waiver is not abused. Based on information from commenters and expertise gained during our testing, the rule requires that you develop and submit to permitting officials a particulate matter CEMS correlation test plan along with a statement of when and how any excess emissions will occur during the correlation tests (i.e., how you will modify operating conditions to ensure a wide range of particulate emissions, and thus a valid correlation test). If the permitting officials fail to respond to the test plan in 30 days, you can proceed with the tests as described in the test plan. If the permitting officials comment on the plan, you must address those comments and resubmit the plan for approval.

In addition, runs that exceed any particulate matter or opacity emission standard or operating parameter limit are limited to no more than a total of 96 hours per correlation test (i.e., including all runs of all test conditions). We determined that the 96 hour total duration for exceedances for a correlation test is reasonable because it is comprised of one day to increase emissions to the desired level and reach system equilibrium, two days of testing[214] at the equilibrium condition followed by a return to normal equipment settings indicative of compliance with emissions standards and operating parameter limits, and one

[213] One exception is the destruction and removal efficiency standard, for which compliance is based on a single test run and not the average of three runs.

[214] The two days assumes sources will conduct a total of 18 runs, 6 runs in each of the low, medium, and high particulate matter emission ranges. To approve use of a particulate matter CEMS, we will likely require that a minimum of 15 runs comprise a correlation test. If this is the case, some runs will likely be eliminated because they fail method or source-specific quality assurance/quality control procedures.

day to reach equilibrium at normal conditions. Finally, to ensure these periods of high emissions are due to the *bona fide* need described here, a manual method test crew must be on-site and making measurements (or in the event some unforseen problem develops, prepared to make measurements) at least 24 hours after you make equipment or workplace modifications to increase particulate matter emissions to levels of the high correlation runs.

3. What Is the Status of Total Mercury CEMS?

We are not requiring use of total mercury CEMS in this rulemaking because data in hand do not adequately demonstrate nationally that these CEMS are reliable compliance assurance tools at all types of facilities. Nonetheless, we are committed to the development of CEMS that measure total mercury emissions and are continuing to pursue the development of these CEMS in our research efforts.

In the April 1996 NPRM, we proposed that total mercury CEMS be used for compliance with the mercury standards. We also said if you elect to use a multimetals CEMS that passed proposed acceptability criteria, you could use that CEMS instead of a total mercury CEMS to document compliance with the mercury standard. Finally, we indicated that if neither mercury nor multimetal CEMS were required in the final rule (*i.e.,* because they have not been adequately demonstrated), compliance assurance would be based on specified operating parameter limits.

In the March 1997 NODA, we elicited comment on early aspects of our approach to demonstrate total mercury CEMS. And, in the December 1997 NODA, we presented a summary of the demonstration test results and our preliminary conclusion that we were unable to adequately demonstrate total mercury CEMS at a cement kiln, a site judged to be a reasonable worst-case for performance of the total mercury CEMS. As new data are not available, we continue to adhere to this conclusion, and comments received in response to the December 1997 NODA concur with this conclusion. Therefore, we are not requiring total mercury CEMS in this rulemaking.

Nonetheless, the current lack of data to demonstrate total mercury CEMS at a cement kiln or otherwise on a generic bases (*i.e.,* for all sources within a category) does not mean that the technology, as currently developed, cannot be shown to work at particular sources. Consequently, the final rule provides you the option of using total mercury CEMS in lieu of complying with the operating parameter limits of § 63.1209(l). As for particulate matter and other CEMS, the rule allows you to petition the Administrator (*i.e.,* permitting officials) under § 63.8(f) to use a total mercury CEMS based on documentation that it can meet acceptable performance specifications, correlation acceptance criteria (*i.e.,* correlation coefficient, tolerance level, and confidence level). Although we are not promulgating the proposed performance specification for total mercury CEMS (Performance Specification 12) given that we were not able to document that a mercury CEMS can meet the specification in a (worst-case) cement kiln application, the proposed specification may be useful to you as a point of departure for a performance specification that you may recommend is achievable and reasonable.

4. What Is the Status of the Proposed Performance Specifications for Multimetal, Hydrochloric Acid, and Chlorine Gas CEMS?

We are not promulgating proposed Performance Specifications 10, 13, and 14 for multimetal, hydrochloric acid, and chlorine gas CEMS because we have not determined that the CEMS can achieve the specifications.

In the April 1996 NPRM, we proposed performance specifications for multimetal, hydrochloric acid, and chlorine gas CEMS to allow sources to use these CEMS for compliance with the metals and hydrochloric acid/chlorine gas standards. Given that we have not demonstrated that these CEMS can meet their performance specifications and our experience with a mercury CEMS where we were not able to demonstrate that the mercury CEMS could meet our proposed performance specification, we are not certain that these CEMS can meet the proposed performance specifications. Accordingly, it would be inappropriate to promulgate them.

As discussed previously, we encourage sources to investigate the use of CEMS and to petition permitting officials under § 63.8(f) to obtain approval to use them. The proposed performance specifications may be useful to you as a point of departure in your efforts to document performance specifications that are achievable and that ensure reasonable correlation with reference manual methods.

5. How Have We Addressed Other Issues: Continuous Samplers as CEMS, Averaging Periods for CEMS, and Incentives for Using CEMS?

a. Are Continuous Samplers a CEMS? Several commenters, mostly owner/operators of on-site incinerators, suggest that we should adjust certain CEMS criteria (*e.g.,* averaging period, response time) to allow use of a continuous sampler known as the 3M Method. The 3M Method is a continuous metals sampling system. It automatically extracts stack gas and accumulates a sample on a filter medium over any desired period—24 hours, days, or weeks. The sample is manually extracted, analyzed, and reported. Various incinerator operators are using or have expressed an interest in using this type of approach to demonstrate compliance with current RCRA metals emission limits. Many commenters contend that the 3M Method is a CEMS and that we developed our performance specifications for CEMS to exclude techniques like the 3M Method.

After careful analysis, we conclude that the 3M Method is not a CEMS. It does not meet our long-standing definition of a CEMS in parts 60 or 63. Specifically, it is not a fully automated piece(s) of equipment used to extract a sample, condition and analyze the sample, and report the results of the analysis in the units of the standard. Also, the 3M Method is unable to ''complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period'' as required by § 63.8(c)(4)(ii). As a result, making the subtle changes (*e.g.,* to the averaging period, response time) to our multimetal CEMS performance specification that commenters recommend would not alter the fact that the device does not automatically analyze the sample on the frequency required for a CEMS.

A continuous sampler (coupled with periodic analysis of the sample) is inferior to a CEMS for two reasons. First, if the sampling period is longer than the time it takes to perform three manual performance tests, compliance with the standard cannot be assured. Approaches like the 3M Method tend to have reporting periods on the order of days, weeks, or even a month. The reporting period is comprised of the time required to accumulate the sample and the additional time to analyze the sample and report results. Because the stringency of a standard is a function of both the numerical value of the standard and the averaging period (*e.g.,* at a given numerical limit, the longer the averaging period the less stringent the standard), a compliance approach having a sampling period greater than the 12 hours we estimate it may take to conduct three manual method stack test runs using Method 29 cannot ensure

compliance with the standard.[215] If the sampling period were greater than the time required to conduct three test runs, the numerical value of the standard would have to be reduced to ensure an equally stringent standard. Unfortunately, we do not know how to derive alternative emission limits as a function of the averaging period that would be equivalent to the emission standard. We raised this issue at proposal, and commenters did not offer a solution.

Second, the results from a continuous sampler are reported after the fact, resulting in higher excess emissions than with a CEMS. Depending on the sample analysis frequency, it could take days or weeks to determine that an exceedance has occurred and that corrective measures need to be taken. A CEMS can provide near real-time information on emissions such that exceedances can be avoided or minimized.

Absent the generic availability of multimetal CEMS, continuous samplers such as the 3M Method may nonetheless be a valuable compliance tool. We have acknowledged that relying on operating parameter limits may be an imperfect approach for compliance assurance. Sampling and analysis of feedstreams to determine metals feedrates can be problematic given the complexities of some waste matrices. In addition, the operating parameters for the particulate matter control device for which limits must be established may not always correlate well with the device's control efficiency for metals and thus metals emissions. Because of these concerns, we encourage sources to investigate the feasibility of multimetal CEMS. But, absent a CEMS, a continuous sampler may provide an attractive alternative or complement to some of the operating parameter limits under §§ 63.1209 (l) and (n). You may petition permitting officials under § 63.8(f) to use the 3M Method (or other sampler) as an alternative method of compliance with the emissions standards. Permitting officials will balance the benefits of a continuous sampler with the benefits of the operating parameter limits on a case-by-case basis.

b. What Are the Averaging Periods for CEMS and How Are They Implemented? We discuss the following issues in this section: (1) Duration of the averaging period; (2) frequency of updating the averaging period; and (3) how averaging periods are calculated initially and under intermittent operations.

i. What Is the Duration of the Averaging Period? We conclude that a six-hour averaging period is most appropriate for particulate matter CEMS, and a 12-hour averaging period is most appropriate for total mercury, multi metals, hydrogen chloride, and chlorine gas CEMS.

We proposed that the averaging period for CEMS (*i.e.*, other than carbon monoxide, hydrocarbon, and oxygen) be equivalent to the time required to conduct three runs of the comprehensive performance test using manual stack methods. As discussed above and at proposal, we proposed this approach because, to ensure compliance with the standard, the CEMS averaging period must be the same as the time required to conduct the performance test.[216]

Commenters suggest two general approaches to establish averaging periods for CEMS: technology-based and risk-based. Commenters supporting a technology-based approach favor our proposed approach and rationale where the time duration of three emissions tests would be the averaging period for CEMS. Commenters favoring a risk-based approach state that the averaging period should be years rather than hours because the risk posed by emissions at levels of the standard were not found to be substantial, assuming years of exposure. We disagree with this rationale. CEMS are an option (that sources may request under § 63.8(f)) to document compliance with the emission standard. As discussed above, if the averaging period for CEMS were longer than the duration of the comprehensive performance test, we could not ensure that a source maintains compliance with the standards.

Establishing an averaging period based on the time to conduct three manual method stack test runs is somewhat subjective. There is no fixed sampling time for manual methods—sampling periods vary depending on the amount of time required to ''catch'' enough sample. Thus, we have some discretion in selecting an averaging period using this approach. Commenters generally favor longer averaging periods as an incentive for using CEMS (i.e., because a limit is less stringent if compliance is based on a long versus short averaging period). We agree that choosing a longer averaging period would provide an incentive for the use of CEMS, but conclude that the selected averaging period must be within the range (i.e., high end) of times required to perform the three stack test runs.

We derive the averaging period for particulate matter CEMS as follows. Most particulate matter manual method tests are one hour in duration, but a few stack sampling companies sample for longer periods, up to two hours. Therefore, we use the high end of the range of values, 2 hours, as the basis for calculating the averaging period. We recommend a six-hour rolling average considering that it may require 2 hours to conduct each of three stack tests.

For mercury, multi-metals, hydrochloric acid, and chlorine gas CEMS, we recommend a 12-hour rolling averaging. The data base we used to determine the standards shows that the sampling periods for manual method tests for these standards ranged from one to four hours. Choosing the high end of the range of values, 4 hours, as the basis for calculating the averaging period, we conclude that a 12-hour rolling average would be appropriate.

ii. How Frequently Is the Rolling Average Updated? We conclude that the rolling average for particulate matter, total mercury, and multimetal CEMS should be updated hourly, while the rolling average for hydrochloric acid and chlorine gas CEMS should be updated each minute.

We proposed that all rolling averages would be updated every minute and would be based on the average of the one-minute block average CEMS observations that occurred over the averaging period. This proposed one-minute update is the same that is used for carbon monoxide and total hydrocarbon CEMS under the RCRA BIF regulations. (We are retaining that update frequency in the final rule for those monitors, and recommend it for hydrochloric acid and chlorine gas CEMS.)

Commenters favor selecting the frequency of updating the rolling average taking into account the variability of the CEMS and limitations concerning how the correlation data are collected. We agree with this approach, as discussed below.

1. Particulate Matter CEMS. Commenters said that particulate matter CEMS correlation tests are approximately one hour in duration and, if the rolling average were updated

[215] A technical support document for the February 1991 municipal waste combustor rule contains a good description of how not only the numerical limit, but the averaging period as well, determines the overall stringency of the standard. See Appendices A and B found in ''Municipal Waste Combustion: Background Information for Promulgated Standards and Guidelines—Summary of Public Comments and Responses Appendices A to C'', EPA–450/3–91–004, December 1990.

[216] Actually, the CEMS averaging period can be no longer than the time required to conduct three runs of the performance test to ensure compliance with the standard. Although compliance with the standard would be ensured if the CEMS averaging period were less than the time required to conduct the performance test, this approach would be overly stringent because it would ensure compliance with an emission level lower than the standard.

each minute, the CEMS would observe more variability in emissions within this one hour than the manual method (which is an average of those emissions during the hour). For this reason, we conclude it is reasonable that particulate matter CEMS data be recorded as a block-hour and that the rolling average be updated every hour as the average of the previous six block-hours. Updating the particulate matter CEMS every hour also means the number of compliance opportunities is the same irrespective of whether a light-scattering or beta-gage particulate matter CEMS is used (i.e., because beta-gage CEMS make observations periodically while light-scattering CEMS make observations continuously).

Furthermore, to ensure consistency with existing air rules governing CEMS other than opacity, a valid hour should be comprised of four or more equally spaced measurements during the hour. See § 60.13(h). This means that batch systems, such as beta gages, must complete one cycle of operation every 15 minutes, or more frequently if possible. See § 63.8(c)(4)(ii). CEMS that produce a continuous stream of data, such as light-scattering CEMS, will produce data throughout the hour.

You may not be able to have four valid 15-minute measurement in an hour, however, to calculate an hourly block-average. Examples include when the source shuts down or the CEMS produces flagged (i.e., problematic) data. In addressing this issue, we balanced the need for the average of the measurements taken during the hour to be representative of emissions during the hour with the need to accommodate problems with data availability that will develop. We conclude that a particulate matter CEMS needs to sample stack gas and produce a valid result from this sample for most of the hour. This means that the CEMS needs to be observing stack gas at least half (30 minutes, or two 15-minute cycles of operation) of the block-hour. Emissions from less than one hour might be unrepresentative of emissions during the hour, and on balance we conclude that this approach is reasonable. If a particulate matter CEMS does not sample stack gas and produce a valid result from that sample for at least 30 minutes of a given hour, the hour is not a valid block-hour. In documenting compliance with the data availability recommendation in the draft performance specification, invalid block-hours due to unavailability of the CEMS that occur when the source is in operation count against data availability. If the hour is not valid because the source was not operating for more than 30 minutes of the hour, however, the invalid block-hour does not count against the data availability recommendation.[217]

2. Total Mercury and Multimetal CEMS. As discussed for particulate matter CEMS, we also expect manual methods will be required to correlate total mercury and multimetal CEMS prior to using them for compliance. For the reasons discussed above in the context of particulate matter CEMS, we therefore recommend the observations from these CEMS be recorded as block-hour averages and that the 12-hour rolling average be updated every hour based on the average of the previous 12 block-hour averages.

3. Hydrochloric Acid and Chlorine Gas CEMS. Unlike the particulate matter, total mercury, and multimetal CEMS, hydrochloric acid and chlorine gas CEMS are likely to be calibrated using Protocol 1 gas bottles rather than correlated to manual method stack test results. Therefore, the variability of observations measured by the CEMS over some averaging period versus the duration of a stack test is not an issue. We conclude that it is appropriate to update the 12-hour rolling average for these CEMS every minute, as required for carbon monoxide and hydrocarbons CEMS.

iii. How Are Averaging Periods Calculated Initially and under Intermittent Operations?

1. Practical Effective Date of Rolling Averages for CEMS. As discussed in Part Five, Sections VII.B.4 above in the context of continuous monitoring systems in general, CEMS recordings will not become effective for compliance monitoring on the compliance date until you have recorded enough observations to calculate the rolling average applicable to the CEMS. For example, the six hourly rolling average for particulate matter CEMS does not become effective until you have recorded six block-hours of observations on the compliance date. Given that compliance with the standards begins nominally at 12:01 am on the compliance date, the six hour rolling average for particulate matter CEMS does not become effective as a practical matter until 6:01 am on the compliance date. Similarly, the 12-hour rolling average for a multimetal CEMS does not become effective until you have recorded 12 block-hours of observations after the compliance date. Thus, the 12-hour rolling average for multimetals CEMS becomes effective as a practical matter at 12:01 p.m. on the compliance date.

We adopt this approach simply because a rolling average does not exist until enough observations have been recorded to calculate the rolling average.

2. How Rolling Averages Are Calculated Upon Intermittent Operations. We have determined that you are to ignore periods of time when CEMS observations are not recorded for any reason (*e.g.*, source shutdown) when calculating rolling averages. For example, consider how the six hour rolling average for a particulate matter CEMS would be calculated if a source shuts down for yearly maintenance for a three week period. The first one-hour block average value recorded when the source renews operations is added to the last 5 one-hour block averages recorded before the source shut down for maintenance to calculate the six hour rolling average.

We adopt this approach for all continuous monitoring systems, including CEMS, because it is simple and reasonable. See discussion in Part Five, Section B.4 above.

c. What Are the Incentives for Using CEMS as Alternative Monitoring? We strongly support the use of CEMS for compliance with standards, even though we are not requiring their use in today's rule (except for carbon monoxide, hydrocarbon, and oxygen CEMS) for the reasons discussed above. We endorse the principle that, as technology advances, current rules should not act as an obstacle to adopting new CEMS technologies for compliance. For instance, today's rule does not require total mercury CEMS because implementation and demonstration obstacles observed during our tests under what we consider worst-case conditions (*i.e.*, a cement kiln) could not be resolved in sufficient time to require total mercury CEMS at all hazardous waste combustors. However, we fully expect total mercury CEMS will improve to the point that the technical issues encountered in our tests can be resolved. At that point, we do not want the compliance regime of today's rule—comprised of emissions testing and limits on operating parameters—to be so rigid as to preclude the use of CEMS. Commenters are generally supportive of this concept, but note that facilities would be reluctant to adopt new technologies without adequate incentives. This section describes potential incentives: emissions testing would not be required; limits on operating parameters would not apply while the CEMS is in service; and the feedstream analysis requirements for the

[217] Data availability is defined as the fraction, expressed as a percentage, of the number of block-hours the CEMS is operational and obtaining valid data during facility operations, divided by the number of block-hours the facility was operating.

parameters measured by the CEMS (*i.e.*, metals or chlorine) would not apply.

i. What Incentives Do Commenters Suggest? Several commenters suggest that we provide various incentives to encourage development and implementation of new and emerging CEMS. Comments by the Coalition for Responsible Waste Incineration (CRWI) include a variety of actions to encourage voluntary installation of CEMS,[218] including: Reduce testing for any parameter measured by a CEMS to the correlation and maintenance of that CEMS; waive operating parameter limits that are linked to the pollutant measured by the CEMS; minimize regulatory oversight on waste analysis if compliance is consistently demonstrated by a CEMS; increase the emission limit for a source using a CEMS to account for the uncertainty of CEMS observations; allow a phase-in period when a source can evaluate CEMS performance and develop maintenance practices and the CEMS would not be used for compliance; allow a phase-in period to establish a reasonable availability requirement for that CEMS at a particular location; and allow sources to evaluate CEMS on a trial basis to determine if these instruments are appropriate for their operations with no penalties if the units do not work or have excessive downtime. Many of CRWI's suggestions have merit, as discussed below.

ii. How Do We Respond to Commenter's Recommended Incentives?

1. Waiver of Emissions Testing and Operating Parameter Limits. CRWI's first two suggestions (reduced testing and waiver of operating parameter limits) are closely linked. The purpose of conducting a comprehensive performance test is to document compliance with emission standard initially (and periodically thereafter) and establish limits on specified operating parameters to ensure that compliance is maintained. Because a CEMS ensures compliance continuously, it serves the purpose of both the performance test and compliance with operating parameter limits. Accordingly, we agree with CRWI that both emissions testing and operating parameter limits for the pollutant in question would not apply to sources using a CEMS.

There is one key caveat to this position, however. Because 100% availability of any CEMS is unrealistic, we require a means of assuring compliance with the emission standards during periods when the CEMS is not available. To meet that need, you may elect to install redundant CEMS or assure continuous compliance by monitoring and recording traditional operating parameter limits during periods when the CEMS is not available. Most likely, you will elect to use operating parameters as the back-up when the CEMS is unavailable because it would be a less expensive approach. You could establish these operating parameter limits, though, through CEMS measurements rather than comprehensive performance test measures. In fact, it may be prudent for you to evaluate relationships between various operating parameters for the particulate matter control device[219] and emission levels recorded by the CEMS to develop a good predictive model of emissions. You could then petition the Administrator (*i.e.*, permitting officials) under § 63.8(f) to base compliance during CEMS malfunctions on limits on alternative monitoring parameters derived from the predictive model.

2. Waiver of Feedstream Analysis Requirements. If you obtain approval to use a CEMS for compliance under the petitioning provisions of § 63.8(f), we agree with the commenter's recommendation that you should not be subject to the feedstream analysis requirements pertinent to the pollutant you are measuring with a CEMS. As examples, if you use a total mercury CEMS, you are not subject to a feedrate limit for mercury, and if you operate an incinerator and use a particulate matter CEMS, you are not subject to a feedrate limit for total ash.

If you are not subject to a feedrate limit for ash, metals, or chorine because you use a CEMS for compliance, you are not subject to the feedstream analysis requirements for these materials. As a practical matter, however, this waiver may be moot because, as discussed above, you will probably elect to comply with operating parameter limits during CEMS malfunctions. However, a second, back-up CEMS would also be acceptable. Absent a second CEMS, you would need to establish feedrate limits for these materials as a back-up compliance approach, and you would need to know the feedrate at any time given that the CEMS may malfunction at any time. In addition, even when the CEMS is operating within the performance specifications approved by the permitting officials, you have the responsibility to minimize exceedances by, for example, characterizing your feedstreams adequately to enable you to take corrective measures if a CEMS-monitored emission is approaching the standard. This level of feedstream characterization, however, is less than the characterization required to establish and comply with feedrate operating limits during CEMS malfunctions or absent a CEMS.

3. Increase the Averaging Period for CEMS-Monitored Pollutants. The averaging period for a CEMS-monitored pollutant should not be artificially inflated (*i.e.*, increased beyond the time required to conduct three manual method test runs) because the standard would be less stringent. See previous discussions on this issue.

4. Increase Emission Limits to Account for CEMS Uncertainty. We do not agree with the suggestion that an emission limit needs to be increased on a site-specific basis to accommodate CEMS inaccuracy and imprecision (*i.e.*, the acceptance criteria in the CEMS performance specification that the source recommends and the permitting officials approve will necessarily allow some inaccuracy and imprecision). Again, we encourage sources to use a CEMS because it is a better indicator of compliance than the promulgated compliance regime (*i.e.*, periodic emissions testing and operating parameter limits). We established the final emission standards with achievability (through the use of the prescribed compliance methods) in mind. We have accounted for the inaccuracies and imprecisions in the emissions data in the process of establishing the standard. See previous discussions in Part Four, Section V.D. If the CEMS performance specification acceptance criteria (that must be approved by permitting officials under a § 63.8(f) petition) were to allow the CEMS measurements to be more inaccurate or imprecise than the promulgated compliance regime of performance testing coupled with limits on operating parameters, the potential for improved compliance assurance with the CEMS would be negated. Consequently, we reject the idea that the standards need to be increased on a site-specific basis as an incentive for sources to use CEMS.

5. Allow a CEMS Phase-In Period. CRWI's final three incentive suggestions deal with the need for a CEMS phase-in period. This phase-in period would be used to evaluate CEMS performance, including identifying acceptable performance specification levels, maintenance requirements, and measurement location. CRWI further suggested that the Agency not penalize

[218] By "optional use of CEMS", we mean using CEM not required by this rule, *i.e.*, other than those for carbon monoxide, oxygen, and hydrocarbon.

[219] You are not restricted to those specified in § 63.1209. You may identify parameters for your source that correlate better with particulate emissions than those we have specified generically.

a source if the CEMS does not work or has excessive downtime.

CRWI provided these comments in response to our proposal to require compliance using CEMS and that sources document that the CEMS meets a prescribed performance specification and correlation acceptance criteria. Although we agree that a phase-in period would be appropriate, the issue is moot given that we are not requiring the use of CEMS.[220] Prior to submitting a petition under § 63.8(f) to gain approval to use a CEMS, we presume a source will identify the performance specification, correlation criteria, and availability factors they believe are achievable. (We expect sources to use the criteria we have proposed, as revised after considering comments and further analysis and provided through guidance, as a point of departure.) Thus, each source will have unlimited opportunity to phase-in CEMS and subsequently recommend under § 63.8(f) performance specifications and correlation acceptance criteria.

We do not agree as a legal matter that we can state generically that CEMS data obtained during the demonstration period are shielded from enforcement if the CEMS data are credible and were to indicate exceedance of an emission standard. In this situation, we cannot shield a source from action by either by a regulatory agency or a citizen suit. On balance, given our legal constraints, our policy desire to have CEMS used for compliance, and uncertainty about the ultimate accuracy of the CEMS data, we can use our enforcement discretion whether to use particulate matter CEMS data as credible evidence in the event the CEMS indicates an exceedance until the time the CEMS is formally adopted as a compliance tool. Sources and regulators may decide to draft a formal testing agreement that states that the CEMS data obtained prior to the time the CEMS is accepted as a compliance tool cannot be used as credible evidence of exceedance of an emission standard.

D. What Are the Compliance Monitoring Requirements?

In this section we discuss the operating parameter limits that ensure compliance with each emission standard.

1. What Are the Operating Parameter Limits for Dioxin/Furan?

You must maintain compliance with the dioxin/furan emission standard by establishing and complying with limits on operating parameters. See § 63.1209(k). The following table summarizes these operating parameter limits. All sources must comply with the operating parameter limits applicable to good combustion practices. Other operating parameter limits apply if you use the dioxin/furan control technique to which they apply.

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[220] Other than carbon monoxide, hydrocarbon, and oxygen CEMS.

Summary of Dioxin/Furan Monitoring Requirements

Control Technique	Compliance Using	Limits From	Averaging Period	How Limit Is Established
Combustion Gas Temperature Quench	Continuous monitoring system (CMS) for maximum temperature at the inlet to the dry particulate matter control device, except lightweight aggregate kilns must monitor gas temperature at the kiln exit	Comprehensive performance test	1-hour	Avg of the test run averages
Good Combustion Practices	CMS for maximum waste feedrates for pumpable and total wastes for each feed system	Comprehensive performance test	1-hour	Avg of the maximum hourly rolling averages for each run
	CMS for minimum gas temperature for each combustion chamber	Comprehensive performance test	1-hour	Avg of the test run averages
	CMS for maximum gas flowrate or kiln production rate	Comprehensive performance test	1-hour	Avg of the maximum hourly rolling averages for each run
	Monitoring of parameters recommended by the source to maintain operation of each hazardous waste firing system[1]	Based on source recommendation	To be determined case-by-case	To be determined case-by-case
Activated Carbon Injection[2]	Good particulate matter control: Monitoring requirements are the same as required for compliance assurance with the particulate matter standard. See Section VII.D.6 below.			
	CMS for minimum carbon feedrate	Comprehensive performance test	1-hour	Avg of the test run averages
	CMS for minimum carrier fluid flowrate or nozzle pressure drop	Manufacturer specifications	1-hour	n/a
	Identification of carbon brand and type or adsorption properties	Comprehensive performance test	n/a	Same properties based on manufacturer's specifications
Activated Carbon Bed[2]	Good particulate matter control: Monitoring requirements are the same as required for compliance assurance with the particulate matter standard. See Section VII.D.6 below.			
	Determination of maximum age of each carbon bed segment	Comprehensive performance test[3]	n/a	Maximum age of each segment during testing[3]
	Identification of carbon brand and type or adsorption properties	Comprehensive performance test	n/a	Same properties based on manufacturer's specifications

	CMS for maximum gas temperature at the inlet or exit of the bed	Comprehensive performance test	1-hour	Avg of the test run averages
Catalytic Oxidizer[2]	CMS for minimum gas temperature at inlet to catalyst	Comprehensive performance test	1-hour	Avg of the test run averages
	Identification of maximum catalyst time in-use	Manufacturer specifications	as specified	
	Identification of catalytic metal loading	Comprehensive performance test	n/a	Same as used during comprehensive test
	Identification of maximum space-time for the catalyst			
	Identification of substrate construct: materials, pore size			
	CMS for maximum flue gas temperature at inlet to catalyst	Manufacturer specifications	1-hour	As specified
Dioxin/Furan Formation Inhibitor[2]	CMS for minimum inhibitor feedrate	Comprehensive performance test	1-hour	Avg of the test run averages
	Identification of inhibitor brand and type or inhibitor properties	Comprehensive performance test	n/a	Same properties based on manufacturer's specifications

[1] You must recommend operating parameters, monitoring approaches, and limits in the comprehensive performance test plan to maintain operation of each hazardous waste firing system.

[2] A CMS for gas flowrate or kiln production rate is also required with the same provisions as required for those parameters under the Good Combustion Practices control technique.

[3] Maximum carbon age limits for the compliance period after the initial comprehensive performance test may be based on manufacturer specifications. See discussion in part d.2 of this section.

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Dioxin/furan emissions from hazardous waste combustors are primarily attributable to surface-catalyzed formation reactions downstream from the combustion chamber when gas temperatures are in the 450 °F to 650 °F window (*e.g.*, in an electrostatic precipitator or fabric filter; in extensive ductwork between the exit of a lightweight aggregate kiln and the inlet to the fabric filter; as combustion gas passes through an incinerator waste heat recovery boiler). In addition, dioxin/furan partition in two phases in stack emissions: a portion is adsorbed onto particulate matter and a portion is emitted as a vapor (gas). Because of these factors, and absent a CEMS for dioxin/furan, we are requiring a combination of approaches to control dioxin/furan emissions: (1) Temperature control at the inlet to a dry particulate matter control device to limit dioxin/furan formation in the control device; (2) operation under good combustion conditions to minimize dioxin/furan precursors and dioxin/furan formation during combustion; and (3) compliance with operating parameter limits on dioxin/furan emission control equipment (*e.g.*, carbon injection) that you may elect to use.

We discuss below the operating parameter limits that apply to each dioxin/furan control technique.

a. Combustion Gas Temperature Quench. To minimize dioxin/furan formation in a dry particulate matter control device that suspends collected particulate matter in the gas flow (e.g., electrostatic precipitator, fabric filter), the rule limits the gas temperature at the inlet to these control devices [221] to levels occurring during the comprehensive performance test. For lightweight aggregate kilns, however, you must monitor the gas temperature at the kiln exit rather than at the inlet to the particulate matter control device. This is because the dioxin/furan emission standard for lightweight aggregate kilns specifies rapid quench of combustion gas to 400 °F or less at the kiln exit. [222]

If your combustor is equipped with a wet scrubber as the initial particulate matter control device, you are not required to establish limits on combustion gas temperature at the scrubber. This is because wet scrubbers do not suspend collected particulate matter in the gas stream and gas temperatures are well below 400 °F in the scrubber.[223] Thus, scrubbers do not enhance surface-catalyzed formation reactions.

We proposed limits on the gas temperature at the inlet to a dry particulate matter control device (see 61 FR at 17424). Temperature control at this location is important because surface-catalyzed formation reactions can increase by a factor of 10 for every 150 °F increase in temperature within the window of 350 °F to approximately 700 °F. We received no adverse comments on the proposal, and thus, are adopting this compliance requirement in the final rule.

You must establish an hourly rolling average temperature limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages. See Part Five, Sections VII.B.1 and B.3 above for a discussion on the approach for calculating limits from comprehensive performance test data.

b. Good Combustion Practices. All hazardous waste combustors must use good combustion practices to control dioxin/furan emissions by: (1) Destroying dioxin/furan that may be present in feedstreams; (2) minimizing formation of dioxin/furan during combustion; and (3) minimizing dioxin/furan precursor that could enhance post-combustion formation reactions. As proposed, you must establish and continuously monitor limits on three key operating parameters that affect good combustion: (1) Maximum hazardous waste feedrate; (2) minimum temperature at the exit of each combustion chamber; and (3) residence time in the combustion chamber as indicated by gas flowrate or kiln production rate. We have also determined that you must establish appropriate monitoring requirements to ensure that the operation of each hazardous waste firing system is maintained. We discuss each of these parameters below.

i. Maximum Hazardous Waste Feedrate. You must establish and continuously monitor a maximum hazardous waste feedrate limit for pumpable and nonpumpable wastes. See 61 FR at 17422. An increase in waste feedrate without a corresponding increase in combustion air can cause inefficient combustion that may produce (or incompletely destroy) dioxin/furan precursors. You must also establish hazardous waste feedrate limits for each location where waste is fed.

One commenter suggests that there is no reason to limit the feedrate of each feedstream; a limit on the total hazardous waste feedrate to each combustion chamber would be a more appropriate control parameter. We concur in part. Limits are not established for each feedstream. Rather, limits apply to total and pumpable wastes feedrates for each feed location. Limits on pumpable wastes are needed because the physical form of the waste can affect the rate of oxygen demand and thus combustion efficiency. Pumpable wastes often will expose a greater surface area per mass of waste than nonpumpable wastes, thus creating a more rapid oxygen demand. If that demand is not satisfied, inefficient combustion will occur. We also note that these waste feedrate limit requirements are consistent with current RCRA permitting requirements for hazardous waste combustors.

As proposed, you must establish hourly rolling average limits for hazardous waste feedrate from comprehensive performance test data as the average of the highest hourly rolling averages for each run. See Part Five, Section VII.B.3 above for the rationale for this approach for calculating limits from comprehensive performance test data.

ii. Minimum Gas Temperature in the Combustion Zone. You must establish and continuously monitor limits on minimum gas temperature in the combustion zone of each combustion chamber irrespective of whether hazardous waste is fed into the chamber. See 61 FR at 17422. These limits are needed because, as combustion zone temperatures decrease, combustion efficiency can decrease resulting in increased formation of (or incomplete destruction of) dioxin/furan precursors.[224]

Monitoring combustion zone temperatures can be problematic, however, because the actual burning zone temperature cannot be measured at many units (e.g., cement kilns). For this reason, the BIF rule requires

[221] The temperature at the inlet to a cyclone separator used as a prefiltering process for removing larger particles is not limited. Cyclones do not suspend collected particulate matter in the gas stream. Thus, these devices do not have the same potential to enhance dioxin/furan formation as electrostatic precipitators and fabric filters.

[222] As discussed in Part Four, Section VIII, lightweight aggregate kilns can have extensive ducting between the kiln exit and the inlet to the fabric filter. If gas temperatures are limited at the inlet to the fabric filter, substantial dioxin/furan formation could occur in the ducting.

[223] For this reason, you are not required to document during the comprehensive performance test that gas temperatures in the wet scrubber are not greater than 400 °F. Also, we note that the 400 °F temperature limit of the dioxin/furan standard does not apply to wet scrubbers, but rather to the inlet to a dry particulate matter control device and the kiln exit of a lightweight aggregate kiln.

[224] See USEPA, ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standards'', February, 1999.

measurement of the ''combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible.'' See § 266.103(c)(1)(vii). In some cases, temperature is measured at a location quite removed from the combustion zone due to extreme temperatures and the harsh conditions at the combustion zone. We discussed this issue at proposal and indicated that we were concerned that monitoring at such remote locations may not accurately reflect changes in combustion zone temperatures. See 61 FR at 17423.

We requested comment on possible options to address the issue. Under one option, the final rule would have allowed the source to identify a parameter that correlates with combustion zone temperature and to provide data or information to support the use of that parameter in the operating record. Under another option, the final rule would have enabled regulatory officials on a case-specific basis to require the use of alternate parameters as deemed appropriate, or to determine that there is no practicable approach to ensure that minimum combustion chamber temperature is maintained (and what the recourse/consequence would be).

Some commenters recommend the status quo as identified by the BIF rule requirements for monitoring combustion zone temperature. These commenters suggest that more prescriptive requirements would not be implementable for cement kilns because use of the temperature measurement instrumentation would simply not be practicable under combustion zone conditions in a cement kiln. We agree that combustion zone temperature monitoring for certain types of sources requires some site-specific considerations (as evidenced in our second proposed option discussed above), and conclude that more specific language than that used in the BIF rule to address this issue would not be appropriate. Accordingly, we adopt language similar to the BIF rule in today's final rule. You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone of that chamber. You are required to identify the temperature measurement location and method in the comprehensive performance test plan, which is subject to Agency approval.

The temperature limit(s) apply to each combustion zone, as proposed. See 61 FR at 17423. For incinerators with a primary and secondary chamber, you must establish separate limits for the combustion zone in each chamber.[225] For kilns, you must establish separate temperature limits at each location where hazardous waste may be fired (e.g., the hot end where clinker is discharged; and the upper end of the kiln where raw material is fed). We also proposed to include temperature limits for hazardous waste fired at the midkiln. One commenter indicates that it is technically infeasible to measure temperature directly at the midkiln waste feeding location, however. We agree that midkiln gas temperature is difficult to measure due to the rotation of the kiln.[226] Thus, the final rule allows temperature measurement at the kiln back-end as a surrogate.

You must establish an hourly rolling average temperature limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages. See Part Five, Sections VII.B.1 and B.3 above for a discussion on the approach for calculating limits from comprehensive performance test data.

iii. Maximum Flue Gas Rate or Kiln Production Rate. As proposed, you must establish and continuously monitor a limit on maximum flue gas flowrate or, as a surrogate, kiln production rate. See 61 FR at 17423. Flue gas flowrates in excess of those that occur during comprehensive performance testing reduce the time that combustion gases are exposed to combustion chamber temperatures. Thus, combustion efficiency can decrease potentially causing an increase in dioxin/furan precursors and, ultimately, dioxin/furan emissions.[227]

For cement kilns and lightweight aggregate kilns, the rule allows the use of production rate as a surrogate for flue gas flowrate. This is the approach currently used for the BIF rule for these devices, given that flue gas flowrate correlates with production rate (e.g., feedrate of raw materials or rate of production of clinker or aggregate).

At proposal, however, we expressed concern that production rate may not relate well to flue gas flowrate in situations where the moisture content of the feed to the combustor changes dramatically. See 61 FR at 17423. Some commenters concur and also express concern that production rate is not a reliable surrogate for flue gas flowrate because changes in ambient temperature can cause increased heat rates and changes in operating conditions can result in variability in excess air rates. Based on an analysis of kiln processes, however, we conclude that these issues should not be a concern. With respect to changes in moisture content of the feed, kilns tend to have a steady and homogeneous waste and raw material processing system. Thus, the feed moisture content does not fluctuate widely, and variation in moisture content of the stack does not significantly affect gas flowrate.[228] Thus, production rate should be an adequate surrogate for gas flowrate for our purposes here.

You must establish a maximum gas flowrate or production rate limit as the average of the maximum hourly rolling averages for each run of the comprehensive performance test. See Part Five, Sections VII.B.3 above for the rationale for the approach for calculating limits from comprehensive performance test data.

iv. Operation of Each Hazardous Waste Firing System. You must recommend in the comprehensive performance test plan that you submit for review and approval operating parameters, limits, and monitoring approaches to ensure that each hazardous waste firing system continues to operate as efficiently as demonstrated during the comprehensive performance test.

It is important to maintain operation of the hazardous waste firing system at levels of the performance test to ensure that the same or greater surface area of the waste is exposed to combustion conditions (e.g., temperature and oxygen). Oxidation takes place more quickly and completely as the surface area per unit of mass of the waste increases. If the firing system were to degrade over time such that smaller surface area is exposed to combustion conditions, inefficient combustion could result leading potentially to an increase in dioxin/furan precursors.

[225] The temperature limits apply to a combustion chamber even if hazardous waste is not burned in the chamber for two reasons. First, an incinerator may rely on an afterburner that is fired with a fuel other than hazardous waste to ensure good combustion of organic compounds volatilized from hazardous waste in the primary chamber. Second, MACT controls apply to total emissions (except where the rule makes specific provisions), irrespective of whether they derive from burning hazardous waste or other material, or from raw materials.

[226] See USEPA. ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standards'', February, 1999, for further discussion.

[227] We note that an increase in gas flowrate can also adversely affect the performance of a dioxin/furan emission control device (e.g., carbon injection, catalytic oxidizer). Thus, gas flowrate is controlled for this reason as well.

[228] See USEPA, ''Final TSD for hazardous Waste Combustor MACT Standards, Volume IV: Compliance with the Hazardous Waste Combustor Standards'', February, 1999 for further discussion.

At proposal, we discussed establishing operating parameter limits only for minimum nozzle pressure and maximum viscosity of wastes fired using a liquid waste injection system. In developing the final rule, however, we determined that RCRA permit writers currently establish operating parameter limits on each waste firing system to ensure compliance with the RCRA destruction and removal efficiency (DRE) standard. We are continuing the DRE requirement as a MACT standard, and as discussed in Section VII.D.7 below, the DRE operating parameter limits are identical to those required to maintain good combustion practices for compliance with the dioxin/furan standard. This is because compliance with the DRE standard is ensured by maintaining good combustion practices. Consequently, we include a requirement to establish limits on operating parameters for each waste or fuel firing system as a measure of good combustion practices for the dioxin/furan standard as well to be technically correct and for purposes of completeness.[229] Because this requirement is identical to an existing RCRA requirement, it will not impose an incremental burden.

The rule does not prescribe generic operating parameters and how to identify limits because, given the variety of firing systems and waste and fuel properties, they are better defined on a site-specific basis. Examples of monitoring parameters for a liquid waste firing system would be, as proposed, minimum nozzle pressure established as an hourly rolling average based on the average of the minimum hourly rolling averages for each run, coupled with a limit on maximum waste viscosity. The viscosity limit could be monitored periodically based on sampling and analysis. Examples of monitoring parameters for a lance firing system for sludges could be minimum pressure established as discussed above, plus a limit on the solids content of the waste.

v. Consideration of Restrictions on Batch Size, Feeding Frequency, and Minimum Oxygen Concentration. We proposed site-specific limits on maximum batch size, batch feeding frequency, and minimum combustion gas oxygen concentration as additional compliance requirements to ensure good combustion practices. See 61 FR at 17423. After carefully considering all comments, and for the reasons discussed below, we conclude that the carbon monoxide and hydrocarbon emission standards assure use of good combustion practices during batch feed operations. This is because the carbon monoxide and hydrocarbon CEMS are reliable and continuous indicators of combustion efficiency. In situations where batch feed operating requirements may be needed to better assure good combustion practices, however, we rely on the permit writer's discretionary authority under § 63.1209(g)(2) to impose additional operating parameter limits on a site-specific basis.

Many hazardous waste combustors burn waste fuel in batches, such as metal drums or plastic containers. Some containerized waste can volatilize rapidly, causing a momentary oxygen-deficient condition that can result in an increase in emissions of carbon monoxide, hydrocarbon, and dioxin/furan precursors. We proposed to limit batch size, batch feeding frequency, and minimum combustion gas oxygen concentration to address this concern.

Commenters suggest that the proposed batch feed requirements (that would limit operations to the smallest batch, the longest time interval, and the maximum oxygen concentration demonstrated during the comprehensive performance test) would result in extremely conservative limits that would severely limit a source's ability to batch-feed waste. Given these concerns and our reanalysis of the need for these limits, we conclude that the carbon monoxide and hydrocarbon emission standards will effectively ensure good combustion practices for most batch feed operations. Consequently, the final rule does not require limits for batch feed operating parameters.

Carbon monoxide or hydrocarbon monitoring may not be adequate for all batch feed operations, however, to ensure good combustion practices are maintained. We anticipate that permitting officials will determine on a site-specific basis, typically during review of the initial comprehensive performance test plan, whether limits on one or more batch feed operating parameters need to be established to ensure good combustion practices are maintained. This review should consider your previous compliance history (e.g., frequency of automatic waste feed cutoffs attributable to batch feed operations that resulted in an exceedance of an operating limit or standard under RCRA regulations prior to the compliance date), together with the design and operating features of the combustor. Providing permitting officials the authority under § 63.1209(g)(2) to establish batch feed operating parameter limits only where warranted precludes the need to impose the limits on all sources.

Permitting officials may also determine that limits on batch feed operating parameters are needed for a particular source based on the frequency of automatic waste feed cutoffs after the MACT compliance date. Permitting officials would consider cutoffs that are attributable to batch feed operations and that result in an exceedance of an operating parameter limit or the carbon monoxide or hydrocarbon emission standard. Given that you must notify permitting officials if you have 10 or more automatic waste feed cutoffs in a 60-day period that result in an exceedance of an operating parameter limit or CEMS-monitored emission standard, permitting officials should take the opportunity to determine if batch feed operations contributed to the frequency of exceedances. If so, permitting officials should use the authority under § 63.1209(g)(2) to establish batch feed operating parameter limits.

Although we are not finalizing batch feed operating parameter limits, we anticipate that permitting officials will require you (during review and approval of the test plan) to simulate worst-case batch feed operating conditions during the comprehensive performance test when demonstrating compliance with the dioxin/furan and destruction and removal efficiency standards. It would be inappropriate for you to operate your batch feed system during the comprehensive performance test in a manner that is not considered worst-case, considering the types and quantities of wastes you may burn, and the range of values you may encounter during operations for batch feed-related operating parameters (e.g., oxygen levels, batch size and/or btu content, waste volatility, batch feeding frequency).

To ensure that the CEMS-monitored carbon monoxide and hydrocarbon emission standards ensure good combustion practices for batch feed operations, the final rule includes special requirements to ensure that ''out-of-span'' carbon monoxide and hydrocarbon CEMS readings are adequately accounted for. We proposed batch feed operating parameter limits in part because of concern that the carbon monoxide and hydrocarbon CEMS may not accurately calculate hourly rolling averages when you encounter emission concentrations that exceed the span of the CEMS. This is an important

[229] Because incomplete combustion of fuels (e.g., oil, coal, tires) could contribute to increased dioxin/furan emissions by producing dioxin/furan precursors, permitting official may require (during review and approval of the comprehensive performance test plan) that you establish limits on operating parameters for firing systems in addition to those firing hazardous waste.

consideration because batch feed operations have the potential to generate large carbon monoxide or hydrocarbon spikes—large enough at times to exceed the span of the detector. When this occurs, the CEMS in effect ''pegs out'' and the analyzer may only record data at the upper end of its span, while in fact carbon monoxide/hydrocarbon concentrations are much higher. In these situations, the true carbon monoxide/hydrocarbon concentration is not being used to calculate the hourly rolling average. This has two significant consequences of concern to us.[230]

First, you could experience a large carbon monoxide/hydrocarbon spike (as a result of feeding a large or highly volatile batch) which causes the monitor to ''peg out.'' In this situation, the CEMS would record carbon monoxide/hydrocarbon levels that are lower than actual levels. This under-reporting of emission levels would result in an hourly rolling average that is biased low. You may in fact be exceeding the emission standard even though the CEMS indicates you are in compliance. Second, if a carbon monoxide/hydrocarbon excursion causes an automatic waste feed cutoff, you may be allowed to resume hazardous waste burning much sooner than you would be allowed if the CEMS were measuring true hourly rolling averages. This is because you must continue monitoring operating parameter limits and CEMS-monitored emission standards after an automatic waste feed cutoff and you may not restart hazardous waste feeding until all limits and CEMS-monitored emission standards are within permissible levels.[231]

As explained in Part Five, Section VII.D.4 below, we have resolved these ''out of span'' concerns by including special provisions in today's rule for instances when you encounter hydrocarbon/carbon monoxide CEMS measurements that are above the upper span required by the performance specifications.[232] These special provisions require you to assume hydrocarbons and carbon monoxide are being emitted at levels of 500 ppmv and 10,000 ppmv, respectively, when any one minute average exceeds the upper span level of the detector.[233] Although we did not propose these special provisions, they are a logical outgrowth of the proposed batch feed requirements and commenters concerns about those requirements.

For the reasons discussed above, we conclude that national requirements for batch feed operating parameter limits are not warranted.

c. Activated Carbon Injection. If your combustor is equipped with an activated carbon injection system, you must establish and comply with limits on the following operating parameters: Good particulate matter control, minimum carbon feedrate, minimum carrier fluid flowrate or nozzle pressure drop, and identification of the carbon brand and type or the adsorption characteristics of the carbon. These are the same compliance parameters that we proposed. See 61 FR at 17424.

i. Good Particulate Matter Control. You must comply with the operating parameter limits for particulate matter control (see discussion in Section VII.D.6 below and § 63.1209(m)) because carbon injection controls dioxin/furan in conjunction with particulate matter control. Dioxin/furan is adsorbed onto carbon that is injected into the combustion gas, and the carbon is removed from stack gas by a particulate control device.

Although we proposed to require good particulate matter control as a control technique for dioxin/furan irrespective of whether carbon injection was used, commenters indicate that we have no data demonstrating the relationship between particulate matter and dioxin/furan emissions. Commenters further indicate that dioxin/furan occur predominately in the gas phase, not adsorbed onto particulate. We agree with commenters that hazardous waste combustors operating under the good combustion practices required by this final rule are not likely to have significant carbon particulates in stack gas (i.e., because carbonaceous particulates (soot) are indicative of poor combustion efficiency). Thus, unless activated carbon injection is used as a control technique, dioxin/furan will occur predominately in the gas phase. We therefore conclude that requiring good particulate control as a control technique for dioxin/furan is not warranted unless a source is equipped with activated carbon injection.[234]

ii. Minimum Carbon Feedrate. As proposed, you must establish and continuously monitor a limit on minimum carbon feedrate to ensure that dioxin/furan removal efficiency is maintained. You must establish an hourly rolling average feedrate limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages. See Part Five, Sections VII.B.1 and B.3 above for a discussion of the approach for calculating limits from comprehensive performance test data.

iii. Minimum Carrier Fluid Flowrate or Nozzle Pressure Drop. A carrier fluid, gas or liquid, is necessary to transport and inject the carbon into the gas stream. As proposed, you must establish and continuously monitor a limit on either minimum carrier fluid flowrate or pressure drop across the nozzle to ensure that the flow and dispersion of the injected carbon into the flue gas stream is maintained.

We proposed to require you to base the limit on the carbon injection manufacturer's specifications. One commenter notes that there are no manufacturer specifications for carrier gas flowrate or pressure drop. Therefore, the final rule allows you to use engineering information and principles to establish the limit for minimum carrier fluid flowrate or pressure drop across the injection nozzle. You must identify the limit and the rationale for deriving it in the comprehensive performance test plan that you submit for review and approval.

iv. Identification of Carbon Brand and Type or Adsorption Properties. You must either identify the carbon brand and type used during the comprehensive performance test and continue using that carbon, or identify the adsorption properties of that carbon and use a carbon having equivalent or better properties. This will ensure that the carbon's adsorption properties are maintained.[235]

We proposed to require you to use the same brand and type of carbon that was

[230] As explained in Part Five, Section VII.D.4 of the text, this concern is not limited to batch feed operations.

[231] A higher hourly rolling average carbon monoxide level that is above the standard requires a longer period of time to drop below the standard.

[232] The carbon monoxide CEMS upper span level for the high range is 3000 ppmv. The upper span level for hydrocarbon CEMS is 100 ppmv. (See Performance Specifications 4B and 8A in Appendix B, part 60, and the appendix to subpart EEE, part 63—Quality Assurance Procedures for Continuous Emissions Monitors Used for Hazardous Waste Combustors, Section 6.3).

[233] You would not be required to assume these one-minute values if you use a CEMS that meets the performance specifications for a range that is higher than the recorded one-minute average. In this case, the CEMS must meet performance specifications for the higher range as well as the ranges specified in the performance specifications in Appendix B, part 60. See § 63.1209 (a)(3) and (a)(4).

[234] We discuss below, however, that good particulate matter control is also required if a source is equipped with a carbon bed. This is to ensure that particulate control upstream of the carbon bed is maintained to performance test levels to prevent blinding of the bed and loss of removal efficiency.

[235] Examples of carbon properties include specific surface area, pore volume, average pore size, pore size distribution, bulk density, porosity, carbon source, impregnation, and activization procedure. See USEPA, ''Technical Support Document for HWC MACT Standards, Volume IV: Compliance with the HWC MACT Standards,'' July 1999.

used during the comprehensive performance test. Commenters object to this requirement and suggest that they should have the option of using alternative types of carbon that would achieve equivalent or better performance than the carbon used during the performance test. We concur, and the final rule allows you to document in the comprehensive performance test plan key parameters that affect adsorption and the limits you have established on those parameters based on the carbon to be used during the performance test. You may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties and conforms to the key sorbent parameters you have identified. You must include in the operating record written documentation that the substitute carbon will provide the same level of control as the original carbon.

d. Activated Carbon Bed. If your combustor is equipped with an activated carbon bed, you must establish and comply with limits on the following operating parameters: good particulate matter control; maximum age of each carbon bed segment; identification of carbon brand and type or adsorption properties, and maximum temperature at the inlet or exit of the bed. These are the same compliance parameters that we proposed. See 61 FR at 17424.

i. Good Particulate Matter Control. You must comply with the operating parameter limits for particulate matter control (see discussion in Section VII.D.6 below and § 63.1209(m)). If good control of particulate matter is not maintained prior to the inlet to the carbon bed, particulate matter could contaminate the bed and affect dioxin/furan removal efficiency. In addition, if particulate matter control is used downstream from the carbon bed, those controls must conform to good particulate matter control. This is because this ''polishing'' particulate matter control device may capture carbon-containing dioxin/furan that may escape from the carbon bed. Thus, the efficiency of this polishing control must be maintained to ensure compliance with the dioxin/furan emission standard.

ii. Maximum Age of Each Bed Segment. As proposed, you must establish a maximum age of each bed segment to ensure that removal efficiency is maintained. Because activated carbon removes dioxin/furan (and mercury) by adsorption, carbon in the bed becomes less effective over time as the active sites for adsorption become occupied. Thus, bed age is an important operating parameter.

At proposal, we requested comment on using carbon aging or some form of a breakthrough calculation to identify a limit on carbon age. See 61 FR at 17424. A breakthrough calculation would give a theoretical minimum carbon change-out schedule that you could use to ensure that breakthrough (i.e., the dramatic reduction in efficiency of the carbon bed due to too many active sites being occupied) does not occur.

Commenters indicate that carbon effectiveness depends on the carbon bed age and pollutant types and concentrations in the gas streams, and therefore a carbon change-out schedule should be based on a breakthrough calculation rather than carbon age. We agree that a breakthrough calculation may be a better measurement of carbon effectiveness, but it would be difficult to define generically for all situations. A breakthrough calculation could be performed only after experimentation determines the relationship between incoming adsorbed chemicals and the adsorption rate of the carbon. The adsorption rate of carbon could be determined experimentally, but the speciation of adsorbed chemicals in a flue gas stream is site-specific and may vary greatly at a given site over time.

We conclude that because carbon age contributes to carbon ineffectiveness, it serves as an adequate surrogate and is less difficult to implement on a national basis. Therefore, the rule requires sources to identify maximum carbon age as the maximum age of each bed segment during the comprehensive performance test. Carbon age is measured in terms of the cumulative volume of combustion gas flow through the carbon since its addition to the bed. Sources may use the manufacturer's specifications rather than actual bed age during the initial comprehensive performance test to identify the initial limit on maximum bed age. If you elect to use manufacturer's specifications for the initial limit on bed age, you must also recommend in the comprehensive performance test plan submitted for review and approval a schedule of dioxin/furan testing prior to the confirmatory performance test that will confirm that the manufacturer's specification of bed age is sufficient to ensure that you maintain compliance with the emission standard.

If either existing or new sources prefer to use some form of breakthrough calculation to establish maximum bed age, you may petition permitting officials under § 63.1209(g)(1)[236] to apply for an alternative monitoring scheme.

iii. Identification of Carbon Brand and Type or Adsorption Properties. You must either identify the carbon brand and type used during the comprehensive performance test and continue using that carbon, or identify the adsorption properties of that carbon and use a carbon having equivalent or better properties. This requirement is identical to that discussed above for activated carbon injection systems.

iv. Maximum Temperature at the Inlet or Exit of the Bed. You must establish and continuously monitor a limit on the maximum temperature at the inlet or exit of the carbon bed. This is because a combustion gas temperature spike can cause adsorbed dioxin/furan (and mercury) to desorb and reenter the gas stream. In addition, the adsorption properties of carbon are adversely affected at higher temperatures.

At proposal, we requested comment on whether it would be necessary to control temperature at the inlet to the carbon bed. See 61 FR at 17425. Some commenters support temperature control noting the concern that temperature spikes could cause desorption of dioxin/furan (and mercury). We concur, and are requiring you to establish a maximum temperature limit at the inlet or exit of the bed. We are allowing you the option of measuring temperature at either end of the bed to give you greater flexibility in locating the temperature continuous monitoring system. Monitoring temperature at either end of the bed should be adequate to ensure that bed temperatures are maintained at levels not exceeding those during the comprehensive performance test (because the temperature remains relatively constant across the bed).

You must establish an hourly rolling average temperature limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages. See Part Five, Sections VII.B.1 and B.3 above for a discussion of the approach for calculating limits from comprehensive performance test data.

e. Catalytic Oxidizer. If your combustor is equipped with a catalytic oxidizer, you must establish and comply with limits on the following operating parameters: minimum gas temperature

[236] We have incorporated the alternative monitoring provisions of § 63.8(f) in § 63.1209(g)(1) so that alternative monitoring provisions for nonCEMS CMS can be implemented by authorized States. The alternative monitoring provisions of § 63.1209(g)(1) do not apply to CEMS, however. The alternative monitoring provisions of § 63.8(f) continue to apply to CEMS because implementation of those provisions is not eligible to be delegated to States at this time.

at the inlet of the catalyst; maximum age in use; catalyst replacement specifications; and maximum flue gas temperature at the inlet of the catalyst. These are the same compliance parameters that we proposed. See 61 FR at 17425.

Catalytic oxidizers used to control stack emissions are similar to those used in automotive and industrial applications. The flue gas passes over catalytic metals, such as palladium and platinum, supported by an alumina washcoat on some metal or ceramic substrate. When the flue gas passes through the catalyst, a reaction takes place similar to combustion, converting hydrocarbons to carbon monoxide, then carbon dioxide. Catalytic oxidizers can also be ''poisoned'' by lead and other metals in the same manner as automotive and industrial catalysts.

i. Minimum Gas Temperature at the Inlet of the Catalyst. You must establish and continuously monitor a limit on the minimum flue gas temperature at the inlet of the catalyst to ensure that the catalyst is above light-off temperature. Light-off temperature is that minimum temperature at which the catalyst is hot enough to catalyze the reactions of hydrocarbons and carbon monoxide.

You must establish an hourly rolling average temperature limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages.

ii. Maximum Time In-Use. You must establish a limit on the maximum time in-use of the catalyst because a catalyst is poisoned and generally degraded over use. You must establish the limit based on the manufacturer's specifications.

iii. Catalytic Metal Loading, Maximum Space-Time, and Substrate Construct. When you replace a catalyst, the replacement must be of the same design to ensure that destruction efficiency is maintained. Consequently, the rule requires that you specify the following catalyst properties: Loading of catalytic metals; space-time; and monolith substrate construction.

Catalytic metal loading is important because, without sufficient catalytic metal on the catalyst, it does not function properly. Also, some catalytic metals are more efficient than others. Therefore, the replacement catalyst must have at least the same catalytic metal loading for each catalytic metal as the catalyst used during the comprehensive performance test.

Space-time, expressed in inverse seconds (s^{-1}), is defined as the maximum rated volumetric flow through the catalyst divided by the volume of the catalyst. This is important because it is a measure of the gas flow residence time and, hence, the amount of time the flue gas is in the catalyst. The longer the gas is in the catalyst, the more time the catalyst has to cause hydrocarbons and carbon monoxide to react. Replacement catalysts must have the same or lower space-time as the one used during the comprehensive performance test.

Substrate construction is also an important parameter affecting destruction efficiency of the catalyst. Three factors are important. First, substrates for industrial applications are typically monoliths, made of rippled metal plates banded together around the circumference of the catalyst. Ceramic monoliths and pellets can also be used. Because of the many types of substrates, you must use the same materials of construction, monolith or pellets and metal or ceramic, used during the comprehensive performance test as replacements. Second, monoliths form a honeycomb like structure when viewed from one end. The pore density (i.e., number of pores per square inch) is critical because the pores must be small enough to ensure intimate contact between the flue gas and the catalyst but large enough to allow unrestricted flow through the catalyst. Therefore, if you use a monolith substrate during the comprehensive performance test, the replacement catalyst must have the same pore density. Third, catalysts are supported by a washcoat, typically alumina. We require that replacement catalysts have the same type and loading of washcoat as was on the catalyst used during the comprehensive performance test.

iv. Maximum Flue Gas Temperature at the Inlet to the Catalyst. You must establish and continuously monitor a limit on maximum flue gas temperature at the inlet to the catalyst. Inlet temperature is important because sustained high flue gas temperature can result in sintering of the catalyst, degrading its performance. You must establish the limit as an hourly rolling average, based on manufacturer specifications.

In the proposed rule, we would have allowed a waiver from these operating parameter limits if you documented to the Administrator that establishing limits on other operating parameters would be more appropriate to ensure that the dioxin/furan destruction efficiency of the oxidizer is maintained after the performance test. See 61 FR at 17425. We are not finalizing a specific waiver for catalytic oxidizer parameters because you are eligible to apply for the same relief under the existing alternative monitoring provisions of § 63.1209(g)(1).

f. Dioxin/Furan Formation Inhibitor. If you feed a dioxin/furan formation inhibitor into your combustor as an additive (e.g., sulfur), you must: (1) Establish a limit on minimum inhibitor feedrate; and (2) identify either the brand and type of inhibitor or the properties of the inhibitor.

i. Minimum Inhibitor Feedrate. As proposed, you must establish and continuously monitor a limit on minimum inhibitor feedrate to help ensure that dioxin/furan formation reactions continue to be inhibited at levels of the comprehensive performance test. See 61 FR at 17425. You must establish an hourly rolling average feedrate limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages.

This minimum inhibitor feedrate pertains to additives to feedstreams, not naturally occurring inhibitors that may be found in fossil fuels, hazardous waste, or raw materials. At proposal, we requested comment on whether it would be appropriate to establish feedrate limits on the amount of naturally occurring inhibitors based on levels fed during the comprehensive performance test. See 61 FR at 17425. For example, it is conceivable that a source would choose to burn high sulfur fuel or waste only during the comprehensive performance test and then switch back to low sulfur fuels or waste after the test, thus reducing dioxin/furan emissions during the comprehensive test to levels that would not be maintained after the test. Commenters do not provide information on this matter and we do not have enough information on the types or effects of naturally occurring substances that may act as inhibitors. Therefore, the final rule does not establish limits on naturally occurring inhibitors. Permitting officials, however, may choose to address the issue of naturally occurring inhibitors when warranted during review of the comprehensive performance test plan. (See discretionary authority of permitting officials under § 63.1209(g)(2) to impose additional or alternative operating parameter limits on a site-specific basis.)

ii. Identification of Either the Brand and Type of Inhibitor or the Properties of the Inhibitor. As proposed, you must either identify the inhibitor brand and type used during the comprehensive performance test and continue using that inhibitor, or identify the properties of that inhibitor that affect its ability to inhibit dioxin/furan formation reactions and use an inhibitor having equivalent

or better properties. This requirement is identical to that discussed above for activated carbon systems.

2. What Are the Operating Parameter Limits for Mercury?

You must maintain compliance with the mercury emission standard by establishing and complying with limits on operating parameters. See § 63.1209(l). The following table summarizes these operating parameter limits. All sources must comply with the limits on mercury feedrate. Other operating parameter limits apply if you use the mercury control technique to which they apply.

Summary of Mercury Monitoring Requirements

Control Technique	Compliance Using	Limits From	Averaging Period	How Limit Is Established
Limit on Maximum Total Mercury Feedrate in all Feedstreams	Sampling and analysis of feedstreams for mercury concentration and a continuous monitoring system for feedstream flowrate[1]	Comprehensive performance test	12-hour	Average of the test run averages
Activated Carbon Injection	Monitoring requirements are the same as required for compliance assurance with the dioxin/furan emission standard. See Section VII.D.1 above.			
Activated Carbon Bed	Monitoring requirements are the same as required for compliance assurance with the dioxin/furan emission standard. See Section VII.D.1 above.			
Wet Scrubber	Monitoring requirements are the same as required for compliance assurance with the hydrochloric acid/chlorine gas emission standard. See Section VII.D.5 below.			

[1] This limit applies to all feedstreams, except natural gas, process air, and feedstreams from vapor recovery systems. See the discussion on maximum semivolatile metal and low volatile metal feedrate limits below in the text.

Mercury emissions from hazardous waste combustors are controlled by controlling the feedrate of mercury, wet scrubbing to remove soluble mercury species (e.g, mercuric chloride), and carbon adsorption. We discuss below the operating parameter limits that apply to each control technique. We also discuss why we are not limiting the temperature at the inlet to the dry particulate matter control device as a control parameter for mercury.

a. Maximum Mercury Feedrate. As proposed, you must establish and comply with a maximum total feedrate limit for mercury for all feedstreams. See 61 FR at 17428. The amount of mercury fed into the combustor directly affects emissions and the removal efficiency of emission control equipment. To establish and comply with the feedrate limit, you must sample and analyze and continuously monitor the flowrate of all feedstreams (including hazardous waste, raw materials, and other fuels and additives) except natural gas, process air, and feedstreams from vapor recovery systems for mercury content.[237] As proposed, you must establish a maximum 12-hour rolling average feedrate limit based on operations during the comprehensive performance test as the average of the test run averages.

Rather than establish mercury feedrate limits as the levels fed during the comprehensive performance test, you may request as part of your performance test plan to use the mercury feedrates and associated emission rates during the performance test to extrapolate to higher allowable feedrate limits and emission rates. See Section VII.D.3 below for a discussion of the rationale and procedures for obtaining approval to extrapolate metal feedrates.

In addition, you may use the performance test waiver provision under § 63.1207(m) to document compliance with the emission standard. Under that provision, you must monitor the total mercury feedrate from all feedstreams and the gas flowrate and document that the maximum theoretical emission concentration does not exceed the mercury emission standard. Thus, this is another compliance approach where you would not establish feedrate limits on mercury during the comprehensive performance test.

b. Wet Scrubbing. As proposed, if your combustor is equipped with a wet scrubber, you must establish and comply with limits on the same operating parameters (and in the same manner) that apply to compliance assurance with the hydrochloric acid/chlorine gas emission standard for wet scrubbers. See Section VII.D.5 below for a discussion of those parameters.

c. Activated Carbon Injection. As proposed, if your combustor is equipped with an activated carbon injection system, you must establish and comply with limits on the same operating parameters (and in the same manner) that apply to compliance assurance with the dioxin/furan emission standard for activated carbon injection systems.

d. Activated Carbon Bed. As proposed, if your combustor is equipped with an activated carbon bed, you must establish and comply with limits on the same operating parameters (and in the same manner) that apply to compliance assurance with the dioxin/furan emission standard for activated carbon beds.

e. Consideration of a Limit on Maximum Inlet Temperature to a Dry Particulate Matter Control Device. The final rule does not require you to control inlet temperature to a dry particulate

[237] See discussion in Section VII.D.3. below in the text for rationale for exempting these feedstreams for monitoring for mercury content.

matter air pollution control device to control mercury emissions. At proposal, we expressed concern that high inlet temperatures to a dry particulate matter control device could cause low mercury removal efficiency because mercury volatility increases with increasing temperature. See 61 FR at 17428. Therefore, we proposed to limit inlet temperatures to levels during the comprehensive performance test.

Commenters suggest that a maximum inlet temperature for dry particulate matter control devices is not needed because mercury is generally highly volatile within the range of inlet temperatures of all dry particulate matter control devices. We are persuaded by the commenters that inlet temperature to these devices is not critically important to mercury control, although temperature can potentially have an impact on the volatility of certain mercury species (e.g., oxides). We conclude that the other operating parameter limits are sufficient to ensure compliance with the mercury emission standard. In particular, we note that a limit on maximum inlet temperature to these control devices is required for compliance assurance with the dioxin/furan, semivolatile metal, and low volatile metal emission standards.

3. What Are the Operating Parameter Limits for Semivolatile and Low Volatile Metals?

You must maintain compliance with the semivolatile metal and low volatile metal emission standards by establishing and complying with limits on operating parameters. See § 63.1209(n). The following table summarizes these operating parameter limits. All sources must comply with the limits on feedrates of semivolatile metals, low volatile metals, and chlorine. Other operating parameter limits apply depending on the type of particulate matter control device you use.

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Summary of Semivolatile and Low Volatile Metals Monitoring Requirements

Control Technique	Compliance Using	Limit From	Averaging Period	How Limit Is Established
Good Particulate Matter Control	Monitoring requirements are the same as required for compliance assurance with the particulate matter standard. See Section VII.D.6 below.			
Limit on Maximum Inlet Temperature to Dry Particulate Matter Control Device	Continuous monitoring system (CMS)	Comprehensive performance test	1-hour	Avg of the test run averages
Limit on Maximum Total Semivolatile and Low Volatile Metal Feedrates from all Feedstreams	Sampling and analysis of feedstreams[1] for metals concentrations and a CMS for feedstream flowrate	Comprehensive performance test	12-hour	Avg of the average hourly rolling averages for each run
Limit on Maximum Total Pumpable Low Volatile Metal Feedrate from all Feedstreams	Sampling and analysis of feedstreams[1] for metals concentrations and a CMS for feedstream flowrate	Comprehensive performance test	12-hour	Avg of the average hourly rolling averages for each run
Limit on Maximum Total Chlorine Feedrate from all Feedstreams	Sampling and analysis of feedstreams[1] for chlorine and chloride concentrations and a CMS for feedstream flowrate	Comprehensive performance test	12-hour	Avg of the average hourly rolling averages for each run

[1] This limit applies to all feedstreams, except natural gas, process air, and feedstreams from vapor recovery systems. See the discussion on maximum semivolatile metal and low volatile metal feedrate limits below in the text.

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Semivolatile and low volatile metal emissions from hazardous waste combustors are controlled by controlling the feedrate of the metals and particulate matter emissions. In addition, because chlorine feedrate can affect the volatility of metals and thus metals levels in the combustion gas, and because the temperature at the inlet to the dry particulate matter control device can affect whether the metal is in the vapor (gas) or solid (particulate) phase, control of these parameters is also important to control emissions of these metals. We discuss below the operating parameter limits that apply to each control technique. We also discuss use of metal surrogates during performance testing, provisions for allowing extrapolation of performance test feedrate levels to calculate metal feedrate limits, and conditional waiver of the limit on low volatile metals in pumpable feedstreams.

a. Good Particulate Matter Control. As proposed, you must comply with the operating parameter limits for particulate matter control (see discussion in Section VII.D.6 below and § 63.1209(m)) because semivolatile and low volatile metals are primarily in the solid (particulate) phase at the gas temperature (i.e., 400°F or lower) of the particulate matter control device. Thus, these metals are largely removed from flue gas as particulate matter.

b. Maximum Inlet Temperature to Dry Particulate Matter Control Device. As proposed, you must establish and continuously monitor a limit on the maximum temperature at the inlet to a dry particulate matter control device. Although most semivolatile and low volatile metals are in the solid, particulate phase at the temperature at the inlet to the dry control device mandated by today's rule (i.e., 400°F or lower), some species of these metals remain in the vapor phase. We are requiring a limit on maximum temperature at the inlet to the control device to ensure that the fraction of these metals that are volatile (and thus not controlled by the particulate matter control device) does not increase during operations after the comprehensive performance test.

As proposed, you must establish an hourly rolling average temperature limit based on operations during the comprehensive performance test. The hourly rolling average limit is established as the average of the test run averages. See Part Five, Sections VII.B.1 and B.3 above for a discussion of the approach for calculating limits from comprehensive performance test data.

Commenters suggest that this limit may conflict with the maximum temperature limit at the inlet to the particulate matter control device that is also required for compliance assurance with the dioxin/furan emission standard. We do not understand commenters' concern. If for some reason the dioxin/furan and metals emissions tests are not conducted simultaneously, the governing temperature limit will be the lower of the limits established from the separate tests. This provides compliance assurance for both standards.

c. Maximum Semivolatile and Low Volatile Metals Feedrate Limits. You must establish limits on the maximum total feedrate of both semivolatile metals and low volatile metals from all feedstreams at levels fed during the comprehensive performance test. Metals feedrates are related to emissions in that, as metals feedrates increase at a source, metals emissions increase. See Part Four, Section II.A above for discussion on the relationship between metals feedrates and emissions. Thus, metals feedrates are an important control technique.

For low volatile metals, you must also establish a limit on the maximum total feedrate of pumpable liquids from all feedstreams. The rule requires a separate limit for pumpable feedstreams because metals present in pumpable feedstreams may partition between the combustion gas and bottom ash (or kiln product) at a higher rate than metals in nonpumpable feedstreams (i.e., low volatile metals in pumpable feedstreams tend to partition primarily to the combustion gas). The rule does not require a separate limit for semivolatile metals in pumpable feedstreams because partitioning between the combustion gas and bottom ash or product for these metals does not appear to be affected by the physical state of the feedstream.[238]

To establish and comply with the feedrate limits, you must sample and analyze and continuously monitor the flowrate of all feedstreams (including hazardous waste, raw materials, and other fuels and additives) except natural gas, process air, and feedstreams from vapor recovery systems for semivolatile and low volatile metals content. As proposed, you must establish maximum 12-hour rolling average feedrate limits based on operations during the comprehensive performance test as the average of the test run averages.

i. Use of Metal Surrogates. You may use one metal within a volatility group as a surrogate during comprehensive performance testing for other metals in that volatility group. For example, you may use chromium as a surrogate during the performance test for all low volatile metals. Similarly, you may use lead as a surrogate for cadmium, the other semivolatile metal. This is because the metals within a volatility group have generally the same volatility. Thus, they will generally be equally difficult to control with an emissions control device.

In addition, you may use either semivolatile metal as a surrogate for any low volatile metal because semivolatile metals will be more difficult to control than low volatile metals.[239] This will help alleviate concerns regarding the need to spike each metal during comprehensive performance testing. If you want to spike metals, you need not spike each metal to comply with today's rule but only one metal within a volatility group (or potentially one semivolatile metal for both volatility groups).

ii. Extrapolation of Performance Test Feedrate Levels to Calculate Metal Feedrate Limits.[240] You may request under § 63.1209(n)(2)(ii) to use the metal feedrates and emission rates associated with the comprehensive performance test to extrapolate feedrate limits and emission rates at levels higher than demonstrated during the performance test. Extrapolation can be advantageous because it avoids much of the spiking that sources normally undertake during compliance testing and the associated costs, risks to operating and testing personnel, and environmental loading from emissions.

Under an approved extrapolation approach, you would be required to feed metals at no less than normal rates to narrow the amount of extrapolation requested. Further, we expect that some spiking would be desired to increase confidence in the measured, performance test feedrate levels that will be used to project feedrate limits (i.e., the errors associated with sampling and analyzing heterogeneous feedstreams can be minimized by spiking known quantities). Extrapolation approaches that request feedrate limits that are significantly higher than the historical range of

[238] See USEPA., ''Technical Support Document for HWC MACT Standards, Volume IV: Compliance with the MACT Standards,'' February 1998.

[239] This is because a greater portion of semivolatile metals volatilize in the combustion chamber and condenses in the flue gas on small particulates or as fume. The major portion of low volatile metals in flue gas are entrained on larger particulates (rather than condensing from volatile species) and are thus easier to remove with a particulate control device.

[240] Although this extrapolation discussion is presented in context of semivolatile and low volatile metal feedrates, similar provisions could be implemented for mercury feedrates.

feedrates should not be approved. Extrapolated feedrate limits should be limited to levels within the range of the highest historical feedrates for the source. We are taking this policy position to avoid creating an incentive to burn wastes with higher than historical levels of metals. Metals are not destroyed by combustion but rather are emitted as a fraction of the amount fed to the combustor. If you want to burn wastes with higher than historical levels of metals, you must incur the costs and address the hazards to plant personnel and testing crews associated with spiking metals into your feedstreams during comprehensive performance testing.

Although we also investigated downward interpolation (i.e., between the measured feedrate and emission level and zero), we are concerned that downward interpolation may not be conservative. Our data indicates that system removal efficiency can decrease as metal feedrate decreases. Thus, actual emissions may be higher than emissions projected by interpolation for lower feedrates. Consequently, we are not allowing downward interpolation.

We are not specifying an extrapolation methodology to provide as much flexibility as possible to consider extrapolation methodologies that would best meet individual needs. We have investigated extrapolation approaches [241] and discussed in the May 1997 NODA a statistical extrapolation methodology. Commenters raise concerns, however, about defining a single acceptable extrapolation method. They note that other methods might be developed in the future that prove to be better, especially for a given source. We agree that the approach discussed in the NODA may be too inflexible and are not promulgating it today.[242] Consequently, today's rule does not specify a single method but allows you to recommend a method for review and approval by permitting officials.

Your recommended extrapolation methodology must be included in the performance test plan. See § 63.1207(f)(1)(x). Permitting officials will review the methodology considering in particular whether: (1) Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels, whether some level of spiking would be appropriate depending on the heterogeneity of the waste, and whether the physical form and species of spiked material is appropriate); and (2) the requested, extrapolated feedrates are warranted considering historical metal feedrate data.

We received comments both in favor of and in opposition to metals extrapolation and interpolation. Those in favor suggest extrapolation would simplify the comprehensive performance test procedure, reduce costs, and decrease emissions during testing. Those in opposition are concerned about: (1) Whether there is a predictable relationship between feedrates and emission rates; (2) the possibility of higher overall metals loading to the environment over the life of the facility (i.e., because higher feedrate limits would be relatively easy to obtain); (3) the difficulty in defining a ''normal'' feedrate for facilities with variable metal feeds; and (4) whether all conditions influencing potential metals emissions, such as combustion temperature and metal compound speciation, could be adequately considered.

Given the pros and cons associated with various extrapolation methodologies and policies, we are still concerned that sources would be able to: (1) Feed metals at higher rates without a specific compliance demonstration of the associated metals emissions; and (2) obtain approval to feed metals at higher levels than normal, even though all combustion sources should be trying to minimize metals feedrates. However, because the alternative is metal spiking (as evidenced in facility testing for BIF compliance) and metal spiking is a significant concern as well, we find that the balance is better struck by allowing, with site-specific review and where warranted approval, extrapolation as a means to reduce unnecessary emissions, reduce unnecessary costs incurred by facilities, and better protect the health of testing personnel during performance tests.

iii. Conditional Waiver of Limit on Low Volatile Metals in Pumpable Feedstreams. Commenters indicate that they may want to base feedrate limits only on the worst-case feedstream—pumpable hazardous waste. The feedrate limit would be based only on the feedrate of the pumpable hazardous waste during the comprehensive performance test, even though nonpumpable feedstreams would be contributing some metals to emissions. In this situation, commenters suggest that separate feedrate limits for total and pumpable feedstreams would not be needed. We agree that if you define the total feedstream feedrate limit as the pumpable feedstream feedrate during the performance test, dual limits are not required. The feedrate of metals in total feedstreams must be monitored and shown to be below the pumpable feedstream-based limit. See § 63.1209(n)(2)(C).

iv. Response to other Comments. We discuss below our response to several other comments: (1) Recommendation for national uniform feedrate limits; (2) concerns that feedstream monitoring is problematic; and (3) recommendations that monitoring natural gas and vapor recovery system feedstreams is unnecessary.

A commenter states that nationally uniform feedrate limits are needed for metals and chlorine and that any other approach would be inconsistent with the CAA. The commenter stated that hazardous waste combustion device operators should not be allowed to self-select any level of toxic metal feedrate just because they can show compliance with the MACT standard. We believe that standards prescribing national feedrate limits on metals or chlorine are not necessary to ensure MACT control of metals and hydrochloric acid/chlorine gas and may be overly restrictive. Emissions of metals and hydrochloric acid/chlorine gas are controlled by controlling the feedrate of metals and chlorine, and emission control devices. In developing MACT standards for a source category, if we can identify emission levels that are being achieved by the best performing sources using MACT control, we generally establish the MACT standard as an emission level rather than prescribed operating limits (e.g., feedrate limits). This approach is preferable because it gives the source the option of determining the most cost-effective measures to comply with the standard. Some sources may elect to comply with the emission standards using primarily feedrate control, while others may elect to rely primarily on emission controls. Under either approach, the emission levels are equivalent to those being achieved by the best performing existing sources. Other factors that we considered in determining to express the standards as an emission level rather than feedrate limits include: (1) There is not a single, universal correlation factor between feedrate and metal emissions to use to determine a national feedrate that would be equivalent to the emission levels achieved by the best performing sources; (2) emission standards communicate better to the public that meaningful controls are being applied because the hazardous waste combustor

[241] See USEPA, ''Draft Technical Support Document for HWC MACT Standards (NODA), Volume III: Evaluation of Metal Emissions Database to Investigate Extrapolation and Interpolation Issues,'' April 1997.

[242] We plan to develop guidance on approaches that provide greater flexibility.

emission standards can be compared to standards for other waste combustors (e.g., municipal and medical waste combustors) and combustion devices; and (3) CEMS, the ultimate compliance assurance tool that we encourage sources to use,[243] are incompatible with standards expressed as feedrate limits.

Another commenter is concerned that feedrate monitoring of highly heterogeneous waste streams is problematic and analytical turnaround times can be rather long. The commenter suggests that alternatives beyond feedstream monitoring (such as predictive emissions monitoring) should be allowed. Although we acknowledge that there may be difficulties in monitoring the feedrate of metals or chlorine in certain waste streams, there generally is no better way to assure compliance with these standards other than using CEMS. Predictive modeling appears to introduce unnecessarily some greater compliance uncertainty than feedstream testing. Thus, we conclude that feedstream monitoring is a necessary monitoring tool if a multimetals CEMS is not used. (We also note that feedstream monitoring under MACT will not be substantially more burdensome or problematic than the requirements now in place under RCRA regulations.)

In addition, another commenter suggests that sources should not have to monitor metals and chlorine in natural gas feedstreams because it is impractical and levels are low and unvarying. The commenter suggests that sources should be allowed to use characterization data from natural gas vendors. We agree that the cost and possible hazards of monitoring natural gas for metals and chlorine is not warranted because our data shows metals are not present at levels of concern. Therefore, you are not required to monitor metals and chlorine levels in natural gas feedstreams. However, you must document in the comprehensive performance test plan the expected levels of these constituents and account for the expected levels in documenting compliance with feedrate limits (e.g., by assuming worst-case concentrations and monitoring the natural gas flowrate). See § 63.1209(c)(5).

Finally, some commenters are concerned that feedstreams from vapor recovery systems (e.g., waste fuel tank and container emissions) are difficult, costly, and often dangerous to monitor frequently for metals and chlorine levels. Particularly because of some of the safety issues concerned, the rule does not require continuous monitoring of metals and chlorine for feedstreams from vapor recovery systems. However, as is the case for natural gas, you must document in the comprehensive performance test plan the expected levels of these constituents and account for the expected levels in documenting compliance with feedrate limits.

d. Maximum Chlorine Feedrate. As proposed, you must establish a limit on the maximum feedrate for total chlorine (both organic and inorganic) in all feedstreams based on the level fed during the comprehensive performance test. A limit on maximum chlorine feedrate is necessary because most metals are more volatile in the chlorinated form. Thus, for example, more low volatile metals may report to the combustion gas as a vapor than would be otherwise be entrained in the combustion gas absent the presence of chlorine. In addition, the vapor form of the metal is more difficult to control. Although most semivolatile and low volatile metal species are in the particulate phase at gas temperatures at the inlet to the particulate matter control device, semivolatile metals that condense from the vapor phase partition to smaller particulates and are more difficult to control than low volatile metals that are emitted in the form of entrained, larger particulates.

To establish and comply with the feedrate limit, you must sample and analyze, and continuously monitor the flowrate, of all feedstreams (including hazardous waste, raw materials, and other fuels and additives) except natural gas, process air, and feedstreams from vapor recovery systems for total chlorine content. As proposed, you must establish a maximum 12-hour rolling average feedrate limit based on operations during the comprehensive performance test as the average of the test run averages.

Commenters suggest that chlorine feedrate limits are not needed for sources with semivolatile and low volatile metal feedrates, when expressed as maximum theoretical emission concentrations, less than the emission standard. We agree. In this situation, you would be eligible for the waiver of performance test under § 63.1207(m). The requirements of that provision (e.g., monitor and record metals feedrates and gas flowrates to ensure that metals feedrate, expressed as a maximum theoretical emission concentration, does not exceed the emission standard) apply in lieu of the operating parameter limits based on performance testing discussed above. We note, however, that you would still need to establish a maximum feedrate limit for total chlorine as an operating parameter limit for the hydrochloric acid/chlorine gas emission standard (discussed below), unless you also qualified for a waiver of that emission standard under § 63.1207(m).

4. What Are the Monitoring Requirements for Carbon Monoxide and Hydrocarbon?

You must maintain compliance with the carbon monoxide and hydrocarbon emission standards using continuous emissions monitoring systems (CEMS). In addition, you must use an oxygen CEMS to correct continuously the carbon monoxide and hydrocarbon levels recorded by their CEMS to 7 percent oxygen.

As proposed, the averaging period for carbon monoxide and hydrocarbon CEMS is a one-hour rolling average updated each minute. This is consistent with current RCRA requirements and commenters did not recommend an alternative averaging period.

We also are promulgating performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMS. The carbon monoxide and oxygen CEMS performance specifications are codified as Performance Specification 4B in appendix B, part 60. This performance specification is the same as the specification currently used for BIFs in appendix IX, part 266. It also is very similar to existing appendix B, part 60 Performance Specifications 3 (for oxygen) and 4A (for carbon monoxide). New specification 4B references many of the provisions of Specifications 3 and 4A.

The hydrocarbon CEMS performance specification is codified as Performance Specification 8A in appendix B, part 60. This specification is also identical to the specification currently used for BIFs in section 2.2 of appendix IX, part 266, with one exception. We deleted the quality assurance section and placed it in the appendix to subpart EEE of part 63 promulgated today to be consistent with our approach to part 60 performance specifications.

We discuss below several issues pertaining to monitoring with these CEMS: (1) The requirement to establish site-specific alternative span values in some situations; (2) consequences of exceeding the span value of the CEMS; and (3) the need to adjust the oxygen correction factor during startup and shutdown.

a. When Are You Required to Establish Site-Specific Alternative Span

[243] As discussed previously in the text, feedrate limits as a compliance tool can be problematic for difficult to sample or analyze feedstreams. Further, the emissions resulting from a given feedrate level may increase (or decrease) over time, providing uncertainty about actual emissions.

Values? As proposed, if you normally operate at an oxygen correction factor of more than 2 (e.g., a cement kiln monitoring carbon monoxide in the by-pass duct), you must use a carbon monoxide or hydrocarbon CEMS with a span proportionately lower than the values prescribed in the performance specifications relative to the oxygen correction factor at the CEMS sampling point. See the appendix to Subpart EEE, part 63: Quality Assurance Procedures for Continuous Emissions Monitors Used for Hazardous Waste Combustors.

This requirement arose from our experience with implementing the BIF rule when we determined that the prescribed span values for the carbon monoxide and hydrocarbon CEMS may lead to high error in corrected emission values due to the effects of making the oxygen correction. For example, a cement kiln may analyze for carbon monoxide emissions in the by-pass duct with oxygen correction factors on the order of 10. At the low range of the carbon monoxide CEMS span—200 ppm as prescribed by Performance Specification 4B—with an acceptable calibration drift of three percent, an error of 6 ppm is the result. Accounting for the oxygen correction factor of 10, however, drives the error in the measurement due to calibration drift up to 60 ppm. This is more than half the carbon monoxide emission standard of 100 ppm and is not acceptable. At carbon monoxide readings close to the 100 ppm standard, true carbon monoxide levels may be well above or well below the standard.

Consider the same example under today's requirement. For an oxygen correction factor of 10, the low range span for the carbon monoxide CEMS must be 200 divided by 10, or 20 ppm. The allowable calibration drift of three percent of the span allows an error of 0.6 ppm at 20 ppm. Applying an oxygen correction factor of 10 results in an absolute calibration drift error of 6ppm at an oxygen-corrected carbon monoxide reading of 200.

b. What Are the Consequences of Exceeding the Span Value for Carbon Monoxide and Hydrocarbon CEMS? If you do not elect to use a carbon monoxide CEMS with a higher span value of 10,000 ppmv and a hydrocarbon CEMS with a higher span value of 500 ppmv, you must configure your CEMS so that a one-minute carbon monoxide value reported as 3,000 ppmv or greater must be recorded (and used to calculate the hourly rolling average) as 10,000 ppmv, and a one-minute hydrocarbon value reported as 200 ppmv or greater must be recorded as 500 ppmv.

If you elect to use a carbon monoxide CEMS with a span range of 0–10,000 ppmv, you must use one or more carbon monoxide CEMS that meet the Performance Specification 4B for three ranges: 0–200 ppmv; 1–3,000 ppmv; and 0–10,000 ppmv. Specification 4B provides requirements for the first two ranges. For the (optional) high range of 0–10,000 ppmv, the CEMS must also comply with Performance Specification 4B, except that the calibration drift must be less than 300 ppmv and calibration error must be less than 500 ppmv. These values are based on the allowable drift and error, expressed as a percentage of span, that the specification requires for the two lower span levels.

If you elect to use a hydrocarbon CEMS with a span range of 0–500 ppmv, you must use one or more hydrocarbon CEMS that meet Performance Specification 8A for two ranges: 0–100 ppmv, and 0–500 ppmv. Specification 8A provides requirements for the first range. For the (optional) high range of 0–500 ppmv, the CEMS must also comply with Performance Specification 8A, except: (1) The zero and high-level daily calibration gas must be between 0 and 100 ppmv and between 250 and 450 ppmv, respectively; (2) the strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEMS measurement range and must have a resolution of 2.5 ppmv; (3) the CEMS calibration must not differ by more than ±15 ppmv after each 24 hour period of the seven day test at both zero and high levels; (4) the calibration error must be no greater than 25 ppmv; and (5) the zero level, mid-level, and high level values used to determine calibration error must be in the range of 0–200 ppmv, 150–200 ppmv, and 350–400 ppmv, respectively. These requirements for the optional high range (0–500 ppmv) are derived proportionately from the requirements in Specification 8A for the lower range (0–100 ppmv).

The rule provides this requirement because we are concerned that, when carbon monoxide and hydrocarbon monitors record a one-minute value at the upper span level, the actual level of carbon monoxide or hydrocarbons may be much higher (i.e., these CEMS often ''peg-out'' at the upper span level). This has two inappropriate consequences. First, the source may actually be exceeding the carbon monoxide or hydrocarbon standard even though the CEMS indicates that it is not. Second, if the carbon monoxide or hydrocarbon hourly rolling average were to exceed the standard, triggering an automatic waste feed cutoff, the emission level may drop back below the standard much sooner than it otherwise would if the actual one-minute average emission levels were recorded (i.e., rather than one-minute averages pegged at the upper span value). Thus, this diminishes the economic disincentive for incurring automatic waste feed cutoffs of not being able to restart the hazardous waste feed until carbon monoxide and hydrocarbon levels are below the standard.

We considered applying these ''out-of-span'' requirements when any recorded value (i.e., any value recorded by the CEMS on a frequency of at least every 15 seconds), rather than one-minute average values, exceeded the upper span level. Commenters point out, however, that CEMS may experience short-term electronic glitches that cause the monitored output to spike for a very short time period. We concur, and conclude that we should be concerned only about one-minute average values because these short-term electronic glitches (that are not caused by emission excursions) could result in an undesirable increase in automatic waste feed cutoffs.

You may prefer to use carbon monoxide or hydrocarbon CEMS that have upper span values between 3,000 and 10,000 ppmv and between 100 and 500 ppmv, respectively. If you believe that you would not have one-minute average carbon monoxide or hydrocarbon levels as high as 10,000 ppmv and 500 ppmv, respectively, you may determine that it would be less expensive to use monitors with lower upper span levels (e.g., you may be able to use a single carbon monoxide CEMS to meet performance specifications for all three spans—the two lower spans required by Specification 4B, and a higher span (but less than 10,000)). You must still record, however, any one-minute average carbon monoxide or hydrocarbon levels that are at or above the span as 10,000 ppmv and 500 ppmv, respectively.

c. How Is the Oxygen Correction Factor Adjusted during Startup and Shutdown? You must identify in your Startup Shutdown, and Malfunction Plan a projected oxygen correction factor to use during periods of startup and shutdown. The projected oxygen correction factor should be based on normal operations. See § 63.1206(c)(2)(iii). The rule provides this requirement because the oxygen concentration in the combustor can exceed 15% during startup and shutdown, causing the correction factor to increase exponentially from the normal value. Such large correction factors result in corrected carbon

monoxide and hydrocarbon levels that are inappropriately inflated.

5. What Are the Operating Parameter Limits for Hydrochloric Acid/Chlorine Gas?

You must maintain compliance with the hydrochloric acid/chlorine gas emission standard by establishing and complying with limits on operating parameters. See § 63.1209(o). The following table summarizes these operating parameter limits. All sources must comply with the maximum chlorine feedrate limit. Other operating parameter limits apply depending on the type of hydrochloric acid/chlorine gas emission control device you use.

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Summary of Hydrochloric Acid/Chlorine Gas Monitoring Requirements

Control Technique	Compliance Using	Limits From	Averaging Period	How Limit Is Established
Limit on Maximum Chlorine Feedrate	Sampling and analysis of feedstreams[1] for chlorine (organic and inorganic) and a continuous monitoring system (CMS) for feedstream flowrate	Comprehensive performance test	12-hour	Avg of the average hourly rolling averages for each run
Wet Scrubber	CMS for maximum flue gas flowrate or kiln production rate	Comprehensive performance test	1-hour	Avg of the maximum hourly rolling averages for each run
	High energy scrubbers: CMS for minimum pressure drop across scrubber	Comprehensive performance test	1-hour	Avg of the test run averages
	Low energy scrubbers: CMS for minimum pressure drop across scrubber	Manufacturer specifications	1-hour	n/a
	Low energy scrubbers: CMS for minimum liquid feed pressure	Manufacturer specifications	1-hour	n/a
	CMS for minimum liquid pH	Comprehensive performance test	1-hour	Avg of the test run averages
	CMS for limit on minimum scrubber liquid flowrate and maximum flue gas flowrate or CMS for limit on minimum liquid/gas ratio	Comprehensive performance test	1-hour	Avg of the test run averages
Dry Scrubber[2]	CMS for minimum sorbent feedrate	Comprehensive performance test	1-hour	Avg of the test run averages
	CMS for minimum carrier fluid flowrate or nozzle pressure drop	Manufacturer specification	1-hour	n/a
	Identification of sorbent brand and type or adsorption properties	Comprehensive performance test	n/a	Same properties based on manufacturer's specifications

[1] This limit applies to all feedstreams, except natural gas, process air, and feedstreams from vapor recovery systems. See the discussion in Section VII.D.3 above in the text for the rationale for these exceptions.

[2] A CMS for gas flowrate or kiln production rate is also required with the same provisions as required for that compliance parameter for wet scrubbers.

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Hydrochloric acid/chlorine gas emissions from hazardous waste combustors are controlled by controlling the feedrate of total chlorine (organic and inorganic) and either wet or dry scrubbers. We discuss below the operating parameter limits that apply to each control technique.

a. Maximum Chlorine Feedrate Limit. As proposed, you must establish a limit on the maximum feedrate of chlorine, both organic and inorganic, from all feedstreams based on levels fed during the comprehensive performance test. Chlorine feedrate is an important emission control technique because the amount of chlorine fed into a combustor directly affects emissions of hydrochloric acid/chlorine gas. To establish and comply with the feedrate limit, you must sample and analyze, and continuously monitor the flowrate, of all feedstreams (including hazardous waste, raw materials, and other fuels and additives) except natural gas, process air, and feedstreams from vapor recovery systems for chlorine content.[244] Also as proposed, you must establish a maximum 12-hour rolling average feedrate limit based on operations during the comprehensive performance test as the average of the test run averages.

One commenter states that a chlorine feedrate is not necessary for cement kilns because cement kilns have an inherent incentive to control chlorine feedrates: to avoid operational problems such as the formation of material rings in the kiln or alkali-chloride condensation on the walls. Although we understand that cement kilns must monitor chlorine feedrates for operational reasons, several cement kilns in our data base emit levels of hydrochloric acid/chlorine gas at levels above today's emissions standard. We conclude, therefore, that the operational incentive to limit chlorine feedrates is not adequate to ensure compliance with the hydrochloric acid/chlorine gas emission standard.

b. Wet Scrubbers. If your combustor is equipped with a wet scrubber, you must establish, continuously monitor, and comply with limits on the following operating parameters:

i. Maximum Flue Gas Flowrate or Kiln Production Rate. As proposed, you must establish a limit on maximum flue gas flowrate or kiln production rate as a surrogate. See 61 FR at 17433. Gas flowrate is a key parameter affecting the control efficiency of a wet scrubber (and any emissions control device). As gas flowrate increases, control efficiency generally decreases unless other operating parameters are adjusted to accommodate the increased flowrate. Cement kilns and lightweight aggregate kilns may establish a limit on maximum production rate (e.g., raw material feedrate or clinker or aggregate production rate) in lieu of a maximum gas flowrate given that production rate directly relates to flue gas flowrate.

As proposed, you must establish a maximum gas flowrate or production rate limit as the average of the maximum hourly rolling averages for each run of the comprehensive performance test.

We did not receive adverse comment on this compliance parameter.

ii. Minimum Pressure Drop Across the Scrubber. You must establish a limit on minimum pressure drop across the scrubber. If your combustor is equipped with a high energy scrubber (e.g., venturi, calvert), you must establish an hourly rolling average limits based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages.

If your combustor is equipped with a low energy scrubber (e.g., spray tower), you must establish a limit on minimum pressure drop based on the manufacturer's specification. You must comply with the limit on an hourly rolling average basis.

Pressure drop across a wet scrubber is an important operating parameter because it is an indicator of good mixing of the two fluids, the scrubber liquid and the flue gas. A low pressure drop indicates poor mixing and, hence, poor efficiency. A high pressure drop indicates good removal efficiency.

One commenter states that wet scrubber pressure drop is not an important parameter for packed-bed, low energy wet scrubbers. The commenter states that the performance of a packed-bed scrubber is based on good liquid-to-gas contacting. Thus, performance is dependent on packing design and scrubber fluid flow. In addition, the commenter states that scrubber liquid flow rate (and recirculation rate and make-up water flow rate) are adequate for assuring proper scrubber operation. We note that for many types of low energy wet scrubbers, pressure drop can be a rough indicator of scrubber liquid and flue gas contacting. Thus, although it is not a critical parameter, the minimum pressure drop of a low energy scrubber should still be monitored and complied with on a continuous basis.

Because pressure drop for a low energy scrubber (e.g., spray towers, packed beds, or tray towers) is not as important as for a high energy scrubber to maintain performance, however, the rule requires you to establish a limit on the minimum pressure drop for a low energy scrubber based on manufacturer specifications, rather than levels demonstrated during compliance testing. You must comply with this limit on an hourly rolling average basis. The pressure drop for high energy wet scrubbers, such as venturi or calvert scrubbers, however, is a key operating parameter to ensure the scrubber maintains performance. Accordingly, you must base the minimum pressure drop for these devices on levels achieved during the comprehensive test, and you must establish an hourly rolling average limit.

iii. Minimum Liquid Feed Pressure. You must establish a limit on minimum liquid feed pressure to a low energy scrubber. The limit must be based on manufacturer's specifications and you must comply with it on an hourly rolling average basis.

The rule requires a limit on liquid feed pressure because the removal efficiency of a low energy wet scrubber can be directly affected by the atomization efficiency of the scrubber. A drop in liquid feed pressure may be an indicator of poor atomization and poor scrubber removal efficiency. We are not requiring a limit on minimum liquid feed pressure for high energy scrubbers because liquid flow rate rather than feed pressure is the dominant operating parameter for high energy scrubbers.

We acknowledge, however, that not all wet scrubbers rely on atomization efficiency to maintain performance. If manufacturer's specifications indicate that atomization efficiency is not an important parameter that controls the efficiency of your scrubber, you may petition permitting officials under § 63.1209(g)(1) to waive this operating parameter limit.

iv. Minimum Liquid pH. You must establish dual ten-minute and hourly rolling average limits on minimum pH of the scrubber water based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages.

The pH of the scrubber liquid is an important operating parameter because, at low pH, the scrubber solution is more acidic and removal efficiency of hydrochloric acid and chlorine gas decreases.

These requirements, except for the proposed ten-minute averaging period, are the same as we proposed. See 61 FR at 17433. We did not receive adverse comments.

[244] See discussion in Section VII.D.3 above in the text for the rationale for exempting these feedstreams for monitoring for chlorine content.

v. Minimum Scrubber Liquid Flowrate or Minimum Liquid/Gas Ratio. You must establish an hourly rolling average limits on either minimum scrubber liquid flowrate and maximum flue gas flowrate or minimum liquid/gas ratio based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages.

Liquid flowrate and flue gas flowrate or liquid/gas ratio are important operating parameters because a high liquid-to-gas-flowrate ratio is indicative of good removal efficiency.

We had proposed to limit the liquid-to-gas ratio only. Commenters suggest that a limit on liquid-to-gas flow ratio would not be needed if the liquid flowrate and flue gas flowrate were limited instead. They reason that, because gas flowrate is already limited, limiting liquid flowrate as well would ensure that the liquid-to-gas ratio is maintained. We agree. During normal operations, the liquid flowrate can only be higher than levels during the performance test, and gas flowrate can only be lower than during the performance test. Thus, the numerator in the liquid flowrate/gas flowrate ratio could only be larger, and the denominator could only be smaller. Consequently, the liquid flowrate/gas flowrate during normal operations will always be higher than during the comprehensive performance test. Consequently, we agree that a limit on liquid-to-gas-ratio is not needed if you establish a limit on liquid flowrate and flue gas flowrate. Establishing limits on these parameters is adequate to ensure that the liquid flowrate/gas ratio is maintained.[245]

c. Dry Scrubbers. A dry scrubber removes hydrochloric acid from the flue gas by adsorbing the hydrochloric acid onto sorbent, normally an alkaline substance like limestone. As proposed, if your combustor is equipped with a dry scrubber, you must establish, continuously monitor, and comply with limits on the following operating parameters: Gas flowrate or kiln production rate; sorbent feedrate; carrier fluid flowrate or nozzle pressure drop; and sorbent specifications. See 61 FR at 17434.

i. Maximum Flue Gas Flowrate or Kiln Production Rate. As proposed, you must establish a limit on maximum flue gas flowrate or kiln production rate as a surrogate. The limit is established and monitored as discussed above for wet scrubbers.

ii. Minimum Sorbent Feedrate. You must establish an hourly rolling average limit on minimum sorbent feedrate based on feedrate levels during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages.

Sorbent feedrate is important because, as more sorbent is fed into the dry scrubber, removal efficiency of hydrochloric acid and chlorine gas increases.[246] Conversely, lower sorbent feedrates tend to cause removal efficiency to decrease.

At proposal, we invited comment on whether a ten-minute rolling average is appropriate for sorbent feedrate (61 FR at 17434). We were concerned that some facilities may not automate their dry scrubbers to add sorbent solutions but instead add batches of virgin sorbent solution. Thus, we were concerned that a ten-minute rolling average may not be practicable in all cases. Some commenters are concerned that a ten-minute limit would be difficult to measure, especially in the case of batch addition of sorbent. Nonetheless, we have determined upon reanalysis that sorbent is not injected into the flue gas in ''batches.'' Although sorbent may be added in batches to storage or mixing vessels, it must be injected into the flue gas continuously to provide continuous and effective removal of acid gases. Thus, ten-minute rolling average limits would be practicable and appropriate for sorbent injection feedrates if ten-minute averages were required in this final rule.[247] However, as discussed in Part Five, Section VII.B, we have decided to not require ten-minute averaging periods on a national basis. Permitting officials may, however, determine that shorter averaging periods are needed to better assure compliance with the emission standard.

iii. Minimum Carrier Fluid Flowrate or Nozzle Pressure Drop. A carrier fluid, normally air or water, is necessary to transport and inject the sorbent into the gas stream. As proposed, you must establish and continuously monitor a limit on either minimum carrier gas or water flowrate or pressure drop across the nozzle to ensure that the flow and dispersion of the injected sorbent into the flue gas stream is maintained. You must base the limit on manufacturer's specifications, and comply with the limit on a one-hour rolling average basis.

Without proper carrier flow to the dry scrubber, the sorbent flow into the scrubber will decrease causing the efficiency to decrease. Nozzle pressure drop is also an indicator of carrier gas flow into the scrubber. At higher pressure drops, more sorbent is carried to the dry scrubber.

iv. Identification of Sorbent Brand and Type or Adsorption Properties. You must either identify the sorbent brand and type used during the comprehensive performance test and continue using that sorbent, or identify the adsorption properties of that sorbent and use a sorbent having equivalent or better properties. This will ensure that the sorbent's adsorption properties are maintained.

We proposed to require sources to continue to use the same sorbent brand and type as they used during the comprehensive performance test or obtain a waiver from this requirement from the Administrator. See 61 FR at 17434. As discussed above in the context of specifying the brand of carbon used in carbon injection systems to control dioxin/furan, we have determined that sources should have the option of using manufacturer's specifications to specify the sorption properties of the sorbent used during the comprehensive performance test. You may use sorbent of other brands or types provided that it has equivalent or better sorption properties. You must include in the operating record written documentation that the substitute sorbent will provide the same level of control as the original sorbent.

6. What Are the Operating Parameter Limits for Particulate Matter?

You must maintain compliance with the particulate matter emission standard by establishing and complying with limits on operating parameters. See § 63.1209(m). The following table summarizes these operating parameter limits. All incinerators must comply with the limit on maximum ash feedrate. Other operating parameter limits apply depending on the type of particulate matter control device you use.

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[245] In fact, complying with limits on liquid flowrate and gas flowrate, rather than complying with a liquid flowrate/gas flowrate ratio, is a more conservative approach to ensure that the performance test ratio is maintained (at a minimum). Thus, we prefer that you establish a limit on liquid flowrate (in conjunction with the limit gas flowrate) in lieu of a limit on the ratio.

[246] We note that sorbent should be fed to a dry scrubber in excess of the stoichiometric requirements for neutralizing the anion component in the flue gas. Lower levels of sorbent, even above stoichiometric requirements, would limit the removal of acid gasses.

[247] We note that flowrate measurement devices are available for ten-minute average times (e.g., those based on volumetric screw feeders which provide instantaneous measurements).

Summary of Particulate Matter Monitoring Requirements

Control Technique	Compliance Using	Limits From	Averaging Period	How Limit Is Established
For Incinerators, Limit on Maximum Ash Feedrate	Sampling and analysis of feedstreams for ash and a continuous monitoring system (CMS) for feedstream flowrate	Comprehensive performance test	12-hour	Avg of the average hourly rolling averages for each run.
Wet Scrubber: High Energy and Ionizing Scrubbers	CMS for maximum flue gas flowrate or kiln production rate	Comprehensive performance test	1-hour	Avg of the maximum hourly rolling averages for each run
	For high energy wet scrubbers only, CMS for minimum pressure drop across scrubber	Comprehensive performance test	1-hour	Avg of the test run averages
	For high energy wet scrubbers only, CMS for limit on minimum scrubber liquid flowrate and maximum flue gas flowrate or CMS for limit on minimum liquid/gas ratio	Comprehensive performance test	1-hour	Avg of the test run averages
All Wet Scrubbers	CMS for limit on minimum blowdown rate plus a CMS for either minimum scrubber tank volume or level, or	Comprehensive performance test	1-hour	Avg of the test run averages
	CMS for solids content of scrubber water, or	Comprehensive performance test	12-hour	Avg of the test run averages
	Manual sampling for solids content of scrubber water[1]	Comprehensive performance test	1-hour	Avg of manual sampling run averages
Fabric Filter[2]	CMS for minimum pressure drop and maximum pressure drop across each cell	Manufacturer's specifications	1-hour	n/a
Electrostatic Precipitator and Ionizing Wet Scrubber[2]	CMS for secondary voltage and current to each field to monitor limits on minimum power input (kVA)	Comprehensive performance test	1-hour	Avg of the test run averages

[1] Unless you elect to comply with a default sampling/analysis frequency for solids content of the scrubber water of once per hour, you must recommend an alternative frequency in the comprehensive performance test plan that you submit for review and approval.

[2] A CMS for gas flowrate or kiln production rate is also required with the same provisions as required for those parameters for wet scrubbers.

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Particulate matter emissions from hazardous waste combustors are controlled by controlling the feedrate of ash to incinerators and using a particulate matter control device. We discuss below the operating parameter limits that apply to each control technique.

a. Maximum Ash Feedrate. As proposed, if you own or operate an incinerator, you must establish a limit on the maximum feedrate of ash from all feedstreams based on the levels fed during the comprehensive performance test. To establish and comply with the feedrate limit, you must sample and analyze, and continuously monitor the flowrate of all feedstreams (including hazardous waste, and other fuels and additives) except natural gas, process air, and feedstreams from vapor recovery systems for ash content.[248] Also as proposed, you must establish a maximum 12-hour rolling average feedrate limit based on operations during the comprehensive performance test as the average of the test run averages. See 61 FR at 17438.

Ash feedrate for incinerators is an important particulate matter control parameter because ash feedrates can relate directly to emissions of particulate matter (i.e., ash contributes to particulate matter in flue gas). We are not requiring an ash feedrate limit for cement or lightweight aggregate kilns because particulate matter from those combustors is dominated by raw materials entrained in the flue gas. The contribution to particulate matter of ash from hazardous waste or other feedstreams is not significant. We discussed this issue at proposal.

A commenter states that ash feedrate limits are not needed for combustors using fabric filters, suggesting that fabric filter pressure drop and opacity monitoring are sufficient for compliance assurance. We discuss previously in this section (i.e., Part Five, Section VII) our concern that neither opacity monitors, nor limits on control device operating parameter, nor limits on the feedrates of constituents that can contribute directly to emissions of hazardous air pollutants comprise an ideal compliance assurance regime. We would prefer the use of a particulate matter CEMS for compliance assurance but cannot achieve that goal at this time. Absent the use of a CEMS and given the limitations of the individual compliance tools currently available, we are reluctant to forgo on a national, generic basis requiring limits on an operating parameter such as ash feedrate that we know can relate directly to particulate emissions. However, you may petition permitting officials under § 63.1209(g)(1) for approval to waive the ash feedrate limit based on data or information documenting that pressure drop across the fabric filter coupled with an opacity monitor would provide equivalent or better compliance assurance than a limit on ash feedrate.

b. Wet Scrubbers. As proposed, if your combustor is equipped with a wet scrubber, you must establish, continuously monitor, and comply with limits on the operating parameters discussed below. High energy wet scrubbers (e.g., venturi, calvert) remove particulate matter by capturing particles in liquid droplets and separating the droplets from the gas stream. Ionizing wet scrubbers use both an electrical charge and wet scrubbing to remove particulate matter. Low energy wet scrubbers that are not ionizing wet scrubbers (e.g., packed bed, spray tower) are only subject to the scrubber water solids content operating parameter requirements for particulate matter control because they are primarily used to control emissions of acid gases and only provide incidental particulate matter control.

i. Maximum Flue Gas Flowrate or Kiln Production Rate. For high energy and ionic wet scrubbers, you must establish a limit on maximum flue gas flowrate or kiln production rate as a surrogate. See 61 FR at 17438. Gas flowrate is a key parameter affecting the control efficiency of a wet scrubber (and any emissions control device). As gas flowrate increases, control efficiency generally decreases unless other operating parameters are adjusted to accommodate the increased flowrate. Cement kilns and lightweight aggregate kilns may establish a limit on maximum production rate (e.g., raw material feedrate or clinker or aggregate production rate) in lieu of a maximum gas flowrate given that production rate directly relates to flue gas flowrate.

As proposed, you must establish a maximum gas flowrate or production rate limit as the average of the maximum hourly rolling averages for each run of the comprehensive performance test.

ii. Minimum Pressure Drop Across the Scrubber. For high energy scrubbers only, you must establish an hourly rolling average limits on minimum pressure drop across the scrubber based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages. See the discussion in Section VII.D.5.b above for a discussion on the approach for calculating limits from comprehensive performance test data.

iii. Minimum Scrubber Liquid Flowrate or Minimum Liquid/Gas Ratio. For high energy wet scrubbers, you must establish an hourly rolling average limits on either minimum scrubber liquid flowrate and maximum flue gas flowrate or minimum liquid/gas ratio based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages. See the discussion in Section VII.D.5.b above for a discussion on the approach for calculating limits from comprehensive performance test data.

iv. Maximum Solids Content of Scrubber Water or Minimum Blowdown Rate Plus Minimum Scrubber Tank Volume or Level. For all wet scrubbers, to maintain the solids content of the scrubber water to levels no higher than during the comprehensive performance test, you must establish a limit on either: (1) Maximum solids content of the scrubber water; or (2) minimum blowdown rate plus minimum scrubber tank volume or level. If you elect to establish a limit on maximum solids content of the scrubber water, you must comply with the limit either by: (1) Continuously monitoring the solids content and establishing 12-hour rolling average limits based on solids content during the comprehensive performance test; or (2) periodic manual sampling and analysis of scrubber water for solids content. Under option 1, the 12-hour rolling average is established as the average of the test run averages. Under option 2, you must either comply with a default sampling and analysis frequency for scrubber water solids content of once per hour or recommend an alternative frequency in your comprehensive performance test plan that you submit for review and approval.

Solids content in the scrubber water is an important operating parameter because as the solids content increases, particulate emissions increase. This is attributable to evaporation of scrubber water and release of previously captured particulate back into the flue gas. Blowdown is the amount of scrubber liquid removed from the process and not recycled back into the wet scrubber. As scrubber liquid is removed and not recycled, solids are removed. Thus, blowdown is an operating parameter that affects solids content and can be used as a surrogate for measuring solids content directly. See 61 FR 17438.

The proposed rule would have required continuously monitored limits on either minimum blowdown or a

[248] See discussion in Section VII.D.3 above in the text for the rationale for exempting these feedstreams from monitoring for ash content.

maximum solids content. In response to comments and upon reanalysis of the issues, we conclude that we need to make two revisions to these requirements. First, we are concerned that it may be problematic to continuously monitor the solids content of scrubber water. Consequently, we revised the requirements to allow manual sampling and analysis on an hourly basis, unless you justify an alternative frequency. Second, we are concerned that a limit on blowdown rate without an associated limit on either minimum scrubber water tank volume or level would not be adequate to provide control of solids content. The solids concentration in blowdown tanks could be higher at lower water levels. Therefore, water levels need to be at least equivalent to the levels during the comprehensive performance test. This should not be a significant additional burden. Sources should be monitoring the water level in the scrubber water tank as a measure of good operating practices. Consequently, we revise the requirement to require a minimum tank volume or level in conjunction with a minimum blowdown rate for sources that elect to use that compliance option.

c. Fabric Filter. If your combustor is equipped with a fabric filter, you must establish, continuously monitor, and comply with limits on the operating parameters discussed below.

i. Maximum Flue Gas Flowrate or Kiln Production Rate. As proposed, you must establish a limit on maximum flue gas flowrate or kiln production rate as a surrogate. Gas flowrate is a key parameter affecting the control efficiency of a fabric filter (and any emissions control device). As gas flowrate increases, control efficiency generally decreases unless other operating parameters are adjusted to accommodate the increased flowrate. Cement kilns and lightweight aggregate kilns may establish a limit on maximum production rate (e.g., raw material feedrate or clinker or aggregate production rate) in lieu of a maximum gas flowrate given that production rate directly relates to flue gas flowrate.

As proposed, you must establish a maximum gas flowrate or production rate limit as the average of the maximum hourly rolling averages for each run of the comprehensive performance test.

ii. Minimum Pressure Drop and Maximum Pressure Drop Across the Fabric Filter. You must establish a limit on minimum pressure drop and maximum pressure drop across each cell of the fabric filter based on manufacturer's specifications.

Filter failure is typically due to filter holes, bleed-through migration of particulate through the filter and cake, and small ''pin holes'' in the filter and cake. Because low pressure drop is an indicator of one of these types of failure, pressure drop across the fabric filter is an indicator of fabric filter failure.

We had proposed to establish limits on minimum pressure drop based on the performance test. Commenters indicate, however, that maintaining a pressure drop not less than levels during the performance test will not ensure baghouse performance. We concur. The pressure change caused by fabric holes may not be measurable, especially at large sources with multiple chamber filter housing units that operate in parallel. In addition, operating at high pressure drop may not be desirable because high pressures can create pin holes.

Nonetheless, establishing a limit on minimum pressure drop based on manufacturer's recommendations, as suggested by a commenter, is a reasonable and prudent approach to help ensure fabric filter performance. We have since determined that an operating parameter limit for maximum pressure drop across each cell of the fabric filter, based on manufacturer specifications, is also necessary. As discussed above, a high pressure drop in a cell of a fabric filter may cause small pinholes to form or may be indicative of bag blinding or plugging, which could result in increased particulate emissions. We do not consider this additional provision to be burdensome, especially because both the maximum and minimum pressure drop limits are based on manufacturer specifications on an hourly rolling average. These pressure drop monitoring requirements, in combination with COMS for cement kilns and bag leak detection systems for incinerators and lightweight aggregate kilns, provide a significant measure of assurance that control performance is maintained.

d. Electrostatic Precipitators and Ionizing Wet Scrubbers. As proposed, if your combustor is equipped with an electrostatic precipitator or ionizing wet scrubber, you must establish, continuously monitor, and comply with limits on the operating parameters discussed below.

i. Maximum Flue Gas Flowrate or Kiln Production Rate. You must establish a limit on maximum flue gas flowrate or kiln production rate as a surrogate. Gas flowrate is a key parameter affecting the control efficiency of an emissions control device. As gas flowrate increases, control efficiency generally decreases unless other operating parameters are adjusted to accommodate the increased flowrate. Cement kilns and lightweight aggregate kilns may establish a limit on maximum production rate (e.g., raw material feedrate or clinker or aggregate production rate) in lieu of a maximum gas flowrate given that production rate directly relates to flue gas flowrate.

As proposed, you must establish a maximum gas flowrate or production rate limit as the average of the maximum hourly rolling averages for each run of the comprehensive performance test.

ii. Minimum Secondary Power Input to Each Field. You must establish an hourly rolling average limit on minimum secondary power (kVA) input to each field of the electrostatic precipitator or ionizing wet scrubber based on operations during the comprehensive performance test. The hourly rolling average is established as the average of the test run averages.

Electrostatic precipitators capture particulate matter by charging the particulate in an electric field and collecting the charged particulate on an inversely charged collection plate. Higher voltages improve magnetic field strength, resulting in charged particle migration to the collection plate. High current leads to an increased particle charging rate and increased electric field strength near the collection electrode, increasing collection at the plate, as well. Therefore, maximizing both voltage and current by specifying minimum power input to the electrostatic precipitator is desirable for good particulate matter collection in electrostatic precipitators. For these reasons, the rule requires you to monitor power input to each field of the electrostatic precipitator to ensure that collection efficiency is maintained at performance test levels.

Power input to an ionizing wet scrubber is important because it directly affects particulate removal. Ionizing wet scrubbers charge the particulate prior to it entering a packed bed wet scrubber. The charging aids in the collection of the particulate onto the packing surface in the bed. The particulate is then washed off the packing by the scrubber liquid. Therefore, power input is a key parameter to proper operation of an ionizing wet scrubber.

One commenter suggests that a minimum limit on electrostatic precipitator voltage be used instead of power input because, at low particulate matter loadings, operation at maximum power input is inefficient. Another commenter suggests that neither a limit on voltage or power input is appropriate because a minimum limit would

actually cause a potential decrease in operational efficiency (required power input and voltage are strong functions of gas and particulate characteristics, electrostatic precipitator arcing and sparking at high voltage and power requirements, etc.). Alternatively, they recommend that a limit on the minimum number of energized electrostatic precipitator fields be established. We continue to maintain that a minimum limit on power input to each field of the electrostatic precipitator is generally accepted as an appropriate parameter for assuring electrostatic precipitator performance. Consequently, it is an appropriate parameter for a generic, national standard. If you believe, however, that in your situation limits on alternative operating parameters may better assure that control performance is maintained you may request approval to use alternative monitoring approaches under § 63.1209(1).

Another commenter suggests that, in addition to a minimum power input for an ionizing wet scrubber, a limit should be set on the maximum time allowable to be below the minimum voltage. While feasible, we conclude that this limit is not necessary on a national basis because the one hour rolling average requirement limits the amount of time a source can operate below its minimum voltage limit. We acknowledge, however, that a permit writer may find it necessary to require shorter averaging periods (e.g., ten-minute or instantaneous limits) to better control the amount of time a source can operate at levels below its limit.

7. What Are the Operating Parameter Limits for Destruction and Removal Efficiency?

You must establish, monitor, and comply with the same operating parameter limits to ensure compliance with the destruction and removal efficiency (DRE) standard as you establish to ensure good combustion practices are maintained for compliance with the dioxin/furan emission standard. See § 63.1209(j) and the discussion in Section VII.D.1 above. This is because compliance with the DRE standard is ensured by maintaining combustion efficiency using good combustion practices. Thus, the DRE operating parameters are: maximum waste feedrate for pumpable and nonpumpable wastes, minimum gas temperature for each combustion chamber, maximum gas flowrate or kiln production rate, and parameters that you recommend to ensure the operations of each hazardous waste firing system are maintained.[249]

VIII. Which Methods Should Be Used for Manual Stack Tests and Feedstream Sampling and Analysis?

This part discusses the manual stack test and the feedstream sampling and analysis methods required by today's rule.

A. Manual Stack Sampling Test Methods

To demonstrate compliance with today's rule, you must use: (1) Method 0023A for dioxin and furans; (2) Method 29 for mercury, semivolatile metals, and low volatile metals; (3) Method 26A for hydrochloric acid and chlorine; and (4) Method 5 or 5i for particulate matter. These methods are found at 40 CFR part 60, appendix A, and in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA publication.

In the NPRM, we proposed that BIF manual stack test methods currently located in SW–846 be required to demonstrate compliance with the proposed standards. Based on public comments from the proposal, in the December 1997 NODA we considered simply citing the ''Air Methods'' found in appendix A to part 60. Our rationale was that facilities may be required to perform two identical tests, one from SW–846 for compliance with MACT or RCRA and one from part 60, appendix A, for compliance with other air rules using identical test methods simply because one method is an SW–846 method and the other an Air Method. See 62 FR at 67803. To facilitate compliance with all air emissions stack tests, we stated that we would list the methods found in 40 CFR part 60, appendix A, as the stack test methods used to comply with the standards. Later in this section we present an exception for dioxin and furan testing.

In today's rule, we adopt the approach of the December 1997 NODA and require that the test methods found in 40 CFR part 60, appendix A be used to demonstrate compliance with the emission standards of today's rule, except for dioxin and furan. Specifically, today's rule requires you to use Method 0023A in SW–846 for sampling dioxins and furans from stack emissions. As noted by commenters, improvements have been made to the dioxin and furan Method 0023A in the Third Update of SW–846 that have been previously incorporated into today's regulations. See the 40 CFR 63.1208(a), incorporation of SW–846 by reference. However, these have not yet been incorporated into 40 CFR part 60, Appendix A. To capture these improvements to the method, today's rule incorporates by reference SW–846 Method 0023A. We have evaluated both methods. Use of the improved Method 0023A will not affect the achievability of the dioxin and furan standard.

In the proposal, we sought comment on the handling of nondetect values for congeners analyzed using the dioxin and furan method. We also sought comment on whether the final rule should specify minimum sampling times. We proposed allowing facilities to assume that emissions of dioxins and furans congeners are zero if the analysis showed a nondetect for that congener and the sample time for the test method run was at least 3 hours. See 61 FR 17378. Dioxin/furan results may not be blank corrected. We received several comments this proposed approach, which are summarized below.

One commenter believes that a minimum dioxin/furan sampling time of two hours is sufficient. Another commenter believes that a minimum sample time as well as a minimum sample volume should be specified. Several commenters agree that nondetects should be treated as zero (which is consistent with the German standard) and prefer the three hour minimum sample period because this would help eliminate intra-laboratory differences and difficulties with matrix effects in attaining low detection limits. One commenter believes that EPA should specify the required detection limit for each congener analysis, otherwise the provision to assign zeroes to nondetected congeners in the TEQ calculation is open to abuse and could result in an understatement of the true dioxin/furan emissions. This commenter also believes that a source should not be allowed to sample dioxin/furans for time periods less than three hours, even if they assume nondetects are present at the detection limit.

Upon carefully considering all the above comments, we conclude that the following approach best addresses the nondetect issue. The final rule requires all sources to sample dioxin/furans for a minimum of three hours for each run,

[249] You are required to establish operating requirements only for hazardous waste firing systems because of DRE standard applies only to hazardous waste. Permitting officials may determine on a site-specific basis under authority of § 63.1209(g)(2), however, that combustion of other fuels or wastes may affect your ability to maintain DRE for hazardous waste. Accordingly, permitting officials may define operating requirements for other (i.e., other than hazardous waste) waste or fuel firing systems. Permitting officials may also determine under that provision on a site-specific basis that operating requirements other than those prescribed for DRE (and good combustion practices) may be needed to ensure compliance with the DRE standard.

and requires all sources to collect a flue gas sample of at least 2.5 dscm. We conclude both these requirements are necessary to maintain consistency from source to source, and to better assure that the dioxin/furan emission results are accurate and representative. We conclude that these two requirements are achievable and appropriate [250]. These requirements are consistent with the requirements included in the proposed Portland Cement Kiln MACT rule (see 64 FR at 31898). The final rule also allows a source to assume all nondetected congeners are not present in the emissions when calculating TEQ values for compliance purposes.

We considered whether it would be appropriate to specify required minimum detection limits for each congener analysis in order to better assure that sources achieved reasonable detection limits, as one commenter recommended. Such a requirement would prevent abuse and understatements of the true dioxin/furan emissions. We conclude, however, that it is not appropriate to finalize minimum detection limits in this rulemaking without giving the opportunity to all interested parties to review and comment on such an approach.

However, we are concerned that (1) sources have no incentive to achieve low detection limits; and (2) sources may abuse the provision that allows nondetected congener results to be treated as if they were not present. As explained in the Final Technical Support Document referenced in the preceding paragraph, if one assumes that all dioxin/furan congeners are present at what we consider to be poor detection limits using Method 23A, the resultant TEQ can approach the emission standard. This outcome is clearly inappropriate from a compliance perspective.

As a result, we highly recommend that this issue be addressed in the review process of the performance test workplan. Facilities should submit information that describes the target detection limits for all congeners, and calculate a dioxin/furan TEQ concentration assuming all congeners are present at the detection limit (similar to what is done for risk assessments). If this value is close to the emission standard, both the source and the regulatory official should determine if it is appropriate to either sample for longer time periods or investigate whether it is possible to achieve lower detection limits by using different analytical procedures that are approved by the Agency.

Also, EPA has developed analytical standards for certain mono-through tri-chloro dioxin and furan congeners. We encourage you to test for these congeners in addition to the congeners that comprise today's standards. This can be done at very little increased cost. If you test for these additional congeners, please include the results in your Notification of Compliance. We would like this data so we can develop a database from which to determine which (if any) of these compounds can act as surrogate(s) for the dioxin and furan congeners which comprise the total and TEQ. If easily measurable surrogate(s) can be found, we can then start the development of a CEMS for these surrogates. A complete list of these congeners will be included in the implementation document for this rule and updated periodically through guidance.

One commenter suggests that a source be allowed to conduct one extended dioxin/furan sampling event as opposed to three separate runs with three separate sampling trains because this would minimize the radioactive waste generated for sources that combust mixed waste. We conclude this issue should be handled on a site-specific basis, although an allowance of such an approach seems reasonable. A source can petition the Agency under the provisions of § 63.7(f) for an alternative test method for such a site-specific determination.

The final rule also adopts the approach discussed in the December 1997 NODA for sampling of mercury, semi-volatile metals, and low-volatile metals. Therefore, for stack sampling of mercury, semi-volatile metals, and low-volatile metals, you are required to use Method 29 in 40 CFR part 60, appendix A. No adverse comments were received concerning this approach in the December 1997 NODA.

For compliance with the hydrochloric acid and chlorine standards, today's rule requires that you use Method 26A in 40 CFR part 60, appendix A. Commenters state that we should instead require a method involving the Fourier Transform Infrared and Gas Filter Correlation Infrared instrumental techniques. Commenters contend that Method 26A is biased high at cement kilns because it collects ammonium chloride in addition to the hydrochloric acid and chlorine gas emissions it was designed to report. Commenters also indicate that the Fourier Transform Infrared and Gas Filter Correlation Infrared were validated against Method 26A and that these alternative methods do not bias the results high due to ammonium chloride [251]. The data for today's hydrochloric acid standard was derived using the SW–846 equivalent to Method 26A (Method 0050) as the reference method. Therefore, today's standard accounts for the ammonium chloride collection bias. We reject the idea that we should require other methods. If the commenters are correct, other methods would not sample the ammonium chloride portion, thus making the standard less stringent. You can obtain Administrator approval for using Fourier Transform Infrared or Gas Filter Correlation Infrared techniques following the provisions found in 40 CFR 63.7 if those methods are found to pass a part 63, appendix A, Method 301 validation at the source.

Compliance with the particulate matter standards requires the use of either Method 5 or Method 5i in 40 CFR part 60, appendix A. See a related discussion of Method 5i in Part 5, section VII.C.2.a of the preamble to today's rule. Although Method 5i has better precision than Method 5, your choice of methods depends on the emissions during the performance test. In cases of low levels of particulate matter (*i.e.*, for total train catches of less than 50 mg), we prefer that Method 5i be used. For higher emissions, Method 5 may be used [252]. In practice this will likely mean that all incinerators and most lightweight aggregate kilns will use Method 5i for compliance, while some lightweight aggregate kilns and most cement kilns will use Method 5.

Today's rule also allows the use of any applicable SW–846 test methods to demonstrate compliance with requirements of this subpart. As an example, some commenters noted a preference to perform particulate matter and hydrochloric acid tests together using Method 0050. Today's rule would allow that practice. Applicable SW–846 test methods are incorporated for use into today's rule via reference. See section 1208(a).

B. Sampling and Analysis of Feedstreams

Today's rule does not require the use of SW–846 methods for the sampling and analysis of feedstreams. Consistent with our approach to move toward performance based measurement

[250] See Final Technical Support Document, Volume IV, Chapter 3, for further discussion.

[251] After further review and consideration of the GFCIR Method (322), we will not be promulgating its use in the Portland Cement Kiln NESHAP rulemaking due to problems encountered with the method during emission testing at lime manufacturing plants.

[252] We note that this total train catch is *not* intended to be a data acceptance criteria. Thus, total train catches exceeding 50 mg *do not* invalidate the method.

systems for other than method-defined parameters,[253] today's rule allows the use of any reliable analytical method to determine feedstream concentrations of metals, halogens, and other constituents. It is your responsibility to ensure that the sampling and analysis are unbiased, precise, and representative of the waste. For the waste, you must demonstrate that: (1) Each constituent of concern is not present above the specification level at the 80% upper confidence limit around the mean; and (2) the analysis could have detected the presence of the constituent at or below the specification level at the 80% upper confidence limit around the mean. You can refer to the Guidance for Data Quality Assessment—Practical Methods for Data Analysis, EPA QA/G–9, January 1998, EPA/600/R–96/084 for more information. Proper selection of an appropriate analytical method and analytical conditions (as allowed by the scope of that method) are demonstrated by adequate recovery of spiked analytes (or surrogate analytes) and reproducible results. Quality control data obtained must also reflect consistency with the data quality objectives and intent of the analysis. You can read the January 31, 1996, memorandum from Barnes Johnson, Director of the Economics, Methods, and Risk Assessment Division, to James Berlow, Director of the Hazardous Waste Minimization and Management Division for more information on this topic.

IX. What Are the Reporting and Recordkeeping Requirements?

We discuss in this section reporting and recordkeeping requirements and a provision in the rule for allowing data compression to reduce the recordkeeping burden.

A. What Are the Reporting Requirements?

The reporting requirements of the rule include notifications and reports that must be submitted to the Administrator as well as notifications, requests, petitions, and applications that you must submit to the Administrator only if you elect to request approval to comply with certain reduced or alternative requirements. These reporting requirements are summarized in the following tables. We discuss previously in various sections of today's preamble the rationale for additional or revised reporting requirements to those currently required under subpart A of part 63 for all MACT sources. In other cases, the reporting requirements for hazardous waste combustors are the same as for other MACT sources (e.g., initial notification under existing § 63.9(b). We also show in the tables the reference(s) in the regulations for the reporting requirement.

SUMMARY OF NOTIFICATIONS THAT YOU MUST SUBMIT TO THE ADMINISTRATOR

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE.
63.1210(b) and (c).	Notification of intent to comply.
63.9(d)	Notification that you are subject to special compliance requirements.
63.1207(e), 63.9(e) 63.9(g) (1) and (3).	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan.
163.1210(d), 63.1207(j), 63.9(h), 63.10(d)(2), 63.10(e)(2).	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.
63.1206(b)(6)	Notification of changes in design, operation, or maintenance.
63.9(j)	Notification and documentation of any change in information already provided under § 63.9.

[1] You may also be required on a case-by-case basis to submit a feedstream analysis plan under § 63.1209(c)(3).

SUMMARY OF REPORTS THAT YOU MUST SUBMIT TO THE ADMINISTRATOR

Reference	Report
63.1211(b)	Compliance progress report associated and submitted with the notification of intent to comply.
63.10(d)(4)	Compliance progress reports, if required as a condition of an extension of the compliance date granted under § 63.6(i).
63.1206(c)(3)(vi)	Excessive exceedances reports.
63.1206(c)(4)(iv)	Emergency safety vent opening reports.
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports.
63.10(e)(3)	Excessive emissions and continuous monitoring system performance report and summary report.

SUMMARY OF NOTIFICATIONS, REQUESTS, PETITIONS, AND APPLICATIONS THAT YOU MUST SUBMIT TO THE ADMINISTRATOR ONLY IF YOU ELECT TO COMPLY WITH REDUCED OR ALTERNATIVE REQUIREMENTS

Reference	Notification, request, petition, or application
63.1206(b)(5), 63.1213, 63.6(i), 63.9(c)	You may request an extension of the compliance date for up to one year.
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.1209(g)(1)	You may request approval of: (1) alternative monitoring methods, except for standards that you must monitor with a continuous emission monitoring system (CEMS) and except for requests to use a CEMS in lieu of operating parameter limits; or (2) a waiver of an operating parameter limit.
63.1209(a)(5), 63.8(f)	You may request: (1) approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (2) approval to use a CEMS in lieu of operating parameter limits.

[253] Feedstream sampling and analysis are not method defined parameters.

SUMMARY OF NOTIFICATIONS, REQUESTS, PETITIONS, AND APPLICATIONS THAT YOU MUST SUBMIT TO THE ADMINISTRATOR ONLY IF YOU ELECT TO COMPLY WITH REDUCED OR ALTERNATIVE REQUIREMENTS—Continued

Reference	Notification, request, petition, or application
63.1204(d)(4)	Notification that you elect to comply with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(4)	Notification that you elect to comply with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)(A)	Notification that you elect to document compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste.
63.1206(b)(9)(iii)(B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b)(10)	Owners and operators of lightweight aggregate kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1206(b)(11)	Owners and operators of cement kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1207(c)(2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.
63.1207(i)	You may request up to a one-year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1209(l)(1)	You may request to extrapolate mercury feedrate limits.
63.1209(n)(2)(ii)	You may request to extrapolate semivolatile and low volatile metal feedrate limits.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1211(e)	You may request to use data compression techniques to record data on a less frequent basis than required by § 63.1209.

Some commenters suggest that the rule needs to provide additional reporting of information regarding metals fed to cement kilns, including quarterly reporting of daily average metal feedrates, maximum hourly feedrates, and all testing and analytical information on the toxic metal content of cement kiln dust and clinker product. Also, they suggest that toxic metals that are Toxics Release Inventory pollutants and that are released to the land from cement kiln dust disposal should be reported. While these reports might have some value for other purposes, we must carefully scrutinize all reporting and recordkeeping burdens for a rulemaking and determine whether the reporting and recordkeeping requirements are necessary to ensure compliance with the standards. (We, as an agency, cannot increase overall our reporting and recordkeeping burden.)

We do not believe that these reports are needed to ensure compliance with the standards and therefore are not requiring them. On balance, quarterly filing requirements would be too burdensome. A source must document compliance with all operating parameter limits and emission standards at all times, and its records are subject to inspection at any time. There is no additional need to provide quarterly reports.

One commenter suggests that the proposed rule incorrectly focuses on maximizing data collection as opposed to ensuring performance, thus frustrating the use of better technology and methods. We, of course, are also interested in ensuring performance by all reasonable means, which for example accounts for our continued focus on continuous emission monitors. However, we are not able to sacrifice data collection as a means for ensuring compliance as well as a means to undergird future rulemakings, assess achievability, and determine site-specific compliance limits, where necessary.

B. What Are the Recordkeeping Requirements?

You must keep the records summarized in the table below for at least five years from the date of each occurrence, measurement, maintenance, corrective action, report, or record. See existing § 63.10(b)(1). At a minimum, you must retain the most recent two years of data on site. You may retain the remaining three years of data off site. You may maintain such files on: microfilm, a computer, computer floppy disks, optical disk, magnetic tape, or microfiche.

We discuss previously in various sections of today's preamble the rationale for additional or revised recordkeeping requirements to those currently required under subpart A of part 63 for all MACT sources. In other cases, the recordkeeping requirements for hazardous waste combustors are the same as for other MACT sources (e.g., record of the occurrence and duration of each malfunction of the air pollution control equipment; see existing § 63.10(b)(2)(ii)). We also show in the table the reference(s) in the regulations for the recordkeeping requirement.

SUMMARY OF DOCUMENTS, DATA, AND INFORMATION THAT YOU MUST INCLUDE IN THE OPERATING RECORD

Reference	Document, data, or information
63.1201(a), 63.10 (b) and (c).	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by continuous monitoring systems (CMS), and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1211(d)	Documentation of compliance.
63.1206 (c)(3)(vii).	Documentation and results of the automatic waste feed cutoff operability testing.
63.1209 (c)(2)	Feedstream analysis plan.
63.1204 (d)(3)	Documentation of compliance with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204 (e)(3)	Documentation of compliance with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)(B).	If you elect to comply with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.
63.1206 (c)(2)	Startup, shutdown, and malfunction plan.

SUMMARY OF DOCUMENTS, DATA, AND INFORMATION THAT YOU MUST INCLUDE IN THE OPERATING RECORD—Continued

Reference	Document, data, or information
63.1206(c)(3)(v).	Corrective measures for any automatic waste feed cutoff that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c)(4)(ii).	Emergency safety vent operating plan.
63.1206 (c)(4)(iii).	Corrective measures for any emergency safety vent opening.
63.1206 (c)(6)	Operator training and certification program.
63.1209 (k)(6)(iii), 63.1209 (k)(7)(ii), 63.1209 (k)(9)(ii), 63.1209 (o)(4)(iii).	Documentation that a substitute activated carbon, dioxin/furan formation reaction inhibitor, or dry scrubber sorbent will provide the same level of control as the original material.

Some commenters are concerned that the specification of media on which these files may be maintained unnecessarily limits the options to facilities, especially those not equipped with computer or other electronic data gathering equipment. We conclude, however, that the options listed under § 63.10(b)(1) seem to provide the greatest flexibility possible, including the reasonable management of paper records through the use of microfilm or microfiche. We encourage the use of computer and electronic equipment, however, for logistical reasons (retrieval and inspection can be easier) and as a means to enhance dissemination to the local community to foster an atmosphere of full and open disclosure about facility operations.

C. How Can You Receive Approval to Use Data Compression Techniques?

You may submit a written request to the Administrator under § 63.1211(f) for approval to use data compression techniques to record data from CMS, including CEMS, on a frequency less than that required by § 63.1209. You must submit the request for review and approval as part of the comprehensive performance test plan. For each CEMS or operating parameter for which you request to use data compression techniques, you must provide: (1) A fluctuation limit that defines the maximum permissible deviation of a new data value from a previously generated value without requiring you to revert to recording each one-minute average; and (2) a data compression limit defined as the closest level to an operating parameter limit or emission standard at which reduced recording is allowed.

You must record one-minute average values at least every ten minutes. If after exceeding a fluctuation limit you remain below the limit for a ten-minute period, you may reinitiate your data compression technique provided that you are not exceeding the data compression limit.

The fluctuation limit should represent a significant change in the parameter measured, considering the range of normal values. The data compression limit should reflect a level at which you are unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average.

We provide the following table of recommended fluctuation and data compression limits as guidance. These are the same limits that we discussed in the May 1997 NODA.

RECOMMENDED FLUCTUATION AND DATA COMPRESSION LIMITS

CEMS or control technique and parameter	Fluctuation limit (±)	Data compression limit
Continuous Emission Monitoring System:		
Carbon monoxide	10 ppm	50 ppm.
Hydrocarbon	2 ppm	60% of standard.
Combustion Gas Temperature Quench: Maximum inlet temperature for dry particulate matter control device or, for lightweight aggregate kilns, temperature at kiln exit.	10°F	Operating parameter limit (OPL) minus 30°F.
Good Combustion Practices:		
Maximum gas flowrate or kiln production rate	10% of OPL	60% of OPL.
Maximum hazardous waste feedrate	10% of OPL	60% of OPL.
Maximum gas temperature for each combustion chamber	20°F	OPL plus 50°F.
Activated Carbon Injection:		
Minimum carbon injection feedrate	5% of OPL	OPL plus 20%.
Minimum carrier fluid flowrate or nozzle pressure drop	20% of OPL	OPL plus 25%.
Activated Carbon Bed: Maximum gas temperature at inlet or exit of the bed	10°F	OPL minus 30°F.
Catalytic Oxidizer:		
Minimum flue gas temperature at entrance	20°F	OPL plus 40°F.
Maximum flue gas temperature at entrance	20°F	OPL minus 40°F.
Dioxin Inhibitor: Minimum inhibitor feedrate	10% of OPL	60% of OPL.
Feedrate Control:		

RECOMMENDED FLUCTUATION AND DATA COMPRESSION LIMITS—Continued

CEMS or control technique and parameter	Fluctuation limit (±)	Data compression limit
Maximum total metals feedrate (all feedstreams)	10% of OPL	60% of OPL.
Maximum low volatile metals feedrate, pumpable feedstreams	10% of OPL	60% of OPL.
Maximum total ash feedrate (all feedstreams)	10% of OPL	60% of OPL.
Maximum total chlorine feedrate (all feedstreams)	10% of OPL	60% of OPL.
Wet scrubber:		
Minimum pressure drop across scrubber	0.5 inches water	OPL plus 2 inches water.
Minimum liquid feed pressure	20% of OPL	OPL plus 25%.
Minimum liquid pH	0.5 pH unit	OPL plus 1 pH unit.
Maximum solids content in liquid	5% of OPL	OPL minus 20%.
Minimum blowdown (liquid flowrate)	5% of OPL	OPL plus 20%.
Minimum liquid flowrate or liquid flowrate/gas flowrate ratio	10% of OPL	OPL plus 30%.
Dry scrubber:		
Minimum sorbent feedrate	10% of OPL	OPL plus 30%.
Minimum carrier fluid flowrate or nozzle pressure drop	10% of OPL	OPL plus 30%.
Fabric filter: Minimum pressure drop across device	1 inch water	OPL plus 2 inches water.
Electrostatic precipitator and ionizing wet scrubber: Minimum power input (kVA: current and voltage).	5% of OPL	OPL plus 20%.

Data compression is the process by which a facility automatically evaluates whether a specific data point needs to be recorded. Data compression does not represent a change in the continuous monitoring requirement in the rule. One-minute averages will continue to be generated. With data compression, however, each one-minute average is automatically compared with a set of specifications (i.e., fluctuation limit and data compression limit) to determine whether it must be recorded. New data are recorded when the one-minute average value falls outside these specifications.

We did not propose data compression techniques in the April 1996 NPRM. In response to the proposed monitoring and recording requirements, however, commenters raise concerns about the burden of recording one-minute average values for the array of operating parameter limits that we proposed. Commenters suggest that allowing data compression would significantly reduce the recordkeeping burden while maintaining the integrity of the data for compliance monitoring. We note that data compression should also benefit regulatory officials by allowing them to focus their review on those data that are indicative of nonsteady-state operations and that are close to the operating parameter limit or, for CEMS, the emission standard.

In response to these concerns, we presented data compression specifications in the May 1997 NODA. Public comments on the NODA are uniformly favorable. Therefore, we are including a provision in the final rule that allows you to request approval to use data compression techniques. The fluctuation and data compression limits presented above are offered as guidance to assist you in developing your recommended data compression methodology.

We are not promulgating data compression specifications because the dynamics of monitored parameters are not uniform across the regulated universe. Thus, establishing national specifications would be problematic. Various data compression techniques can be successfully implemented for a monitored parameter to obtain compressed data that reflect the performance on a site-specific basis. Thus, the rule requires you to recommend a data compression approach that addresses the specifics of your operations. The fluctuation and data compression limits presented above are offered solely as guidance and are not required.

The rule requires that you record a value at least once every ten minutes to ensure that a minimum, credible data base is available for compliance monitoring. If you operate under steady-state conditions at levels well below operating parameter limits and CEMS-monitored emission standards, data compression techniques may enable you to achieve a potential reduction in data recording up to 90 percent.

X. What Special Provisions Are Included in Today's Rule?

A. What Are the Alternative Standards for Cement Kilns and Lightweight Aggregate Kilns?

In the May 1997 NODA, we discussed alternative standards for cement kilns and lightweight aggregate kilns that have metal or chlorine concentrations in their mineral and related process raw materials that might cause an exceedance of today's standard(s), even though the source uses MACT control. (See 62 FR 24238.) After carefully considering commenters input, we adopt a process that allows sources to petition the Administrator for alternative mercury, semivolatile metal, low volatile metal, or hydrochloric acid/chlorine gas standards under two different sets of circumstances. One reason for a source to consider a petition is when a kiln cannot achieve the standard, while using MACT control, because of raw material contributions to their hazardous air pollutant emissions. The second reason is limited to mercury, and applies when mercury is not present at detectable levels in the source's raw material. These alternative standards are discussed separately below.

1. What Are the Alternative Standards When Raw Materials Cause an Exceedance of an Emission Standard? See sections 1206(b) (10) and (11)

a. What Approaches Have We Publicly Discussed? We acknowledge that a kiln using properly designed and operated MACT control technologies, including control of metals levels in hazardous waste feedstocks, may not be capable of achieving the emission standards (i.e., the mercury, semivolatile metal, low volatile metal, and/or hydrochloric acid/chlorine gas standards). This can occur when hazardous air pollutants (i.e., metals and chlorine) contained in the raw material volatilize or are entrained in the flue gas such that their contribution to total metal and chlorine emissions cause an exceedance of the emission standard.

Our proposal first acknowledged this possible situation. In the April 1996 NPRM, we proposed metal and chlorine standards that were based, in part, on specified levels of hazardous waste feedrate control as MACT control. To address our concern that kilns may not

be able to achieve the standards when using MACT control technologies, given raw material contributions to emissions, we performed an analysis. Our analysis estimated the total emissions of each kiln including emissions from raw materials, while also assuming the source was using MACT hazardous waste feedrate and particulate matter control. Results of this analysis, which were discussed in the proposal, indicated that there may be several kilns that would not be able to achieve the proposed emission standards while using MACT control, due to levels of metals and chlorine in raw material and/or conventional fuel. (See 61 FR at 17393–17406.) Commenters requested that we provide an equivalency determination to allow sources to comply with a control efficiency requirement (e.g., a minimum metal system removal efficiency) in lieu of the emission standard. (See response below.)

In the May 1997 NODA, we discussed revised standards that defined MACT control, in part, based on hazardous waste metal and chlorine feedrate control—as did the NPRM. (See 62 FR 24225–24235.) However, our revised approach did not define specific levels of hazardous waste metal and chlorine feedrate control, therefore, making it difficult to attribute a kiln's failure to meet emission standards to metals levels in raw materials.[254] In response to a commenter's request, we discussed, in the May 1997 NODA, an alternative approach to address raw material contributions. Our approach did not subject a source to the MACT standards if the source could document that metal or chlorine concentrations in their hazardous waste, and any nonmineral feedstock, is within the range of normal industry levels. The purpose of this requirement was to ensure that metal and chlorine emissions attributable to nonmineral feedstreams were roughly equivalent to those from sources achieving the MACT emission standards. The use of an industry average, or normal metal and chlorine level, was to serve as a surrogate MACT feedrate control level for the alternative standard because we did not define a specific level of control as MACT. We also requested comment on how best to determine normal hazardous waste metal and chlorine levels.

Today's final rule uses a revised standard setting methodology that defines specific levels of hazardous waste metal and chlorine feedrates as MACT control.[255] As a result, we do not need to define normal, or average, metal and chlorine levels for the purposes of this alternative standard provision.

b. What Comments Did We Receive on Our Approaches? There were many comments supporting and many opposing the concept of allowing alternative standards. Several commenters focus on the Agency's legal basis for this type of alternative standard. Some, supporting an alternative standard, wrote that feedrate control of raw materials at mineral processing plants is not a permissible basis for MACT control. In support of their position, some directed our attention to the language found in the Conference Report to the 1990 CAA amendments.[256] However, as we noted in the April 1996 NPRM and as was mentioned by many commenters[257], the Conference Report language is not reflected in the statute. Section 112(d)(2)(A) of the statute states, without caveat, that MACT standards may be based on ''process changes, substitution of materials or other modifications.''

As noted above, our MACT approach in today's rule relies on metal and chlorine hazardous waste feedrate control as part of developing MACT emission standards. It should be noted, that we do not directly regulate raw material metal and chlorine input under this approach, although there is no legal bar for us to do so. Since raw material feedrate control is not an industry practice, raw material feedrate control is not part of the MACT floor. In addition, we do not adopt such control as a beyond-the-floor standard. We conclude it is not cost-effective to require kilns to control metal and chlorine emissions by substituting their current raw materials with off-site raw materials. (See metal and chlorine emission standard discussions for cement kilns and lightweight aggregate kilns in Part Four, Sections VII and VIII.)[258]

Although today's rule offers a petition process, we considered varying levels of metal and chlorine emissions attributable to raw material in identifying the metal and chlorine emission standards through our MACT floor methodology. This consideration helps to ensure that the emission standards are achievable for sources using MACT control. Therefore, we anticipate very few sources, if any, will need to petition the Administrator for alternative standards. However, it is possible that raw material hazardous air pollutant levels, at a given kiln location, could vary over time and preclude kilns from achieving the emission standards. We believe, therefore, that it is appropriate to adopt a provision to allow kilns to petition for alternative standards so that future changes in raw material feedstock will not prevent compliance with today's emission standards.

Other commenters believe that alternative standards are not necessary because there are kilns with relatively high raw material metal concentrations already achieving the proposed standards. To address this point, and to reevaluate the ability of kilns to achieve the emission standards without new control of metals and chlorine in raw material and conventional fuel, we again estimated the total metal and chlorine emissions, assuming each kiln fed metal and chlorine at the defined MACT feedrate control levels.[259]

The following table summarizes the estimated achievability of the emission standards assuming kilns used MACT control. Our analysis determined achievability both at the emission standard and at the design level—70 percent of the standard. (To ensure compliance most kilns will ''design'' their system to operate, at a minimum, 30 percent below the standard.) The table describes the number of test conditions in our data base that would not meet the emission standard or meet the design level by estimating total emissions. For example, all cement kiln test conditions achieve the mercury emission standard, assuming all cement

[254] We could not estimate a cement kiln's total emissions (i.e., to determine emission standard achievability) based on the assumption that the kiln is feeding metals in the hazardous waste at the MACT control feedrate levels.

[255] As explained earlier, the emission standards for metals and chlorine reflect the performance of MACT control, which includes control of metals and chlorine in the hazardous waste feed materials. As further explained, sources are not required to adopt MACT control. Sources must, however, achieve the level of performance which MACT control achieves. Therefore, sources are not required to control metals and chlorine hazardous waste feedrates to the same levels as MACT control in order to comply with the standards for metals and chlorine. Rather, the source can elect to achieve the emission standard by any means, which may or may not involve hazardous waste feedrate control

[256] H.R. Rep. No. 101–952, at p. 339, 101st Cong., 2d Sess. (Oct. 26, 1990).

[257] See 62 FR 24239, May 2, 1997.

[258] The nonhazardous waste Portland Cement Kiln MACT rulemaking likewise controls semivolatile metal and low volatile metal emissions by limiting particulate matter emissions, and did not adopt beyond-the-floor standards based on raw material metal and chlorine feedrate control—see 64 FR 31898.

[259] When estimating emissions, the Agency assumed the kiln was feeding metals and chlorine in its hazardous waste at the lower of the MACT defining maximum theoretical emission concentration levels or the level actually demonstrated during its performance test. See Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume II: Selection of MACT Standards and Technologies, July 1999, for further discussion.

kilns used MACT control. On the other hand, the table also indicates that four cement kiln test conditions out of 27 do not achieve the design level for mercury. In our analysis, if all test conditions achieved both the standard and the design level, we concluded that there is no reason to believe raw material contributions to metal and chlorine emissions might cause a compliance problem.

CEMENT KILN AND LIGHTWEIGHT AGGREGATE KILN EMISSION STANDARD ACHIEVABILITY RESULTS

Source category	Mercury	Semivolatile metal	Low Volatile metal	Total chlorine
No. of cement kiln test conditions in MACT data base not achieving standard	[1]0/27	[1]1/38	[1]1/39	[1]2/42
No of cement kiln test conditions in MACT data base not achieving 70 % design level	4/27	6/38	3/39	3/42
No of lightweight aggregate kiln test conditions in MACT data base not achieving standard	0/17	5/22	2/22	3/18
No of lightweight aggregate kiln test conditions in MACT data base not achieving 70% design level	0/17	5/22	4/22	10/18

*Number after slash denotes total number of test conditions.

Our analysis illustrates that, subject to the assumptions made, some lightweight aggregate kilns and cement kilns have raw material hazardous air pollutant levels that could affect their ability to achieve the emission standard if no additional emission controls were implemented (e.g., additional hazardous waste feedrate control, or better air pollution control device efficiency). Nevertheless, we conclude that it is difficult to determine whether raw material hazardous air pollutant contributions to the emissions result in unachievable emission standards because of the difficulty associated with differentiating raw material hazardous air pollutant emissions from hazardous waste pollutant emissions. This uncertainty has led us to further conclude that it is appropriate to allow kilns to petition for alternative standards, provided that they submit site-specific information that shows raw material hazardous air pollutant contributions to the emissions prevent the kiln from complying with the emission standard even though the kiln is using MACT control.

Many commenters dislike the idea of an alternative standard. They wrote that regulation of raw material metal content may be necessary to control semivolatile metal and low volatile metal emissions at hazardous waste burning kilns because: (1) These kilns have relatively high chlorine levels in the flue gas (which predominately originate from the hazardous waste); and (2) chlorine tends to increase metal volatility. We agree that increased flue gas chlorine content from hazardous waste burning operations may result in increased metals volatility, which then could result in higher raw material metal emissions.[260] The increased presence of chlorine at hazardous waste burning kilns presents a concern. To address this concern, we require kilns to submit data or information, as part of the alternative standard petition, documenting that increased chlorine levels associated with the burning of hazardous waste, as compared to nonhazardous waste operations, do not significantly increase metal emissions attributable to raw material. This requirement is explained in greater detail later in this section.

Many commenters also point out that the alternative standard, at least as originally proposed, could result in metal and chlorine emissions exceeding the standard to possible levels of risk to human health and the environment. We agree that this potential could exist; however, the RCRA omnibus process serves as a safeguard against levels of emissions that present risk to human health or the environment. Therefore, sources operating pursuant to alternative standards may likely be required to perform a site-specific risk assessment to demonstrate that their emissions do not pose an unacceptable risk. The results of the risk assessment would then be used to develop facility-specific metal and chlorine emission limits (if necessary), which would be implemented and enforced through omnibus conditions in the RCRA permit.[261]

c. How Do I Demonstrate Eligibility for the Alternative Standard? To demonstrate eligibility, you must submit data or information which shows that raw material hazardous air pollutant contributions to the emissions prevent you from complying with the emission standard, even though you use MACT control for the standard from which you seek relief. To allow flexibility in implementation, we do not mandate what this demonstration must entail. However, we believe that a demonstration should include a performance test while using MACT control or better (i.e., the hazardous waste feedrate control and air pollution control device efficiencies that are the basis of the emission standard from which you seek an alternative). If you still do not achieve the emission standards when operating under these conditions, you may be eligible for the alternative standard (provided you further demonstrate that you meet the additional eligibility requirements discussed below). If you choose to conduct this performance test after your compliance date, you should first obtain approval to temporarily exceed the emission standards (for testing purposes only) to make this demonstration, otherwise you may be subject to enforcement action.

In addition, you must make a showing of adequate system removal efficiency to be eligible for an alternative standard for semivolatile metal, low volatile metal, or hydrochloric acid/chlorine gas. This requirement provides a check to ensure that you are exceeding the emission standard solely because of raw material contributions to the emissions, and not because of poor system removal efficiency for the hazardous air pollutants for which you are seeking relief. (It is possible that poor system removal efficiencies for these hazardous air pollutants result in emissions that are higher than the emission standards, even though the particulate matter emission standard is met.) This check could be done without the expense of a second performance test. The system removal efficiency achieved in the performance test described above could be calculated for the hazardous air pollutants at issue. You would then

[260] The potential for increased metal emissions is stronger for semivolatile metals (lead, in particular), but low volatile metal emissions still have potential to increase with increased flue gas chlorine concentrations. See Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume II: Selection of MACT Standards and Technologies, July 1999, for further discussion.

[261] RCRA permits for hazardous waste combustors address total emissions, regardless of the source of the pollutant due to the nexus with the hazardous waste treatment activities. See *Horsehead* v *Browner*, 16 F. 3d 1246, 1261–63 (D.C. Cir. 1994)(Hazardous waste combustion standards may address hazardous constituents attributable to raw material inputs so long as thee is a reasonable nexus with the hazardous waste combustion activites).

multiply the MACT control hazardous waste feedrate level (or the feedrate level you choose to comply with)[262] for the same hazardous air pollutant by a factor of one minus the system removal efficiency. This estimated emission value would then be compared to the emission standard, and would have to be below the standard for you to qualify for the alternative standard.

As discussed in the next section, this alternative standard requires you to use MACT control as defined in this rulemaking. For lightweight aggregate kilns, MACT control for chlorine is feedrate control and use of an air pollution control system that achieves a given system removal efficiency for chlorine. Thus, lightweight aggregate kilns that petition the Administrator for an alternative chlorine standard must also demonstrate, as part of a performance test, that it achieves a specified minimum system removal efficiency for chlorine. This eligibility requirement is identical to the above-mentioned eligibility demonstration that requires sources to make a showing of adequate system removal efficiency, with the exception that here we specify the system removal efficiency that must be achieved.[263]

For an alternative mercury standard, you do not have to perform a performance test demonstration and evaluation. We do not require this test because the mandatory hazardous waste mercury feedrate specified in § 63.1206(b)(10) and (11) ensures that your hazardous waste mercury contribution to the emissions will always be below the mercury standard.[264]

Finally, if you apply for semivolatile metal or low volatile metal alternative standards, you also must demonstrate, by submitting data or information, that increased chlorine levels associated with the burning of hazardous waste, as compared to nonhazardous waste operations, do not significantly increase metal emissions attributable to raw material. We expect that you will have to conduct two different emission tests to make this demonstration (although the number of tests should be determined on a site-specific basis). The first test is to determine metal emission concentrations when the kiln is burning conventional fuel with typical chlorine levels. The second test is to determine metal emissions when chlorine feedrates are equivalent to allowable chlorine feedrates when burning hazardous waste. You should structure these tests so that metal feedrates for both tests are equivalent. You would then compare metal emission data to determine if increased chlorine levels significantly affects raw material metal emissions.

d. What Is the Format of the Alternative Standard? The alternative standard requires that you use MACT control, or better, as applicable to the standard for which you seek the alternative. MACT control, as previously discussed, consists of hazardous waste feed control plus (for all relevant hazardous air pollutants except mercury) further control via air pollution control devices. Cement kilns and lightweight aggregate kilns will first have to comply with a specified hazardous waste metal and chlorine feedrate limit, as defined by the MACT defining maximum theoretical emission concentration level for the applicable hazardous air pollutant or hazardous air pollutant group. This work practice is necessary because there is no other reliable means of measuring that hazardous air pollutants in hazardous waste are controlled to the MACT control levels, i.e., that hazardous air pollutants in raw material are the sole cause of not achieving the emission standard. (See CAA section 112(h).) To demonstrate control of hazardous air pollutant metals emissions to levels reflecting the air pollution control device component of MACT control, you must be in compliance with the particulate matter standard. Finally, we require lightweight aggregate kilns to use an air pollution control device that achieves the specified MACT control total chlorine removal efficiency. This work practice is necessary because there is no other way to measure whether the failure to achieve the chlorine emission standard is caused by chlorine levels in raw materials.[265] See § 63.1206(b)(10) and (11) for a list of the maximum achievable control technology requirements for purposes of this alternative standard.[266]

There may be site-specific circumstances which require other provisions, imposed by the Administrator, in addition to the mandatory requirement to use MACT control. These provisions could be operating parameter requirements such as a further hazardous waste feedrate limitation. For instance, a kiln that petitions the Administrator for an alternative semivolatile emission standard may need to limit its hazardous waste chlorine feedrate to better assure that chlorine originating from the hazardous waste does not significantly affect semivolatile metal emissions attributable to the raw material. As discussed above, a kiln must demonstrate that increased chlorine levels from hazardous waste do not adversely affect raw material metal emissions to be eligible for this alternative standard. For this scenario, the alternative standard would be in the form of a semivolatile metal hazardous waste feedrate restriction which would require you to use MACT control, in addition to a hazardous waste chlorine feedrate limit.

Additional provisions also could include emission limitations that differ from those included in today's rulemaking. For example, the Administrator may determine it appropriate to require you to comply with metal or chlorine emission limitations that are than the standards in this final rulemaking. The emission limitation would likely consider the elevated levels of metal or chlorine in your raw material. This type of emission limitation would be no different, except for the numerical difference than the emission limitations in today's rule because it would limit total metal and chlorine emissions while at the same time ensuring MACT control is used. If the Administrator determines that such an emission limitation is appropriate, you must comply with both a hazardous waste feedrate restriction, which requires you to use MACT control, and an emission limitation. A potential method of determining an appropriate emission limitation would be to base the limit on levels demonstrated in the comprehensive performance test.

e. What Is the Process for an Alternative Standard Petition? If you are seeking alternative standards because raw materials cause you to exceed the standards, you must submit a petition request to the Administrator that includes your recommended alternative

You may choose to comply with a hazardous waste feedrate limit that is lower than the MACT control levels required by this alternative standard.

[263] The requirement to achieve an 85.0% and 99.6% chlorine system removal efficiency for existing and new lightweight aggregate kilns, respectively, together with the requirement to comply with a hazardous waste chlorine feedrate limitation, ensures that chlorine emissions attributable to hazardous waste are below the standards.

[264] The MACT defining hazardous waste maximum theoretical emission concentration for mercury is less than mercury standard itself, thus hazardous waste mercury contributions to the emissions will always be below the standard.

[265] There is no corresponding chlorine air pollution control device efficiency requirement for cement kilns since air pollution control is not the basis for MACT control of cement kiln chlorine emissions.

[266] See also ''Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Selection of MACT Standards and Technologies'', Chapter 11, July 1999, for further discussion on how the maximum achievable control technologies were chosen for the hazardous air pollutants.

standard provisions. At a minimum, your petition must include data or information which demonstrates that you meet the eligibility requirements and that ensure you use MACT control, as defined in today's rule.

Until the authorized regulatory agency approves the provisions of the alternative standard in your petition (or establishes other alternative standards) and until you submit a revised NOC that incorporates the revised standards, you may not operate under your alternative standards in lieu of the applicable emission standards found in §§ 63.1204 and 63.1205. We recommend that you submit a petition well in advance of your scheduled comprehensive performance test, perhaps including the petition together with your comprehensive performance test plan. You may need to submit this petition in phases to ultimately receive approval to operate pursuant to the alternative standard provisions, similar to the review process associated with performance test workplans and performance test reports. After initial approval, alternative standard petitions should be resubmitted every five years for review and approval, concurrent with subsequent future comprehensive performance tests, and should contain all pertinent information discussed above.

You may find it necessary to complete any testing associated with documenting your eligibility requirements prior to your comprehensive performance test to determine if in fact you are eligible for this alternative standard, or you may choose to conduct this testing at the same time you conduct your comprehensive performance test. This should be determined on a site-specific basis, and will require coordination with the Administrator or Administrator's designee.

2. What Special Provisions Exist for an Alternative Mercury Standard for Kilns?

See § 63.1206(b)(10) and (11).

a. What Happens if Mercury Is Historically Not Present at Detectible Levels? Situations may exist in which a kiln cannot comply with the mercury standard pursuant to the provisions in § 63.1207(m) when using MACT control and when mercury is not present in the raw material at detectable levels.[267] As a result, today's rule provides a petition process for an alternative mercury standard which only requires compliance with a hazardous waste mercury feedrate limitation, provided that historically mercury not been present in the raw material at detectable levels.

We received comments from the lightweight aggregate kiln industry expressing concern with the stringency of the mercury standard. Commenters oppose stringent mercury standards, in part, because of the difficulty of complying with day-to-day mercury feedrate limits. One potential problem cited pertains to raw material mercury detection limits. Commenters point out that if a kiln assumed mercury is present in the raw material at the detection limit, the resulting calculated uncontrolled mercury emission concentration could exceed, or be a significant percentage of, the mercury emission standard. This may prevent a kiln from complying with the mercury emission standard pursuant to the provisions of § 63.1207(m), even though MACT control was used.

We agree with commenters that this is a potential problem. In addition, it is not appropriate to implement a mercury standard compliance scheme that is relatively more burdensome for kilns with no mercury present in raw material, as compared to kilns with high levels of mercury in their raw material.[268] Because we establish provisions that provide alternatives to kilns with high levels of mercury in the raw material, we are doing the same for those kilns which do not have mercury present in raw material at detectable levels.

b. What Are the Alternative Standard Eligibility Requirements? To be eligible for this alternative mercury standard, you must submit data or information which demonstrates that historically mercury has not been present in your raw material at detectable levels. You do not need to show that mercury has never been present at detectable levels. The determination of whether your data and information sufficiently demonstrate that mercury has not historically been present in your raw material at detectable levels will be made on a site-specific basis. To assist in this determination, you also should provide information that describes the analytical methods (and their associated detection limits) used to measure mercury in the raw material, together with information describing how frequently you measured raw material mercury content.

If you are granted this alternative standard, you will not be required to monitor mercury content in your raw material for compliance purposes. However, after initial approval, this alternative standard must be reapproved every five years (see discussion below). Therefore, you should develop a raw material mercury sampling and analysis program that can be used in future alternative mercury standard petition requests for the purpose of demonstrating that mercury has not historically been present in raw material at detectable levels.

c. What Is the Format of Alternative Mercury Standard? The alternative standard requires you to use MACT control for mercury (i.e., the level of hazardous waste feedrate control specified in today's rule). This alternative standard for mercury is conceptually identical to the emission standards in this final rule, because it requires the use of an equivalent level of hazardous air pollutant MACT control as compared to the MACT control used to determine the emission standards.

The mercury feedrate control level will differ for new and existing sources, and will differ for cement kilns and lightweight aggregate kilns. See § 63.1206(b) (10) and (11) for a list of the mercury hazardous waste feedrate control levels for purposes of this alternative standard.[269]

d. What Is the Process for The Alternative Mercury Standard Petition? If you are seeking this alternative mercury standard, you must submit a petition request to the Administrator that includes the required information discussed above. You will not be allowed to operate under this alternative standard, in lieu of the applicable emission standards found in §§ 63.1204 and 63.1205, unless and until the Administrator approves the provisions of this alternative standard and until you submit a revised NOC that incorporates this alternative standard.

[267] The provisions in § 63.1207(m) waive the requirement for you to conduct a performance test, and the requirement to set operating limits based on performance test data, provided you demonstrate that uncontrolled mercury emissions are below the emission standard (see Part 4, Section X.B). These provisions allow you to assume mercury is present at half the detection limit in the raw material, when a feedstream analysis determines that mercury is not present at detectable levels, when calculating your uncontrolled emissions.

[268] Kilns that comply with alternative mercury standards because of high mercury levels in their raw material are not required to monitor the mercury content of their raw material unless the Administrator requires this as an additional alternative standard requirement. Thus, absent the alternative mercury standard discussed in this section, a source that does not have mercury present in their mercury at detectable levels would be subject to more burdensome raw material feedstream analysis requirements.

[269] Also see Final Technical Support Document for Hazardous Waste Combustor MACT Standards, Volume IV: Selection of MACT Standards and Technologies, Chapeter 11, July 1999, for further discussion on how the maximum achievable control technologies were chosen for mercury.

We recommend that you submit these petitions well in advance of your scheduled comprehensive performance test, perhaps including the petition together with your comprehensive performance test plan. After initial approval, alternative standard petitions should be resubmitted every five years for review and approval, concurrent with subsequent future comprehensive performance tests, and should contain all pertinent information discussed above.

B. Under What Conditions Can the Performance Testing Requirements Be Waived? See § 63.1207(m).

In the April 1996 NPRM, we proposed a waiver of performance testing requirements for sources that feed low levels of mercury, semivolatile metal, low volatile metal, or chlorine (see 61 FR at 17447). Under the proposed waiver, a source would be required to assume that all mercury, semivolatile metal, low volatile metal, or chlorine (dependent on which hazardous air pollutant(s) the source wishes to petition for a waiver) fed to the combustion unit, for all feedstreams, is emitted from the stack. The source also would need to show that these uncontrolled emission concentrations do not exceed the associated emission standards, taking into consideration stack gas flow rate. The above requirements would apply for all periods that a source elects to operate under this waiver and for which the source is subject to the requirements of this rulemaking. All comments received on this topic support this approach, and no commenters suggest alternative procedures to implement this provision. Today's rule finalizes the proposed performance test waiver provision, with one minor change expected to provide industry with greater flexibility when demonstrating compliance without compromising protectiveness.

1. How Is This Waiver Implemented?

The April 1996 proposal identified two implementation methods to document compliance with this waiver provision. In today's rule we finalize both proposed methods and add another implementation method to provide greater flexibility when demonstrating compliance with the provisions of this performance test waiver. As proposed, the first approach allows establishment and continuous compliance with one maximum total feedstream feedrate limit for mercury, semivolatile metal, low volatile metal, or chlorine and one minimum stack gas flow rate. The combined maximum feedrate and minimum stack gas flow rate must result in uncontrolled emissions below the applicable mercury, semivolatile metal, low volatile metal, or chlorine emission standards. Both limits would be complied with continuously; any exceedance would require the initiation of an automatic waste feed cut-off.

Also as proposed, the second approach accommodates operation under different ranges of stack gas flow rates and/or metal and chlorine feedrates. Today's rule allows establishment of different modes of operation with corresponding minimum stack gas flow rate limits and maximum feedrates for metals or chlorine. If you use this approach, you must clearly identify in the operating record which operating mode is in effect at all times, and you must properly adjust your automatic waste feed cutoff levels accordingly.

The third approach, which is an outgrowth of our proposed approaches, allows continuous calculation of uncontrolled stack gas emissions, assuming all metals or chlorine fed to combustion unit are emitted out the stack. If you use this approach, you must record these calculated values and comply with the mercury, semivolatile metal, low volatile metal, or chlorine emission standards on a continuous basis. This approach provides greater operational flexibility, but increases recordkeeping since the uncontrolled emission level must be continuously recorded and included in the operating record for compliance purposes.

If you claim this waiver provision, you must, in your performance test workplan, document your intent to use this provision and explain which implementation approach is used. Other than those limits required by this provision, you will not be required to establish or comply with operating parameter limits associated with the metals or chlorine for which the waiver is claimed. Your NOC also must specify which implementation method is used. The NOC must incorporate the minimum stack gas flowrate and maximum metal and chlorine feedrate as operating parameter limits, or include a statement which specifies that you will comply with emission standard(s) by continuously recording your uncontrolled metal and chlorine emission rate.

If you cannot continuously monitor stack gas flow rate, for the purpose of demonstrating compliance with the provisions of this waiver, you may use an appropriate surrogate in place of stack gas flow rate (e.g., cement kiln production rate). However, if you use a surrogate, you must provide in your performance test workplan data that clearly and reasonably correlates the surrogate parameter to stack gas flow rate.

2. How Are Detection Limits Handled Under This Provision?

We did not address in April 1996 NPRM how nondetect metal and chlorine feedstream results are handled when demonstrating compliance with the feedrate limits or when calculating uncontrolled emission concentrations under this provision. Commenters likewise did not offer suggestions of how to handle nondetect data for this provision. After careful consideration, for the purposes of this waiver, we require that you must assume that the metals and chlorine are present at the full detection limit value when the analysis determines the metals and chlorine are not detected in the feedstream (except as described in the following paragraph). Because performance testing is waived under this provision, it is appropriate to adopt a more conservative assumption that metals and chlorine are present at the full detection limit for the purposes of this waiver. (In other portions of today's rule we make the assumption that 50 percent presence is appropriate given the different context involved). Assuming full detection limits provides an additional level of assurance that resulting emissions still reflect MACT and do not pose a threat to human health and the environment. If you cannot demonstrate compliance with the provisions of this waiver when assuming full detection limits, then you should not claim this waiver and should conduct emissions testing to demonstrate compliance with the emission standard.

Based on the comments and as discussed in the previous section (Section A.2.a), we conclude it is not appropriate, for purposes of this performance test waiver provision, to require a kiln to assume mercury is present at the full detection limit in its raw material when the feedstream analysis determines mercury is not present at detectable levels. As a result, we allow kilns to assume mercury is present at one-half the detection limit in raw materials when demonstrating compliance with the performance test waiver provisions whenever the raw material feedstream analysis determines that mercury is not present at detectable levels.

C. What Other Waiver Was Proposed, But Not Adopted?

Waiver of the Mercury, Semivolatile Metal, Low Volatile Metal, or Chlorine Standard

We proposed not to subject sources to one or more of the mercury, semivolatile metal, low volatile metal, or chlorine emission standards (and other requirements)[270] if their feedstreams did not contain detectable levels of that associated metal or chlorine (e.g., if their feedstreams did not contain a detectable level of chlorine, the hydrochloric acid/chlorine gas standard would be waived—see 61 FR at 17447). As part of this waiver, a feedstream sampling and analysis plan would be developed and implemented to document that feedstreams did not contain detectable levels of the metals or chlorine.

Several commenters supported this waiver, stating that it is of no benefit to human health or the environment to require performance testing, monitoring, notification, and record-keeping of constituents not fed to the combustion unit. However, commenters were divided in their support of the need to set minimum feedstream detection limits. Those supporting specified detection limits wrote that detection limits are needed to ensure that appropriate analytical procedures are used and needed to provide consistency between sources. Those opposing specified detection limits believed that detection limits are highly dependent on feedstream matrices. Therefore, to impose a detection limit that applies to all sources and all feedstreams would not be practicable. One commenter questioned basing this waiver on nondetect values because a feedstream analyses that detects, at any time, a quantity of the metal or chlorine just above the detection limit may be considered to be out of compliance.

We agree that little or no environmental benefit may be gained by requiring performance testing, monitoring, notification, and record keeping for a constituent not fed to the combustion unit. However, based on our careful analysis of comments and on our reevaluation of the practical implementation issue inherent in this type of waiver, we find that it may not always be practicable to use detection limits to determine if a waste does or does not contain metals or chlorine. We are concerned that facility-specific detection limits may vary, from source to source, at levels such that sources with detection limits in the high-end of the distribution (due to their complex waste matrix) have the potential for significant metal or chlorine emissions. Under the facility-specific detection limit approach, a high-end detection limit source with relatively high emissions could qualify for the waiver; however, a source with a simpler feedstream matrix with significantly lower amounts of metals in the feedstream (but just above the detection limit) would not qualify. This not only turns the potential benefit of a waiver provision on its head, but raises serious questions of national consistency, fairness, and evenness of environmental protection to surrounding communities. We also conclude that it is impractical to set one common detection limit for each hazardous air pollutant as part of this waiver because, as commenters stated, detection limits are matrix dependent.

Due to these issues, we were unable to devise an implementable and acceptable nondetect waiver provision, and therefore do not adopt one in today's final rule. As is described in the previous section (Section B), however, we do provide a waiver of performance testing requirements to sources that feed low levels of mercury, semivolatile metal, low volatile metal, or chlorine. Although this waiver provision does not waive the emission standard, monitoring, notification, recordkeeping, and reporting requirements, it does waive emission tests and compliance with operating parameter limits for the associated metals or chlorine.

D. What Equivalency Determinations Were Considered, But Not Adopted?

In response to comments we received from the April 1996 NPRM, we included in the May 1997 NODA a discussion of an allowance of a one-time compliance demonstration for hydrocarbon and carbon monoxide at cement kilns equipped with temporary midkiln sampling locations. (See 62 FR 24239.) This equivalency determination required that alternative, continuously monitored, operating parameters be used in lieu of continuous monitoring of hydrocarbon/carbon monoxide. As discussed below, we conclude that the shortcomings associated with the proposed alternative operating parameters created sufficient uncertainties, for implementation and overall environmental protection, that we are not adopting an equivalency determination option in this rulemaking. However, cement kilns have the opportunity to petition the Administrator under § 63.8(f) and 63.1209(g)(1) to make a site-specific case for this type of equivalency determination.

In response to the April 1996 NPRM, we received comments indicating that some kilns would need to either operate at inefficient back-end temperatures (to oxidize hydrocarbons desorbed from the raw material) or be required to install and maintain a midkiln sampling system to demonstrate compliance with the hydrocarbon/carbon monoxide standards. Commenters believe that this may not be feasible for some kilns because: (1) Raising back end temperatures may increase dioxin formation; (2) most long kilns are not equipped to sample emissions at the midkiln location; (3) costs associated with retrofit and maintenance may be considered high; and (4) maintenance problems associated with the sampling duct are difficult to overcome.

We received numerous comments on the proposed hydrocarbon/carbon monoxide equivalency approach described in the May 1997 NODA. Many cement kilns support the option and defend the use of alternative operating parameters in lieu of continuous carbon monoxide and hydrocarbon monitors. Many commenters oppose using any parameters other than carbon monoxide or hydrocarbon as a combustion efficiency indicator and as surrogate emission standards for the nondioxin organic hazardous air pollutants. We have found that a number of factors suggest that a special provision allowing use of alternative operating parameters, in lieu of carbon monoxide and/or hydrocarbon, is neither necessary nor appropriate to include in this rulemaking.

The alternative operating parameters associated with a one-time demonstration would have to assure that compliance with the carbon monoxide/hydrocarbon standard is maintained at the midkiln location on a continuous basis. We considered adopting several different operating parameters in lieu of hydrocarbon/carbon monoxide monitoring to achieve this goal. Maximum production rate was considered as a continuous residence time indicator. Minimum combustion zone temperature, continuously monitored destruction and removal efficiency using sulphur hexafluoride, and minimum effluent NO_X limits were also examined to ensure adequate temperature is continuously maintained in the combustion zone. To ensure adequate turbulence, we considered using minimum kiln effluent oxygen concentration. Commenters did not suggest additional alternative operating parameters.

Each of these operating parameters have potential shortcomings, and we are not convinced that use of these parameters, even in combination, provides a combustion efficiency indicator as reliable as continuous

[270] Ancillary performance testing, monitoring, notification, record keeping, and reporting requirements.

hydrocarbon/carbon monoxide monitoring. We have identified the following potential problems with these alternative operating parameters: (1) Effluent kiln oxygen concentration may not correlate well to carbon monoxide/hydrocarbon produced from oxygen deficient zones in the kiln;[271,272] (2) pyrometers, or other temperature monitoring systems, may not provide direct and reliable measurements of combustion zone temperature;[273] (3) some combustion products of sulphur hexaflouride are toxic and regulated hazardous air pollutants;[274] (4) there are no demonstrated performance specifications for continuous sulphur hexaflouride monitors; and (5) it is contrary to other air emission limitations (in principle) to require minimum (not maximum) NO_X limits.

On balance, the lack of adequate documentation allowing us to resolve these uncertainties and potential problem areas prevents us from further considering this type of hydrocarbon/carbon monoxide equivalency determination provision for inclusion in today's final rule. As stated above, however, cement kilns have the opportunity to petition the Administrator under § 63.8(f) to make a site-specific case for this type of equivalency determination.

As is explained in Part Four, Section VII.C(9)(c), today's rulemaking subjects newly constructed hazardous waste burning cement kilns at greenfield sites to a main stack hydrocarbon standard of either 20 or 50 ppmv. We clarify that this standard applies to these sources even if they applied and received approval for an alternative monitoring approach described above, because the intent of this hydrocarbon standard is to control organic hazardous air pollutants desorbed from raw material and not to control combustion efficiency.

E. What are the Special Compliance Provisions and Performance Testing Requirements for Cement Kilns with In-line Raw Mills and Dual Stacks?

Preheater/precalciner cement kilns with dual stacks and cement kilns with in-line raw mills require special compliance provisions and performance testing requirements because they are unique in design.

Preheater/precalciner kilns with dual stacks have two separate air pollution control systems. As discussed in Section F below, emission characteristics from these separate stacks could be different. As a result, these kilns must conduct emission testing in both stacks to document compliance with the emission standards[275] and must establish separate operating parameter limits for each air pollution control device. See § 63.1204(e)(1).

Cement kilns with in-line raw mills either operate with the raw mill on-line or with the raw mill off-line. As discussed in Section F below, these two different modes of operation could have different emission characteristics. As a result, cement kilns with in-line raw mills must conduct emission testing when the raw mill is off-line and when the raw mill is on-line to document compliance with the emission standards and must establish separate operating parameters for each mode of operation. These kilns must document in the operating record each time they change from one mode of operation to the alternate mode. They must also begin calculating new rolling averages for operating parameter limits and comply with the operating parameter limits for that mode of operation, after they officially switch modes of operation. If there is a transition period associated with changing modes of operation, the kiln operator has the discretion to determine when, during this transition, the kiln has officially switched to the alternate mode of operation and when it must begin complying with the operating parameter limits for that alternate mode of operation. See 63.1204(d)(1).

Preheater/precalciner kilns with dual stacks that also have in-line raw mills do not have to conduct dioxin/furan testing in the bypass stack to demonstrate compliance with the standard when the raw mill is off-line. We have concluded that dioxin/furan emissions in the bypass stack are not dependent on the raw mill operating status because dioxin/furan emissions are primarily dependent on temperature control. A kiln may assume that when the raw mill is off-line, the dioxin/furan emissions in the bypass stack are identical to the dioxin/furan emissions when the raw mill is on-line and may comply with the bypass stack dioxin/furan raw mill on-line operating parameters for both modes of operation. See § 63.1204(d)(1).

F. Is Emission Averaging Allowable for Cement Kilns with Dual Stacks and In-line Raw Mills?

In the April 1996 NPRM, we did not subdivide cement kilns by process type when setting emission standards (see 61 FR at 17372–17373). As a result, we received many comments from the cement kiln industry indicating that preheater/precalciner cement kilns with dual stacks and cement kilns with in-line raw mills have unique design and operating procedures that necessitate the use of emission averaging when demonstrating compliance with the emission standards. We addressed these comments in the May 1997 NODA by discussing an allowance for emission averaging (for all standards except for hydrocarbon/carbon monoxide) at preheater/precalciner cement kilns with dual stacks when demonstrating compliance with the emission standards (see 62 FR at 24240). We also discussed allowing cement kilns with in-line raw mills to demonstrate compliance with the emission standards on a time-weighted average basis to account for different emission characteristics when the raw mill is active as opposed to when it is inactive. In light of the favorable comments received, and the lack of significant concerns to the contrary, we adopt these emission averaging provisions in today's rule.

1. What Are the Emission Averaging Provisions for Cement Kilns with In-line Raw Mills?

See § 63.1204(d).

As explained in the May 1997 NODA, emissions of hazardous air pollutants can be different when the raw mill is active versus periods of time when the mill is out of service. We received many comments on this issue, all in favor of an emissions averaging approach to accommodate these different modes of operation. As a result, we adopt a provision that allows cement kilns that operate in-line raw mills to average their emissions on a time-weighted basis to show compliance with the metal and chlorine emission standards.

Emission averaging for in line raw mills will not be allowed when they demonstrate compliance with the hydrocarbon/carbon monoxide standard

[271] An oxygen deficient zone in the kiln due to inadequate mixing, which could potentially result in the emission of significant amounts of carbon monoxide and organic hazardous air pollutants, could be well mixed with excess air by the time it reaches the kiln exit, where oxygen is monitored. Thus the oxygen monitor may not record any oxygen concentration change and would not serve as an adequate control to ensure proper combustion turbulence.

[272] We do not have, nor did commenters submit, data which show whether effluent kiln oxygen concentration adequately correlates with carbon monoxide/hydrocarbon produced from oxygen deficient zones in the kiln.

[273] See Part Five, Section VII.D.(2)(b)(iii), for further discussion on combustion zone temperature measurements.

[274] Hydrofluoric acid, a CAA hazardous air pollutant, is a possible combustion byproduct of sulphur hexafluoride.

[275] This does not apply to the hydrocarbon and carbon monoxide standard. See discussion in Part Four, Section VII.D on hydrocarbon and carbon monoxide standards for cement kilns.

because hydrocarbon and carbon monoxide are monitored continually and serve as a continuous indicator of combustion efficiency. No commenter states that emission averaging is needed for hydrocarbon/carbon monoxide. Emission averaging for particulate matter will not be allowed because this standard is based on the New Source Performance Standards found in § 60.60 subpart F. We interpret these standards to apply regardless if the raw mill is on or off. (Note that this is consistent with the proposed Nonhazardous Waste Portland Cement Kiln Rule. See 56 FR 14188). In addition, emission averaging for dioxin/furan will not be allowed because cement kilns with in-line raw mills are expected to control temperature during both modes of operation to comply with the standard. No commenter stated that emission averaging was needed for dioxin/furan.

a. What Is the Averaging Methodology? In the May 1997 NODA, we did not specify an averaging methodology. As a result, commenters suggested that the following equation would adequately calculate the time-weighted average concentration of a regulated constituent when considering the length of time the in-line raw mill is on-line and off-line:

$$C_{total} = \left\{\left(C_{mill\text{-}off}\right)\times\left(T_{mill\text{-}off} / \left(T_{mill\text{-}off} + T_{mill\text{-}on}\right)\right)\right\} + \left\{\left(C_{mill\text{-}on}\right)\times\left(T_{mill\text{-}on} / \left(T_{mill\text{-}off} + T_{mill\text{-}on}\right)\right)\right\}$$

Where:

C_{total} = time-weighted average concentration of a regulated constituent considering both raw mill on time and off time.

$C_{mill\text{-}off}$ = average performance test concentration of regulated constituent with the raw mill off-line.

$C_{mill\text{-}on}$ = average performance test concentration of regulated constituent with the raw mill on-line.

$T_{mill\text{-}off}$ = time when kiln gases are not routed through the raw mill.

$T_{mill\text{-}on}$ = time when kiln gases are routed through the raw mill.

We agree that this equation properly calculates the time-weighted average concentration of the regulated constituent when considering both raw mill operation and raw mill down time and are adopting it in today's rule.

b. What Is Required During Emission Testing? As discussed, sources that use this emission averaging provision must conduct performance testing for both modes of operation (with the raw mill both on-line and off-line), demonstrating appropriate operating parameters during both test conditions. One commenter suggests that the Agency allow sources to demonstrate both raw mill on-line and off-line operations within the same test runs. This would allow a test under one condition instead of two and would give more flexibility by ensuring identical operating parameters for raw mill on-line operations as opposed to off-line operations. This also could theoretically result in fewer automatic waste feed cutoffs when transitioning from one mode of operation to another. Although this approach may have some benefit, we conclude that it is necessary to demonstrate, through separate emission testing, the comparison of emissions when operating with the raw mill on-line as opposed to the raw mill off-line. The separate emission testing is necessary to demonstrate whether emissions are higher or lower when the raw mill is not active to assure compliance with the emission standards on a time-weighed basis.[276]

c. How Is Compliance Demonstrated? In the May 1997 NODA, we did not discuss specific compliance provisions of an emission averaging approach. After careful consideration, however, we determine that to use this emission averaging provision, you must document and demonstrate compliance with the emission standards on an annual basis by using the above equation. Shorter averaging times were considered, but were not chosen since it may be difficult for a kiln with an in-line raw mill to comply with a short averaging period if the raw mill must be off-line for an extended period of time. Therefore, you must annually document in your operating record that compliance with the emission standard was demonstrated for the previous year's operation by calculating your estimated annual emissions with the above equation. The one-year block average begins on the day you submit your NOC. You must include all hazardous waste operations in that one year block period, and you also must include all nonhazardous waste operations that you elect to comply with hazardous waste MACT standards, when demonstrating annual compliance.[277]

d. What Notification Is Required? Again, in the May 1997 NODA, we did not discuss specific notification requirements. After careful consideration, we determined that if you use this emission averaging provision, you must notify the Administrator of your intent to do so in your performance test workplan. Several commenters favor allowing time-weighted emissions averaging, so long as historical data are submitted to justify allowable time weighting factors (explained below). We agree with these comments and require that you submit historical raw mill operation data in your performance test workplan. These data should be used to estimate the future down-time the raw mill will experience. You must document in your performance test workplan that estimated emissions and estimated raw mill down-time will not result in an exceedance of the emission standard on an annual basis. You also must document in your NOC that the emission standard will not be exceeded based on the documented emissions from the compliance test and predicted raw mill down-time.

2. What Emission Averaging Is Allowed for Preheater or Preheater-Precalciner Kilns with Dual Stacks? (See § 63.1204(e).)

As explained in the May 1997 NODA, and in an earlier section of this preamble (see Part Four, Section V.II.B), emissions of hazardous air pollutants can be different in a preheater or preheater-precalciner cement kiln's main stack as opposed to the bypass stack. We received many comments on this issue, all in favor of the emissions averaging approach discussed in the NODA to accommodate the different emission characteristics in these stacks. Therefore, we today finalize a provision to allow preheater or preheater-precalciner cement kilns with dual stacks to average emissions on a flow-weighted basis to demonstrate compliance with chlorine and metal emission standards.

Emission averaging to demonstrate compliance with the hydrocarbon/carbon monoxide standard is not

[276] The Agency does not have, nor did commenters submit, sufficient data to determine whether emissions will be higher or lower when the raw mill is inactive.

[277] Today's rulemaking allows a hazardous waste source, when not burning hazardous waste, to either comply with the hazardous waste cement kiln MACT standards or the non hazardous waste cement kiln standards (see Part Five, Section I).

needed at preheater and preheater-precalciner cement kilns with dual stacks since today's rule requires these kilns to monitor hydrocarbon or carbon monoxide in the bypass stack only.[278] Emission averaging for particulate matter is no longer needed since the format of the standard (0.15 kg/Mg dry feed) implicitly requires the kiln to consider mass emissions from both stacks to demonstrate compliance with the emission standard. In addition, emission averaging for dioxin/furan will not be allowed because cement kilns with dual stacks are expected to control temperature in both air pollution control systems to comply with the standard. No commenter stated that emission averaging was needed for dioxin/furan.

a. What Is the Average Methodology? In the May 1997 NODA, we did not specify an averaging methodology. However, commenters suggested that the following is an appropriate equation to calculate the flow-weighted average concentration of a regulated constituent when considering emissions from both stacks:

$$C_{tot} = \left\{\left(C_{main}\right)\times\left(Q_{main}/\left(Q_{main}+Q_{bypass}\right)\right)\right\}+\left\{\left(C_{bypass}\right)\times\left(Q_{bypass}/\left(Q_{main}+Q_{bypass}\right)\right)\right\}$$

Where:

C_{tot} = flow-weighted average concentration of the regulated constituent

C_{main} = average performance test concentration demonstrated in the main stack

C_{bypass} = average performance test concentration demonstrated in the bypass stack

Q_{main} = volumetric flowrate of main stack effluent gas

Q_{bypass} = volumetric flowrate of bypass effluent gas

We agree that this equation properly calculates the flow-weighted average concentration of the regulated constituent when considering emissions from both stacks and it is adopted in today's rule.

b. What Emissions Testing and Compliance Demonstrations Are Necessary? To use this emission averaging provision, you must simultaneously conduct performance testing in both stacks during your comprehensive performance test to compare emission levels of the regulated constituents (as proposed). These emission data must be used as inputs to the above equation to demonstrate compliance with the emission standard.

You must develop operating parameter limits, and incorporate these limits into your NOC, that ensures your emission concentrations, as calculated with the above equation, do not exceed the emission standards on a twelve-hour rolling average basis. These operating parameters should limit the ratio of the bypass stack flowrate and combined bypass and main stack flowrate such that the emission standard is complied with on a twelve-hour rolling average basis. Whereas this was not proposed, we conclude that this provision is necessary to assure compliance with the standards since the ratio of stack gas flowrate and bypass stack flowrate could deviate from the levels demonstrated during the performance test.

c. What Notification Is Required? In the May 1997 NODA, we did not discuss specific notification requirements. After careful consideration, however, we determine that to use this emission averaging provision, you must notify the Administrator of your intent to do so in your performance test workplan. The performance test workplan must include, at a minimum, information that describes your proposed operating limits. You must document your use of this emission averaging provision in your NOC and document the results of your emissions averaging analysis after estimating the flow weighted average emissions with the above equation. You must also incorporate into the NOC the operating limits that ensures compliance with emission standards on a twelve-hour rolling average basis.

G. What Are the Special Regulatory Provisions for Cement Kilns and Lightweight Aggregate Kilns that Feed Hazardous Waste at a Location Other Than the End Where Products Are Normally Discharged and Where Fuels Are Normally Fired? (§ 63.1206(b)(12) and (b)(8)(ii))

As discussed in Part Four, Section IV.B., the Agency is allowing you to comply with either a carbon monoxide or hydrocarbon standard. However, we have concluded that this option to comply with either standard should not apply if you operate a cement kiln or lightweight aggregate kiln and feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired these other locations include, at the mid kiln or the cold, upper end of the kiln. Consistent with the Boilers and Industrial Furnace regulations (see § 266.104(d)), we are today requiring you to comply with the hydrocarbon standard, and are not giving you the option to comply with the carbon monoxide standard, if you feed hazardous waste in this manner. This is because we are concerned that hazardous waste could be fired into a location such that nonmetal compounds in the waste may be merely evaporated or thermally cracked to form pyrolysis byproducts rather than be completely combusted.[279] If this occurs, there is the potential that little carbon monoxide will be generated even though significant hydrocarbons are being emitted. Carbon monoxide monitoring would thus not ensure that organic hazardous air pollutant emissions are being properly controlled. We do not anticipate this requirement to be overly burdensome, since it is a current requirement of the Boilers and Industrial Furnace regulation.

We have also concluded that it would not be appropriate for you to comply with the hydrocarbon standard in the bypass duct if you operate a cement kiln and feed hazardous waste into a location downstream of your bypass sampling location relative to flue gas flow direction. Such operation would result in hazardous waste combustion that would not be monitored by a hydrocarbon monitor. Today's rulemaking thus requires you to comply with the main stack hydrocarbon standard of 20 ppmv if you feed hazardous waste in this manner. This is also consistent with the Boilers and Industrial Furnace regulations, which do not allow you to monitor hydrocarbons in the bypass duct if you operate a short kiln and if you feed hazardous waste in the preheater or precalciner (see § 266.104(f)(1)).

In addition to the above requirements, if you operate a cement kiln or

[278] New kilns at greenfield locations must also comply with a main stack hydrocarbon standards. For these sources, emission averaging for hydrocarbons would not appropriate because the purpose of the main stack hydrocarbon standard is to control organic hazardous air pollutants that originate from the raw material.

[279] See Final Rule, Burning of Hazardous Waste in Boilers and Industrial Furances, February 21, 1991, 56 FR at 7158.

lightweight aggregate kiln and feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired, you are also required to demonstrate compliance with the destruction and removal efficiency standard every five years as opposed to a one-time destruction and removal demonstration We require you to do this because the unique design and operation of such a waste firing system necessitates a compliance demonstration for this standard every five years (see previous discussion in part Four, Section IV.A.3.).

H. What is the Alternative Particulate Matter Standard for Incinerators? See § 63.1206(b)(15).

As discussed in Part Four, Section II.A.2, today's rule establishes a particulate matter standard of 0.015 gr/dscf for incinerators as a surrogate to control nonenumerated metal hazardous air pollutants (i.e., antimony, cobalt, manganese, nickel, selenium). Of course, particulate matter air pollution control devices also exert control on other metals (except highly volatile species such as mercury), including the enumerated metals. (The enumerated metal hazardous air pollutants are those CAA metal hazardous air pollutants regulated directly via individual emission standards in today's rule, i.e., mercury, semivolatile metals, low volatile metals). A number of commenters, primarily incinerator operators, assert that a particulate matter standard should not be used as a surrogate control for metals in situations where the particulate matter does not contain any metal hazardous air pollutants (i.e., situations when the waste does not contain any metals, except perhaps mercury and the resulting ash contains only relatively benign ash or soot). These commenters argue that the cost associated with reducing particulate matter levels below 0.015 gr/dscf would be excessive and that some type of alternative standard (reflecting superior metal feedrate control) be created.

After considering these comments and another type of particulate matter control technology, we conclude that it is appropriate to offer an alternative particulate matter standard of 0.03 gr/dscf for incinerators that have de minimis levels of hazardous air pollutant metals in their feedstreams, and we have adopted a petition process to allow incinerators to seek this alternative standard. An alternative particulate matter standard is within the scope of our overall preamble discussions of the control of particulate matter and metal emissions, the ways in which the Agency was considering feedrate as part of its MACT analysis, our approaches to enumerated and non-enumerated CAA hazardous air pollutant metals, and the presentation of options for compliance testing when only de minimis levels of metals are present.

1. Why is this Alternative Particulate Matter Standard Appropriate under MACT?

An alternative particulate matter floor level of 0.030 gr/dscf is appropriate for an incinerator that can demonstrate it has de minimis levels of CAA hazardous air pollutant metals (except mercury), as defined below, in its feedstreams. As discussed in other portions of this preamble and in our technical background documents for this rulemaking, control of metals (other than mercury) is a function, in a practical sense, of both the feedrate of those metals into the combustion device as well as the design, operation, and maintenance of a source's air pollution control devices for particulate matter. Given the intertwined relationship between these two factors, the Agency has concluded that a particulate matter floor control level of 0.015 gr/dscf is not warranted for sources using superior feedrate control (i.e. beyond MACT) to reduce metal emissions, which in this case would be shown by having non-detectable levels of metals in their feedstreams (discussed in more detail below).[280]

We also conclude that the floor control for this alternative standard is the use of a venturi scrubber or the use of the same, but less sophisticated, particulate matter control technologies that were established for the 0.015 gr/dscf standard.[281] These floor technologies, including venturi scrubbers, were the basis of our particulate matter floor standard of 0.029 gr/dscf which was published for comment in the May 1997 NODA. See 62 FR at 24221. Although we have since determined that 0.015 gr/dscf is a technically achievable and appropriate MACT floor control level for incinerators based on a suite of technologies that does not include venturi scrubbers, we conclude that an alternative floor level of 0.030 gr/dscf that includes venturi scrubbers in the floor is appropriate for sources using superior metal feedrate control. Put another way, we view the average of the 12 percent best performing incinerators as including incinerators with venturi scrubbers when the incinerator is exercising beyond-MACT feed control of hazardous air pollutant metals.[282] We also note that the final rule for medical waste incinerators establishes a particulate matter standard of 0.030 gr/dscf for medium sized existing sources and small new sources that is based on medium efficiency venturi scrubbers. See 62 FR at 48348. The alternative floor level of 0.030 gr/dscf that is adopted in this final rulemaking is appropriate when we include venturi scrubbers as an alternative floor control technology when superior feed rate control is being employed.[283]

Particulate matter control below 0.030 gr/dscf is still necessary to control metal emissions at sources with de minimis levels of hazardous air pollutant metals in their feedstreams for several reasons. Even if an incinerator obtains non-detect analytical results for one or more metals in its feedstream, this does not conclusively prove that metals are absent. Rather, all that such laboratory results mean is that the metals are not contained in the feedstream above the detection limit used in the analysis. This detection limit may be low but it can also be fairly high depending on the waste matrix. As previously discussed in Part Five, Section X.C.1, commenters have indicated that feedstream metal detection limits are highly dependent on the feedstream matrix.

Given that our prerequisite for the alternative standard is that de minimis levels of metals are present, we must take into account this phenomenon of matrix-dependent detection limits. We are unwilling simply to allow facilities upon a showing of non-detectable levels of metals to avoid particulate matter controls entirely, especially given the complementary controls in practice provided by both feedrate control and

[280] We do not require you to document that your feedstreams have de minimis mercury levels to qualify for this alternative standard because mercury is a volatile metal and is generally not controlled with particulate matter control technologies.

[281] As discussed in Part Four, Section VI.C.4.a, particulate matter floor control for hazardous waste incinerators is defined as the use of either fabric filters, electrostatic precipitators (dry or wet), or ionizing wet scrubbers (sometimes in combination with venturi, packed bed, or spray tower scrubbers) that achieve particulate matter emission levels of 0.015 gr/dscf or less.

[282] See Final Technical Support Document, Volume 3, Chapter Four, July, 1999, for further discussion.

[283] The cement kilns and lightweight aggregate kilns that are also covered by today's final rule have feedrates of metals far above any de minimis threshold. See Final Technical Support Document, Volume 3, Chapter Four, July, 1999, for further discussion. Therefore, in light of the commenters requesting alternative standards and in light of the feedstream levels of metals going into the kilns, we have elected to offer an alternative particulate matter standard only to incinerators.

particulate matter air pollution control devices. On the other hand, it would be overly narrow to give essentially no credit for superior feedrate control (shown by non-detectable levels of metals) by requiring these incinerators to meet 0.015 gr/dscf. It appears, therefore, to be an appropriate balance to allow facilities with non-detectable levels of metals (other than mercury) to meet a standard of 0.030 gr/dscf. This will assure control reflecting performance of the best performing plants that use superior (i.e., beyond MACT) feedrate control, especially in the event that detection limits for a particular waste matrix are unusually high. Because we are moving to a Performance Based Measurement System (PBMS) we cannot rely upon previously approved EPA standard methods as a means to predict detection levels in various matrices. Therefore, we are retaining a particulate matter standard 0.030 gr/dscf to offset the potential for high detection limits.

2. How Do I Demonstrate Eligibility for the Alternative Standard?

Although we adopt a particulate matter standard as a surrogate to control nonenumerated metal hazardous air pollutants, particulate matter control is an integral part of the semivolatile and low volatile metal emission standards as well, as discussed above. See Part Four, Section II.A.1, for further discussion. We therefore conclude that you must document that not only the nonenumerated metals meet the de minimis criteria explained below, but that the semivolatile and low volatile metals do as well. This provides assurance that superior feedrate control is being achieved for all hazardous air pollutant metals, which in turn allows us to provide you with the opportunity to use the alternative particulate matter standard.

To demonstrate eligibility, you must document that you meet two qualification requirements. First, you must document that your feedstreams do not contain detectable levels of CAA hazardous air pollutant metals, apart from mercury (i.e., antimony, cobalt, manganese, nickel, selenium, lead, cadmium, chromium, arsenic and beryllium). This requirement is necessary to ensure that you have de minimis levels of metals in your feedstreams, and assures us that you are using superior feedrate control. You must conduct feedstream analyses at least annually to document that your feedstreams do not contain detectable levels of these metals. Permitting officials may, on a site-specific basis, require more frequent feedstream analyses to better ensure that you comply with this eligibility requirement.

Second, you must document that your calculated uncontrolled metal emissions, i.e., no system removal efficiency, are below the numerical semivolatile and low volatile metal emission standards. When calculating these uncontrolled emissions, you must assume metals are present at one-half the detection limit and are categorized into their appropriate volatility grouping for purposes of this requirement. The one-half detection limit assumption provides a relatively, but not overly, conservative way assuring that de minimis determinations are not given to sources with very high detection limits.

For example, the combined uncontrolled emissions for lead, cadmium and selenium, when assuming these metals are present at one-half the detection limit, must be below 240 μg/dscm. The combined uncontrolled emissions for antimony, cobalt, manganese, nickel, chromium, arsenic and beryllium, when assuming these metals are present at one-half the detection limit, must be below 97 μg/dscm. We require this second eligibility requirement because (1) it ensures you have de minimis levels of metals in your feedstreams even though metals can be present at levels below the detection limit, and (2) it encourages you to obtain reasonable detection limits.

3. What Is the Process for the Alternative Standard Petition?

If you are seeking this alternative particulate matter standard, you must submit a petition request to the Administrator, or authorized regulatory Agency, that includes the documentation discussed above. You will not be allowed to operate under this alternative standard until the Administrator determines that you meet the above qualification requirements. Although we are not requiring that you include this petition as part of the comprehensive performance test workplan, we strongly recommend that you do so. This approach has several advantages: (1) It will clarify which PM standard you are complying with as of your documentation of compliance, and avoid potential confusion about your state of compliance; (2) it will help ensure that the planned performance tests cover all of the relevant parameters and standards and will facilitate interpretation of performance test results; (3) it will help avoid costs of having to conduct a separate performance test to show compliance with the alternative standard, which would include re-testing and re-establishment of many of the same parameters as would be covered in the initial comprehensive performance test; and (4) it will help maximize the time that the regulatory agency needs to evaluate your demonstration of the prerequisite, non-detect levels of metals in your feed, including the time needed for you to respond to any additional information that may be requested by the agency. Agency approval of a comprehensive performance test workplan that also includes this petition request will be deemed as approval for you to operate pursuant to this alternative standard. In our implementation of today's final rule, we will address as appropriate various considerations related to processing these petitions, including the timing of the submittal, review and approval. We fully expect that Agency permit officials will act expeditiously on these petitions so that both the source and the reviewing official know what particulate matter level the comprehensive performance test must show is being achieved.

XI. What Are the Permitting Requirements for Sources Subject to this Rule?

As indicated in Part One, we intend the requirements of this rule to meet our obligations for hazardous waste combustor air emission standards under two environmental statutes, the Clean Air Act and the Resource Conservation and Recovery Act. The overlapping air emission requirements of these two statutes have historically resulted in some duplication of effort. In developing a permitting scheme that accommodates the requirements of both statutes, with regard to the new air emissions limitations and standards being promulgated in this rule, our goal is to avoid any such duplication to the extent possible. This goal is consistent with the RCRA statutory directive of section 1006(b)(1) to ''integrate all provisions of (RCRA) for purposes of administration and enforcement and (* * *) avoid duplication, to the maximum extent practicable, with the appropriate provisions of the Clean Air Act.'' [284] It also is consistent with our objectives to streamline requirements and follow principles that promote ''good government.''

[284] See also CAA section 112(n)(7) (requirements of section 112 should be consistent with those of RCRA Subtitle C to the maximum extent practicable).

A. What Is the Approach to Permitting in this Rule?

1. In General What Was Proposed and What Was Commenters' Reaction?

In the April 1996 NPRM, we proposed placing the MACT air emissions standards in the CAA regulations at 40 CFR part 63 and proposed to reference the standards in the RCRA regulations at 40 CFR parts 264 and 266. (see 61 FR 17451, April 19, 1996). At that time, we believed that placing the standards in both the CAA and RCRA regulations would provide maximum flexibility to regulatory authorities at the Regional, State, or local levels to coordinate permitting and enforcement activities in the manner most appropriate for their individual circumstances.[285] We also believed that this approach would alleviate the potential for duplicative requirements across permitting programs.

In addition, we presented two examples of ways for permitting hazardous waste combustors subject to the new MACT standards. These examples reflected, in part, the proposed approach of incorporating the new MACT standards into both RCRA and CAA implementing regulations.[286] (See 61 FR 17451, April 19, 1996.) In the first example, the two permitting programs would work together to issue one permit, under joint CAA and RCRA authority, that would meet all the requirements of both programs. In the second example, the two permitting programs would coordinate their efforts with each program issuing a separate permit; the items common to both (e.g., the air emissions standards) would be included in one permit and incorporated by reference into the other permit.

Comments on the April 1996 NPRM expressed widespread support for providing flexibility for regulatory agencies to implement common sense permitting schemes that fit their organization and resources. However, commenters disagreed as to which approach would best provide such flexibility. A few commenters thought that the April 1996 NPRM approach, placing the standards in both CAA and RCRA regulations, would both provide flexibility to choose which program would issue permits and therefore avoid duplication.

On the other hand, we received several comments challenging our assumption that placement of the standards in both CAA and RCRA regulations would optimize flexibility for regulatory agencies. These commenters believed that the regulatory agencies would be, in fact, more limited. They noted that both the RCRA and CAA programs would be responsible for incorporating the standards, to some extent, into their permits, even if just by referencing the other. Commenters also were concerned with the potential for conflicting conditions between the two permits, particularly with regard to testing, monitoring, and certification requirements. In addition, they felt that the conditions common to both permits might be subject to separate decision-making processes. For example, they might potentially be subject to two different administrative or judicial appeals procedures and two permit modification procedures. If this happened, the Agency would not achieve its stated objective of avoiding duplication between the two programs. Additionally, our example pointing to close coordination between programs to avoid duplication was countered by commenters examples where such coordination has not occurred, either due to logistical problems within regulatory agencies or to differences in administrative processes between the two programs.

Commenters also expressed concern about the potential for enforcement of the same requirement under two different statutes that they believed the proposed approach would create. Since the requirements would have to be incorporated into both RCRA permits and CAA title V permits, sources would have to comply with both. Although we stated in the proposal that we did not expect to take enforcement action under both permits (see 62 FR 17452), commenters noted that this would not restrain State or local authorities from initiating dual enforcement actions. In addition, commenters pointed out that they would be vulnerable to citizen suits under both statutes.

The majority of the commenters voiced a desire for the Agency to avoid duplicate requirements or redundant processes. We received several suggestions for alternative approaches, which can be grouped in three ways: (1) Requiring regulatory agencies to develop a separate permitting program to cover elements common to both CAA and RCRA (i.e., air emissions and related operating requirements) while maintaining separate permits for the other elements; (2) Developing a single multi-media permit to cover all RCRA and CAA requirements applicable to hazardous waste combustors; and (3) placing the standards only in CAA regulations and incorporation only into the title V permits.

The first alternative, i.e., requiring a separate permitting program for air emissions and related parameters, is a very different approach that would likely require the development of more new regulations. However, duplication may be avoided without promulgation of an ''independent'' permitting scheme just for the elements common to both RCRA and CAA programs. Other alternatives would not involve the time and effort needed to craft and adopt a new regulatory scheme, such as that suggested.

We believe that the second alternative, pursuing multi-media permits, had some merit. As commenters pointed out, the Agency's Permits Improvement Team expressed support for multimedia permits in its ''Concept Paper.'' The Permits Improvement Team also acknowledged, however, that true multimedia permits have been difficult to develop. We still support multimedia permitting, and this rule does not preclude this approach. Nevertheless, we do not believe that, at this point, we can rely on multimedia permitting as an overall approach to implementing this rule. Some States have successfully piloted multi-media permitting or implemented ''one-stop'' permits that address both RCRA and CAA requirements. We encourage States to continue these efforts and to apply them to hazardous waste combustor permitting to the extent possible. Even for States that do not currently pursue multimedia or one-stop permits, this rule presents unique opportunities to start moving in that direction.

The third alternative had a couple of variations. The straightforward version was simply to place the MACT air emission standards in the CAA regulations, incorporate them into title V permits, and continue to issue RCRA permits for other RCRA-regulated aspects of the combustion unit, as well as of the rest of the facility (e.g., corrective action, general facility standards, other combustor-specific concerns such as materials handling, risk-based emissions limits and operating requirements, as appropriate, and other hazardous waste management units). A variation of this was to develop a RCRA permit-by-rule provision to defer to title V permits. The straightforward approach was favored by the majority of the commenters. Some offered, as further support for this

[285] When referring to permitting under the CAA, we mean operating permits under title V of the CAA. The regulations governing state and federal title V permit programs are codified in 40 CFR parts 70 and 71, respectively.

[286] The possibility of issuing only one EPA permit under either CAA or RCRA authority, and the ensuing legal barriers rendering that approach infeasible, also were discussed in the preamble for the proposed rule (61 FR 17451, April 19, 1996).

position, a reference to the recommendation put forth by the Permit Improvement Team's Alternatives to Individual Permits Task Force that called for permitting air emissions from hazardous waste combustors under the CAA. The variation of developing a RCRA permit-by-rule provision is not as responsive to commenters' concerns because, among other things, that approach would not avoid the potential for dual enforcement. Although the permit-by-rule has the effect of deferring to the title V permit, the facility is still considered to have a RCRA permit for the combustor's air emissions.

2. What Permitting Approach Is Adopted in Today's Rule?

We found the arguments for the straightforward approach (i.e., placing the standards only in the CAA regulations and relying on the title V permitting program) persuasive. Based on the comments we received, and our subsequent analysis, we narrowed our options for how to permit hazardous waste combustors subject to the new MACT standards and elaborated on our preferred approach in the May 1997 NODA (see 62 FR 24249). In the NODA, we described an approach to place the MACT emissions standards only in the CAA regulations at 40 CFR part 63 Subpart EEE, and rely on implementation through the air program, including operating permit programs developed under title V. Under this approach, which we are adopting in today's final rule, MACT air emissions and related operating requirements are to be included in title V permits; RCRA permits will continue to be required for all other aspects of the combustion unit and the facility that are governed by RCRA (e.g., corrective action, general facility standards, other combustor-specific concerns such as materials handling, risk-based emissions limits and operating requirements, as appropriate, and other hazardous waste management units).

Placement of the emissions standards solely in part 63 appears to be the most feasible way to avoid duplicative permitting requirements. We agree with the commenters' views that placement of the standards in both RCRA and CAA regulations would require both permits to address air emissions. Permitting authorities would not be able to choose which program would be responsible for implementing the requirements. Placing the standards in both sets of regulations would obligate both programs to address the standards in permits issued under their respective authorities. Simply put, permitting authorities would not be free to incorporate the new standards into either CAA title V permits or RCRA permits; rather, they would need to incorporate the new standards, to some degree, into both permits.[287] Having determined that placement of the standards in both sets of regulations is not desirable, we revisited the question of whether one program could defer to the other. The CAA does not provide authority to defer to other environmental statutes,[288] so we could not place the MACT standards solely in RCRA regulations, which would have consequently allowed them to be incorporated only into a RCRA permit. On the other hand, RCRA does provide authority to forego RCRA emissions standards in favor of MACT standards imposed under the CAA. As stated above in Part One, Section I, under the authority of RCRA section 3004(a), it is appropriate to eliminate these RCRA standards because they would only be duplicative and so are no longer necessary to protect human health and the environment. Also as discussed there, RCRA section 1006(b) provides further authority for the Administrator to eliminate the existing RCRA air emissions standards in order to avoid duplication with the new MACT standards. Thus, we use our authority to defer RCRA controls on the air emissions to the part 63 MACT standards, which ultimately are incorporated into title V permits issued under the CAA.

The majority of the comments received following publication of the May 1997 NODA supported our preferred approach to permitting the hazardous waste combustors. Several commenters expressed appreciation for this effort, and concluded that our approach would avoid duplication and have the RCRA and title V permits work to complement each other rather than potentially contradict each other. Although sources will still have two permits, the scope and subject matter of each will be distinguishable. The title V permit will focus on the operation of the combustion unit (e.g., air emissions and related parameters) while the RCRA permit will continue to focus on basic hazardous waste management at the facility (e.g., general facility standards, corrective action, other units, and so on). The only time there might be conditions in both RCRA and title V permits that address the same hazardous waste combustor operating requirements and limits is when there is a need to impose more stringent risk-based conditions, e.g., under RCRA ''omnibus'' authority, in the RCRA permit. The RCRA permitting authority would add terms and conditions based on the omnibus clause only if it found, at a specific facility, that the MACT standards were not sufficient to protect human health or the environment. This issue is discussed in greater detail in Part III, Section IV (RCRA Decision Process). In those limited cases, sources and permitting agencies may agree to identify the RCRA limit in the title V permit. Since one goal of the title V program is to clarify a source's compliance obligations, it will be beneficial, and convenient, to acknowledge the existence of more stringent limits or operating conditions derived from RCRA authority for the source in the title V permit, even though the requirements would not reflect CAA requirements. We strongly encourage Regional, State, and local permitting authorities to take advantage of this beneficial option.

Some commenters continued to maintain that flexibility to choose which program would permit air emissions would only be provided if we were to promulgate the standards in both CAA and RCRA regulations. They reiterated the position they had taken in their comments on the initial proposal that this approach would not result in duplication across the programs; they discounted concerns over duplicative requirements or dual enforcement scenarios by saying that it was basically not in a permitting authority's best interests to issue duplicate permits. We found the contrary, that placement of the standards in both sets of regulations does not provide flexibility for a regulatory agency to choose one permit program or another. Such an approach would obligate both permits to cover air emissions and related operating requirements. This result does not achieve our or the commenters' objective of avoiding duplication across programs. Although the actual burden on permit writers may not be significant if, for example, the title V permit were to just cross-reference the appropriate sections of the RCRA permit, the requirements would still be enforceable under both vehicles, and would go through dual administrative processes. As mentioned above, EPA would like to

[287] As discussed earlier, states may be able to develop combined permits that address both RCRA and CAA requirements. Such permits would have to cite the appropriate authority (CAA or RCRA) for each condition, and have to be signed by the appropriate officials of each program. Permit conditions would continue to be enforced under their respective authorities as well.

[288] Although CAA section 112(n)(7) is directed at harmonizing requirements with RCRA, it does not provide a jurisdictional basis for deferral (i.e., nonpromulgation of mandated section 112(d) MACT standards in light of the existence of RCRA standards).

avoid this type of dual enforcement and dual process scenario in implementing the new standards.

3. What Considerations Were Made for Ease of Implementation?

Our approach in the final rule does not limit the options available to state permitting authorities for implementing the new standards. The primary concern about which program (RCRA or CAA) assumes lead responsibility for administering air emissions requirements appears to revolve around resource issues. The RCRA program has been the lead program for permitting hazardous waste combustors for many years, consequently, RCRA program staff have developed a great deal of expertise in this area. They are familiar with source owners and operators, the combustion units, and special considerations associated with permitting hazardous waste combustion activities. Some commenters are concerned that by deferring regulation of air emissions standards to the CAA, that expertise will no longer be available. They express doubt about the ability of air toxics implementation programs and title V programs to take on these sources, given the complexity of hazardous waste combustor operations and the volume of title V permits that need to be issued over the next several years.[289]

In response to these comments, we note that many State Air programs currently play key roles in permitting hazardous waste combustors under RCRA. Furthermore, States may find that much of the expertise used to regulate other air sources is directly applicable to regulating the hazardous waste combustor sources subject to the new MACT standards, and that the resources in their air programs are sufficient to handle these additional sources. If, however, a State shares commenters' concerns that its air program, as it currently exists, may not be able to take on these sources, the State may continue using the resources and expertise of its RCRA program even though the new standards are being promulgated as part of the CAA regulations.

In the May 1997 NODA, we discussed the flexibility afforded to States by codifying the standards under only one statute (see 62 FR 24246). Two potential options were described in the NODA for how this might be achieved: (1) A State could simply have its RCRA staff implement the hazardous waste combustor MACT standards; or (2) a State could formally incorporate the standards into its State RCRA program. In response to the NODA, some State environmental agencies commented that, as a matter of State law, they would not be able to incorporate the new standards into their authorized hazardous waste programs unless they are included in federal RCRA regulations. We acknowledge, therefore, that some States may not be able to pursue the second option. In any case, we recommend against this option because, as discussed below, it would perpetuate having duplication between two permits. The first option would, however, still be feasible. For example, the States could explore the flexibility provided through Performance Partnership Agreements [290] if they would like to have their RCRA program staff continue their work with the hazardous waste combustors.

If a State chooses to use either of the above options to continue applying RCRA expertise to hazardous waste combustors, we anticipate that RCRA program staff would be responsible for many of the implementation activities, such as reviewing documents submitted by the source (e.g., the Notice of Intent to Comply, the progress report, and the performance test plan), and working with the source to resolve any differences (e.g., on anticipated operating requirements or on results of comprehensive performance tests).

Where the process issues would start to diverge between the two options is at the actual permitting stage. Under the first option (RCRA staff implementing CAA regulations), the standards would be incorporated only into title V permits. Title V permits cover a wide range of applicable requirements under the CAA; the hazardous waste combustor MACT standards are likely to be just one piece.[291] We believe that the RCRA permit writer would draft the hazardous waste combustor portion of the title V permit, and would coordinate with the title V permit writer in the CAA program who has responsibility for the source's overall permit to ensure that the hazardous waste combustor portion is properly incorporated. In short, the RCRA permit writer would simply be developing a component of a title V permit instead of developing a component of a RCRA permit. State permitting authorities that wish to continue using their RCRA expertise will undoubtedly explore this approach.

If a State pursues the second option of incorporating the new hazardous waste combustor MACT standards into its State RCRA program, there may still be a need to incorporate the standards into both title V and RCRA permits. The CAA does not provide authority to defer title V permitting to other environmental programs. Thus, the source would still be subject to title V requirements (i.e., a RCRA permit could not ''replace'' a title V permit). Furthermore, an EPA Region or a State who chooses to obtain authorization for the hazardous waste combustor MACT standards under RCRA would also have to start implementing the new standards under CAA authority (including title V permitting requirements) even as the State begins efforts to incorporate the standards into its State RCRA program.

Although close cooperation between the RCRA and title V permit writers could minimize duplicative efforts in developing permits and avoid conflicting conditions in the two permits (for example, by putting the conditions in one permit and just referencing them in the other), this approach still results in the potential for enforcement and citizen suits under both permits. [292] As discussed above, we intend to avoid duplicate permitting and enforcement scenarios for hazardous waste combustor MACT standards; thus, we strongly encourage States that choose to pursue this approach to develop implementation schemes that minimize the potential for such duplication to the extent practicable.

B. What Is the Applicability of the Title V and RCRA Permitting Requirements?

This section briefly summarizes the applicability of both title V and RCRA permitting requirements under the permitting scheme discussed in Section XI. A. above. It also discusses the relationship of this permitting scheme to both the proposed revisions to combustion permitting procedures from June 1994 and to the RCRA preapplication meeting requirements. Our decision to subject hazardous waste combustors that are considered area

[289] Title V permits are required for many more sources than those subject to the HWC MACT standards. Currently, there are approximately 20,000 sources that are subject to title V; there are only about HWCs subject to today's rule.

[290] Within negotiated agreements, there is flexibility in Performance Partnership Grants to strategically move funds, and flexibility in Performance Partnership Agreements found in the National Environmental Performance Partnership System to strategically integrate programs.

[291] If the HWC MACT standards are the only applicable CAA requirements, however, then there would be no other components of a title V permit for the source.

[292] Some States have successfully issued ''one-stop'' multimedia permits which include provisions from both the CAA and RCRA programs in a single permit. However, it is EPA's understanding that these permits cite both the RCRA and CAA authority; thus, the potential for enforcement under both statutes still remains.

sources under the CAA to title V permitting is discussed in a separate section.

1. How Are the Title V Permitting Requirements Applicable?

We intend, by placing the new standards only in 40 CFR part 63 and not cross-referencing them in RCRA regulations, to rely on existing air programs to implement the new requirements, including operating permits programs developed under title V. All hazardous waste combustors subject to the MACT standards promulgated in this rule will thus be subject to title V permitting requirements for air emissions and related operating requirements (this includes hazardous waste combustors that are considered area sources under the CAA, as discussed in more detail below). In this rule, we are not amending any of the existing air permitting procedures. The procedures of 40 CFR part 71 for federal operating permits, or a State title V program approved under part 70, will remain applicable. Thus, all current CAA requirements governing permit applications, permit content, permit issuance, renewal, reopenings and revisions will apply to air emissions from hazardous waste combustors pursuant to promulgation of the hazardous waste combustor MACT standards.[293]

The public participation requirements for title V permits in parts 70 and 71, such as allowing an opportunity for public hearing and public comments on draft permits, also apply (see 40 CFR 70.7(h) and 71.11). We are committed to enhancing public participation in all of our programs. In 1996, we published a guidance manual on public involvement in the RCRA program intended to improve cooperation and communication among all participants in the RCRA permitting process (*RCRA Public Participation Manual*, EPA530–R–96–007, September 1996). Although the Manual is written in the context of the RCRA program, the principles are common to all program areas. For example, the Manual encourages early and meaningful involvement for communities and open access to information. It also acknowledges the important role of public participation in addressing environmental justice concerns. Since these principles are applicable in all situations, we encourage air programs and sources subject to the hazardous waste combustor MACT standards to refer to the RCRA manual for additional guidance on implementing effective public participation activities.

2. What Is the Relationship Between the Notification of Compliance and the Title V Permit?

The hazardous waste combustor MACT standards promulgated in this final rule include emissions limitations for several hazardous air pollutants, as well as detailed compliance, testing, monitoring, and notification requirements. Under these provisions, you not only demonstrate compliance with the emissions limitations, but also demonstrate that you have established operating requirements and monitoring methods that ensure continuous compliance with those limits. These demonstrations are made during a comprehensive performance test and subsequently documented in an NOC.

We are requiring, in § 63.1210(f), that you comply with the general provisions governing the NOC codified in § 63.9(h). Those provisions specify that in addition to describing the air pollution control equipment (or method) for each emission point for each hazardous air pollutant, the NOC also must include information such as: methods that were used to demonstrate compliance; performance test results; and methods for determining continuous compliance (including descriptions of monitoring and reporting requirements and test methods). We also are requiring in § 63.1207(j) that you comply with the all of the operating requirements specified in the NOC upon submittal to the Administrator.

Although these requirements are self-implementing, in that you must comply in accordance with the time frames set forth in today's rule, the requirements are ultimately implemented through title V operating permits (see 40 CFR parts 70 and 71). Section 63.1206(c)(1) specifies that: (1) You can only operate under the operating requirements specified in the DOC or NOC (with some exceptions as laid out in the regulations); (2) the DOC and NOC must contain operating requirements including, but not limited to, those in § 63.1206 (compliance with the standards and general requirements) and § 63.1209 (monitoring requirements); (3) operating requirements in the NOC are applicable requirements for the purposes of 40 CFR parts 70 and 71; and, (4) operating requirements in the NOC must be incorporated into the title V permit. In addition, because title V permits can only be issued if, among other conditions, ''the conditions of the permit provide for compliance with all applicable requirements'' (see §§ 70.7(a)(1)(iv) and 71.7(a)(1(iv)), parts 70 and 71 are clear that title V permits must contain the operating requirements documented in the NOC.

As mentioned above, you must comply with all operating requirements specified in the NOC as of the postmark date when the NOC is submitted to the Administrator. Operating requirements documented in the NOC must be included in your title V permit—either through initial issuance if you do not yet have a title V permit, or through a permit revision if you already have a permit. Including information from the initial NOC in title V permits should not create the potential for any compliance conflicts. Because it is the first time the NOC operating requirements are incorporated into the permit, there would be no requirements already on permit with which the NOC would conflict.

However, the potential for compliance conflicts could be created when a subsequent NOC is submitted. For example, you are required to conduct periodic comprehensive performance testing (see § 63.1207(d)(1)). Subsequent to each test, you must submit another NOC to the Administrator. Because of the dynamics of the testing and permitting cycles, it is possible that once you have information from the initial NOC in the permit, you could find yourself, after subsequent testing, in a situation where there might be potentially conflicting requirements with which you must comply (i.e., requirements in the title V permit and requirements in the most recently submitted NOC). This might occur, for example, if any of the operating requirements changed from the previous test.[294] The potential for compliance conflicts that might arise from this situation can be avoided, however, by following the guidance presented below.

The requirements in parts 70 and 71 govern the timing and procedures for permit issuance, revisions, and renewals, and you should refer to those requirements when obtaining or maintaining your permit. For today's rule, we provide guidance on what we recommend as to how operating requirements in the NOC should be incorporated into title V permits.[295]

[293] Requirements of other CAA permitting programs, such as construction permits, will continue to apply, as appropriate, to the HWC's sources subject to today's rule.

[294] On the other hand, if the limits did not change, there would be no conflict between the NOC and the permit.

[295] We are recommending this approach as guidance in the preamble, but not including any associated regulatory provisions. This guidance is

Continued

For incorporating information from an initial NOC into a title V permit, when you have an existing title V permit, we recommend that you and your permitting agency follow the procedures for significant modifications. The primary rationale for using these procedures is to afford the public an opportunity to review all of the information pertinent to your compliance obligations. We want to ensure a level of public involvement when including operating requirements in title V permits that is commensurate with that under RCRA. In RCRA, operating parameters are initially developed pursuant to trial burns and incorporated into permits either through initial issuance (in the case of facilities operating under RCRA interim status) or through a RCRA class 2 or 3 permit modification (in the case of new facilities). In either situation, significant opportunities exist for public review and input parallel to those under initial title V permit issuance or significant permit modification procedures.

With regard to a subsequent NOC developed pursuant to periodic performance tests, we prefer an implementation scheme for this rule that avoids unnecessary permit revisions. Thus, we recommend that you coordinate your five-year comprehensive performance testing schedule with your five-year permit term to the extent possible. This would allow changes in the NOC to be incorporated into the permit at renewal rather than through separate permit revisions. This also helps to minimize the number of permit revisions, as well as, the likelihood of having two sets of requirements with which to comply.

We recognize, however, that such coordination may not always be possible or feasible. At times, it may be necessary to include information from the most recent NOC through a permit revision. We expect that this will be accomplished using, at most, the minor permit modification procedures in § 70.7(e)(2) or § 71.7(e)(1). Keeping in mind that the information from the initial NOC was included either as part of the initial permit issuance or as a significant revision, the information was already subject to review by both the regulatory agency and the public. Thus, the public should have a clear understanding of your compliance obligations. The obligation to comply with the emissions limitations in §§ 63.1203, 63.1204, or § 63.1205 does not change even if any of the associated compliance information, such as operating limits, is revised pursuant to subsequent performance tests. Given our experience in regulating (under RCRA) the types of sources subject to today's MACT standards, we do not expect the information in a NOC to change significantly over time. We have been regulating these sources for almost twenty years; the testing and monitoring requirements we are promulgating in this rule reflect the ''lessons learned'' over time. Thus, the initial set of compliance parameters are likely to need primarily minor changes over time. You and your regulatory agency also are experienced in setting operating parameter limits and monitoring systems to ensure compliance with performance standards. Again, this expertise and experience suggests that primarily minor adjustments will need to be made. In light these factors, we are confident that changes in the NOC may be appropriately incorporated into title V permits using the minor permit revisions procedures. Furthermore, regulatory agencies are obligated under § 63.1206(b)(3) to make a finding of compliance based on performance test results. This requirement provides an additional administrative safeguard to ensure that you are setting the proper operating limits.

The minor permit modification process will allow you to meet your compliance obligations under § 63.1207(j) and begin to comply with the conditions in the NOC upon submittal (i.e., post-mark). Under §§ 70.7(e)(2)(v) and 71.7(e)(1)(v), you may make the change proposed in the minor permit modification application immediately after filing such application. Following this, you must comply with both the applicable requirements governing the change and the proposed permit terms and conditions (i.e., the information from the NOC that you are incorporating into your permit). The provisions in this section also ensure that you will not be in the position of having to choose between compliance with the NOC or compliance with your permit because this section also specifies that during this time period, you need not comply with the existing permit terms and conditions you seek to modify.[296] Since the NOC is submitted to the Administrator once you have a title V permit (see § 63.9(h)(3)), we expect that you will submit the NOC together with a minor permit modification application. Any modifications added to the permit through this process can be reviewed by the public at the time of permit renewal.

We encourage permitting authorities to develop permits in a way that minimizes the need for future permit revisions and is consistent with the requirements in parts 70 and 71. For example, you may request that your permitting authority develop a permit that contains alternative operating scenarios. This would allow you to alternate among various approved operating scenarios while concurrently noting the change in your operating record.

3. Which RCRA Permitting Requirements Are Applicable?

The RCRA permitting requirements particular to incinerators and boilers and industrial furnaces are found in 40 CFR 270.19, 270.22, 270.62, and 270.66. These permitting requirements apply to new facilities, to those operating under interim status while they pursue a permit, and to sources seeking to renew their permits. In today's final rule, we amend the introductory text in each of these sections to reflect that RCRA permitting requirements for hazardous waste combustor air emissions and related operating parameters will not apply once you demonstrate compliance with the requirements of the new MACT standards by completing a comprehensive performance test and submitting a NOC to the Administrator.[297] The timing for the deferral of the RCRA permitting requirements is consistent with the timing in today's rule for the deferral of applicable standards in 40 CFR parts 264 and 265.

Even though we rely on the title V permitting program to address air emissions from hazardous waste combustors, we still need RCRA permits at these sources to address: (1) Other RCRA regulations applicable to all types of RCRA units, including hazardous waste combustors, that are not duplicated under the CAA; (2) any risk-based emissions limits and operating parameters, as appropriate; and (3) other RCRA units at the facility. Also, new facilities (including new hazardous waste combustor units) must obtain RCRA permits prior to starting construction. Thus, the remaining RCRA permitting requirements in 40 CFR part 270 governing permit applications and permit content continue to apply. These

essentially an interpretation of the current part 70 and 71 rules.

[296] If, however, the source fails to comply with its proposed permit terms and conditions during this time period, the existing terms and conditions it seeks to modify may be enforced against it (§§ 70.7(e)(2)(v) and 71.7(e)(1)(v)).

[297] The final rule language in these sections differs from that in the NPRM to reflect placement of the standards only in part 63 and deferral of RCRA controls to the air program.

include the provisions in §§ 270.10(k) and 270.32(b)(2), which together provide authority to require a facility owner or operator to submit information necessary to establish permit conditions and to impose site-specific conditions, including risk-based conditions, through the RCRA permit.

Even though you will still have two permits, the scope and subject matter of each are distinguishable. The title V permit will focus on the operation of the combustion unit (e.g., air emissions and related parameters) while the RCRA permit will continue to focus on the other basic aspects of hazardous waste management. The RCRA permit would thus include conditions to ensure compliance with relevant requirements in 40 CFR part 264, including: General facility standards; preparedness and prevention; contingency planning and emergency procedures; manifesting; recordkeeping and reporting; releases from solid waste management units; closure; post-closure; financial responsibility; corrective action; storage; materials handling; and air emissions standards for process vents and equipment leaks from tanks and containers.

The only time we foresee that conditions in both RCRA and title V permits may govern the same hazardous waste combustor operating parameters and limits is when there is a need to impose more stringent or more extensive risk-based conditions, e.g., under RCRA omnibus authority, to ensure protection of public health and the environment. This situation is discussed in greater detail in Part Three, Section IV (RCRA Site Specific Risk Assessment Decision Process).

4. What Is the Relationship of Permit Revisions to RCRA Combustion Permitting Procedures?

In June, 1994, we published a proposed rule for RCRA Expanded Public Participation and Revisions to Combustion Permitting Procedures (59 FR 28680, June 2, 1994). The proposal contained amended procedures for interim status combustion facilities during the trial burn period that were intended to make the procedures for interim status facilities more like those governing permitted facilities. We finalized the expanded public participation requirements (see section immediately below), but did not finalize the proposed permitting revisions. At the time we began to finalize the proposal, we were already committed to issuing comprehensive air emissions standards under MACT. It was anticipated that there would be overlap between the emissions standards in the proposed MACT rule and the combustion permitting procedures in the June 1994 proposed rule. It did not make sense to finalize provisions in one rulemaking effort only to propose changing them yet again in another rulemaking effort. Now, given the approach being adopted in today's final rule to permit hazardous waste combustor air emissions under title V of the CAA, there is no longer as strong a need to pursue the amended procedures for RCRA permitting in the June 1994 proposal. We do not, therefore, intend at this time to finalize these proposed permitting amendments.

5. What Is the Relationship to the RCRA Preapplication Meeting Requirements?

In 1995, we finalized the expanded RCRA public participation requirements (60 FR 63417, December 11, 1995). These included requirements for a facility to advertise and conduct an informal meeting with the neighboring community to discuss anticipated operations prior to submitting a RCRA Part B permit application. Since hazardous waste combustors subject to the new MACT standards (and title V permitting) still need RCRA permits for other hazardous waste management activities, you are still subject to the RCRA preapplication meeting requirements in 40 CFR 124.31. Even though operations and emissions associated with the combustor unit are now to be addressed primarily under CAA requirements, we anticipate that the public will continue to exhibit a great deal of interest in combustor activities at RCRA meetings. They may not always be familiar with our administrative ''boundaries'' dictated by the various environmental statutes. Given this potential lack of familiarity, and because combustor units and emissions are already discussed at these meetings, we strongly encourage you to continue including combustor unit operations in discussions during RCRA preapplication meetings. Furthermore, conditions for hazardous waste combustor activities may sometimes be imposed under RCRA, for example, in cases where the results of a site-specific risk assessment indicate a need for conditions more stringent or more extensive than those imposed under MACT. You should be prepared to discuss the site-specific risk assessment process and how it may result in additional conditions being included to their RCRA permits.

All other public participation requirements in 40 CFR part 124 associated with the RCRA permitting process continue to apply. These include requirements for public notice at application submittal, public notice of the draft permit, opportunity for public comments on the draft permit, and opportunity for public hearings. These requirements also are explained in the *RCRA Public Participation Manual* (EPA530–R–96–007, September 1996), which provides guidance on how to implement RCRA public participation requirements, as well as, recommendations on how to tailor public involvement activities to the situation at hand. For example, if the community around a facility does not speak English as a primary language, the manual encourages use of multilingual fact sheets. As mentioned previously, we encourage you and States to apply the principles contained in the RCRA manual to hazardous waste combustor MACT compliance and title V activities as well.

C. Is Title V Permitting Applicable to Area Sources?

Under today's rule, hazardous waste combustors meeting the definition of an area source will be subject to today's MACT standards (see discussion in Part One, Section III.B). As discussed in the May 1997 NODA, under § 63.1(c)(2), area sources subject to MACT are subject to title V permitting as well, unless the standards for that source category (e.g., subpart EEE for hazardous waste combustors) specify that: (1) States will have the option to exclude area sources from title V permit requirements; or (2) States will have the option to defer permitting of area sources. We received several comments on our NODA discussion (see 62 FR 24215) on the issue of subjecting area sources to title V permitting. The comments were fairly evenly split—several supported requiring area sources to obtain title V permits, while several were against it. After considering the comments, we have chosen not to provide the option to the States to exclude hazardous waste combustor area sources from title V permitting requirements or to defer permitting of these sources.

Commenters that support the Agency's position affirm that title V permits serve an important role to incorporate all requirements applicable to a source in one enforceable permitting document. They maintain that the compliance certifications and opportunities for public involvement inherent in the title V program will serve a useful and valuable public service. Other supporters note that requiring all hazardous waste combustors to obtain title V permits will help to ensure that the permits are both consistent and adequate. The idea of

consistency being a desirable end result is echoed by others as well. One commenter points out that area sources in several other source categories are not exempt from title V permitting requirements, and recommends that hazardous waste combustor area sources also be subject to title V to maintain consistency with the rest of the MACT program. Finally, some commenters state that if the Agency were not to pursue title V permitting for hazardous waste combustor area sources, then the Agency would have to strengthen the nontitle V permitting programs with respect to public involvement and agency approval of modifications relating to facility emissions.

We agree with these points. Title V permits clarify your regulatory obligation, thereby making it easier for you to keep track of your many compliance obligations across several air programs. Clarifying the regulatory obligations improves compliance in many cases; we have seen an increase in compliance among air sources with the advent of the title V permitting program. For example, through the process of applying for and issuing title V permits, applicable requirements of which a source is unaware or with which it is found to be out of compliance are identified. Once these requirements are included in a title V permit, the source must certify compliance with these requirements both initially and then on an annual basis.

We concur with commenters about the benefits of the public involvement opportunities afforded by the title V permit program. Our experience in the RCRA combustion program has shown that many of the sources that would fall into the area source classification (e.g., some commercial incinerators and cement kilns burning hazardous waste as fuel) are the ones in which the public is generally most interested. Subjecting hazardous waste combustor area sources to title V permitting will ensure that the public will continue to be involved in permit decisions under the CAA, as they have been under RCRA. For example, the public will have an opportunity to comment on and request a public hearing for a draft title V permit. They have access to State or Federal court to challenge title V permits, depending upon whether the permit is a part 70 or part 71 permit. Title V also provides greater access to information about sources in many cases. Under title V, States and EPA cannot deny basic information about sources to citizens unless it is protected as confidential business information. Conversely, there could be disparity in what information citizens might be able to obtain under State non-title V operating permits.

Consistency is a key objective as well. Part 70 sets out the minimum criteria that a State program must meet. If a State fails to develop and implement a program that meets these minimum criteria, then a part 71 federal operating permits program is put into place. These minimum criteria provide for consistency across State and Federal title V permitting programs, which might not occur under other State air permitting programs. Consistency within CAA programs is not the only concern. We also are, as part of our approach to integrating regulation of these sources under RCRA and the CAA, striving to maintain consistency with how sources have been regulated under RCRA. Under RCRA, all of the sources that would fall into an area source classification are currently treated the same as the sources that are classified as major under the CAA. It is appropriate to continue treating all hazardous waste combustor sources in the same manner (i.e., to apply the same permitting requirements to all of these sources) under the CAA.

Commenters that do not support applying title V requirements to area sources generally base their position on three arguments. First, they argue that Congress had consciously differentiated between area and major sources when developing the CAA, so that there would be a strong incentive for facilities to limit emissions and thus avoid the additional requirements imposed on major sources. These commenters maintain that subjecting area sources to title V requirements would create a disincentive for these sources to minimize emissions. Secondly, they suggest that other CAA permitting mechanisms, such as federally enforceable state operating permits, might be more appropriate for the hazardous waste combustor area sources. One commenter notes that some sources have already invested a lot of time and effort working with permitting authorities to develop federally enforceable state operating permits that limit their potential to emit below major source levels, and that the Agency's action subjecting these sources to title V permits would render this work meaningless. Finally, they assert that this would be the first time the Agency did not provide the option to the States to either defer title V permitting for area sources or exempt them entirely, and they express concern about the precedent that would be set if the Agency were to start requiring area sources to obtain title V permits in this rule.

After careful consideration, we are not persuaded by these counter-arguments. Although the CAA does differentiate in some provisions between area and major sources, it did not specify that area sources should be exempt from the title V permitting program. On the contrary, it provides discretionary authority in section 502(a) for the Administrator to decide whether to exempt a source category, in whole or in part, from title V permitting requirements. Furthermore, the implementing regulations in 40 CFR 70.3(b)(2), 71.3(b)(2), and 63.1(c)(2) specify that the Administrator will determine whether to exempt any or all area sources from the requirement to obtain a title V permit at the time new MACT standards are promulgated. Clearly, the decision to subject area sources to title V permitting is intended to be made in the context of both the source category and the applicable standards. The exemption from title V may only be provided if compliance with the requirements would be ''impracticable, infeasible, or unnecessarily burdensome.'' CAA section 502(a). Given that the hazardous waste combustors subject to today's rule, including those that may meet the definition of area sources, have all been subject to common permitting regulations under RCRA, subjecting these sources to title V permitting is not impracticable, infeasible, or unnecessarily burdensome. Furthermore, if we exempt area sources from title V permitting requirements, we would most likely have continued to apply RCRA permit requirements for stack emissions to these sources. Thus, the area sources would have been subject to dual permitting regimes (e.g., federally enforceable state operating permits under the CAA and RCRA permits) and the resulting burden associated with duplicative regulation. This would be contrary to a major goal of today's rule. In conclusion, we decided that it is appropriate to subject all hazardous waste combustor sources subject to today's MACT standards to title V permitting requirements. As noted earlier in this preamble, this is also consistent with the Congressional scheme under RCRA that mandates regulation of all hazardous waste combustors for all pollutants of concern.

Although we provided the option to defer title V permitting for some area sources subject to other MACT standards, this rule is not the first time we have not allowed States to defer area sources from title V requirements. See, e.g., 64 FR 31898, 31925 (June 14, 1999) (NESHAP for Portland Cement Manufacturing Industry to be codified at

40 CFR part 63, subpart LLL). Moreover, EPA regulations governing other categories of solid waste combustors under CAA section 129 do not differentiate between major and minor sources in imposing title V permitting requirements. See, e.g., CAA section 129(e); 40 CFR 70.3(a) and 70.3(b)(1), and 40 CFR 60.32e(i). Given that the decision to apply title V requirements is made in a specific context, we do not share commenters' concern about the precedent our approach might set for other situations. We will continue to evaluate each situation on its own merit. Finally, we do not agree with commenters that this approach will provide a disincentive to limit emissions because sources will still be ''capped'' by the emissions limits being promulgated in today's rule. Neither would progress already achieved in developing federally enforceable state operating permits be rendered meaningless, as suggested by some commenters. We anticipate that a source will likely be able to use the information gathered during the process of developing a federally enforceable state operating permit (e.g., information about its emissions and applicable requirements) in completing a title V application. Commenters appear to think that sources will have to start totally anew and without an ability to use past experience and results. This is neither a realistic nor practical view of how sources are likely to act.

Commenters opposed to subjecting hazardous waste combustor area sources to title V had also noted that these sources would be receiving RCRA permits for the air emissions as well. This argument would have merit if we choose to promulgate the new standards in both CAA and RCRA regulations. Since we are promulgating the MACT standards only in the CAA regulations, however, requirements on air emissions from hazardous waste combustor area sources would not be included in RCRA permits.[298] Commenters also discount our position in the NODA about difficulties that would arise if an area source were to move from one permitting program to another as they make modifications to their emissions levels that could change their major/area source determination. They point to our ''once in, always in'' approach to MACT standards that is stringently applied. Under this approach, once a MACT standard goes into effect, a major source will always be regulated under that standard, even if it later decreases its emissions to below major source levels. This ensures that sources cannot routinely ''flip'' between being regulated or unregulated, which in turn means that sources would not be moving in and out of the title V permitting universe. The commenter was correct in raising this to our attention. We are not relying on this argument to support our decision to subject hazardous waste combustor area sources to the standards or to title V.

D. How will Sources Transfer from RCRA to MACT Compliance and Title V Permitting?

1. In General, How Will this Work?

As discussed in Section A (Placement of Standards and Approach to Permitting), we are deferring RCRA controls on hazardous waste combustor air emissions to the part 63 hazardous waste combustor MACT standards, which are ultimately incorporated into title V permits issued under the CAA. Promulgation of the new hazardous waste combustor MACT standards under the CAA does not, however, by itself implement this deferral or eliminate the need to continue complying with applicable RCRA requirements—either those in a source's RCRA permit or in RCRA interim status performance standards. These requirements include obligations for RCRA permitting (for example, interim status facilities will continue to be subject to RCRA permitting requirements, including trial burn planning and testing).

Therefore, today's rule adopts specific provisions that address the transition from RCRA permitting to the CAA regulatory scheme. As discussed in Section B.3 (Applicability of RCRA permitting requirements), the requirements in §§ 270.19, 270.22, 270.62, and 270.66 do not apply once a source demonstrates compliance with the standards in part 63 subpart EEE by conducting a comprehensive performance test and submitting an NOC to the regulatory agency.[299] In this section, we discuss how regulators can implement the deferral from RCRA to hazardous waste combustor MACT compliance and title V permitting.

a. What Requirements Apply Prior to Compliance Date? You have three years following promulgation of the MACT standards to achieve compliance with the emissions standards. However, the rule is effective shortly after promulgation. During the approximately three years between the effective date and the compliance date, you will be subject to applicable requirements for hazardous waste combustor MACT compliance and title V permitting. For example, there are compliance-related requirements in 40 CFR part 63 subpart EEE that are separate from the actual standards for emissions levels, such as those in §§ 63.1210(b) and 63.1211(b) for submitting a Notice of Intent to Comply and a progress report, respectively. Requirements in 40 CFR parts 70 and 71 for operating permit programs developed under title V will also apply. These include requirements governing timing for submitting initial applications, reopenings to include the standards, and revisions to incorporate applicable requirements into title V permits. The interface between an NOC and the title V permit has already been discussed. Consequently, our discussion on implementing the deferral of RCRA controls focuses on the transition away from RCRA permits and permit processing once a facility demonstrates compliance with the standards through a comprehensive performance test and submits a NOC to the regulatory agency.

Many of the activities undertaken during the three year compliance period play a role in implementing the transition of RCRA controls to MACT compliance and title V. For example, some of you may have to make changes to their design or operations to come into compliance with the new standards. If you have a RCRA permit, you may need to modify the RCRA permit to reflect any of these changes before they are actually made. This may be necessary to remain in compliance with the RCRA permit while setting the stage for demonstrating compliance with CAA MACT requirements. We urge you (the source) to seek guidance from your RCRA permitting authorities as early as possible in this process. As part of our ''fast track rule'' (see 63 FR 33781, June 19, 1998), we promulgated a streamlined process in 40 CFR 270.42(j) for modifying the RCRA permit, so that you can make these necessary changes and begin operating in accordance with the new limits before the compliance date arrives. To take advantage of the streamlined process, however, you must first comply with the Notice of Intent to Comply requirements in § 63.1210. The Notice of Intent to Comply requirements obligate you to advertise and conduct an informal meeting with the neighboring community to discuss plans to comply with the new standards, and to subsequently provide information about

[298] The exception would be, as discussed earlier, cases where States, at their own choosing, have incorporated the HWC MACT standards into their State RCRA programs.

[299] If, however, there is a need to collect information under § 270.10(k) then the permitting authority may require, on a case-by-case basis, that facilities use the provisions found in these sections.

these plans to the regulatory agency.[300] We anticipate discussion at this meeting will include modifications to the RCRA permit that must be processed before you can start upgrading equipment to meet the emissions limits set by MACT. The goal of these activities is to ensure that by the end of the three-year compliance period, you will be in compliance with both the MACT standards and their RCRA permits or interim status requirements.

b. What Requirements Apply After Compliance Date? After the compliance date, a transition period exists during which there will be, in effect, two sets of standards concerning emissions from hazardous waste combustors: (1) The MACT standards in 40 CFR part 63; and (2) the performance standards that are still in the RCRA permit or in the 40 CFR part 265 interim status regulations. During this period, in cases where operating parameters and limits are addressed by both programs (MACT and RCRA), you must comply with all applicable parameters and limits; those which are more stringent will govern. We anticipate that the MACT standards will be compatible with the RCRA performance standards, although in some cases the DOC is likely to set narrower or different operating conditions. Thus, in complying with the MACT standards, you also will comply with corresponding conditions in the RCRA permit or in the RCRA interim status regulations. However, at some sites, certain RCRA permit conditions may be more stringent than the corresponding MACT standards or may establish independent operating requirements. Some potential reasons why such a situation would occur are discussed in the May 2, 1997 Notice of Data Availability (62 FR 21249, 5/2/97). In these situations, you must comply with the more stringent or more extensive conditions in the RCRA permit.

We also note that there may be situations where it is not clear whether a RCRA compliance requirement is less stringent than a MACT requirement. This can occur, for example, when the two compliance requirements have different averaging periods and different numerical limits. In this situation, we recommend that the source coordinate with permitting officials early in the MACT process, perhaps when the source submits RCRA permit modification pursuant to the fast-track rulemaking, in order to determine which requirement is more stringent. We believe the permitting officials should give sources an appropriate level of flexibility when making this determination.

Our approach of placing the MACT air emission standards for hazardous waste combustors in 40 CFR part 63 subpart EEE and not including them, even by reference, in the RCRA regulations means that the air emissions must ultimately be incorporated into title V permits issued under the CAA. To completely implement the deferral of RCRA controls, conditions governing air emissions and related operating parameters should also be ultimately removed from RCRA permits. (For the special case of risk-based conditions derived from RCRA omnibus authority, see earlier discussions.) Similarly, hazardous waste combustors that are in the process of obtaining RCRA permits will likely need to have the combustor air emissions and related parameters transitioned to MACT compliance and title V permits at some point.

We intend to avoid duplication between the CAA and RCRA programs. We encourage you and regulators to work together to defer permit conditions governing air emissions and related operating parameters from RCRA to MACT compliance and title V, and to eliminate any RCRA provisions that are no longer needed from those permits. As discussed below, we are adopting a provision in today's final rule to help permitting authorities accomplish this task in the most streamlined way possible. The RCRA permits will, of course, retain conditions governing all other aspects of the hazardous waste combustor unit and the rest of the facility that continue to be regulated under RCRA (e.g., general facility standards, corrective action, financial responsibility, closure, and other hazardous waste management units). Furthermore, if any risk-based site-specific conditions have been previously included in the RCRA permit, based either on the BIF metals and/or hydrochloric acid/chlorine requirements[301] or the omnibus authority, the regulatory authority will need to evaluate those conditions vis-a-vis the MACT standards and the operating parameters identified in the NOC. If the MACT-based counterparts do not adequately address the risk in question, those conditions would need to be retained in the RCRA permit or included within an appropriate air mechanism. In those limited cases, sources and permitting agencies may instead agree to identify the RCRA limit in the title V permit. Since one goal of the title V program is to clarify a source's compliance obligations, it will be beneficial, and convenient, to acknowledge the existence of more stringent limits or operating conditions derived from RCRA authority for the source in the title V permit, even though the requirements would not reflect CAA requirements. We strongly encourage Regional, State, and local permitting authorities to take advantage of this beneficial option.

2. How Will I Make the Transition to CAA Permits?

In the May 1997 NODA, we expressed our intent to rely on the title V permitting program for implementation of the new standards, and asked for comments on how and when the transition from RCRA should occur (see 62 FR 24250, May 2, 1997). We are amending the regulations in 40 CFR part 270 to specify the point at which the RCRA regulatory requirements for permitting would cease to apply. However, once you have a permit, you must comply with the conditions in that permit until they are either removed or they expire. Many commenters expressed an interest in what happens to conditions in a RCRA permit once the new standards are published. We received a variety of suggestions, but a common thread was a request for EPA to lay out a clear path through the permit transition process. While we recognize the desirability of having a uniformly defined route for getting from one permit to another, it is important to provide flexibility to allow a plan that makes the most sense for the situation at hand. There is not a ''one size fits all'' approach that would be appropriate in all cases. Thus, we are not prescribing a transition process via regulation, but providing guidance in the following discussion which we hope will assist regulatory agencies in determining a route that makes the most sense in a given situation. Given the level of interest expressed, we will, in the ensuing discussion, map out a process for implementing the deferral of air emissions controls from RCRA to MACT compliance and title V permitting. We address key considerations that should factor into the decision of how and when to implement the deferral of permit conditions.[302]

[300] The requirements for providing notice of and conducting the public meeting as part of the Notice of Intent to Comply provisions are based on the RCRA preapplication meeting requirements in 40 CFR 124.31.

[301] The BIF limits for metals under RCRA are based on different level of site-specific testing and risk analysis (Tier I through Tier III). It is possible that, if it were based on the more stringent analysis, a RCRA BIF limit could be more stringent than the corresponding MACT standard.

[302] Although we are not mandating an approach to transition by regulation, we are, as discussed in Section 2. How Should RCRA Permit Be Modified?

In identifying key aspects of the transition, we seek the optimal balance of three basic considerations raised by commenters and other stakeholders. The considerations are to: (1) Address public perception issues associated with taking conditions out of a RCRA permit; (2) minimize the amount of time a source might be potentially subject to overlapping requirements of RCRA and the CAA (and thus subject to enforcement under both RCRA and the CAA for the same violation); and (3) provide flexibility to do what makes the most sense in a given situation. The first two considerations are primarily factors of time—when should conditions be removed from the RCRA permit? The third consideration is more a factor of how—what mechanism should be used for removing RCRA conditions?

Why do these particular considerations carry such importance? As for the first, one of the points emphasized in our National Hazardous Waste Minimization and Combustion Strategy is the importance of bringing hazardous waste combustors under permits as quickly as possible. The Strategy has been driving EPA Regions and authorized States to place their top permitting priority on the hazardous waste combustor universe. Consequently, the Strategy may have created a certain perception on behalf of the public about the importance of the actual permit document. The actual issue we are trying to address here is more of a concern about a potential break in regulatory coverage of a source as it transitions from RCRA permitting requirements to the CAA regulatory scheme.

While it might appear that we are altering the policy expressed in the Strategy if we allow removal of conditions from a RCRA permit before the title V permit is in place, it is not the actual permit document that is of paramount importance. Rather, our focus is and has been on maintaining a complete and enforceable set of operating conditions and standards. One of the underlying tenets of the position taken on permitting in the Combustion Strategy was a commitment to bring hazardous waste combustors under enforceable controls that demonstrate compliance with performance standards. Under RCRA, the permit was the available vehicle to achieve better enforcement of tighter conditions than exist in interim status.

We remain committed to this underlying tenet. However, the mechanism for achieving this objective under the CAA is not necessarily the title V permit. In RCRA, the permitting process provides the vehicle for the regulatory agency to approve testing protocols (including estimated operating parameters), to ensure completion of the testing, and to develop final operating parameters proven to achieve performance standards. The final RCRA permit is the culmination of these activities. Under MACT, these activities do not culminate in a permit, but in a NOC. The development of the NOC is separate from the development of the title V permit. The title V permitting process is primarily a vehicle for consolidating in one document all of the requirements applicable to the source. Conversely, it is the NOC that contains enforceable operating conditions demonstrated through the comprehensive performance test to achieve compliance with the hazardous waste combustor MACT standards (which are generally more stringent than the RCRA combustion performance standards). Thus, the NOC captures the intent of the Strategy with regard to ensuring enforceable controls demonstrated to achieve compliance with relevant standards are in place.

Another basis for our position on permitting in the Combustion Strategy is the level of oversight by the regulatory agency during the permitting process, which is typically greater than that which occurs during interim status. For example, although BIFs operating under interim status are required to conduct compliance testing and subsequently operate under conditions they identify in a certification of compliance, there are no requirements for the regulatory agency to review and approve compliance test plans or results. On the other hand, oversight by the regulatory agency is more intensive during the permitting process, *e.g.*, through the trial burn planning (including regulatory approval of the trial burn plan), testing, and development of permit conditions. Although the process required for interim status BIFs under RCRA may, at first, seem analogous to the CAA MACT process, *i.e.*, sources being required to conduct comprehensive performance tests and subsequently operate under conditions in an NOC, there is a significant difference. The difference is the level of oversight that occurs in the MACT process. According to the MACT requirements in 40 CFR 63.1207(e) and 63.1206(b)(3), the regulatory agency must review and approve the performance test protocol and must make a finding of compliance based on the test results that are reported in the NOC. The NOC consequently represents a level of agency oversight that is actually more analogous to the RCRA permit process than to interim status procedures.

An additional reason for the importance, under the Combustion Strategy, of bringing hazardous waste combustors under permits was to allow for the imposition of additional permit conditions where necessary to protect human health and the environment. In general, these conditions are established based on the results of a site-specific risk assessment and imposed under the RCRA omnibus authority. This objective will continue to be met even though we are deferring regulation of hazardous waste combustor air emissions, in general, to the CAA. Coming into compliance with the more stringent and more encompassing MACT standards will accomplish part of the Combustion Strategy's goal of improved protection. For any cases where the protection afforded by the MACT standards is not sufficient, the RCRA omnibus authority and RCRA permitting process will continue to be used to impose additional conditions in the RCRA permit (or, as discussed earlier, in a title V permit).

With regard to the remaining considerations, we seek here to reduce duplicative requirements across environmental media programs (*i.e.*, air emissions under the CAA and RCRA). This objective to reduce duplication is behind our goal of minimizing the amount of time a source might be potentially subject to dual permitting and enforcement scenarios. In order to allow for common sense in implementing environmental regulations, we need to provide flexibility here to do what makes sense in a given situation. We have provided this flexibility in today's rule by not prescribing only one process for transitioning from RCRA to the CAA.

3. When Should RCRA Permits Be Modified?

We identified two options in the May, 1997, NODA for when conditions should be ultimately removed from RCRA permits (see 62 FR 24250). Our preferred option at the time is to wait until the source had completed its comprehensive performance test and the standards had been included in its title V permit. The alternative option we identified would be to modify the RCRA permit once the facility submits the results of its comprehensive performance test.

below, providing a tool in the RCRA permit modification table in 40 CFR 270.42, Appendix I, that may be used to assist regulators and sources in effecting the transition.

Of the comments that spoke to the timing issue, some advocate waiting for the title V permit, but most opposed this position. The majority of commenters favor effecting the transition either on the compliance date, since we had said in the NODA that the pre-NOC would be due to the regulatory agency on that date[303] and would contain enforceable conditions, or upon submittal of the NOC, since it contains enforceable operating conditions demonstrated to achieve compliance with the standards. All three of these approaches are identified in the time line shown in Figure 1. Readers will note that the time line shows two potential points for the title V permit to be issued (options 1A and 1B). Option 1A is based on the statutory time frames for issuing title V permits. Under this option, the title V permit may be issued prior to the compliance date for the new standards, but it might only include the standards themselves and a schedule of compliance. Under option 1B, the operating requirements in the NOC that actually have been demonstrated to achieve compliance would be included in the permit.

We evaluated each of the options in terms of the two timing-related considerations listed above: addressing the perception issue that stems from removing conditions from the RCRA permit (which, as discussed above, is really a concern about a break in regulatory coverage—*i.e.,* that there might be a period of time when the source would not have enforceable controls demonstrated to achieve compliance with stack emissions standards), and minimizing the amount of time sources would potentially be subject to the same requirement(s) under both RCRA and CAA. These considerations may not always be compatible. For example, one way to address the perception of creating a break in regulatory coverage would be to continue to place emphasis on the permit, rather than on the tenet behind the permit (of having enforceable controls that demonstrate compliance with performance standards). This would mean waiting to remove conditions from a RCRA permit until a source has demonstrated compliance with the MACT standards and incorporated the appropriate combustion operating requirements in its NOC into the title V permit (*i.e.,* option 1B). However, this approach would maximize the amount of time the source potentially would be subject to overlapping requirements under RCRA and the CAA. On the other hand, one way to address the overlapping requirements consideration would be to allow removal of conditions from the RCRA permit at the time the standards are promulgated. But, this would create a time period during which the source would not have enforceable controls proven to achieve compliance, which would not address the concern about avoiding a break in regulatory coverage. Clearly neither of these extremes can provide a good balance between the two timing-related considerations.

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[303] We are adopting a DOC (previously the pre-NOC) requirement in today's final rule, but it is amended from how we presented it in the NODA (as discussed in Part Five, Section IV). Rather than submitting the DOC to the regulatory agency, a source must maintain it in their operating record. We encourage source owners and operators to set up the operating record in an unrestricted location that is reasonably accessible by the public.

FIGURE 1:

HAZARDOUS WASTE COMBUSTOR MACT IMPLEMENTATION TIME LINE: OPTIONS FOR TIMING OF PERMIT TRANSITION

				Option 1A	*Option 2*			*Option 3*	*Option 1B*	
HWC MACT rule published	NIC due to regulatory agency		Progress report due to regulatory agency	Performance test plans due	DOC in operating record [3]	Notification of test plan approval or intent to deny		Performance tests completed	NOC, including test results, due to regulatory agency	
Year 0	**Year 1**	**Year 1.5**	**Year 2**	**Year 2.5**	**Year 3**	**Year 3.25**		**Year 3.5**	**Year 3.75**	**Year 4.5** [4]
EFFECTIVE DATE	Title V permit applications due to permitting authority [1]	Reopenings complete for sources with 3 or more years left in permit term		Title V permit decisions made [2]	**COMPLIANCE DATE**				Revise title V permit to include NOC	

Notes:

1/ Sources newly subject to title V as a result of the hazardous waste combustor (HWC) MACT rule have 12 months to submit applications. Sources that have title V permits with a remaining permit term of 3 or more years when the HWC MACT rule is promulgated must reopen the permit to address HWC MACT. Such a reopening must be completed within 18 months of rule promulgation. Sources with title V permits with less than 3 years remaining in the permit term do not have to reopen; they can wait until renewal to address HWC MACT. However, in the interim, sources must meet the HWC MACT requirements.

2/ By statute, permitting authorities have 18 months to act on title V applications, if they are submitted after the first full year of a title V permit program. This means that decisions on title V applications or reopening requests submitted at Year 1 would be made by Year 2.5 -- still a year before sources conduct the performance test (which

(1) provides operating parameters for the unit, (2) demonstrates compliance with the standards, and (3) provides data for the notification of compliance (NOC)). However, permitting authorities are behind schedule in issuing title V permits; thus, we cannot assume that permits will have been issued by this point. We also cannot assume they will not be issued, because the permitting authorities may "catch up" with their schedule.

3/ Although the source is subject to enforceable *requirements* from the time of MACT promulgation (e.g., requirements for the Notice of Intent to Comply (NIC), the progress report, performance tests, and so on), this is the first point at which the source is subject to enforceable *operating conditions* (those contained in the DOC maintained in the source's operating record); however, these conditions have not yet been demonstrated to actually achieve the standards.

4/ It could take up to nine months to incorporate significant permit revisions (see 40 CFR 70.7(e)(4)(ii) and 71.7(e)(3)(ii)).

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We evaluated each option to determine which most effectively balances the relevant issues. Options 1A and 1B focus primarily on tying the transition timing to title V permitting. Option 2 links the timing for transition to the DOC (previously called the pre-NOC). Option 3, which we are recommending be followed, ties transition to submittal of the NOC.

a. Option 1A. This option is a variation of an option discussed in the May, 1997, NODA. There we stated, ''The Agency's current thinking is that the RCRA permit should continue to apply until a facility completes its comprehensive performance testing and its title V permit is issued (or its existing title V permit is modified) to include the MACT standards. The RCRA permit would then be modified to remove the air emissions limitations which are covered in the title V permit.'' (see 62 FR 24250). Although this description basically applies to option 1B, the discussion in the NODA might also have been interpreted to mean that once the standards are in a title V permit, the corresponding emissions limits should be removed from the RCRA permit. When reviewing the implementation time line in terms of the statutory and regulatory time frames governing the title V process, we found that sources might well have title V permits issued or modified to include the new standards a year before they ever conduct performance testing. Although the permit would likely include the standards and a schedule for complying with the new limits, it would not include any of the key combustion operating requirements demonstrated in the performance test. Thus, even though option 1A would seem to address the concern about a break in coverage because the title V permit would have been issued, in actuality, the underlying tenet of the Combustion Strategy—that the source have enforceable operating parameters proven to achieve the new standards—is not fully addressed.

b. Option 1B. This option calls for the NOC to be incorporated into title V permits before any conditions could be removed from RCRA permits. As discussed earlier, this approach would not be consistent with our goal of minimizing duplication across permitting programs, even though it was identified as our current thinking in the NODA. As discussed in the NOC/title V Interface Section, the initial NOC must be incorporated into the title V permit as a significant permit modification, which could add another nine months to the transition period. Moreover, commenters express concern over impacts that existing delays in title V permitting activities might have. Commenters wrote that given the tremendous volume of permits to be issued (hazardous waste combustors being just one small subset) there would be no way to predict how long it might take regulatory agencies to initially issue or modify title V permits to include the standards, or to modify permits to include NOCs, despite time frames set forth in the title V regulations. We agree that delaying removal of air emissions and related parameters from RCRA permits until this occurs would unnecessarily extend the amount of time sources might be subject to overlapping requirements. As pointed out by commenters, having overlapping requirements may present technical and administrative difficulties. Examples of technical difficulties include, but are not limited to, the potential for conflicting requirements with regard to testing, monitoring, and compliance certifications. Examples of administrative difficulties include, but are not limited to, permit maintenance issues stemming from different permit modification procedures and appeals procedures.

c. Option 2. Option 2 reflects the time frame suggested by some commenters for effecting the transition upon submittal of the DOC, which, under the NODA discussion, would have been due to the regulatory agency on the compliance date (note: commenters appear to use the terms ''compliance date'' and ''effective date'' interchangeably, but they are quite different). Basing transition on the DOC was still a viable option to consider, even with our amended approach of having the source maintain the DOC in its operating record. The DOC contains enforceable operating conditions for key combustion parameters that the source anticipates will achieve compliance with the new standards. Although the source would have had to comply with other enforceable part 63 requirements by this point (*e.g.*, requirements for the Notice of Intent to Comply, the progress report, and the performance test plan), this would be the first point where a source might have overlapping requirements governing air emissions and related operating parameters—those in the DOC and those in the RCRA permit. Recommending removal of RCRA permit conditions at this point would thus minimize the potential for duplicative requirements. However, we conclude that it would still not address the perception issue adequately. Specifically, even though the source is subject to enforceable operating requirements, the source has not actually demonstrated compliance with the new standards.

d. Option 3. This option reflects the alternative approach we suggested in the May, 1997, NODA, as well as the preferred option of the majority of those who submitted comments on the timing issue. Under this recommended option, a source might well have a title V permit that addresses the new standards to some extent, even if just by including the standards themselves and a schedule for compliance. More importantly, the source will have conducted its comprehensive performance test, and submitted an NOC containing key operating parameters demonstrated to actually achieve compliance (and which are enforceable). Although there would be some time during which a source might have overlapping requirements (those in its NOC and those in its RCRA permit), this would be a finite and predictable amount of time. After considering all the comments, we conclude that option 3 best meets the dual challenges of ensuring the source is continuously subject to enforceable controls demonstrated to achieve compliance while minimizing the time you would be subject to permitting requirements for, and enforcement of, operating parameters and limits under both RCRA and the CAA. Therefore, today's rule adopts option 3.

We acknowledge that this approach does not completely eliminate concerns expressed by some commenters about the potential for facilities to be subject to dual enforcement mechanisms. Although this potential may exist during the brief transition period when a source has enforceable conditions under both CAA and RCRA, we will exercise enforcement discretion to avoid any duplicative inspections or actions, and we encourage States to do so as well. If any inspections are scheduled to occur during the brief transition period (which may be unlikely given how short this period is), the regulatory agency could conduct joint inspections by RCRA and CAA enforcement staff. Joint inspections might help to alleviate some of the potential for any duplicative efforts, either in terms of individual inspections targeting the same areas, or enforcement actions being taken under both RCRA and CAA authorities.

Under Option 3, you would most likely have a title V permit that addresses the hazardous waste combustor MACT standards to some extent. We expect that if the permit were issued prior to the comprehensive performance test and the submittal of the NOC, it would contain the standards

themselves, and related requirements in part 63 subpart EEE, such as the requirements to develop and public notice performance test protocols, to develop and maintain in its operating record the DOC with anticipated (and enforceable) operating limits, to conduct the comprehensive performance test and periodic confirmatory tests, and to submit the NOC, including the test results, to the regulatory agency.

The public would have had an opportunity to comment on the requirements in the title V permit as part of the normal CAA administrative process for issuing permits. Furthermore, the public would have had other opportunities to be involved in your compliance planning. For example, under the requirements for the Notice of Intent to Comply in § 63.1210(b), you would have had to conduct an informal meeting with the community to discuss how you intend to come into compliance with the new standards. You also are required in § 63.1207(e) to provide public notice of the performance test plan, so the public would have the opportunity to review the detailed testing protocol that describes how the operating parameters will achieve compliance.

4. How Should RCRA Permits Be Modified?

Once you have been issued a RCRA permit, you must comply with the conditions of that permit. Unless the conditions have been written into the permit with sunset (*i.e.*, automatic expiration) clauses governing their applicability, conditions remain in effect until the permit is either modified to remove them or the permit is terminated or expires. Promulgation of final MACT standards for hazardous waste combustors does not in itself eliminate your obligation to comply with your RCRA permit. In the May 1997 NODA, we stated that the RCRA permit would be modified to remove air emission limitations that are covered under MACT, but did not elaborate on what modification procedures would be followed. We solicited comments on how the transition should occur.

Of the commenters that addressed this issue, the recurring theme in the comments is for EPA to provide a mechanism that would impose minimal burden on sources and permit writers to process the modifications. Some express a desire to see the RCRA conditions removed in some automatic fashion once the MACT standards became effective. A mechanism for accomplishing this, suggests one commenter, would be to include a requirement in the final rule that would effect removal of conditions from all RCRA permits. One commenter suggests adding a new line item to Appendix I in § 270.42, designated as class 1, to address the transition to MACT. Another suggests a new line item designated as class 1 requiring prior agency approval. A third suggests a new line item designated as class 2.

We do not agree with eliminating conditions from all RCRA permits as part of a national rulemaking effort (*i.e.*, we do not agree with an ''automatic'' removal), particularly given the existence of authorized sate programs and state-issued permits. Permits may contain site-specific conditions developed to address particular situations, *e.g.*, conditions based on the results of a site-specific risk assessment. To ensure that the regulatory agency continues to meet its RCRA obligation to ensure protection of human health and the environment, these conditions may need to be evaluated on a case-by-case basis vis-a-vis the MACT standards before they are removed. If the RCRA risk-based conditions are more stringent or more extensive than the corresponding MACT requirements, the conditions must remain in the RCRA permit.

We do agree with commenters that there should be a streamlined approach to removing conditions from a RCRA permit that are covered by the hazardous waste combustor MACT regulations at the time an NOC demonstrating compliance is submitted to the regulatory agency. All other conditions would, of course, remain in the RCRA permit. Once you demonstrate compliance with MACT, we consider the transition from RCRA to be primarily an administrative matter since you will not only be subject to comparable enforceable requirements under CAA authority, but also will continue to be subject to any site-specific conditions under RCRA that are more stringent than MACT. Our intent is not to impose an additional burden on you or permit writers for a largely administrative requirement. To this end, we are adding a new line item to the permit modification table in 40 CFR 270.42, Appendix I, to specifically address the transition from RCRA to the CAA.

The approach of adding a new line item to the permit modification table is consistent with the comments we received pursuant to the May 1997 NODA. We agree with the commenter who suggests the new item be designated as a class 1 modification requiring prior Agency approval. This classification effectively balances the need to retain some regulatory oversight of the changes with the goal of minimizing the amount of time a source will be subject to regulation under both RCRA and the CAA for essentially the same requirements. A class 1 modification without prior approval, suggests one commenter, would not be sufficient to accomplish the transition with adequate confidence in proper regulatory coverage. Even though we consider the deferral to be an administrative matter, it is important to retain some level of regulatory oversight prior to effecting the change to provide the opportunity to address any differences between the two programs. On the other hand, the administrative exercise of transitioning from RCRA to the CAA does not warrant the extra measures (and attendant time commitment) of a class 2 modification procedure.

We are designating the new line item (A.8.) in the Appendix I table as class 1 requiring prior Agency approval. Thus, the administrative procedures associated with this mechanism will not be overly burdensome, yet RCRA permit writers will have an opportunity to confer with their counterparts in the air program prior to approving the request to eliminate conditions from the RCRA permit. This allows the RCRA permit writer to verify that you have completed the comprehensive performance test and submitted your NOC. In the few situations where site-specific, risk-based conditions have been incorporated into RCRA permits, it also provides the RCRA permit writer with the opportunity to review such conditions vis-a-vis the MACT standards to ensure any conditions that are more stringent or extensive than those applicable under MACT are retained in the RCRA permit. The public also would be informed that the transition from RCRA was being effected because the modification procedures require a notice to the facility mailing list. We recommend that the public notice for the RCRA permit modification also briefly mention that you have completed performance testing under the CAA, and are operating under enforceable conditions that are at least as stringent as those being removed from your RCRA permit.

One commenter offered suggestions for preparing the RCRA modification requests. We found some of these suggestions helpful and recommend that, to facilitate processing of the RCRA modification requests, you (1) identify in your modification requests which RCRA conditions should be removed, and (2) attach your NOC to the requests.

From another perspective, today's approach for removing conditions from the RCRA permit also may encourage

you to work closely with the air program to expeditiously resolve any potential or actual disagreements on the results of the comprehensive performance test and conditions in the NOC. The RCRA permit writer is not likely to approve the modification request until he or she has received confirmation that their air program counterpart is satisfied with your compliance demonstration under MACT (*i.e.*, that they have made the finding of compliance based on the test results documented in the NOC, as discussed in the following paragraph). Thus, you should continue to be subject to requirements under both RCRA and the CAA until the differences, if any, are resolved.

We are not including a requirement in either part 63 subpart EEE or part 270 specifically for the regulatory agency to approve the NOC before approving the RCRA modification request. We have incorporated the general provision for making a finding of compliance (see § 63.6(f)(3)) into the requirements of subpart EEE at § 63.1206(b)(3). According to these provisions, the regulatory agency has an obligation to make a finding of compliance with applicable emissions standards upon obtaining all of the compliance information, including the written reports of performance test results. Because of this obligation, air program staff currently review stack test results that are submitted in NOCs subsequent to performance testing, and routinely transmit an official letter to you indicating the acceptability of the test results. Furthermore, if you fail the comprehensive performance test, there are requirements in part 63 subpart EEE specifying what you must then do. Given this combination of regulatory obligations and current practices, we see no need to impose additional requirements governing review of performance test results. This approach is also consistent with the timing for when permit requirements are deferred to CAA (see the amended rule language for 40 CFR 270.19, 270.22, 270.62, and 270.66)).

5. How Should Sources in the Process of Obtaining RCRA Permits Be Switched Over to Title V?

In the initial NPRM and the May, 1997, NODA, we did not specifically describe, or solicit comment on, permit process issues for facilities operating under RCRA interim status, or facilities seeking to renew their RCRA permits (which can occur even after the nominal permit term has expired). In the above sections, we focused on implementing the deferral of RCRA controls by determining how and when to move conditions out of existing RCRA permits. For facilities that do not yet have RCRA permits, or that need to renew their RCRA permits, the focus of the discussion shifts to how and when to move nonrisk-based air emissions considerations out of the RCRA permitting process. As indicated earlier, RCRA interim status facilities will continue to be subject to RCRA permitting requirements for air emissions standards and related operating parameters, including trial burn planning and testing, until they have demonstrated compliance with the new standards by conducting a comprehensive performance test and submitting an NOC to the agency. Facilities in the process of renewing their RCRA permits will also continue to be subject to RCRA permitting requirements until the same point.

Again, there is no single approach for moving these two categories of facilities out of the RCRA permitting process (*i.e.*, for stack air emissions requirements). The most appropriate route to follow in each case depends on a host of factors, including, for example: (1) The status of the facility in the RCRA permitting process at the time this rule is published; (2) the priorities and schedule of the regulatory agency; (3) the level of environmental concern at a given site; and (4) the number of similar facilities in the permitting queue. The regulatory agency (presumably in coordination with the facility) will balance all of these factors. In mapping out a site-specific approach, we are encouraging permitting agencies to give weight to two key factors. First, we should minimize to the extent practicable the amount of time a facility would be subject to duplicative requirements between RCRA and CAA programs. Second, as indicated in Part Five, Section V.B (Risk Burn/Comprehensive Performance Testing), testing under one program should not be unnecessarily delayed in order to coordinate with testing under the other. For example, if a facility is planning to conduct a RCRA trial burn within a fairly short amount of time after the rule is promulgated, they generally should not be allowed to delay the trial burn to coordinate with comprehensive performance testing under MACT that may not occur for three more years.[304]

Even though we cannot prescribe a single national approach for the transition from RCRA permitting for air emissions, we can provide some other recommendations to help permitting authorities and facility owners or operators determine a sound approach. In this section, we walk through some examples, intended as guidance, for transitioning facilities that are in the process of obtaining or renewing a RCRA permit. We hope that these examples will also enhance consistency among the various regulatory agencies.

a. Example 1. Facility has submitted a RCRA permit renewal application. Some sources, particularly hazardous waste incinerators, have RCRA permits that are close to expiring. These sources may already have initiated the renewal process by the time this rule is promulgated. In these situations, we anticipate the source might need to modify its current permit to accommodate any upgrades necessary to comply with the new standards. Facilities may modify RCRA permits that have been continued under § 270.51 pending final disposition of the renewal application. Thus, facilities will be able to use the streamlined permit modification procedures that were promulgated in § 270.42(j) to effect the necessary changes pending resolution of their renewal application. Depending on where they are in the renewal process, the permitting authority may, alternatively, elect to fold the modifications into the actual renewal process, thereby streamlining some of the administrative requirements.

Issuance of RCRA hazardous waste combustor permits often takes several years. If the source and the permitting authority are in the early stages of renewal, the schedule of permitting activities may not call for a trial burn to be conducted until sometime close to when the source would be required to conduct comprehensive performance testing under MACT. If so, the source may be able to either coordinate the testing requirements of the two programs, *e.g.*, if a RCRA risk burn is necessary, or to perform just the comprehensive performance test under MACT. If, on the other hand, they are further along in the renewal process, the trial burn might be scheduled for the near future. In this case, the approach outlined in Example 2 below might be more appropriate to follow.

Regardless of the approach followed to transition the air emissions and related operating parameters for the combustion unit to the Air program, the

[304] There may be a short delay allowed for the purpose of combining RCRA trial burn and MACT performance test plans. Of course, even if the timing for the two tests is such that they may be coordinated, that does not mean that one can simply replace the other, particularly because test conditions for one may not be applicable to the other (refer to Section V.B for additional discussion on this topic).

RCRA permit must still be renewed for all other aspects of hazardous waste management at the facility.

b. Example 2. Permitting authority has approved, or is close to approving, the RCRA trial burn plan at the time the final MACT standards are promulgated. Both interim status facilities and those seeking permit renewal are subject to requirements in §§ 270.62 and 270.66 to develop and obtain approval for trial burn plans. Requirements in these sections also call for permitting authorities to provide public notice of approved (or tentatively approved) trial burn plans and projected schedules for conducting the burns. We anticipate that many of the hazardous waste combustors seeking permits who are subject to this rulemaking will have already had their trial burn plans approved, or close to being approved, by the time this rule is promulgated. In such situations, we expect the facility to continue with the trial burn as planned.

If the burn is successful, we anticipate the permitting authority will issue a final RCRA permit that covers both the operations of the hazardous waste combustor unit as well as all other hazardous waste management activities at the site. We recommend that the permit be worded flexibly to facilitate transition to title V once the source subsequently demonstrates compliance with the MACT standards. For example, conditions in the RCRA permit that would ultimately be covered under title V might have associated sunset provisions indicating that the conditions will cease to apply once the combustor unit demonstrates compliance with the MACT standards. This would ensure that the amount of time the source might be subject to emissions limits and operating parameters under both RCRA and the CAA would be minimized. It would also eliminate the need to engage in a separate permit modification action to remove the conditions after the MACT compliance demonstration.

Facilities in this scenario may determine they need to make some changes to their equipment or operations to meet the new emissions limits. These facilities will be able to use the streamlined permit modification procedures that were promulgated in § 270.42(i).

If the trial burn is not successful, we expect permitting authorities to refer to the RCRA trial burn failure policy (see Memorandum on Trial Burns, EPA530–F–94–023, July 1994). This policy includes discussion in the following areas: (1) Taking immediate steps to restrict operations; (2) initiating procedures for permit denial (which would be appropriate for interim status or renewal candidates); (3) initiating proceedings to terminate the permit (which would be appropriate for proposed new facilities); and (4) authorizing trial burn retesting after the facility investigates reasons for the failure and makes changes to address them.

c. Example 3. The permitting authority does not anticipate approving the trial burn plan, or the trial burn is not scheduled to occur until after the Notice of Intent to Comply is submitted. As suggested in the previous example, if a facility is ready to proceed with a trial burn at the time the final hazardous waste combustor MACT rule is promulgated, we expect that activities will proceed as planned. Once the Notice of Intent to Comply is submitted, however, the regulatory authority will have a better understanding of how and when the facility intends to comply with the emissions standards, and how the trial burn would fit in with the MACT compliance demonstration. Thus, we expect the regulatory authority may wish to decide whether to separately continue with the trial burn schedule laid out in the RCRA permitting process or, conversely, coordinate with MACT comprehensive performance testing, based on a number of considerations, including, for example: (1) The facility's schedule and planned modifications for MACT compliance; (2) progress on completing and approving the RCRA trial burn plan; (3) whether the risk testing that may be necessary under RCRA is likely to fit in with the MACT performance test schedule; and (4) whether the facility wants to combine risk testing under RCRA with the MACT performance test.

Even after a source conducts its comprehensive performance test and subsequently submits the NOC to the regulatory agency, separate risk testing might be necessary. For example, if the comprehensive performance test did not generate sufficient data for a site-specific risk assessment, a RCRA ''risk burn'' might be required (see discussion in Part Five, Section V.B.).

E. What Is Meant by Certain Definitions?

When we considered incorporating MACT standards into both RCRA and CAA regulations, we anticipated some confusion about definitions that differ between the two programs. In the NPRM, we solicited comments on our expressed preference not to reconcile these issues on a national basis. (See 61 FR 17452). Several commenters suggest that EPA reconcile the issues and clarify definitions. In the final rule, we have made some changes, as discussed below, to ensure consistency of interpretation and to minimize uncertainty for facilities seeking to comply with today's rule. With these changes, we believe that revisions to the definitions themselves are not necessary.

1. Prior Approval

In the proposed rule, we stated that RCRA and CAA are similar in that they both require EPA prior approval before construction or reconstruction of a facility. There were no adverse comments received regarding this statement. The requirements for obtaining prior approval are apparently clear under both programs.

We suggested in the proposed rule that readers of part 63 might be unaware of their obligations under RCRA. Therefore, as proposed, we are inserting the following note into § 63.1206 Compliance Dates, ''An owner or operator wishing to commence construction of a hazardous waste incinerator or hazardous waste-burning equipment for a cement kiln or lightweight aggregate kiln must first obtain some type of RCRA authorization, whether it be a RCRA permit, a modification to an existing RCRA permit, or a change under already existing interim status. See 40 CFR part 270''. No adverse comments were submitted.

2. 50 Percent Benchmark

As stated in the proposed rule, RCRA and CAA both classify ''reconstruction'' as any modifications of a facility that cost more than 50 percent of the replacement cost of the facility. However, the significance of this term is different depending on which statute is being applied. Two commenters confirmed that the distinction is critical. Therefore, they concluded that, to avoid confusion, EPA should defer to the CAA definition of ''reconstruction'' under RCRA Section 1006(b) because it is the more flexible and appropriate definition.

The primary concern about the 50 percent benchmark is in relation to the limit imposed on RCRA interim status facilities for making modifications. To ensure that this limit would not present a barrier to making upgrades necessary to comply with MACT, we finalized a revision to § 270.72(b) to specify that interim status facilities can exceed the 50 percent limit if necessary to comply with MACT. (See 63 FR 33829, June 19, 1998). Therefore, there is no potential for practical conflict among the CAA and RCRA regulatory regimes, and no further amendment or clarification is needed.

3. Facility Definition

As stated in the NPRM, the definition of ''facility'' differs between CAA and RCRA. The definition has bearing in determining the value of the facility with respect to the 50 percent rule on modifications as discussed above. We proposed that the RCRA definition should be used for the RCRA application to changes during interim status, and the CAA definition should be used when determining applicability of MACT standards to new versus existing sources. Commenters disagreed with this approach and concluded that EPA should defer to the CAA definition of facility because it encompasses the entire operations at a site. We continue to believe that the CAA definition should apply to CAA requirements and that the RCRA definition should apply to RCRA requirements, since the definitions are used for a different purpose under each statute. By clarifying the 50 percent benchmark issue for RCRA interim status facilities as discussed above, we believe this satisfies commenters' concerns and, thus, it is not necessary to reconcile the facility definition.

4. No New Eligibility for Interim Status

RCRA bestows interim status on facilities that were in existence on November 19, 1980, or are in existence on the effective date of statutory or regulatory changes that render the facility subject to RCRA permitting requirements. The original RCRA rules for hazardous waste incinerators and BIFs were finalized in 1980 and 1991, respectively. Because these rules established the dates on which incinerators and BIFs were first subject to RCRA permitting requirements, the effective dates of those rules created the *only* opportunity for interim status eligibility. The interim status windows that occurred in 1980 and 1991 thus are not modified by this rule. The lone exception is that facilities currently burning only nonhazardous wastes that become newly listed or identified hazardous waste under other future rules would still be able, under existing law, to qualify for interim status (§ 270.42(g)).

5. What Constitutes Construction Requiring Approval?

The proposed rule noted that RCRA and CAA both have restrictions requiring approval prior to construction, but that each statute defines construction differently. We expressed our intent in the NPRM to retain the two definitions. In the final rule, we continue to support retaining the two definitions. Since most facilities currently possess RCRA and CAA permits, these definitions are already being applied concurrently with no apparent problems. Consequently, this is the most practical and least confusing approach for permittees and regulators.

XII. State Authorization

A. What Is the Authority for Today's Rule?

Today's rule is being issued under the joint authority of the Clean Air Act (CAA), 42 U.S.C. 7401 *et seq.*, and the Resource Conservation Recovery Act (RCRA), 42 U.S.C. 6924(o), 6924(q) and 6925. The new MACT air emissions standards are located in 40 CFR part 63. Pursuant to sections 1006(b) and 3004(a) of RCRA, 42 U.S.C. 6905(b) and 6924(a), the MACT program will only be carried out under the CAA delegated program. We strongly encourage States to adopt today's MACT standards under their CAA statute and to apply for delegation under the CAA if they do not have section 112 delegation. State implementation of the MACT portions of this rule through its delegated CAA program will facilitate coordination between the regulated entity and its State and reduce duplicative permitting requirements under the CAA and RCRA.

In addition to promulgating the MACT standards, today's rule modifies the RCRA program in other various respects and States authorized for the RCRA base program must revise their programs accordingly. For example, this rule revises the test for determining whether a facility's waste retains the Bevill exclusion by adding dioxins/furans to the list of constituents to be analyzed.

B. How Is the Program Delegated Under the Clean Air Act?

States can implement and enforce the new MACT standards through their delegated 112(l) CAA program and/or by having title V authority. A State's title V authority is independent of whether it has been delegated section 112(l) of the CAA.

Section 112(l) of the CAA allows us to approve State rules or programs to implement and enforce emission standards and other requirements for air pollutants subject to section 112. Under this authority, we developed delegation procedures and requirements located at 40 CFR part 63, subpart EEE, for National Emission Standards for Hazardous Air Pollutants (NESHAPS) under section 112 of the CAA (see 58 FR 62262, November 26, 1993, as amended, 61 FR 36295, July 10, 1996). Similar authority for our approval of state operating permit programs under title V of the CAA is located at 40 CFR part 70 (see 57 FR 32250, July 21, 1992).

Submission of rules or programs by States under 40 CFR part 63 (section 112) is voluntary. Once a State receives approval from us for a standard under section 112(l) of the CAA, the State is delegated the authority to implement and enforce the part 63 standards under the State's rules and regulations (the approved State standard would be federally enforceable). States also may apply for a partial 112 program, such that the State is not required to adopt all rules promulgated in 40 CFR part 63. We will implement the portions of the 112 program not delegated to the State. For example, documents such as the NOC will be submitted to the Administrator when due, if the State is not approved for the standards in today's rule.

Under 40 CFR 70.4(a) and section 502(d) of the CAA, States were required to submit to the Administrator a proposed part 70 (title V) permitting program by November 15, 1993. If a State did not receive our approval by November 15, 1995 for its title V program, the title V program had to be implemented by us in that State. As of today's rule, all States have approved title V programs.[305] This means that all States have the authority to incorporate all MACT standards (changes to section 112 of the CAA) into the title V permits as permit conditions, and have the authority to enforce all the terms and conditions of the title V permits. *See* 40 CFR 70.4(3)(vii).

The MACT standards are effective upon promulgation of this rule. Facilities with a remaining permit term of three or more years will be required to submit title V applications to their permitting authorities to revise their permits.[306] States will write the new

[305] Under the CAA, Indian tribes may apply to EPA to be treated as States and obtain approval of their own Clean Air Act programs. Section 301(d) of the Clean Air Act, 42 U.S.C. 7601(d); see also 40 CFR part 49. Tribes may thus become empowered to implement the section 112 and title V portions of today's rule is areas where they demonstrate jurisdiction and the capacity to do so. Currently under RCRA, there is no Tribal authorization for the RCRA Subtitle C hazardous waste program and thus EPA generally implements the RCRA portions of today's rule in Indian Country.

EPA has authority to implement the federal operating permits program 940 CFR part 71) where a State fails to adequately administer and enforce an approved part 70 program, or where a State fails to appropriately respond to an EPA objection to a part 70 permit. Additionally, some sources in U.S. Territories, the Outer Continental Shelf, and Indian Country, are subject, or will soon be subject, to part 71.

[306] Title V permits are issued for a period not to exceed five years. *See* 40 CFR 70.4(b)(3)(iii). You

Continued

MACT standards into any new, renewed, or revised title V permit and enforce all terms and conditions in the title V permit. A State's authority to write and enforce title V permits is independent of its authority to implement the changes to the MACT standards (changes to section 112 of the CAA). Therefore, while both we and the State can enforce the federal MACT standards within a title V permit, until the State receives approval from us for required changes to section 112 of the CAA, we will implement the 112 program.

C. How Are States Authorized Under RCRA?

Under section 3006(g) of RCRA, enacted as part of the Hazardous and Solid Waste Amendments (HSWA) of 1984, new requirements imposed by us as a result of authorities provided by HSWA take effect in authorized States at the same time as they do in unauthorized States—as long as the new requirements are more stringent than the requirements a State is authorized to implement. We implement these new requirements until the State is authorized for them. After receiving authorization, the State administers the program in lieu of the Federal government, although we retain enforcement authority under sections 3008, 3013, and 7003 of RCRA.

Most of the new Federal RCRA requirements in today's final rule are being promulgated through the HSWA amendments to RCRA. Regulatory changes based on HSWA authorities are considered promulgated through HSWA. The following RCRA sections, enacted as part of HSWA, apply to today's rule: 3004(o) (changes to the MACT standards), 3004(q) (fuel blending), and 3005 (omnibus). As a part of HSWA, these RCRA provisions are federally enforceable in an authorized State until the necessary changes to a State's authorization are approved by us. See RCRA section 3006, 42 U.S.C. 6926. The Agency is adding these requirements to Table 1 in § 271.1(j), which identifies rulemakings that are promulgated pursuant to HSWA.

In contrast, the change to the permit modification table (Appendix I to § 270.42) is promulgated through authorities provided to us prior to HSWA. Therefore, this change does not become effective until States adopt the revision and become authorized for that revision.

Under RCRA, States that have received authorization to implement and enforce RCRA regulatory programs are required to review and, if necessary, to modify their programs when we promulgate changes to the federal standards that result in the new federal program being more stringent or broader in scope than the existing federal standards. This is because under section 3009 of RCRA, States are barred from implementing requirements that are less stringent than the federal program. See also 40 CFR 271.21.

In four respects, we consider today's final rule to be more stringent than current federal RCRA requirements: (1) The added definitions for dioxins/furans and TEQ (40 CFR 260.10); (2) the requirement that permits for miscellaneous units must include appropriate terms and conditions from part 63, subpart EEE standards (40 CFR 264.601); (3) the establishment of new standards to control particulate matter (40 CFR 266.105(c)); and (4) the addition of dioxin/furans as listed potential Products of Incomplete Combustion (PIC) (40 CFR 266.112; Appendix VIII to 40 CFR part 266). Authorized States must adopt these requirements as part of their State programs and apply to us for approval of their program revisions. The procedures and deadlines for State program revisions are set forth in 40 CFR 271.21.

Section 3009 of RCRA allows States to impose standards that are more stringent or more extensive (*i.e.*, broader) in scope than those in the Federal program (see also 40 CFR 271.1(i)(1)). Thus, for those Federal changes that are less stringent, or reduce the scope of the Federal program, States are not required to modify their programs. Further, EPA will not implement those provisions promulgated under HSWA authority that are not more stringent than the previous federal regulations in States that have been authorized for those previous federal provisions. EPA will implement these new provisions in States that are not authorized to implement the previous federal regulations.

In two respects, we consider today's rule to be less stringent than current federal requirements: (1) The inapplicability of certain provisions of RCRA once specified part 63, subpart EEE and other requirements have been met (40 CFR 264.340(b)(1); 265.340(b)(1); 266.100(b)(1), 266.100(d)(1) and (d)(3); 266.100(h); 270.19; 270.22; 270.62; and 270.66); and (2) the provision for RCRA permit modifications to remove inapplicable RCRA conditions (Appendix I to 40 CFR part 270.42).[307]

The rest of the requirements in today's rule, in our view, are neither more nor less stringent than current regulatory requirements. They are either reiterations or clarifications of our existing regulations or policies (40 CFR 264.340(b)(2), 265.340(b)(2), 266.100(b)(2), and 266.101).

Although States must adopt only those requirements that are more stringent, in the spirit of RCRA section 1006(b), which directs us to avoid duplicative RCRA and CAA requirements, we strongly urge States to adopt all aspects of today's final rule (including the clarifying as well as less stringent sections). The adoption of all portions of today's final rule by state agencies will ensure clear, consistent requirements for owners, operators, affected sources, State regulators, and the public. Pursuant to today's rule, the permitting requirements will be implemented solely through the CAA title V program. If a RCRA permitted facility is required to use RCRA risk-based air emissions standards in addition to the CAA designated technology based standards, we will exercise our omnibus authority in section 3005 of RCRA to modify the facility's RCRA permit.[308] Therefore, we believe that the standards promulgated today properly implement the goals of sections 3004(o) and (q) of RCRA to ensure the safe and proper management of the affected combustion units and the goal of section 1006(b) of RCRA to avoid duplicative and potentially confusing permitting requirements under two different environmental statutes (RCRA and CAA). For these reasons, we encourage States to adopt these

will have three years to come into compliance with the new MACT standards. If you have fewer than three years remaining on your title V permit term, our part 70 regulations do not require you to reopen and revise your permit to incorporate the new MACT standard into the title V permit. *See* 40 CFR 70.7(f)(1)(i). However, the CAA does allow State programs to require revisions to your permit to incorporate the new MACT standard. Therefore, if you have fewer than three years remaining on your title V permit, you should consult your state permitting program regulations to determine whether a revision to your permit is necessary to incorporate the new part 63 MACT standards. If your are not required to revise your permit to incorporate the new standard, you must still fully comply with today's standard.

[307] States choosing to adopt the other less stringent changes to RCRA in today's rule also should adopt the change to 40 CFR 270.42. The change to 40 CFR 270.42 provides the RCRA permit modification procedure to eliminate inapplicable RCRA requirements once specified part 63, subpart EEE and other requirements have been met.

[308] If a State has a provision in its State air statute or regulation that is equivalent to the RCRA omnibus authority (RCRA section 3005(c)), we expect that the State will be able to use its air authority in pace of its RCRA omnibus authority.

regulations as quickly as their legislative and regulatory processes will allow.

Part Six: Miscellaneous Provisions and Issues

I. Does the Waiver of the Particulate Matter Standard or the Destruction and Removal Efficiency Standard Under the Low Risk Waste Exemption of the BIF Rule Apply?

Section 266.109 of the current BIF regulation provides a conditional exemption from the destruction and removal efficiency standard and the particulate matter standard for low risk wastes. We proposed to restrict eligibility for the waiver of the particulate matter standard to BIFs other than cement and lightweight aggregate kilns because the waiver could supersede the MACT requirements for the particulate matter standards. We had the same concern for the destruction and removal efficiency requirements. See 61 FR at 17470. After reconsidering the issue, we are clarifying that today's MACT requirements are separately applicable and enforceable and that no action is needed to ensure that a BIF waiver does not supersede the MACT requirements. See the discussions in Part Five of today's preamble regarding integration of the MACT and RCRA standards.

II. What Is the Status of the ''Low Risk Waste'' Exemption?

Section 264.340(b) and (c) exempts certain incinerators from the RCRA emission standards if the hazardous waste burned contains (or could reasonably be expected to contain) insignificant concentrations of Appendix VIII, part 261, hazardous constituents. We proposed that this ''low risk waste'' provision no longer be applicable incinerators on the MACT compliance date because a risk-based exemption from technology-based MACT standards seemed inappropriate. See 61 FR at 17470. After reconsidering the issue, we have determined that no specific action is necessary because the MACT standards are separately applicable and enforceable standards. See the discussion in Part Five of today's preamble regarding integration of the MACT and RCRA standards.

III. What Concerns Have Been Considered for Shakedown?

In the proposal, we expressed concern that some new units do not effectively use their allotted 720-hour pre-trial burn shakedown period or appropriate extensions to correct operational problems. This can potentially lead to trial burn failures and emission exceedances, which pose unnecessary risks to human health and the environment. Therefore, we proposed three shakedown options to enhance regulatory control over trial burn testing:

(1) Prior to scheduling trial burns, we would require facilities to provide the Director a minimum showing of operational readiness.

(2) We would require notification of operational readiness prior to, and following, the shakedown period.

(3) We would provide guidance on how to effectively prepare for a trial burn. These options were proposed for inclusion under both the CAA and RCRA regulations, and comments were requested regarding their usefulness.

A few commenters preferred Option 3 because it would be useful in determining how to effectively prepare for a trial burn. Regarding Options 1 and 2, two commenters felt the cost, time, and resources required for a trial burn already provide adequate financial incentive to prepare, plan, and conduct trial burns efficiently. Two commenters felt that Option 3 provided the potential for inequities in implementation of the guidance by the permit writer. In general, most commenters agreed that additional regulatory requirements are not necessary.

In light of the comments, we decided not to adopt any of the proposed options. We acknowledge that it is in the facility's best interest to conduct a successful trial burn that most facilities will properly utilize their shakedown period. However, during the transition period from RCRA to MACT compliance, we strongly encourage facilities to properly use their shakedown period to correct operational problems that pose unnecessary risks to human health and the environment.

Therefore, with the exception of risk burns, we are pursuing the deferral of RCRA trial burns to the MACT performance test requirements. A source remains subject to RCRA trial burns during the transition period to MACT compliance. For facilities where unique considerations make a SSRA necessary, risk-based permit conditions may result. In such cases, there likely would need to be conditions for all phases of operation in the RCRA permit. Thus, start-up and shakedown would still be an issue for some RCRA combustor facilities given that they would have to be in compliance with the unique RCRA emission standards even during startup and shakedown (unless the permit conditions specify otherwise).

IV. What Are the Management Requirements Prior to Burning?

Today, we are finalizing the proposal to revise 40 CFR 266.101 (''Management prior to burning'') to clarify that fuel blending activities are regulated under RCRA. See 61 FR at 17474 (April 19, 1996). As described in detail in the proposal, this is already implicit (and for some units, explicit) in existing rules. Therefore, today's rule is more an interpretive clarification. See 52 FR 11820 (April 13, 1987). By incorporating the term ''treatment'' into the regulation, we are clarifying that fuel blending activities that are conducted in units other than 90-day tanks or containers also are subject to regulation.

We received two comments expressing concern that this would subject all fuel blending-related equipment permitting, without allowing for case-by-case determinations. For example, these commenters believe that some pre-processing activities conducted by blenders (shredding, drum crushing, and other physical handling) do not meet the definition of treatment and should not be subject to permitting standards. However, we feel that these activities meet the existing definition of treatment. They are ''processe(s) . . . designed to change the physical . . . composition of . . . hazardous waste so as to . . . render such waste amenable for recovery'' via combustion. See 40 CFR 260.10 (definition of ''treatment'').

Moreover, these pre-processing activities should be subject to permitting requirements. Controls on these activities are necessary to protect against releases of hazardous constituents to the environment due to the nature of those operations (*e.g.*, crushing or shredding of drums containing hazardous wastes, grinding of waste materials, etc.). *See Shell Oil* v. *EPA*, 950 F. 2d 741, 753–56 (D.C. Cir. 1991), which broadly construes the definition of treatment to assure that the RCRA goal of cradle-to-grave management of hazardous wastes is satisfied and that specific types of units remain subject to subtitle C regulation. For units that do not already meet the definition of a specific unit, subpart X is available to provide the appropriate standards.

V. Are There Any Conforming Changes to Subpart X?

In today's rule, we are making a *conforming change* to part 264 subpart X (§ 264.601) to make reference to part 63 subpart EEE.

Hazardous waste treatment, storage, and disposal facilities that are not

classified under other categories (*e.g.*, tank systems, surface impoundments, waste piles, incinerators, *etc.*) are classified as miscellaneous units and regulated under part 264 subpart X. However, due to the varying types and designs of miscellaneous units, subpart X does not include specific performance standards. Instead, subpart X makes reference to requirements in other sections of the regulations. Section 264.601 of subpart X states that ''Permit terms and provisions shall include those requirements of subparts I through O and subparts AA through CC of this part, part 270, and part 146 that are appropriate for the miscellaneous unit being permitted .'' This statement directs the permitting agency to look at the requirements (*e.g.*, performance standards, operating parameters, monitoring requirements, *etc.*) from other sections in the regulations when developing appropriate permit conditions for miscellaneous units.

In the past, permitting authorities have often looked to the part 264 subpart O regulations for incinerators to develop the appropriate permit conditions for units such as thermal desorbers and carbon regeneration units. Since today's rule upgrades the air emission standards for certain source categories, these new standards also should be considered when determining the appropriate requirements for miscellaneous units, most notably those engaged in any type of thermal operation. Therefore, the language in § 264.601 of subpart X is being modified to incorporate a reference to part 63 subpart EEE.

VI. What Are the Requirements for Bevill Residues?

A. Dioxin Testing of Bevill Residues

In the proposal, we proposed to add polychlorinated dibenzo-p-dioxin and polychlorinated dibenzo-furan compounds to appendix VIII of part 266. Appendix VIII lists those compounds that may be generated as products of incomplete combustion and that must be included in testing of Bevill residues conducted pursuant to 40 CFR 266.112. Products of incomplete combustion can be unburned organic compounds that were originally present in the waste, thermal decomposition products resulting from organic constituents in the waste, or compounds synthesized during or immediately after combustion. We noted in the proposal that there is a considerable body of evidence to show that dioxin and furan compounds can be formed in the post-combustion regions of hazardous waste burning boilers, industrial furnaces, and incinerators, especially at temperatures between 250–450°C.[309] [310] Collected particulate matter in the post-combustion regions of furnaces can provide sites for adsorption of precursors, formation of dioxins and furans by surface chlorination of precursors, catalytic production of chlorine for subsequent chlorination of dioxin and furan precursors, and *de novo* synthesis of dioxins and furans. This same particulate matter may be subsequently managed as excluded Bevill residue.

No evidence was provided by commenters to show that dioxins and furans cannot be formed in cooler, post-combustion regions of furnaces (*e.g.*, ductwork, boiler tubes, heat exchange surfaces, and air pollution control devices). A few commenters referenced the total number of nondetects for all of the compounds in the cement kiln dust database. However, the relevance of this information specifically to dioxins and furans was unclear. Dioxins and furans have repeatedly been detected in cement kiln dust, as well as other Bevill residues.[311] [312]

The majority of commenters were concerned about implementation issues. Many felt that the addition of dioxins and furans to part 266 appendix VIII, in conjunction with the proposed requirement for daily sampling and analysis of Bevill residues, would make Bevill demonstrations prohibitively expensive. They also noted that the turnaround time for daily dioxin and furan analyses would delay compliance demonstrations and result in shortages in storage capacity. One commenter felt that daily sampling for dioxins and furans is not warranted because cement kiln dust at their site has already been shown to meet the proposed Bevill exclusion criteria for dioxins and furans. None of these arguments directly address our basic premise that dioxin and furan compounds can be generated in combustion systems, are of concern to the protection of human health and the environment, and, as such, should be included in part 266 appendix VIII. Rather, these comments pertain to issues that are more readily and appropriately resolved within the context of site-specific Bevill testing plans.

The proposed daily residue test frequency, which was cited most often as an impediment in conjunction with dioxin and furan analysis, is not being promulgated as part of today's rule. The rule will leave maximum flexibility for development of appropriate dioxin and furan analysis frequencies considering site-specific factors. Most facilities should be able to substantially limit the number of dioxin and furan analyses after an initial sampling effort. Most residue test plans rely on the concentration-based comparisons to F039 nonwastewater levels (40 CFR 266.112(b)(2)) in combination with a phased testing approach. Under the phased approach, test frequency can be substantially reduced for those constituents where initial sampling efforts reveal that concentrations are well below the F039 levels. Of the facilities where residue testing for dioxins and furans has been performed, we are aware of only two facilities where dioxins and furans have exceeded the F039 levels. Thus, the burden of higher analytical costs is expected to be appropriately limited to those few sites with significant dioxin and furan residue concentrations.

Several commenters pointed out that some Bevill residues (*e.g.*, slag from primary smelters) are generated prior to the post-combustion regions typically associated with dioxin and furan formation. Indeed, the preamble discussion in the proposal focused exclusively on post-combustion residues and did not address Bevill-exempt primary smelter slags. We currently do not have analytical data on dioxins and furans in smelter slag. However, our current information on dioxin and furan formation mechanisms suggests that it would be highly unlikely to expect significant dioxins and furans in smelter slag. Therefore, we agree that dioxin and furan analyses should be limited to those residues where there is a reasonable expectation that dioxins and furans could be present (*e.g.*, post-combustion residues).

Finally, two commenters disagreed with our assertion that dioxins and furans have been shown, in a national comparison, to be higher in residues from hazardous waste burning cement kilns than from other cement kilns. Although this information was included in the proposal as background, it is not necessary to reconcile various interpretations regarding national trends for today's rule. The 40 CFR 266.112 provisions are site-specific, and 40 CFR 266.112(b)(1) provides ample opportunity for you to demonstrate, on a site-specific basis as necessary, that waste-derived residues are not

[309] USEPA, ''Estimating Exposure to Dioxin-Like Compounds'', EPA/600/6-88/005Ca, June 1994.

[310] USEPA, ''Combustion Emissions Technical Resource Document (CETRED)''. EPA/530/R–94/014, May 1994.

[311] USEPA, ''Report to Congress on Cement Kiln Dust'', EPA/530/R–94/001, December 1993.

[312] USEPA, ''Dioxins/Furans, Metals, Chlorine, Hydrochloric acid, and Related Testing at a Hazardous Waste-Burning Light-Weight Aggregate Kiln'', June 1997 Draft Report.

significantly different from normal residues.

After considering all of the comments on the proposal, we are adding dioxins and furans to part 266 appendix VIII in today's rule. A notation has been included to clarify that dioxin and furan analyses are required only for post-combustion residues. Commenters provided no compelling information to challenge the classification of dioxins and furans as products of incomplete combustion which can be formed in post-combustion regions of combustion systems, and the presence of dioxin and furan compounds in several post-combustion Bevill residues is clearly documented. Also, the increased use of carbon injection technology to achieve dioxin and furan stack emissions reductions could increase dioxin and furan contamination of Bevill residues in the future. The addition of dioxins and furans to part 266 appendix VIII is not expected to unduly burden the regulated community because facilities with dioxins and furans well below exclusion levels should be able to justify a minimum test frequency.

Dioxins and furans will be listed in part 266 appendix VIII simply as ''Polychlorinated dibenzo-p-dioxins'' and ''Polychlorinated dibenzo-furans''. However, the specific form of dioxins and furans that must be determined analytically will depend on the portion of the two-part test that is being implemented. If you are performing a comparison with normal residues pursuant to 40 CFR 266.112(b)(1), specific congeners and homologues must be measured and converted to TEQ values using the procedure provided in part 266, appendix IX, section 4.0. We received no comments regarding this portion of the proposal. If you are utilizing the concentration-based comparison to the F039 nonwastewater levels in 40 CFR 268.43 as outlined in 40 CFR 266.112(b)(2), then only the tetra-, penta-, and hexa-homologues need to be measured (these are the only homologues with established F039 concentration limits). One commenter seemed uncertain as to whether the tetra-, penta-, and hexa-homologue concentrations should be converted to TEQ values. We have revised the regulatory language to clarify that total concentrations for each homologue, not TEQs, should be used for the F039 comparisons. Another commenter objected to the use of F039 levels for the health-based comparison, noting that the F039 concentrations are technology-based levels. Our rationale for relying on the F039 concentrations has been explained previously (see 58 FR at 59598, November 9, 1993) and is not being revisited in today's rule.

B. Applicability of Part 266 Appendix VIII Products of Incomplete Combustion List

In the proposal, we noted the confusion regarding whether every constituent listed on the part 266 appendix VIII list must be included in residue testing at every facility. We proposed to clarify that the part 266 appendix VIII list is applicable in its entirety to every facility.

The only comments received on this issue were objections to our characterization of this change as a clarification. The commenters felt this was a substantive change that should not be enforced prior to the effective date of any final rule establishing the revision as law. The Agency is proceeding in today's rule to make the part 266 appendix VIII list applicable in its entirety to every facility by changing the title of the appendix from ''Potential PICs for Determination of Exclusion of Waste-Derived Residues'' to ''Organic Compounds for Which Residues Must Be Analyzed.'' This change is considered a revision to the part 266 regulations effective 30 days after the date of publication of today's rule. We will not seek to retroactively enforce this provision.

VII. Have There Been Any Changes in Reporting Requirements for Secondary Lead Smelters?

We proposed that secondary lead smelters subject to MACT standards for the secondary lead source category not be subject to RCRA air emission standards. 61 FR at 17474 (April 19, 1996). This exemption would apply only if a secondary lead smelter processed the type of feed material we evaluated in promulgating the secondary lead MACT standards, namely, lead-bearing hazardous wastes containing less than 500 ppm toxic nonmetals and/or hazardous wastes listed in appendix XI to 40 CFR part 266. *Id.* at 14475. Secondary lead smelters are presently not subject to RCRA air emission standards under these circumstances. See existing § 266.100 (c)(1) and (c)(3). However, they are subject to certain notification and recordkeeping requirements found in § 266.100 (c)(1)(I) and (c) (3) and on-going sampling and analysis requirements in § 266.100 (c)(1)(ii) and § 266.100 (c)(3)(i)(D). The practical effect of the proposal was to continue to relieve secondary lead smelters of these administrative requirements.

The proposal was supported by the public commenters. The reason for the proposal remains. That is, now that secondary lead smelters are complying with MACT standards for their source category, it is not necessary for them to be regulated under RCRA also for their air emissions. 60 FR 29750 (June 23, 1995). For the same reason, it is unnecessary to have the same level of recordkeeping and other administrative oversight as when these units were exempt from RCRA air emission requirements but not yet complying with CAA standards for hazardous air pollutants. 61 FR at 14474. Consequently, we are finalizing this portion of the proposal.

Today's rule takes the form of an amendment to the RCRA BIF rule (new § 266.100 (h)) and indicates that secondary lead smelters are exempt from all provisions of the BIF rule except for § 266.101, which contains the restrictions on types of hazardous waste which may be burned, as described in the first paragraph above. As proposed, a secondary lead smelter must provide a one-time notice to the Regional Administrator or State Director identifying each hazardous waste burned and stating that the facility claims an exemption from other requirements in the BIF rules. Those secondary lead smelters which have already notified pursuant to existing regulatory provisions (namely § 266.100 (c) (1) (i) or § 266.100 (c) (3) (i) (D)) would not have to renotify.

VIII. What Are the Operator Training and Certification Requirements?

Section 129 of the CAA requires us to develop and promulgate a program for training and certification of operators of facilities that burn municipal and medical wastes. We accordingly promulgated operator training and certification requirements for the operators of municipal waste combustors (60 FR 65424 (December 19, 1995)) and medical waste incinerators (62 FR 48348 (September 15, 1997)). At proposal, we considered similar requirements for hazardous waste combustor operators also and requested comments on whether: (1) Operator certification requirements are necessary for hazardous waste combustors, and (2) the American Society of Mechanical Engineers (ASME) standards (or an equivalent state certification program) are appropriate and sufficient. We note that ASME has established a Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators in collaboration with the American National Standards Institute (ASME Standard Number QHO–1–1994) and has been providing certifications since 1996.

Commenters differed widely on two key issues: (1) Whether such a training program should be voluntary, mandatory, or even necessary, considering that RCRA already requires some site-specific training program (40 CFR 264.16); and (2) whether the certifying agency should be an independent body like ASME versus an industry organization like the Cement Kiln Recycling Coalition. Most commenters favored the establishment of a mandatory operator certification program by an independent organization that develops consensus standards (*e.g.,* ASME, American Society for Testing and Materials, or American National Standards Institute) in order to preserve the integrity of certification. We agree and note that ASME has already done commendable work in developing certification programs for operators of municipal waste combustors, medical waste incinerators, high capacity fossil-fuel fired plants, and hazardous waste incinerators. Each combustor program includes defined criteria for certification, including operator qualifications, recommended training, examination content, minimum passing grades, and due process. These programs are incorporated (at least in part) into EPA's combustion regulations to satisfy the CAA section 129 mandate, and we are extending similar requirements in today's rule to all hazardous waste combustor operators also. We find that the concerns about good operator training and certification that underlie the section 129 requirement for municipal waste combustors and medical waste incinerators apply as well to those persons charged with the responsibility for safe handling and burning of hazardous waste.

Some kiln operators and the Cement Kiln Recycling Coalition have commented that cement and lightweight aggregate kilns are much larger and more diverse facilities than most hazardous waste incinerators, that these kilns operate with employee unions that object to additional outside certification when site-specific training programs are already in place, and that the ASME certification programs are not pertinent or applicable to them. We recognize that there are some differences in the operation of incinerators and cement and lightweight aggregate kilns. However, these differences do not suggest that operator training and certification should be abandoned. Rather, they serve to emphasize the importance of having a rigorous operator training and certification program in place and having it subject to regulatory agency scrutiny. In that regard, we are aware of the Cement Kiln Recycling Coalition's efforts to develop a suitable industry-wide training and certification program for the kilns. However, the Cement Kiln Recycling Coalition's efforts to date have not resulted in a final industry-wide set of standards that can be relied upon in today's rule, and we note that the current general facility training programs under § 264.16 do not fully cover the areas that would need to be addressed at facilities burning hazardous waste. For example, § 264.16 neither identifies important areas of training with respect to daily operations (such as hazardous waste and residues handling operations, air pollution control device operations, troubleshooting, normal start-up and shut-down procedures, continuous emissions monitoring system operation and maintenance *etc.*) nor discriminates among the different categories of operators. Also, § 264.16 does not specify any operator certification nor minimum standards for certification, which are needed to ensure the initial and continual competence of the hazardous waste combustor facility operators.

We expect that kiln specific programs will be developed in the near future after complete analysis for consistency, reliability and conformance with principles of good operating and operator practices (including training and certification). Today's rule therefore specifies that each hazardous waste combustor facility must develop an operator training and certification program. In the case of cement and lightweight aggregate kilns, the facility must submit its program to the Agency for approval. The submittal will be evaluated for completeness, reliability and conformance with appropriate principles of good operator and operating practices (including training and certification). If a state-approved certification program becomes available, the facility's program must conform to that state program. These are to ensure that sufficient specifics are included in each facility program. In the case of hazardous waste incinerators, the facility's program must conform to either a state-approved certification program or, if none exists, to the ASME certification program (Standard No. QHO–1–1994). Again, this is to ensure that sufficient specifics are contained in a facility program.

IX. Why Did the Agency Redesignate Existing Regulations Pertaining to the Notification of Intent To Comply and Extension of the Compliance Date?

In today's final rule, we redesignate existing regulations pertaining to the Notification of Intent to Comply with subpart EEE and extensions of the compliance date to install pollution prevention or waste minimization controls to meld them into the new provisions of the subpart. This ensures that similar topics (*e.g.,* notifications, compliance requirements) are grouped together in the rule. We also revise those existing regulations to: (1) Convert the regulatory language to plain language consistent with the new provisions; (2) include references to the new provisions; and (3) include references to the actual effective date of the rule.

We promulgated these regulations as Part 1 of revised standards for hazardous waste combustors. See 63 FR 33782 (June 19, 1998). We are promulgating part 2 today, which comprises the emission standards and compliance requirements. Today's revisions to the existing standards does not constitute a repromulgation and does not reopen the comment period for those standards.

We are redesignating the existing regulations as indicated in the following table:

Existing regulation	Topic	Predesignated regulation
§ 63.1211(a) and (b)	Notification requirements for the notification of intent to comply	§ 63.1210(b) and (c)
§ 63.1211(c)	Requirements for sources that do not intend to comply	§ 63.1206(a)(2)
§ 63.1212	Progress report requirements for the notification of intent to comply	§ 63.1211(b)
§ 63.1213	Certification that must accompany the notice of intent to comply	§ 63.1212(a)
§ 63.1214	Extension of the compliance date	§ 63.1206(a)(1)
§ 63.1215	Requirements for sources that become affected sources after the effective date of the emission standards.	§ 63.1212(b)

Existing regulation	Topic	Predesignated regulation
§ 63.1216	Extension of the compliance date to install pollution prevention or waste minimization controls.	§ 63.1213

Part Seven: National Assessment of Exposures and Risks

We received many public comments on the risk assessment for the proposed rule.[313] In addition, the risk assessment was peer reviewed in accordance with EPA guidelines. Many of the commenters commented on similar topics. These topics included the representativeness of the HWC facilities modeled, the estimation of facility emissions, the exposure scenarios evaluated, and the assessment of risks from mercury. As of result of these comments, we made significant changes in the risk assessment for the final rule. Also, new information became available after proposal on food intake rates for home-produced foods and methods for assessing exposures to mercury. In addition, EPA issued guidance for use of probabilistic techniques in risk assessments and a policy for evaluating risks to children. These were also considered in making revisions to the risk assessment. A complete discussion of the risk assessment for today's rule may be found in the background document.[314]

I. What Changes Were Made to the Risk Methodology?

A. How Were Facilities Selected for Analysis?

The representativeness of the example facilities used in the risk assessment at proposal was widely questioned by commenters. We analyzed eleven example facilities for the proposed rule: two commercial incinerators, two on-site incinerators, two lightweight aggregate kilns, and five cement kilns.[315] While these facilities represented a geographically diverse set of facilities in each source category, it was not possible to demonstrate in any formal way that the facilities were representative of the universe of facilities covered by the rule.

Because of this difficulty, we concluded that the most efficient approach for assuring the representativeness of the facilities analyzed was to select a stratified random sample. The number of strata was determined by the number of categories and subcategories of sources for which risk information was desired. The final sample of facilities chosen for analysis includes 66 randomly selected facilities and 10 of the 11 facilities selected at proposal for a total sample of 76 facilities out of a universe of 165 facilities within the contiguous United States.[316] The sample sizes are as follows:

HAZARDOUS WASTE COMBUSTION FACILITY STRATUM AND SAMPLE SIZES

Combustion facility category	Stratum size	Random sample size	NPRM sample size	Final sample size	High end sampling probability [1]
Cement Kilns	18	10	5	15	98
Lightweight Aggregate Kilns	5	3	2	5	100
Commercial Incinerators:					
Including Waste Heat Boilers	20	11	2	13	97
Excluding Waste Heat Boilers	12	7	2	9	95
Large On-Site Incinerators:					
Including Waste Heat Boilers	43	17	1	18	94
Excluding Waste Heat Boilers	36	15	0	15	90
Small On-Site Incinerators:					
Including Waste Heat Boilers	79	25	0	25	96
Excluding Waste Heat Boilers	65	16	0	16	88
Incinerators With Waste Heat Boilers	29	15	1	16	92

[1] Probability that a facility that lies in the upper 10% of the distribution of risk will be sampled.

For the randomly selected facilities, sample sizes within a given category were chosen such that the probability of sampling a facility in the upper ten percent of the distribution of risk would be 90 percent or greater. The probabilities actually achieved range from 88 to 100 percent depending on the size of the original, non-randomly chosen sample and changes in the sampling frame that occurred during the random sampling process.[317]

We did not target area sources specifically for sampling because the statutory definition of major sources versus area sources is based on facility-wide emissions of hazardous air pollutants and such information was not available at the time the sampling was performed. Therefore, it was not possible to determine the sampling frame. We expect that on-site incinerators, both large and small, at large industrial facilities are major sources rather than area sources. Because area sources are of interest, we made risk inferences based on those area source incinerators that could be identified and had otherwise been

[313] "Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Information Document," February, 1996.

[314] See the background document, "Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Document—Final Report," July, 1999.

[315] See 61 FR 17370 and "Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Information Document" (February, 1996).

[316] A large on-site incinerator analyzed at proposal that is undergoing RCRA closure was excluded from the analysis.

[317] Changes in the sampling frame occurred as a result of facilities that were missing from the original sampling frame were misclassified, or were no longer burning hazardous waste and had begun RCRA closure.

sampled.[318] For cement kilns, all area sources were sampled and used for making such inferences.

B. How Were Facility Emissions Estimated?

At proposal, we estimated baseline emissions (reflecting current conditions) for the example facilities from the distribution of stack gas concentrations for the corresponding category of sources. Both central tendency and high end emissions estimates were made based on the 50th and 90th percentiles of the stack gas concentration distributions. For the purpose of evaluating risks associated with the proposal, we assumed that facilities emitted at the design level determined to be necessary to meet the standard, even if this meant an increase in emissions over baseline. Many commenters thought that using percentiles to estimate emissions was inappropriate and that site-specific emissions should be used instead. Commenters also thought that it was incorrect to project an increase in risk with the proposed standards (which occurred as a result of allowing emissions to increase over baseline). We agree with these comments. For the final rule, we estimated emissions based on site-specific stack gas emission concentrations and flow rates. Site-specific stack gas concentration data were used where emissions measurements were available; otherwise, stack gas concentrations were imputed. For today's rule, we assumed emissions would remain unchanged from baseline in instances where a facility's emissions are already below the design level (which is taken as 70 percent of the MACT standard).[319] In instances where a facility's emissions exceed the design level, we determined the percentage reduction in emissions required to meet the design level. We then applied this reduction to each chemical constituent to which the standard applies.

The imputation approach we used in instances where measured data were not available involves the random selection of emissions concentrations from a pool of emissions concentrations for other facilities and test conditions that are believed to be reasonably representative of the facility in question. For groups of interrelated constituents (*e.g.*, different dioxin congeners or mercury species), imputation was carried out for the group of interrelated constituents taken together rather than each individual constituent separately. We used the random imputation approach to preserve the variability in emissions exhibited by the pooled data. Another commonly used approach for estimating emissions, emissions factors, generally represents average conditions and does not reflect the variability in emissions across facilities in a given source category. Because the objective of the risk assessment is to characterize the distribution of risks across a given source category, we deemed the use of average emissions to be inappropriate except where only very limited data are available (*i.e.*, for cobalt, copper, and manganese). Although the random imputation approach may significantly over or under estimate emissions for a given facility (a problem also inherent in emission factors), we expect that the distributions of risk across a given source category are better characterized using random imputation than with an emissions factor approach or any other approach that does not account for the variation in emissions from one facility to the next.

Emissions estimates were made for all chemical constituents covered by the rule for which sufficient data were available, including all 2,3,7,8-chlorine substituted dibenzo(p)dioxins and dibenzofurans, elemental mercury (Hg^0), divalent mercury (Hg^{+2}), lead, cadmium, arsenic, beryllium, trivalent chromium (Cr^{+3}), hexavalent chromium (Cr^{+6}), chlorine, and hydrogen chloride. In addition, emissions estimates were made for particulate matter (PM_{10} and $PM_{2.5}$) and nine other metals, three of which (cobalt, copper, and manganese) were not assessed at proposal but were included in the risk assessment for the final rule. Chemical-specific emissions estimates could not be made for organic constituents other than dioxins and furans (*e.g.*, various products of incomplete combustion) due to the lack of sufficient emission measurements. We assessed the risks from all constituents for which chemical-specific emissions estimates could be made, as well as from particulate matter. A complete discussion of the emissions estimates used in the risk assessment may be found in the technical support documents for today's rule.[320]

C. What Receptor Populations Were Evaluated?

The risk assessment at proposal examined risks to individuals engaged in subsistence activities such as farming and fishing. Some commenters viewed these types of activities as unlikely to occur and questioned whether these types of exposures are representative of actual exposures and risk. Other commenters thought the exposure pathways included in the analysis did not fully reflect potential exposures to individuals living a true subsistence lifestyle. We share the concerns raised by commenters and have refocused the assessment on non-subsistence receptor populations such as commercial farmers, recreational anglers, and non-farm residents whose numbers and locations can be estimated from available census data. At the same time, we retained the subsistence scenarios and revised them to be more reflective of a subsistence lifestyle. Although it is not known precisely how many individuals are engaged in subsistence activities or exactly where those activities take place, subsistence does occur in some segments of the U.S. population, and we believe it is important to evaluate the associated risks.

D. How Were Exposure Factors Determined?

Since the risk assessment at proposal, we have developed new information on factors that are used to estimate exposures. We obtained data collected from previously published studies and used the data to derive exposure factor information, including information for children.[321] In particular, we reanalyzed data collected by USDA to estimate consumption of home-produced foods, such as meat, milk, poultry, fish, and eggs. Over half of farm households report consuming home-produced meats, including nearly 40 percent that report consumption of home-produced beef. In the Northeast, nearly 40 percent of farm households report consuming home-produced dairy products, and, in the Midwest, nearly 20 percent do. The percentage is lower elsewhere, averaging about 13 percent nationally. Presumably most of these households are associated with dairy farms. Most farm households that consume home-produced foods are engaged in farming as an occupation rather than a means of subsistence.

The data indicate that individual consumption of home-produced foods is

[318] Area source incinerators that were identified included commercial incinerators and on-site incinerators at U.S. Department of Defense installations.

[319] This is also consistent with the assumption made in the cost and economic analysis that facilities that are currently emitting below the design level will not need to retrofit using new control technology.

[320] See ''Final technical Support Document for HWC MACT Standards, Volume V: Emission Estimates and Engineering Costs.'' July, 1999.

[321] EPA published the new exposure factor information in the ''Exposure Factors Handbook,'' EPA/600/P–95/002Fb, August, 1997.

higher than consumption of the same foods in the general populace. We have used the information on home-produced foods to estimate the exposures to farm households and to households engaged in subsistence farming. Only the primary food commodity produced on the farm was assumed to be consumed by farm households. In contrast, a wide variety of foods was assumed to be produced and consumed by households engaged in subsistence farming.

E. How Were Risks from Mercury Evaluated?

Commenters viewed the absence of a quantitative assessment of risks from mercury as a significant failing at proposal. However, a number of issues related to assessing risks from mercury had not been adequately resolved at the time of proposal that would have allowed us to proceed with a quantitative analysis. We have since issued our Mercury Study Report to Congress, a study that has been subject to extensive peer review, and the Utility Study Report to Congress.[322] [323] With today's rule, we conclude that sufficient technical basis exists for conducting a quantitative assessment of mercury risks from hazardous waste combustors. We recognize, however, that significant uncertainties remain and the results of our mercury analysis should be interpreted with caution and be used only qualitatively.

Although the mercury analysis that accompanies today's rule is patterned after the analysis done for the Mercury Study, there are differences between the two studies in the methods used. The model we used for evaluating the fate and transport of mercury in lakes is the same as the IEM–2M model used in the Mercury Study Report to Congress. However, modifications were made to adapt it for use with rivers and streams.[324] Both studies used the ISC air dispersion model for modeling wet deposition of mercury. However, for the Mercury Study the ISC model was modified to include dry deposition of mercury vapor whereas, for the current analysis, we used a simplified treatment of dry vapor deposition. In the Mercury Study, air modeling was carried out to a distance of 50 kilometers whereas, for the current analysis, air modeling (and, therefore, the effective size of the modeled watersheds) was limited to a distance of 20 kilometers. Long-range transport of mercury emissions (beyond 50 kilometers) was considered in the Mercury Study but was not included in the current analysis. In the Mercury Study, a large number of different sources were investigated to identify whether reductions in anthropogenic or environmental sources of mercury would reduce the total exposures of mercury to the general population. The current analysis was designed to assess what reductions may occur in incremental exposures from specific industrial sources of mercury to specific individuals rather than what reductions would occur in total exposures of mercury. Also, the Mercury Study modeled exposures under varying background assumptions, but the current analysis did not assess the impact that variable background concentrations would have on the risk results. In addition, the Mercury Study received external peer review, whereas we have not conducted an external peer review of the current analysis.

In addition, there are a variety of uncertainties related to the fate and transport of mercury in the environment, such as the deposition of mercury emitted to the atmosphere via wet and dry removal processes, the transport of mercury deposited in upland areas of a watershed to a body of water, and the disposition of mercury in the water body itself, including methylation and demethylation processes, sequestering in the water column and sediments, and uptake in aquatic organisms. Furthermore, the form of mercury emitted by a given facility is thought to be a determining factor in the fate and transport of mercury in the atmosphere. Only limited data are available on the form of the mercury emitted from hazardous waste combustors. A more complete discussion of the uncertainties related to the fate and transport of mercury may be found in the Mercury Study Report to Congress.

Also important to consider is that the reference dose for methyl mercury represents a ''no-effects'' level that is presumed to be without appreciable risk. We used an uncertainty factor of 10 to derive the reference dose for methyl mercury from a benchmark dose that represents the lower 95% confidence level for the 10% incidence rate of neurologic abnormalities in children.[325] Therefore, there is a margin of safety between the reference dose and the level corresponding to the threshold for adverse effects, as indicated by the human health data. Furthermore, we applied the reference dose, which was developed for maternal exposures, to childhood exposures. This introduces additional uncertainty in the risk estimates for children. Additional uncertainties associated with assessing individual mercury risks to nonsubsistence populations and subsistence receptors are discussed under the ''Human Health Risk Characterization'' section below.

We do not know the direction or magnitude of many of the uncertainties discussed above and did not attempt to quantify the overall uncertainty of the analysis. Thus, the cumulative impact of these uncertainties is unknown, and the uncertainties implicit in the quantitative mercury analysis continue to be sufficiently great so as to limit its ultimate use for decision-making. Therefore, we have used the quantitative assessment to make qualitative judgments about the risks from mercury but have not relied on the quantitative assessment (nor do we believe it is appropriate) to draw quantitative conclusions about the risks associated with particular national emissions standards.

F. How Were Risks From Dioxins Evaluated?

Few changes have been made to the methods used for assessing risk from dioxins since proposal. Some commenters thought we should modify the toxicity equivalence factors that are used to characterize the relative risk from 2,3,7,8-chlorine substituted congeners relative to that from 2,3,7,8,-tetrachlorodibenzo(p)dioxin. As a matter of policy, we continue to use the international consensus values that were published by EPA in 1989. We are aware that revisions to the toxicity equivalence factors are being considered by the international scientific community. However, we have not adopted revised values and continue to use the 1989 toxicity equivalence factors.

We have changed the data being relied upon to characterize the bioaccumulation of dioxins in fish. Specifically, we believe that the biota-

[322] ''Mercury Study Report to Congress, Volume III: Fate and Transport of Mercury in the Environment,'' U.S. Environmental Protection Agency, EPA–452/R–97–005, December 1997.

[323] ''Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units—Final Report to Congress,'' U.S. Environmental Protection Agency, EPA–453/R–98–004a and b, February 1998.

[324] For a discussion of the mercury surface water model, see the background document, ''Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Document—Final Report,'' July, 1999.

[325] The uncertainty factor is intended to cover three areas of uncertainty: Lack of data from a two-generation reproductive assay; variability in the human population, in particular the wide variation in the distribution and biological half-life of methyl mercury; and lack of data on long term sequelae of developmental effects.

sediment accumulation factors used at proposal, which were derived from data for the Great Lakes, significantly understate the bioaccumulation potential in aquatic systems that have recent and ongoing contamination. Studies in Sweden and elsewhere show that where contamination is ongoing, biota-sediment accumulation factors may be higher by as much as an order of magnitude or more relative to the Great Lakes and other aquatic systems where levels in biota are influenced primarily by past contamination. For the risk assessment for today's rule, biota-sediment accumulation factors were derived from data collected by the Connecticut Department of Environmental Protection. The Connecticut study, which is discussed in detail in the dioxin reassessment, involved extensive monitoring of soils, sediments, and fish near resource recovery facilities operating in the state.[326] The data show biota-sediment accumulation factors that are a factor of two to nine times higher (depending on the individual congener) than those used previously.

G. How Were Risks from Lead Evaluated?

Risks from exposures to lead were assessed at proposal by comparing model-predicted lead levels in soil to a health-based soil benchmark criterion. Commenters pointed out that there are pathways of exposure other than those related to soils and that we should look at the overall impact of lead emissions on blood lead levels in children. We agree with these comments and have modified the risk assessment to include other pathways of exposure such as inhalation and dietary exposures, in addition to soil ingestion. The revised assessment employs the Intake/Exposure Uptake BioKinetic model to assess the incremental impact of lead intake on blood lead levels in children. The results of the blood lead modeling are used together with information on background levels of blood lead in the general population to estimate the number of children whose blood levels exceed 10 micrograms per deciliter. Our goal is to reduce children's blood lead to below this level.

H. What Analytical Framework Was Used To Assess Human Exposures and Risk?

As a result of the public and peer review comments received on the risk assessment at proposal, we modified the analysis to focus on the entire population of persons that are exposed to facility emissions rather than persons living on a few individual farms and residences. A study area was defined for each sample facility as the area surrounding the facility out to a distance of 20 kilometers (or about 12 miles). All persons residing within the study area were included in the analysis.[327] The study area was divided up into sixteen (16) sectors defined by the intersection of rings at two, five, ten and twenty kilometers and radii extending to the north, south, east, and west. For each sector, census data were used to estimate the population of those persons living in farm households by type of farm and the population of those persons living in non-farm households. Census data were also used to determine the age of all household members. Four age groups were delineated: Preschoolers (0 to 5 years), preteens (6 to 11 years), adolescents (12 to 19 years) and adults (20 years and older).

Within each study area, three or four bodies of water were chosen for analysis based on their proximity to the sample facility and the likelihood of their being used for recreational purposes, as indicated by factors such as size and accessibility. Water bodies were also chosen if they were used to supply drinking water to the surrounding community. The watershed of each water body was delineated out to a distance of 20 kilometers from the facility.

We conducted a multi-pathway exposure analysis for all the human receptors considered in the risk assessment. Household members regardless of the type of household were assumed to be exposed to facility emissions through direct inhalation and incidental ingestion of soil. In addition, in study areas where surface waters are used for drinking water, household members were also assumed to be exposed through tap water ingestion. A portion of non-farm households were assumed to engage in home gardening based on the prevalence of home gardening in national surveys. Farm households were assumed to consume the primary food commodity produced on the farm. This contrasts with the subsistence farmer who was assumed to consume predominantly home-produced foods, including meat, milk, poultry, fish, and eggs, as well as fruits and vegetables. For the purpose of characterizing the range of risks that could result from subsistence farming, it was assumed that a subsistence farm was located in every sector in a given study area. A portion of the households in each study area were assumed to engage in recreational fishing based on the prevalence of recreational fishing in national surveys. It was assumed that individual recreational anglers would fish at all of the water bodies delineated in a given study area. In contrast, households engaged in subsistence fishing were assumed to consume fish from only a single body of water. For the purpose of characterizing the range of risks that could result from subsistence fishing, the assumption was made that every body of water delineated in a given study area was used for subsistence fishing.

Air dispersion and deposition modeling were performed for each study area at all sample facilities using facility-specific information on stack configuration and emissions, along with site-specific meteorological data, terrain data (in areas of elevated terrain), and land use data. Air modeling was conducted to a distance of 20 kilometers. Long-range transport of emissions beyond this distance was not considered. Bioaccumulation in the terrestrial food chain was modeled from estimates of deposition and uptake in plants and subsequent uptake in agricultural livestock from consumption of forage and silage. Bioaccumulation in the aquatic food chain was modeled from estimates of deposition to watershed soils (and subsequent soil erosion and runoff) and direct deposition to water bodies and subsequent uptake in fish. Surface water modeling was conducted for each body of water using site-specific information relative to watershed size, surface runoff, soil erosion, water body size, and dilution flow.

Exposure modeling was performed using central tendency exposure factors (*e.g.*, duration of exposure and daily food intake) for all receptor populations. As noted below, an exposure variability analysis was also performed for selected constituents and receptor populations using exposure factor distributions. Exposure pathways varied depending on the particular human receptor and the types of activities that lead to human exposures. Age-specific rates of mean daily food intake and media contact rates, in conjunction with sector-specific media concentrations and concentrations in food, were used

[326] "Estimating Exposure to Dioxin-Like Compounds, Volume III: Site-Specfic Assessment Procedures, U.S. Environmental Protection Agency, External Review Draft, EPA/600/6–88/005Cc, June 1994

[327] Because the analysis at proposal indicated that exposures beyond 20 kilometers were well below levels of concern, we did not consider persons exposed to facility emissions that are transported beyond 20 kilometers. Also, as discussed elsewhere, the risk assessment was peer reviewed in accordance with EPA guidelines, and peer reviewes did not comment that the range of the local scale study area was insufficient (or recommend that it be increased to 50 or more kilometers).

to calculate the total (administered or potential) dose from all exposure pathways combined. Lifetime average daily dose was used as the exposure metric for assessing cancer risk and average daily dose (reflecting less than lifetime exposure) was used for assessing risks of non-cancer effects.

We estimated the risk of developing cancer from the estimated lifetime average daily dose and the slope of the dose-response curve. A cancer slope factor is derived from either human or animal data and is taken as the upper bound on the slope of the dose-response curve in the low-dose region, generally assumed to be linear, expressed as a lifetime excess cancer risk per unit exposure. Total carcinogenic risk was determined for each receptor population assuming additivity. The same approach was used for estimating cancer risks in both adults and children. This is also the same approach we used at proposal for estimating lifetime cancer risks stemming from childhood exposures. However, individuals exposed to carcinogens in the first few years of life may be at increased risk of developing cancer. For this reason, we recognize that significant uncertainties and unknowns exist regarding the estimation of lifetime cancer risks in children. Although the risk assessment at proposal was externally peer reviewed, EPA's charge to the peer review panel did not specifically identify the issue of cancer risk in children and the peer review panel did not address it.

To characterize the potential risk of non-cancer effects, we compared the average daily dose (reflecting less than lifetime exposure) to a reference dose and expressed the result as a ratio or hazard quotient. The reference dose is an estimate of a daily exposure to the human population, including sensitive subgroups, that is likely to be without an appreciable risk of deleterious effects during a lifetime. The hazard quotient, by indicating how close the average daily dose is to the reference dose, is a measure of relative risk. However, the hazard quotient is not an absolute measure of risk. For inhalation exposures, we compared modeled air concentrations to a reference concentration and expressed the result as a ratio or inhalation hazard quotient. The reference concentration is an estimate of a concentration in air that is likely to be without an appreciable risk of deleterious effects in the human population, including sensitive subgroups, from continuous exposures over a lifetime. In addition, inhalation and ingestion hazard indices were generated for each receptor population by adding the constituent-specific hazard quotients by route of exposure. The hazard index is an indicator of the potential for risk from exposures to chemical mixtures.

For dioxins, we used a margin of exposure approach to assess the potential risks of non-cancer effects. The average daily dose, in terms of 2,3,7,8-TCDD toxicity equivalents (TEQ), was compared to background TEQ exposures in the general population and expressed as a ratio or incremental margin of exposure. An incremental margin of exposure was generated for infants exposed through intake of breast milk and for other age groups exposed through dietary intake and other pathways of exposure. For lead, we characterized the risk of adverse effects in children by modeling body burden levels in blood that result from intake of lead in the diet, direct inhalation, and incidental soil ingestion and comparing these levels to levels at which community-wide efforts aimed at prevention of elevated blood levels are indicated.

Distributions of individual risk were generated for a given category of sources by weighting the individual risks using sector-specific population weights and facility-specific sampling weights. Such distributions, which were derived using central tendency exposure factors, were generated for all constituents and receptor populations. In addition, for those receptor populations and chemical constituents that exhibited risks within an order of magnitude of a potential level of concern (using central tendency exposure factors), we performed an exposure variability analysis. Normalized, age-specific distributions of food intake and exposure duration were used to adjust the risk estimates to generate a distribution of risks in each sector. For children, food intake changes significantly with age, which can affect the lifetime average daily dose. To adjust for this, a life table analysis was conducted in which individuals were followed over the duration of exposure to arrive at an age adjustment factor. The individual sector distributions were combined for a given source category using Monte Carlo sampling and the appropriate sector-specific population weights and facility-specific sampling weights.

Estimates of population risk, or the incidence of health effects in the exposed population, were made for selected receptor populations and chemical constituents. Local excess cancer incidence was estimated from the mean individual risk for a given sector and the number of persons who reside in a sector. These sector-specific cancer incidence rates were then adjusted using facility-specific sampling weights and summed for a given category of sources. Cancer incidence associated with the consumption of dioxin contaminated beef, pork, and milk by the general population was estimated at the sector level from the number of dairy cattle and the number of beef cattle and hogs slaughtered annually, adjusted using facility-specific sampling weights, and summed by source category. Excess incidence of lead poisoning in children (over and above background) was estimated at the sector level from the intake of lead in the diet, direct inhalation, and incidental soil ingestion, adjusted using facility-specific sampling weights, and summed.

Generally speaking, incidence rates for non-cancer effects can be estimated from the number of persons exposed above the reference dose (*i.e.*, the number of exceedances) and the annual turnover in the exposed population. However, non-cancer incidence rates of interest, such as the incidence of exceedances of the methyl mercury reference dose from consumption of freshwater fish, could not be estimated due to the difficulty in determining the number and frequency of visits made by recreational anglers to a given body of water. However, by making certain assumptions, it was possible to make an estimate of the portion of recreational anglers who consume fish from local water bodies that may be at risk.[328]

Due to concerns of commenters about the representativeness of the risk assessment, we also made estimates of confidence intervals about the risk estimates. Estimation of confidence intervals was made possible by virtue of the sampling design used for facility selection. The confidence intervals quantify the magnitude of the uncertainty of the risk estimates associated with sampling error only. We emphasize that the confidence intervals do not reflect other sources of uncertainty, which may be of considerably greater magnitude.

In addition to the risk estimates for individual chemical constituents, we estimated the incidence of excess mortality and morbidity associated with particulate matter emissions. Mortality and morbidity estimates were made for children and the elderly, as well as the general population, using concentration-response functions derived from human epidemiological studies. Incidence rates

[328] The assumption is that fishing activity typical of recreational fishing takes place only at the particular water bodies delineated in the analysis.

in a given sector were estimated from the size of the exposed population, including susceptible populations such as children and the elderly, and either annual mean PM_{10} and $PM_{2.5}$ concentrations or distributions of daily PM_{10} and $PM_{2.5}$ concentrations. Morbidity effects include respiratory and cardiovascular illnesses requiring hospitalization, as well as other illnesses not requiring hospitalization, such as acute and chronic bronchitis, acute upper and lower respiratory symptoms, and asthmatic attacks. As with other incidence estimates, sector-specific incidence rates were adjusted using facility-specific sampling weights and summed for a given source category.

I. What Analytical Framework Was Used to Assess Ecological Risk?

Public comments on the ecological assessment at proposal expressed the view that we should expand the assessment beyond water quality criteria. We agree with these commenters and have extended the ecological analysis to include the use of soil and sediment criteria, in addition to water quality criteria. Also, the analysis was expanded to include additional metals that are of ecological concern, such as mercury and copper.

The ecological assessment represents a screening level analysis that uses media-specific ecological criteria thought to be protective of a range of ecological receptors. Modeled surface water concentrations were compared to water quality criteria protective of aquatic life, such as algae, fish, and aquatic invertebrates, as well as piscivorous wildlife. Similarly, modeled soil concentrations were compared to soil criteria protective of the terrestrial soil community, as well as terrestrial plants and mammalian and avian wildlife. Modeled sediment concentrations were compared to sediment criteria protective of the benthic aquatic community. As a screening level analysis, we did not attempt to determine whether the specific ecological receptors upon which the media-specific criteria are based are actually present at a given site. Furthermore, we did not ascertain the occurrence of threatened or endangered species at individual sites. However, the ecological receptors upon which the media-specific criteria are based are commonly occurring species and may not be any less sensitive than other species and may be more sensitive than some, including perhaps threatened or endangered species.[329]

II. How Were Human Health Risks Characterized?

This section describes the conclusions of the human health risk assessment. For a full discussion of the methodology and the results of the assessment, see the background document for today's rule.[330]

A. What Potential Health Hazards Were Evaluated?

This section summarizes the potential health hazards from exposures to emissions from hazardous waste combustors, in particular the human health hazards associated with the chemical constituents evaluated in the risk assessment, including dioxins, mercury, lead, other metals, hydrogen chloride and chlorine, and particulate matter.

1. Dioxins

A large body of evidence demonstrates that chlorinated dibenzo(p)dioxins and dibenzofurans can have a wide variety of health effects, ranging from cancer to various developmental, reproductive and immunological effects. Dioxins are persistent and highly bioaccumulative in the environment and most human exposures occur through consumption of foods derived from animal products such as meat, milk, fish, poultry, and eggs. In 1985, we developed a carcinogenic slope factor for 2,3,7,8-TCDD of 1.56e–4 per picogram per kilogram body weight per day.[331] The slope factor represents the 95 percent upper confidence limit estimate of the lifetime excess cancer risk. Re-analysis of data from laboratory animals and cancer in humans lends support to the slope factor derived in 1985, and we continue to use the 1985 estimate pending completion of our dioxin reassessment.[332] [333]

For non-cancer effects, we believe it is inappropriate to develop a reference dose, or level which is without appreciable risk, using standard uncertainty factors. This is due to the high levels of background exposures in the general population and the low levels at which effects have been seen in laboratory animals. Instead, we have chosen to use a margin of exposure approach in which the average daily dose from a given facility is compared to the average daily dose in the general population. The ratio of the two represents the incremental margin of exposure and, as such, measures the relative increase in exposures over background.

2. Mercury

The most bioavailable form of mercury is methyl mercury, and most human exposures to methyl mercury occur through consumption of fish. Methyl mercury is known to cause neurological and developmental effects in humans at low levels. The most susceptible human population is thought to be developing fetuses. We have developed a reference dose for methyl mercury of 0.1 microgram per kilogram body weight per day that is presumed to be protective of the most sensitive human populations.[334] The reference dose is based on neurotoxic effects observed in children exposed *in utero*. Although epidemiological studies in fish-eating populations are ongoing, we believe that the reference dose is the best estimate at the present time of a daily exposure that is likely to be without an appreciable risk of deleterious effects. However, because it was derived from maternal exposures, application of the reference dose to assess children's exposures carries with it additional uncertainty beyond that otherwise related to the data and methods used for its development.

3. Lead

Exposures to lead in humans are associated with toxic effects in the nervous system at low doses and at higher doses in the kidneys and cardiovascular system. Infants and children are particularly susceptible to

[329] Multiple ecological criteria were available for most constituents and the lowest criteria were used to establish the media-specific values that were in the eco-analysis. In addition, ecotoxicological benchmarks for mammals and birds were typically derived from studies involving measures of reproductive success.

[330] ''Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Document—Final Report,'' July 1999.

[331] USEPA, ''Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins,'' EPA/600/8–84–014F, September 1985.

[332] USEPA, ''Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds,'' External Review Draft, EPA/600/BP–92/001b, June 1994.

[333] USEPA, ''Dose Response Modeling of 2,3,7,8–TCDD,'' Workshop Review Draft, EPA/600/P–92/100C8, January 1997.

[334] USEPA, ''Mercury Study Report to Congress,'' EPA–452/R–97–007, December 1997.

[335] For a complete description of the derivation of the chronic toxicity benchmark for chlorine, see the

the effects of lead due to behavioral characteristics such as mouthing behavior, heightened absorption in the respiratory and gastrointestinal tracts, and the intrinsic sensitivity of developing organ systems. Symptoms of neurotoxicity include impairment in psychomotor, auditory, and cognitive function. These effects extend down to levels in blood of at least 10 micrograms lead per deciliter. Impairment of intellectual development, as measured by standardized tests, is thought to occur at levels below 10 micrograms per deciliter. Maternal lead exposure has been shown to be a risk factor in premature infant mortality, lead being associated with reduced birth weight and decreases in gestational age. Lead has also been associated with hypertension in both men and women and, as such, may be a risk factor for coronary disease, stroke, and premature mortality. Although dose-response relationships have been developed between blood lead levels and many of these health effects, EPA has not applied the relationships in the HWC risk analysis due to uncertainties related to the relatively small changes in blood lead expected to occur as a consequence of the MACT standards and the uncertain significance of any health benefits that might be attributed to such changes. Instead, our characterization of risks from lead focuses on the reductions in blood levels themselves and EPA's goal of reducing blood lead in children to below 10 micrograms per deciliter.

4. Other Metals

Metals that pose a risk for cancer include arsenic, cadmium, and chromium. Human epidemiological studies have shown an increase in lung cancer from inhalation exposures to arsenic, primarily in occupationally exposed individuals, and multiple internal cancers (such as liver, lung, kidney, and bladder), as well as skin cancer, from exposures to arsenic through drinking water. Human epidemiological studies have also shown an association between exposures to cadmium and lung cancer in occupational settings. These studies have been confirmed by animal studies which have shown significant increases in lung tumors from inhalation exposures to cadmium. However, cadmium administered orally has shown no evidence of carcinogenic response. A strong association between occupational exposures to chromium and lung cancer has been found in multiple studies. Although workers were exposed to both trivalent and hexavalent chromium, animal studies have shown that only hexavalent chromium is carcinogenic. There have been no studies that have reported that either hexavalent or trivalent chromium is carcinogenic by the oral route of exposure.

Other metals may pose a risk of noncancer effects. For example, in animal studies thallium has been shown to have ocular, neurological, and dermatological effects and effects on blood chemistry and the reproductive system. Signs and symptoms of similar and other effects have been observed in occupational studies of thallium exposures.

5. Hydrogen Chloride

Data on the effects of low-level inhalation exposures to hydrogen chloride are limited to studies in laboratory animals. Based on a lifetime study in rats which showed histopathological changes in the nasal mucosa, larynx, and trachea associated with exposures to hydrogen chloride, we estimated a reference concentration of 0.02 milligrams per cubic meter. The reference concentration was derived from a human equivalent lowest observed adverse effects level of 6 milligrams per cubic meter using an uncertainty factor of 300 to account for extrapolation from a lowest observed adverse effects level to a no observed adverse effects level, as well as extrapolation from animals to humans (including sensitive individuals).

6. Chlorine

Chlorine gas is a potent irritant of the eyes and respiratory system. Based on a lifetime study in rats and mice which showed histopathological changes affecting all airway tissues in the nose, we derived an interim chronic toxicity benchmark for chlorine gas of 0.001 milligrams per cubic meter. This value was derived from a human equivalent no observed adverse effects level of 0.04 milligrams per cubic meter and an uncertainty factor of 30 to account for extrapolation from animals to humans (including sensitive individuals). The human equivalent no observed adverse effects level from this study is also supported by a year-long study in monkeys.[335]

[335] For a complete description of the derivation of the chronic toxicity benchmark for chlorine, see the background document, ''Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background—Final Report,'' July, 1999.

B. What Are the Health Risks to Individuals Residing Near HWC Facilities?

In this section, we address risks to populations that could be enumerated using estimation methods based on U.S. Census data and Census of Agriculture data. Estimates of the population of persons residing within 20 kilometers of hazardous waste combustion facilities were made for beef, dairy, produce, and pork farming households and for non-farm households. The number of home gardeners was estimated using national survey data on the portion of households that engage in home gardening. Estimates were made for each of four different age groups. In addition, population estimates were made for recreational anglers age 16 and older based on U.S. Fish and Wildlife Service survey data on recreational fishing and hunting.[336]

The risks to individuals of carcinogenic effects are expressed as the estimated increase in the probability that an individual will develop cancer over a lifetime. For non-cancer effects, risks are expressed as a hazard quotient, which is the ratio of an estimate of an individual's exposure to a health benchmark thought to be without appreciable risk. Both cancer and non-cancer risks are summarized in terms of percentiles of the national distribution of risks to individuals across a combustor category. High end risks are represented by the 90th to 99th percentiles of the distribution. Distributions for only the most highly exposed receptor populations are discussed here. The most highly exposed population varies depending on the particular chemical constituent, its fate and transport in the environment, and the pathways that lead to human exposures. Also, 90 percent confidence limits are estimated for each percentile. The size of the confidence interval reflects sampling error which is introduced by not sampling all the facilities in a given category of sources.[337] In some instances, estimates of the 90 percent confidence limits could not be made either because there were too few data points or there was insufficient spread in the data. For lightweight aggregate kilns, there is no sampling error because the sample included all known

[336] However, it was not possible to determine the number of recreational anglers that fish specifically at water bodies located in the vicinity of hazardous waste combustion facilities, such as those that were selected for modeling analyses.

[337] A 90 percent confidence interval indicates that there is a 10 percent chance that the actual value could lie outside the interval indicated, either higher or lower.

hazardous waste burning lightweight aggregate kilns.

1. Dioxins

For dioxins, our analysis shows that the most exposed population is children of dairy farmers who consume home-produced milk. High exposures were estimated for this population due to the relatively high consumption of milk by households that consume home-produced milk, the relatively high intake of milk by children compared to other age groups, and the tendency of chlorinated dioxins and furans to bioaccumulate in milk fat. A distribution of cancer risks for dioxins was generated which reflects variability in individual exposures due to site-specific differences in dioxin emissions, location of exposure, and other factors, as well as differences between individuals in exposure factors such as the length of exposure and the amount of milk consumed.

As a result of today's rule, we project that high end lifetime excess cancer risks will be reduced in this population from 2 in 100,000 (99th percentile) for both lightweight aggregate kilns and incinerators with waste heat recovery boilers to below one in one million (99th percentile) for lightweight aggregate kilns and 1 in one million (99th percentile, 90 percent upper confidence limit of 2 in one million) for incinerators with waste heat recovery boilers. For cement kilns, high end lifetime excess cancer risks are reduced only slightly, from 7 in one million (99th percentile) to 5 in one million (99th percentile). These reductions, which represent the reduction in the increment of exposure that results from dioxin emissions from hazardous waste combustors, are relatively small in relation to background exposures to dioxins generally. Considering that the number of individuals in the affected population is relatively small, only a few individuals may benefit from such reductions.

We also project that the incremental margin of exposure relative to background will be reduced in the same population from 0.2 (99th percentile for lightweight aggregate kilns) and 0.3 (99th percentile for incinerators with waste heat recovery boilers, 90 percent upper confidence limit of 0.5) to below 0.1 across all categories of combustors. Therefore, the risks associated with non-cancer effects from hazardous waste combustors are an order of magnitude or more lower than any (unknown and unquantifiable) risks that may be attributable to background exposures.

Unlike the distribution of cancer risks, the distribution of the margin of exposure reflects only site-to-site differences and does not reflect differences between individuals in the amount of milk consumed. Therefore, the exposures at the upper percentiles are likely to be underestimated.[338] Additional uncertainty is introduced because background exposures to dioxins in children have not been well characterized.

Other uncertainties include milk consumption rates and the limitations of the data available to assess consumption of home-produced milk. In addition, there are a variety of uncertainties related to the fate and transport of dioxins in the environment, including partitioning behavior into vapor and particle phases following release to the atmosphere and subsequent deposition via various wet and dry removal processes, uptake in plants such as forage and silage used by dairy cows for grazing and feeding, and the factors which affect the disposition of dioxins in dairy cattle and the extent of bioaccumulation in cow's milk.

2. Mercury

For mercury, our analysis shows that the most exposed population is recreational anglers and their families who consume recreationally-caught freshwater fish. This is because methyl mercury is readily formed in aquatic ecosystems and bioaccumulates in fish. Children have the highest exposures due to their higher consumption of fish, relative to body weight, compared to adults. Risks from exposures to methyl mercury are expressed here in terms of a hazard quotient, which is defined as the ratio of the modeled average daily dose to our reference dose. Although the reference dose was developed to be protective of exposures *in utero*, we applied the reference dose not just to maternal exposures but also to non-maternal adult and childhood exposures based on the presumption that the reference dose should be protective of neurological and developmental effects in these populations as well.

A distribution of hazard quotients was generated that reflects variability in individual exposures due to site-specific differences in mercury emissions, location of water bodies, and other factors, as well as differences between individuals in the amount of fish consumed. Other factors, such as water body-specific differences in the extent of methylation of inorganic mercury and the age and species of fish consumed were not reflected in the risk distribution. However, it is unclear what effect such factors would have on the distribution given the high degree of variability that is attributable to the factors that were considered in our analysis.

The results of our quantitative analysis for mercury are as follows. For cement kilns, we project that high end hazard quotients in adults will be reduced from a range of 0.09 to 0.4 (90th percentile, upper confidence limit of 0.1, and 99th percentile, respectively) at baseline to a range from 0.06 to 0.2 under today's rule (90th percentile, upper confidence limit of 0.08, and 99th percentile, respectively). In children, high end hazard quotients are projected to be reduced from a range of 0.2 to 0.8 (90th percentile, upper confidence limit of 0.3, and 99th percentile, respectively) at baseline to a range of 0.2 to 0.6 under today's rule (90th percentile, upper confidence limit of 0.2, and 99th percentile, respectively). For lightweight aggregate kilns, high end hazard quotients in both adults and children are below 0.1 at baseline and under today's rule. For incinerators, high end hazard quotients are below 0.01 in adults and below 0.1 in children at baseline and under today's rule. Taken together, these results appear to suggest that risks from mercury emissions (on an incremental basis) are likely to be small, although we cannot be certain of this for the reasons discussed below.

The risk results for mercury are subject to a considerable degree of uncertainty. In addition to the uncertainties discussed above in ''Overview of Methodology—Mercury'', there are other uncertainties when assessing individual mercury risks to nonsubsistence populations. In order to assess exposures to mercury emissions, we assumed that recreational anglers fish only at the water bodies within a given study area that were selected for modeling (and at no other water bodies) and that the extent of fishing activity at a given water body is related to the size of the water body.[339] As a result, in those situations where relatively low fish concentrations were modeled (and particularly if the water body was relatively large), a large portion of fish were assumed to have relatively low levels of mercury contamination and, therefore, recreational anglers who consume relatively large amounts of recreationally-caught fish were estimated to have relatively low levels

[338] The precise extent of underestimation at the upper percentiles associated with variability in milk consumption is unknown but is expected to be a factor of two.

[339] Ideally, detailed information on the fishing activities of individual anglers, including the size of the catch taken from individual locations, would be used to better assess exposures from consumption of recreationally-caught fish.

of exposure. In reality, some portion of the fish consumed by recreational anglers is likely to be contaminated with mercury at levels typical of background conditions. The effect of such background exposures is to increase actual exposures, except perhaps at the high end of the exposure distribution.[340]

We believe that the uncertainties implicit in the quantitative mercury analysis continue to be sufficiently great so as to limit its ultimate use for decision-making. Therefore, we have used the quantitative analysis to make qualitative judgments about the risks from mercury but have not relied on the quantitative analysis (nor do we believe it is appropriate) to draw quantitative conclusions about the risks associated with the MACT standards.

3. Lead

For lead, children are the population of primary concern for several reasons, including behavioral factors, absorption, and the susceptibility of the nervous system during a child's development. We have chosen to use blood lead level as the exposure metric, consistent with the U.S. Centers for Disease Control criteria for initiating intervention efforts. Lead exposures occur through a variety of pathways, including inhalation, incidental ingestion of soil and household dust, and dietary intake. Our analysis indicates that the population having the highest exposures are children who consume home-produced fruits and vegetables. However, children who do not consume home-produced foods also have relatively high exposures due to incidental ingestion of soil and household dust.

Blood lead distributions were generated that represent incremental exposures to lead emissions from hazardous waste combustors. These distributions reflect variability in individual exposures due to site-specific differences in lead emissions, location of exposure, and other factors, as well as differences between individual children in behavior patterns, absorption, and other pharmacokinetic factors. The IEUBK model that was used to estimate blood lead levels considers inter-individual variability in behavior related to lead exposure, such as mouthing activity. However, the model does not explicitly consider variability for the specific dietary pathways assessed for children of home gardeners, that is, consumption of home-produced fruits and vegetables. Therefore, the blood lead distributions may not fully reflect inter-individual variability that results from such individual differences.

Modeled blood lead (PbB) levels can be compared with background exposures in the same age group (children ages 0 to 5 years) in the general population. The median blood lead level in children in the general population is 2.7 micrograms per deciliter (μg/dL), and 4.4 and 1.3 percent of children have blood lead levels that exceed 10 and 15 μg/dL, the levels at which community wide prevention and individual intervention efforts, respectively, are recommended.[341] However, the percentages vary widely depending on such factors as race, ethnicity, income, and age of the housing units occupied. Children whose blood lead levels are already elevated are the most susceptible to further increases in blood lead levels.

As a result of today's rule, we project that high end (90th to 99th percentile) incremental blood lead (PbB) levels in children will decrease from 0.24 to 0.50 micrograms per deciliter to 0.02 to 0.03 μg/dL for cement kilns. For incinerators, incremental PbB levels are projected to decrease from 0.6 to 1.2 μg/dL (90th to 99th percentile) to 0.02 to 0.03 μg/dL. For lightweight aggregate kilns, incremental PbB levels are projected to decrease from 0.02 to 0.03 μg/dL (90th to 99th percentile) to less than 0.01 μg/dL under the MACT standards. Although these reductions in incremental exposures represent only a fraction of the PbB level of concern (10 μg/dL), they can be significant in children with PbB levels that are already elevated from exposures to other sources of lead. In addition, there is evidence that effects on the neurological development of children may occur at blood lead levels so low as to be essentially without a threshold. Under the MACT standards, blood lead levels attributable to HWCs will be one percent or less of background levels typical of children in the general population.

4. Other Metals

We assessed both direct and indirect human exposures to a dozen different metals in addition to mercury. Exposures to non-mercury metals are generally quite low. Under today's rule, we project that lifetime excess cancer risks from exposures to carcinogenic metals (i.e., arsenic) will be below 1 in 10 million for all source categories. Hazard quotients for all source categories are projected to be at or below 0.01 (99th percentile) for all non-mercury metals under the MACT standards. These risks reflect variability in individual exposures due to site-specific differences in emissions, location of exposure, and other factors. However, the risks do not reflect differences between individuals in exposure factors such as the length of exposure and the amount of food ingested. Therefore, we may have underestimated risks at the upper percentiles of the distribution.[342] A full exposure factor variability analysis was not carried out because the risks using mean exposure factors are comparatively low. Risks from exposure to metals are also subject to uncertainty related to modeling of fate and transport in the environment such as deposition of airborne metals to soils, forage, and silage and subsequent uptake in farm animals.

5. Inhalation Carcinogens

We also assessed the combined cancer risk associated with inhalation exposures to all inhalation carcinogens, assuming additivity of the risks from individual compounds. The populations that have the highest inhalation exposures are adult farm or non-farm residents. Adults have the longest exposure duration relative to other age groups and adult farmers have less mobility and, therefore, longer durations of exposure than non-farm residents. However, depending on the location of farms and non-farm households, adult non-farm residents can have lifetime average exposures that are as high as adult farm residents.

Under today's rule, we project that lifetime excess cancer risks from inhalation exposures will be below 1 in 10 million for all source categories. The risks for inhalation carcinogens reflect variability in individual exposures due to site-specific differences in metals emissions, location of exposure, and other factors. However, they do not reflect differences between individuals

[340] We have previously estimated that median exposures to methyl mercury in the general population from seafood consumption are in the range of 0.01 to 0.03 μg/kg BW/day (Mercury Study Report to Congress, December 1997). These exposures correspond to hazard quotients of 0.1 to 0.3, values which (except for cement kilns) are higher than the 90th to 99th percentile hazard quotients estimated here for incremental exposures among recreational anglers.

[341] Data from the Centers for Disease Control's National Health and Nutrition Examination survey (NHANES III, phase 2) conducted from October 1991 to September 1994.

[342] For dioxins, inclusion of exposure factor variability increased the risk of cancer at the upper (90th to 99th) percentiles by less than a factor of two to a factor of five. However, the effect on the distribution of risks could differ for metals depending on the health effect of concern (i.e., cancer versus non-cancer), the pathway of exposure, and relative differences in the site-to-site variability of emissions.

in the length of exposure or other exposure factors. Therefore, we may have underestimated risks at the upper percentiles of the distribution.[343] A full exposure factor variability analysis was not carried out for inhalation carcinogens because the risks using mean exposure factors are comparatively low.

Estimates of inhalation risks are subject to a number of uncertainties. Individuals spend a majority of their time indoors and it is uncertain how representative modeled, outdoor, ambient air concentrations are of concentrations indoors. Also, the daily activities of individuals living in the vicinity of a given facility will tend to moderate actual exposures compared to modeled exposures at a fixed location. Meteorological information was generally obtained from locations well removed from modeled facilities and, therefore, may not be representative of conditions in the immediate vicinity of the stack. Limited information was available on the size of structures located near or adjacent to stacks at the modeled facilities. Building downwash, that can result from the presence of such structures, may significantly increase ground-level ambient air concentrations, particularly at locations that are relatively close to the point of release. In addition, the effect of elevated terrain was only considered when the terrain rose above the height of the stack. However, elevated terrain below stack height can lead to an increase in ground-level concentrations depending on the distance from the stack. Nevertheless, our projections of inhalation cancer risks are sufficiently low that we do not believe the uncertainties introduced by these factors impacts our conclusion that these risks are relatively low.

6. Other Inhalation Exposures

Of the compounds we evaluated that are not carcinogenic, the highest inhalation exposures are for hydrogen chloride and chlorine gas. We express the risks from these in terms of an inhalation hazard quotient, which is defined as the ratio of the modeled air concentration to our reference concentration. The receptor population with the highest inhalation hazard quotients is variable and depends on site-to-site differences in the location of farm and non-farm households and differences in emissions. A distribution of hazard quotients was generated that reflects variability in individual exposures due to site-specific differences in chlorine emissions, location of exposure, and other factors. However, the distribution does not reflect individual differences in activity patterns or breathing rates.[344] Also, because the reference concentration is intended to be protective of long-term, chronic exposures over a lifetime, the distribution does not reflect temporal variations in exposure.[345]

Under today's rule, we project that inhalation hazard quotients will be at or below 0.01 for both hydrogen chloride and chlorine gas for all source categories. The same uncertainties related to indoor versus outdoor concentrations and atmospheric dispersion modeling are also applicable to hydrogen chloride and chlorine. However, our projections of non-cancer inhalation risks are sufficiently low that we do not believe the uncertainties impact our conclusion that these risks are relatively low.

C. What Are the Potential Health Risks to Highly Exposed Individuals?

We also assessed exposures to individuals that could be more highly exposed than the populations that could be characterized using census data. These include persons engaged in subsistence activities such as farming and fishing. Although the frequency of these activities is unknown, such activities do occur in some segments of the U.S. population, and we believe that it is important to evaluate risks associated with such activities. In addition, risks associated with subsistence farming place a bound on potential risks to farmers who raise more than one type of livestock. Information on the numbers of farms that produce more than one food commodity (*e.g.*, beef and milk) is not available from the U.S. Census of Agriculture. Therefore, in assessing risks to farm populations, we may have underestimated the risks to farmers and their families that consume more than one type of home-produced food commodity.

We assumed that subsistence farmers obtain substantially all of their dietary intake from home-produced foods, including meats, milk, poultry, fish, and fruits and vegetables. We used data on the mean rate of consumption of home-produced foods in households that consume home-produced foods to estimate the average daily intakes from subsistence farming. For subsistence fishing, we used data on the mean rate of fish consumption among Native American tribes that rely on fish for a major part of their dietary intake.

We do not have specific information on the existence or location of subsistence farms or water bodies used for subsistence fishing at sites where hazardous waste combustors are located. Therefore, we hypothetically assumed that subsistence farming does occur at each of the modeled facilities and, furthermore, that it occurs within each of the sixteen sectors within a study area. We also assumed that subsistence fishing takes places at each of the modeled water bodies. The results of the analysis are summarized in the form of frequency distributions of individual risk. The distributions must be interpreted in relation to the frequency of the modeled scenarios and not the likelihood of such exposures actually occurring.[346]

The risk results for subsistence receptors are highly uncertain, primarily due to the lack of information on the location of subsistence farms (or even the occurrence of subsistence farms within the study area of a given facility) and the assumption that individuals engaged in subsistence farming obtain essentially their entire dietary intake from home-produced foods.

1. Dioxins

Under today's rule, we project that lifetime excess cancer risks from dioxin exposures associated with subsistence farming will be below 1 in 100,000 for all categories of combustors, with the exception of cement kilns at the lowest frequency of occurrence. The lifetime excess cancer risk for cement kilns is estimated to be 2 in 100,000 at a frequency of 1 percent. This indicates that only 1 in 100 sectors are expected to have risks of this magnitude or greater, assuming that subsistence farms are located in all sectors at all hazardous waste burning cement kilns. However, because the sectors increase in size with increasing distance, the probability that a subsistence farm would be exposed to

[343] The precise extent of underestimation at the upper percentiles associated with variability in the duration of exposure is unknown but is expected to be a factor of three or less.

[344] Differences in breathing rates are not considered because the exposure factors used in deriving the reference concentration are fixed.

[345] Although short-term exposures to hydrogen chloride and chlorine gas resulting from routine releases can be significantly higher than long-term exposures, we do not believe that such exposures are high enough to pose a health concern because the threshold for acute effects is quite high in comparison to that for chronic effects.

[346] Moreover, the modeled scenarios cannot be considered equally probable because the sectors in which farms were located are of unequal area, being much smaller closer to a facility and much larger farther away and because any particular sector may be more or less likely to support farming activities depending on soils, precipitation, existing land uses, and other conditions. Similarly, the modeled water bodies may be more or less likely to support intensive fishing activity depending on their size, productivity, and other characteristics.

this level of risk is probably considerably less than 1 percent.

We project that the incremental margin of exposure relative to background will be reduced to 0.1 or below for incinerators under today's rule except at the lowest frequency of occurrence (*i.e.*, 1 percent) for which a margin of exposure of 0.2 is projected. However, the incremental margins of exposure for cement kilns and lightweight aggregate kilns are projected to remain above 0.1 at a frequency of 10 percent or greater (ranging up to 0.2 at a frequency of 5 percent for lightweight aggregate kilns and 0.7 at a frequency of 1 percent for cement kilns). This indicates that more than 1 in 10 sectors are expected to have risks associated with non-cancer effects that are within an order of magnitude of any (unknown and unquantifiable) risks that may be attributable to background exposures. However, for the reasons stated previously, the probability that a subsistence farm would be exposed to this level of risk is probably considerably lower than indicated by the number of sectors.

Under today's rule, we project lifetime excess cancer risks from dioxin exposures associated with subsistence fishing will be below 1 in one million for incinerators and lightweight aggregate kilns. For cement kilns, high end cancer risks under today's rule range from 3 in one million to 4 in one million (at frequencies of 10 and 5 percent, respectively) in adults and from 2 in one million to 4 in one million (at frequencies of 10 and 5 percent, respectively) in children (6 to 11 years of age). We project that the incremental margin of exposure relative to background will be below 0.1 for subsistence fishing for both children and adults for all categories of combustors under today's rule.

2. Metals

Our analysis indicates that the highest risks from metals (other than mercury) are from arsenic, thallium, and lead. Under today's rule, we project that lifetime excess cancer risks from arsenic exposures associated with subsistence farming will be below 1 in one million for all source categories. Hazard quotients for thallium are projected to be at or below 0.01 (99th percentile) under today's rule, except for cement kilns. For cement kilns, hazard quotients for thallium are projected to range from 0.03 to 0.4 (90th to 99th percentiles). Incremental blood lead levels are projected to be at or below 0.03 μg/dL for all source categories under today's rule. Blood lead at these levels are about one percent of background levels typical of children in the general population.

3. Mercury

From the results of our quantitative analysis we project that, under today's rule, hazard quotients for incremental exposures to mercury associated with subsistence fishing will be at or below 1 in both adults and children. These results apply to incinerators, lightweight aggregate kilns, and cement kilns at the very lowest frequency of occurrence that was analyzed (*i.e.*, 1 percent).

The risk results for mercury are subject to a considerable degree of uncertainty. In addition to the uncertainties discussed above in ''Overview of Methodology—Mercury'', there are other uncertainties when assessing individual mercury risks to subsistence receptors. We assumed that individuals engaged in subsistence fishing obtain all the fish they consume from a single water body. To the extent that individuals may fish at more than one water body, the effect of this assumption may be to exaggerate the risk from water bodies having relatively high modeled fish concentrations.

The uncertainties implicit in the quantitative mercury analysis continue to be sufficiently great so as to limit its ultimate use for decision-making. Therefore, we have used the quantitative analysis to make qualitative judgments about the risks from mercury but have not relied on the quantitative analysis (nor do we believe it is appropriate) to draw quantitative conclusions about the risks associated with the MACT standards.

D. What Is the Incidence of Adverse Health Effects in the Population?

We estimated the overall risk to human receptor populations for those chemical constituents that posed the highest individual risks and whose populations could be enumerated. These included excess cancer incidence in the general population from the consumption of agricultural commodities produced in the vicinity of hazardous waste burning facilities, excess cancer incidence in the local population, and excess incidence of children with elevated blood lead levels. In addition, we estimated the avoided incidence of mortality and morbidity in the local population associated with reductions in exposures to particulate matter emissions.[347]

Incidence is generally expressed in terms of the annual number of new cases of disease in the exposed population. However, for diseases such as cancer which have a long latency period, the annual incidence represents the lifetime incidence associated with an exposure of one year. For diseases with recurring symptoms, the annual incidence represents the number of episodes of disease over a year's time.

1. Cancer Risk in the General Population

Agricultural commodities produced in the vicinity of hazardous waste combustors may be consumed by the general population (*i.e.*, individuals who reside outside the study area). Commodities such as meat and milk may be contaminated with dioxins and, therefore, pose some risk to individuals that consume them. We estimated the amount of ''diet accessible'' dioxin in meat and milk produced at hazardous waste combustors that would be consumed by the general population and estimated the number of additional cancer cases that could result from such exposures. The approach is predicated on the assumption that cancer risks follow a linear, no-threshold model in the low dose region.

Our agricultural commodity analysis indicates that, as a result of today's rule, annual excess cancer incidence in the general population will be reduced from 0.5 cases per year (90 percent confidence interval, 0.4 to 0.6) to 0.1 cases per year (90 percent confidence interval, 0.1 to 0.2). Most of the risk is associated with the consumption of milk and other dairy products. The combustor categories that contribute most to the reduction are incinerators with waste heat recovery boilers and lightweight aggregate kilns.

2. Cancer Risk in the Local Population

Individuals that live and work in the vicinity of hazardous waste combustors are exposed to a number of compounds that are carcinogenic by oral or inhalation routes of exposure or both. These include dioxin, arsenic, beryllium, cadmium, chromium, and nickel. We estimated the annual cancer incidence in each of the enumerated receptor populations based on the mean individual risk in each sector and sector-specific population estimates. The resulting incidence estimates were weighted using facility-specific sampling weights and summed.

Our analysis of cancer risks in the local population indicates that, as a result of today's rule, annual excess

[347] Excess incidence refers to the incidence of disease beyond that which would otherwise be observed in the population, absent exposures to the sources in question. Avoided incidence is the reduction in incidence of disease in the population that would be expected from a reduction in exposures to the sources in question.

cancer incidence will be reduced from 0.1 cases per year (90 percent confidence interval, 0.08 to 0.2) to 0.02 cases per year (90 percent confidence interval, 0.01 to 0.03). Nearly all of the risk reduction, which occurs almost entirely among non-farm residents, is attributable to incinerators and results mainly from reductions in emissions of metals, primarily arsenic, cadmium, and chromium.

3. Risks From Lead Emissions

Children that live near hazardous waste combustor are exposed to lead emissions through the diet and through inhalation and incidental soil ingestion. Children that already have elevated blood lead levels may have their levels further increased as a result of such exposures, some of whom may have their blood lead levels increased beyond 10 µg/dL. We estimated the increase, or excess incidence, of elevated blood levels above 10 µg/dL by estimating the number of children in each sector with blood lead levels above 10 µg/dL as a result of background exposure and subtracting that from the number of children above 10 µg/dL as a result of both background exposure and incremental exposures from hazardous waste combustors. This estimate represents the annual rate of increase in the number of children with elevated blood lead beyond background.

Our analysis indicates that, as a result of today's rule, the excess incidence of elevated blood lead will be reduced from 7 cases per year to less than 0.1 cases per year. The reduction is primarily attributable to incinerators, although a small reduction (0.4 cases per year) is attributable to cement kilns. These reductions occur entirely among non-farm residents. Children of minority and low income households generally have higher background exposures to lead and are more likely to have blood levels elevated above 10 µg/dL than children from other demographic groups and, therefore, are more likely to benefit from reductions in lead exposures. However, our analysis did not consider the influence of such socioeconomic factors. For this reason, we believe that we may have underestimated the reductions in excess incidence of elevated blood lead levels, including potential reductions attributable to cement kilns and lightweight aggregate kilns.

4. Risks From Emissions of Particulate Matter

Human epidemiological studies have demonstrated a correlation between community morbidity and mortality and ambient levels of particulate matter, particularly fine particulate matter (below 2.5 or 10 microns in diameter, depending on the study), across a wide variety of geographic settings. Lower particulate matter is associated with lower mortality, lower rates of hospital admissions, and a lower incidence of respiratory disease. Concentration-response functions for various health endpoints have been derived from these studies, and we used these functions to estimate the reduction in the incidence of mortality and morbidity associated with a reduction in emissions of particulate matter.

Our analysis indicates that, as a result of today's rule, there will be between 1 and 4 fewer premature mortalities per year associated with particulate matter emissions (depending on which study is used). In addition, we project there will be 6 fewer hospitalizations, 25 fewer cases of chronic bronchitis, 180 fewer cases of lower respiratory disease, per year.

The mortality estimates are subject to some uncertainty due to the fact that the lower estimate (which is derived from long-term studies) assumes no threshold for effects and the upper estimate (which is derived from short-term studies) may include mortalities that are premature by as little as a few days. The no threshold assumption may be appropriate, however, considering that the reduction in mortality is projected to occur entirely from incinerators, especially on-site incinerators. Such incinerators are located at manufacturing facilities that are likely to have other particulate matter emissions and both on-site, and commercial incinerators are typically located in industrial areas where there may be many other sources of particulate matter emissions, resulting in ambient particulate matter levels that are well above any threshold. Also, because the particulate matter modeling was conducted to 20 rather than 50 kilometers, the inhalation risks may be understated, especially from PM that is 2.5 microns in diameter and smaller which can be transported over long distances from HWCs.

III. What Is the Potential for Adverse Ecological Effects?

The ecological assessment is based on a screening level analysis in which model-estimated media concentrations are compared to media-specific ecotoxicological criteria that are protective of multiple ecological receptors. The analysis used an ecological hazard quotient as the metric for assessing ecological risk. The ecological hazard quotient is the ratio of the model-estimated media concentration to the ecotoxicological criterion. Hazard quotients above 1 suggest that a potential for adverse ecological effects may exist. Ecotoxicological criteria for soils, surface waters, and sediments were used in the analysis. Ecotoxicological criteria for soil are intended to be broadly protective of terrestrial ecosystems, including the soil community, terrestrial plants, and consumers such as mammals and birds. Ecotoxicological criteria for surface water are intended to be protective of the aquatic community, including fish and aquatic invertebrates, primary producers such as algae and aquatic plants, and fish-eating mammals and birds. Sediment criteria are intended to be protective of the benthic community. The analysis was conducted for dioxins, mercury, and fourteen other metals. Only the results for dioxins and mercury are discussed here. Very low or no potential for ecological risk was found for the other metals.[348] For a full discussion of the ecological assessment, see the background document for today's rule.[349]

A. Dioxins

A variation on the general screening level approach was used for assessing ecological risks from dioxins in surface water. Rather than basing the assessment on ambient water quality criteria for the protection of wildlife, ecotoxicological benchmarks for 2,3,7,8-tetrachlorodibenzo(p)dioxin (TCDD) for fish-eating birds and mammals (i.e., no observed adverse effects levels) were used to make a direct comparison with estimated intakes of dioxins in fish in terms of 2,3,7,8–TCDD toxicity equivalents (TEQ). This approach accounts for the different rates of bioaccumulation of the various 2,3,7,8 dibenzo(p)dioxin and dibenzofuran congeners and avoids the conservatism of comparing an ambient water quality criterion for 2,3,7,8–TCDD to model-estimated water concentrations in terms of 2,3,7,8–TCDD TEQs. The results of our analysis indicate no exceedances of the ecotoxicological benchmarks for 2,3,7,8–TCDD for any category of hazardous waste combustors. One limitation of the ecological assessment for dioxins is that water quality criteria for the protection of aquatic life are not

[348] Although minor exceedances of the ecotoxicological criteria for lead were noted for incinerators, the exceedances were eliminated under today's rule.

[349] ''Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes: Background Document—Final Report,'' July, 1999.

available. However, fish and aquatic invertebrates are generally less sensitive to dioxins than mammals and birds.

For assessing the potential for ecological risk in terrestrial ecosystems, soil criteria developed for 2,3,7,8–TCDD for the protection of mammals and birds were compared to model-estimated soil concentrations in terms of 2,3,7,8–TCDD TEQs. Because the more highly chlorinated 2,3,7,8 dibenzo(p)dioxin and dibenzofuran congeners are expected to bioaccumulate in prey species more slowly than 2,3,7,8–TCDD, the potential for ecological risk is likely to be overstated. Our analysis indicates that, at baseline, less than one percent of the study areas surrounding hazardous waste combustors have the potential for ecological risk from dioxins in soil. Under today's rule, we project no exceedances of the ecotoxicological criteria for dioxins in soil. The soil ecotoxicological criterion for dioxins is derived from studies of reproductive and developmental effects in mammals. Potential impacts to terrestrial plant and soil communities could not be evaluated due to a lack of sufficient ecological toxicity data. However, vertebrates such as mammals and birds are known to be more sensitive to dioxin exposure than invertebrates. Therefore, we consider the potential for risk to invertebrate receptors to be low.

B. Mercury

The ecological assessment of mercury is based on water quality criteria for the protection of wildlife that were developed for the Mercury Study Report to Congress. The assessment used the lowest of the available water quality criteria for individual fish-eating avian and mammalian wildlife species. The frequency distribution of ecological hazard quotients for total mercury indicates the potential for adverse ecological effects for cement kilns. Our analysis indicates that, for cement kilns, exceedances of the ecotoxicological criteria for total mercury may occur over 40 percent of study area surface waters at baseline. Above a hazard quotient of 1, the frequency of exceedances drops off quickly, with hazard quotients above 2 occurring at a frequency of 1 percent. The ecological hazard quotients remain essentially unchanged under today's rule. However, we project no exceedances of the ecotoxicological criteria for methyl mercury. Because methyl mercury is the form of mercury that is of greatest concern for fish-eating mammals and birds, the lack of exceedances suggests that the potential for ecological effects is relatively low. Our analysis also suggests relatively low potential for ecological effects for incinerators and lightweight aggregate kilns. Although our analysis indicates that exceedances of the ecotoxicological criteria for total mercury may occur over 22 percent of study area surface waters for lightweight aggregate kilns and 6 percent for incinerators at baseline, these are reduced to no exceedances and less than 1 percent, respectively, under today's rule. Moreover, we project no exceedances of the ecotoxicological criteria for methyl mercury. The significance of these results must be judged in the context of the considerable uncertainties related to the fate and transport of mercury in the environment, as discussed elsewhere in today's notice, the presence of background levels of mercury, and the level of protection afforded by the underlying ecotoxicological criteria.

For soils, our analysis indicates that less than one percent of the study areas surrounding hazardous waste combustors have the potential for ecological risk at baseline. Under today's rule, we project no exceedances of the ecotoxicological criteria for mercury for incinerators and lightweight aggregate kilns. For cement kilns, we project exceedances at a frequency of much less than one percent. The soil ecotoxicological criterion for mercury is derived from studies of the reproductive capacity of earthworms. Although earthworms serve a vital function in the soil community, given the redundancy and abundance of soil organisms and the low frequency of exceedances, we believe that adverse impacts to the terrestrial ecosystem, including higher trophic levels such as terrestrial mammals, are unlikely.

As a screening level analysis, the ecological assessment is subject to a number of limitations. The analysis assumes the occurrence of the ecological receptors on which the ecotoxicological criteria are based in all modeled sectors and water bodies. Although the ecological receptors included in the analysis are commonly occurring species, they may not be present in the same locations at which exceedances are predicted due to a lack of suitable habitat or other factors. Furthermore, the range of predator and prey species may exceed the spatial extent of the estimated exceedances. Many primary and secondary consumers are opportunistic feeders with substantial variability in both the type of food items consumed as well as the seasonal patterns of feeding and foraging. These behaviors can be expected to moderate exposures to chemical contaminants and reduce the potential for risk. On the other hand, gaps exist in the ecotoxicological data base such that not all combinations of chemical constituents and ecological receptors could be evaluated. In addition, media concentrations could not be estimated for all habitats that may be important to ecological receptors, such as wetlands. Also, our analysis did not consider the possible impact of background concentrations. Therefore, although as a screening level analysis the ecological assessment has a tendency toward conservatism, we cannot say for certain that no potential exists for ecological risks that fall beyond the scope of the assessment.

Part Eight: Analytical and Regulatory Requirements

I. Executive Order 12866: Regulatory Planning and Review (58 FR 51735)

Is This a Significant Regulatory Action?

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether a regulatory action is ''significant'' and, therefore, subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more, adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

Under the terms of Executive Order 12866, we have reviewed today's rule and determined that it does not represent an ''economically significant'' regulatory action, as defined under point one above. The aggregate annualized social costs for this rule are under $100 million (ranging from $50 to $63 million for the final standards). However, it has been determined that this rule is a ''significant regulatory action'' because it may raise novel legal or policy issues (point four above). As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

We have prepared economic support materials for today's final action. These documents are entitled: Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Standards—Final Rule, and, Addendum To The Assessment of the Potential Costs, Benefits, and Other Impacts of the Hazardous Waste Combustion MACT Standards—Final Rule. The Addendum and Assessment documents were designed to adhere to analytical requirements established under the Executive Order, and corresponding Agency and OMB guidance; subject to data, analytical, and resource limitations.

This part of the Preamble is organized as follows: I. Executive Order 12866 (as addressed above), II. What Activities have Led to Today's Rule?—presenting a summary of the analytical methodology and findings from the 1996 RIA for the proposed action, and, a summary of substantive peer review and public stakeholder comments on this document, with Agency responses, III. Why is Today's Rule Needed?—justifying the need for Federal intervention, IV. What Were The Regulatory Options?—presenting a brief discussion of the scope of alternative regulatory options examined, V. What Are the Potential Costs and Benefits of Today's Rule?—summarizing methodology and findings from the final Assessment document, VI. What Considerations Were Given to Issues Like Equity and Children's Health?, VII. Is Today's Rule Cost-Effective?, VIII. How Do the Costs of Today's Rule Compare to the Benefits?, IX. What Consideration Was Given to Small Businesses? X. Were Derived Air Quality and Non-Air Impacts Considered? XI. Is Today's Rule Subject to Congressional Review?, XII. How is the Paperwork Reduction Act Considered in Today's Rule?, XIII. Was the National Technology Transfer and Advancement Act Considered?, and, XIV. Were Tribal Government Issues Considered? (Executive Order 13084).

The RCRA docket established for today's final rulemaking maintains a copy of the complete final Assessment and Addendum documents for public review. Readers interested in these economic support materials are strongly encouraged to read both documents to ensure full understanding of the methodology, data, findings, and limitations of the analysis.

II. What Activities Have Led to Today's Rule?

In May of 1993, we introduced a draft Waste Minimization and Combustion Strategy designed to reduce reliance on the combustion of hazardous waste and encourage reduced generation of these wastes. Among the key objectives of the strategy was the reduction of health and ecological risks posed by the combustion of hazardous wastes. As part of this strategy, we initiated the development of MACT emissions standards for hazardous waste combustion facilities.

On April 19, 1996, we published the proposal, which included revisions to standards for hazardous waste incinerators and hazardous waste burning cement kilns and lightweight aggregate kilns. These proposed MACT standards were designed to address a variety of hazardous air pollutants, including dioxins/furans, mercury, semivolatile and low volatile metals, and chlorine. We also proposed to use emissions of carbon monoxide and hydrocarbons as surrogates for products of incomplete combustion.

A. What Analyses Were Completed for the Proposal?

We completed an economic analysis in support of the proposal. This Regulatory Impact Assessment (RIA), examined and compared the costs and benefits of the proposed standards, as required under Executive Order 12866. Industry economic impacts, environmental justice, waste minimization incentives, and other impacts were also examined. This RIA also fulfilled the requirements of the Regulatory Flexibility Act by evaluating the effects of regulations on small entities. This document, Regulatory Impact Assessment for Proposed Hazardous Waste Combustion MACT Standards (November 13, 1995), Appendices (November 13, 1995), and two Addenda (November 13, 1995 and February 12, 1996) are available in the docket established for the proposed action.

Throughout the development of the proposal, we considered many alternative regulatory options. A full discussion of the methodology and findings of all options considered is in the Regulatory Impact Assessment (RIA). Only the floor option and our preferred option (*i.e.*, the floor option and beyond-the-floor options for selected hazardous air pollutants) are discussed in this summary.

1. Costs

To develop industry compliance cost estimates, we categorized or modeled combustion units based on source category and size and estimated engineering costs for the air pollution control devices needed to achieve the proposed standards. Based on current emissions and air pollution control device information, we developed assumptions regarding the type of upgrades that units would require. This ''model plants'' engineering cost analysis was used because our data were limited.

Total annual compliance cost estimates for the floor option and the beyond-the-floor standards ranged from $93 million to $136 million, respectively, beyond the baseline. For the floor option, on-site incinerators represented 55 percent of total nationwide costs, cement kilns represented 29 percent, commercial incinerators represented 14 percent, and lightweight aggregate kilns represented 2 percent. Of the total beyond-the-floor costs, on-site incinerators represented 50 percent, cement kilns represented 32 percent, commercial incinerators represented 15 percent, and lightweight aggregate kilns represented 3 percent. For the incremental impacts of going from the floor to beyond-the-floor, lightweight aggregate kilns were projected to experience a 100 percent increase in compliance costs, cement kilns would experience a 63 percent increase, commercial incinerators and on'site incinerators, at 54 and 34 percent, respectively. Overall, compliance costs associated with the proposed action were projected to result in significant economic impacts to the combustion industry.

The RIA also examined average total annual compliance costs per combustion unit. This indicator was designed to assess the relative impact of the rule on each facility type in the combustion universe. Findings projected that cement kilns were likely to incur the greatest average incremental cost per unit, totaling $770,000 annually at the floor and $1.1 million annually for the proposed beyond-the-floor standards. The costs for LWAKs ranged from $490,000 to $825,000. The costs for on-site incinerators ranged from $340,000 to $486,000. The costs for commercial incinerators ranged from $493,000 to $730,000. These costs assume no market exits. Once market exit occurs, average per unit costs may be significantly lower, particularly for on-site incinerators.

The analysis also examined the floor and proposed beyond-the-floor impacts on a per ton basis. In the baseline, average prices charged to burn hazardous waste were estimated to be $178 per ton for cement kilns, $188 per ton for lightweight aggregate kilns, $646 per ton for commercial incinerators, and $580 per ton for on-site incinerators (approximate internal transfer price).

Baseline burn costs (before consolidation) for these facilities were found to average $104 per ton for cement kilns, $194 per ton for lightweight aggregate kilns, $806 per ton for commercial incinerators, and $28,460 per ton for on-site incinerators.[350] Incremental compliance costs at the floor and proposed BTF levels were estimated to be $23 to $31 per ton for commercial incinerators, $40 to $50 per ton for cement kilns, $39 to $56 per ton for lightweight aggregate kilns, and $47 to $57 per ton for on-site incinerators.

From comparison of these prices and baseline burn costs, some high-cost facilities, especially commercial and on-site incinerators, appeared to be burning below break-even levels. The incremental compliance costs of the proposal would make these facilities even less competitive. The RIA estimated that, of the facilities which are currently burning hazardous waste, three cement kilns, two lightweight aggregate kilns, six commercial incinerators, and eighty-two on-site incinerators would likely stop burning hazardous waste over the long term. These were incremental to projected baseline market exits estimated at the time of proposal. Most of the facilities that exit the market were ones that burned smaller amounts of hazardous waste.

We also conducted a generalized cost effectiveness analysis for the proposal. We found that the cost per hazardous air pollutant is often difficult to estimate because the air pollution control devices often control more than one pollutant. Therefore, it was not feasible to estimate precise costs per pollutant. Once the compliance expenditures had been estimated, the total mass emission reduction achieved when facilities comply with the standards option was estimated. The total incremental cost per incremental reduction in pollutant emissions was then estimated. Considering all facilities together, dioxin, mercury, and metals costs per unit reduction are quite high because small amounts of the dioxin and metals are released into the environment. For other pollutants, expenditures per ton are much lower. Please refer to the November 13, 1995 draft RIA for a complete discussion of the methodology and findings.

2. Benefits

Our evaluation showed that background levels of dioxin in beef, milk, pork, chicken, and eggs were approximately 0.50, 0.07, 0.30, 0.20, and 0.10 parts per trillion fresh weight, respectively, on a toxicity equivalent (TEQ) basis. These background levels and information on food consumption were then used to estimate dietary intake in the general population. That estimate was 120 picograms TEQ per day. We also collected background data on dioxins in fish, taken from 388 locations nationwide. At 89 percent of the locations, fish contained detectable levels of at least two of the dioxin and furan compounds for which analyses were conducted. We then estimated total dioxin emissions from hazardous waste combustors at 0.94 kg TEQ per year. This represented about 9 percent of total anthropogenic emissions of dioxins in the U.S. at the time. The dioxin estimates have been revised since then.

While no one-to-one relationship between emissions and risk exists, it was inferred that hazardous waste-burning sources were likely to contribute significantly to dioxin levels in foods. In the proposal, we estimated that these dioxin emissions would be reduced to 0.07 kg TEQ per year at the floor levels and to 0.01 kg TEQ per year at the beyond the floor levels. We estimated this to result in decreases of approximately 8 and 9 percent in total estimated anthropogenic U.S. emissions, respectively. Our position at proposal was that reductions in these emissions, in conjunction with reductions from other dioxin-emitting sources, would help reduce dioxin levels in foods over time and, therefore, reduce the likelihood of adverse health effects, including cancer.

Mercury is a concern in both occupational and environmental settings. Human exposures to methyl mercury occur primarily from ingestion of fish. Mercury contamination results in routine fish consumption bans or advisories in over two thirds of the States. At the proposal, we estimated a safe exposure level to methyl mercury (the reference dose) at 0.0001 mg per kg per day. We collected data on chemical residues in fish from 388 locations nationwide and found that fish contained detectable levels of mercury at 92 percent of the locations. Similar results have been obtained in other studies, strongly suggesting that long-range atmospheric transport and deposition of anthropogenic emissions is occurring. Our research found that, for persons who eat significant amounts of freshwater fish, exposures to mercury may be significant compared to the threshold at which effects may occur in susceptible individuals.

Our estimates for the proposal indicated that hazardous waste combustors emitted a total of 10.1 Mg of mercury per year, representing about 4 percent of the U.S. anthropogenic total. Implementation of the floor levels were estimated to reduce mercury emissions from all hazardous waste-burning sources to 3.3 Mg per year. The proposed beyond-the-floor levels would drop this to an estimated 2.0 Mg per year. Such reductions were estimated to lower total anthropogenic U.S. emissions by approximately 3 percent. Reductions in these mercury emissions, in conjunction with the Agency's efforts to reduce emissions from other mercury-emitting sources, would help diminish mercury levels in fish over time and, therefore, reduce the likelihood of adverse health effects occurring in fish-consuming populations.

Other benefits we investigated for the proposal included ecological benefits, property value benefits, soiling and material damage, aesthetic damages, and recreational and commercial fishing impacts. Overall, the analysis of the ecological risk suggested that water quality criteria may be exceeded only in small watersheds located near waste combustion facilities. Furthermore, such exceedances would occur only when assuming very high emissions. The preliminary analysis for the proposal indicated that property value impacts may be very significant because of emission reductions from hazardous waste combustion facilities. A detailed review of this analysis, as well as other benefits (*e.g.,* avoided clean-up as result of reduced particulate matter releases), is presented in chapter 5 of the November 13, 1995 Regulatory Impact Assessment.

3. Other Regulatory Issues

We also examined other issues associated with the proposal. These included environmental justice, unfunded federal mandates, regulatory takings, and waste minimization.

a. Environmental Justice. We completed an analysis of demographic characteristics of populations near cement plants and commercial hazardous waste incinerators and compared them to county and state populations. This analysis focused on spatial relationships between these

[350] Baseline costs were calculated by identifying all costs of hazardous waste burning. For commercial incinerators and on-site incinerators, all costs of construction, operation and maintenance are included. This also includes RCRA permits and existing air pollution control devices. The costs for on-site burners are extremely high because the costs are distributed across the small amount of hazardous waste burned. For cement kilns and lightweight aggregate kilns, only the incremental costs of with burning hazardous waste are included (e.g., permits). The cost of the actual units (which are primarily for producing cement or aggregate) are not included in the baseline.

facilities and the adjacent minority and low income populations. The study did not describe the actual health status of these populations nor how their health might be affected in proximity to hazardous waste facilities. Results indicated that 27 percent of all cement plants and 37 percent of the sample of incinerators had minority percentages within a one mile radius which exceed the corresponding county minority percentages by more than five percentage points. Eighteen percent of all cement plants and 36 percent of the sample of incinerators had poverty percentages which exceed the county poverty percentages by more than five percentage points. Please see chapter seven of the November 13, 1995 RIA for a full discussion of the environmental justice methodology and findings conducted for the proposal.

b. Unfunded Federal Mandates. Our analysis of compliance with the Unfunded Mandates Reform Act (UMRA) of 1995 found that the proposal contained no State, local, tribal government, or private sector Federal mandates as defined under the regulatory provisions of Title II of UMRA. We concluded that the rule implements requirements specifically set forth by Congress, as stated in the CAA and RCRA. The proposed standards were not projected to result in mandated annualized costs of $100 million or more to any state, local, or tribal government. Furthermore, the proposed standards would not significantly or uniquely affect small governments.

c. Regulatory Takings. We found no indication that the proposed MACT standards would be considered a taking, as defined by legislation being considered by Congress at the time. Property would not be physically invaded or taken for public use without the consent of the owner. Also, the proposed standards would not deprive property owners of economically beneficial or productive use of their property or reduce the property's value.

d. Incentives for Waste Minimization and Pollution Prevention. We briefly examined the potential for waste minimization in the proposal. Preliminary results suggested that generators have a number of options for reducing or eliminating waste. To evaluate whether facilities would adopt applicable waste minimization measures, a simplified pay back analysis was used. Using information on per-facility capital costs for each technology, we estimated the time period required for the cost of the waste minimization measure to be returned in reduced combustion expenditures. Our assessment of waste minimization found that approximately 630,000 tons of waste may be amenable to waste minimization. For a complete description of the analysis please see the November 13, 1995 Regulatory Impact Assessment.

4. Small Entity Impacts

The Regulatory Flexibility Act (RFA) of 1980 requires Federal agencies to consider impacts on small entities throughout the regulatory process. Section 603 of the RFA calls for an initial screening analysis to determine whether small entities will be adversely affected by the regulation. If affected small entities are identified, regulatory alternatives must be considered to mitigate the potential impacts. Small entities, as described by the Act, are only those ''businesses, organizations, and governmental jurisdictions subject to regulation.'' We used information from Dunn & Bradstreet, the American Business Directory, and other sources to identify small businesses. Based on the number of employees and annual sales information, we identified eleven firms which might be considered directly affected small entities. We found that directly affected small entities were unlikely to be significantly affected and that over one-third of those that were considered small, while having a relatively small number of employees, had annual sales in excess of $50 million per year. Also, small entities impacted by the proposal were found to be those that burn very little waste and hence face very high cost per ton burned. These facilities were expected to discontinue burning hazardous waste rather than complying with the proposal. These costs of discontinuing waste burning would not be so high as to be a significant impact. Thus, we found that the proposal may, at most, have a minor impact on a limited number of affected small businesses.

B. What Major Comments Were Received on the Proposal RIA?

The November 13, 1995 Regulatory Impact Assessment (RIA) received comment from many concerned stakeholders. We also conducted a formal peer review of the RIA. We appreciate all comments received and incorporated many of the suggestions into the final Assessment document to improve the analysis. A summary of the key issues presented by stakeholders and the peer reviewers is presented below, along with our responses. You are requested to review the complete documents: Comment Response Document—Addressing The Public Comments Received On: Regulatory Impact Assessment for Proposed Hazardous Waste Combustion MACT Standards, Draft, November 13, 1995, and, Peer Review Response Document—Addressing The Peer Review Received On: Regulatory Impact Assessment for Proposed Hazardous Waste Combustion MACT Standards, Draft, November 13, 1995. These documents, available in the RCRA docket established for today's action, present complete responses to all substantive comments received on the 1995 RIA.

1. Public Comments

We received several general comments on the accuracy of the baseline and compliance costs applied in the RIA. Several commenters suggested that we revise baseline and compliance costs to improve their accuracy, which we did. Instead of using a model plant approach for assigning compliance and baseline costs to modeled combustion facilities, costs for today's rule have been estimated using combustion system-specific parameters including gas flow rate, baseline emissions, air pollution control devices currently in place, total chlorine in feed, stack moisture, and temperature at the inlet to the air pollution control device. These system-specific baseline and compliance costs allow for greater accuracy in estimating national costs and predicting which facilities are likely to stop burning hazardous waste. Also, the baseline costs include clinker production penalties at cement kilns and use updated incinerator capital costs, labor requirements, and ash disposal costs.

Various commenters were concerned that the consolidation routine in the economic modeling was unrealistic. For the final economic assessment, we revised the consolidation routine to incorporate capacity constraints that affect the ability of combustion facilities to consolidate wastes into fewer systems at a given facility. Maximum capacity rates (tons per year) were derived by using the feed rates in OSW's database (pounds per year) and assuming 8,000 hours per year of operation. Wastes are assumed to be consolidated into fewer combustion systems at a single facility to the extent that the capacity constraints allow the systems to absorb the displaced hazardous wastes.

Many commenters felt that the waste minimization analysis of the 1995 RIA was unrealistic and overestimated gains. They suggested that the waste minimization analysis be improved to reflect other constraints faced by waste generators. For the 1999 Assessment, we conducted an expanded and significantly improved analysis of waste

minimization alternatives, using a more detailed decision framework for evaluating waste minimization investment decisions. This framework attempts to capture the full inventory of costs, savings, and revenues, including indirect, less tangible items typically omitted from waste minimization analysis, such as liability and corporate image. For each alternative that was identified as viable for currently combusted waste streams, cost curves were developed for a range of waste quantities, as cost varies by waste quantity. These cost curves were then used to determine whether a waste generator would shift from combustion to waste minimization alternatives as combustion prices rise.

Some commenters suggested that we model waste markets to reflect segmentation across waste types, instead of simply applying different prices for kilns and incinerators. In response, we have developed a revised pricing approach that covers seven categories of waste types and prices. The economic model used for the 1999 Assessment incorporates these seven different waste types and prices. Waste management prices depend on several factors: Waste form (solid/liquid/sludge), heat content, method of delivery (*e.g.*, bulk versus drum), and contamination level (*e.g.*, metals or chlorine content). In addition, regulatory constraints (*e.g.*, prohibitions against burning certain types of wastes) and technical constraints (*e.g.*, adverse effects of certain waste streams on cement product quality) also influence combustion prices. Although data limitations prevent the inclusion of all factors, the information on heat content and constituent concentrations from EPA's National Hazardous Waste Constituent Survey (NHWCS) allowed us to enhance the characterization of combusted waste.

A few commenters indicated that the baseline costs of waste burning for cement kilns should include the shared joint costs of cement production. We do not include cement production costs in the costs of waste burning because they are not part of the incremental costs introduced by hazardous waste burning at kilns. We believe this assumption is appropriate, given that cement production is the principal activity of cement kilns that burn hazardous waste. Furthermore, that same kiln would be required in the production of cement regardless of hazardous waste combustion activities. We did, however, evaluate whether some of the more economical marginal kilns may be covering cement production costs with hazardous waste burning revenues. These findings are reported in the 1999 Assessment document.

Some were concerned that shutdown costs and environmental risks associated with combustion facility closures were not accounted for in the 1995 economic analysis. We found that many of the facilities that are expected to close are those that are were operating significantly below capacity in the baseline. This suggests that such facilities may not have been fully recovering their capital costs and are likely to close, even in the absence of the MACT standards. Therefore, while closure is not costless, closure costs attributable directly to the MACT standards are likely to be relatively small. With regard to increased risks from transportation of hazardous wastes, the incremental health risks will be minimal since these facilities are burning small quantities of waste. In fact, we estimate that less than 1.5 percent of the wastes currently burned at combustion facilities will be reallocated due to facility closure. Moreover, spills and other accidents caused by trucking hazardous waste (the most common means of shipment for hazardous materials) generally are considered low-probability events, especially relative to the total number of accidents occurring within transportation overall.

Some commenters felt that potential impacts on generators and fuel blenders were not adequately addressed. In the 1995 RIA, we considered these costs and determined that hazardous waste generators and fuel blenders would likely see price increases for combusted waste streams, though the magnitude of the price increase will depend on the type of waste and the non-combustion waste management alternatives available for that waste type. The price increase faced by generators was estimated at 10 percent of market prices.

The major hazardous waste burning sectors frequently presented alternative views regarding various key waste burning issues. These included: Facility market exits, revenues, impacts resulting from waste feedrate modifications, impacts from alternative fuel usage, price impacts, and available practical capacity. We have reviewed and evaluated the substantiative information submitted by all concerned stakeholders and believe our final Assessment and Addendum documents reflect a fair and balanced representation of baseline conditions and post-rule incremental economic impacts.

2. Peer Review

The peer reviewers suggested that we clarify the aims, objectives, and organizing principles for the 1995 RIA. They stated that, while the 1995 RIA generally meets the requirements set forth by OMB's Guidance regarding the economic analysis of federal regulations under Executive Order 12866, the RIA would be substantially improved if it fully conformed with OMB's Guidance, especially with regard to organization and statement of objectives. For the 1999 Assessment, we have tried to restructure the document to be more in line with OMB's 1996 Guidance for conducting Economic Analysis of Federal Regulations Under Executive Order 12866. The 1999 Assessment includes the following elements in the first chapter to address concerns of the reviewers: the objectives of the Economic Assessment, the analytical requirements the document fulfills, the rationale for regulatory action, an examination of alternative regulatory options, the anticipated effect of the MACT standards, and the analytic approach and organization for the subsequent chapters.

The peer reviewers also suggested that the compliance costs need to be clearly distinguished from social costs, as defined by the theory of applied welfare economics. For the 1999 Assessment, we have been careful to clarify the difference between compliance costs and social costs and explain how the rule will likely affect producers and consumers. The final Assessment explicitly lays out the economic framework for the social cost analysis and distinguishes these from compliance cost estimates. The hazardous waste combustion market is diverse, dynamic, and segmented. Because data are not adequate to support a full econometric analysis at this level of complexity, we have applied a simplified approach that brackets the welfare loss attributable to today's rule. This approach bounds potential economic welfare losses by considering two scenarios: (1) Compliance costs assuming no market adjustments (the upper bound) and (2) market adjusted compliance costs (the lower bound).

The peer reviewers also suggested that the benefits analysis was not fully responsive to the requirements of Executive Order 12866. For the 1999 Assessment, we have applied results from an extensive multi-pathway risk assessment to develop human health and ecological benefit estimates. For the human health analysis, benefits are estimated from cancer and noncancer

risk reductions. Cancer risk reduction estimates are monetized by applying the value of a statistical life (VSL) to the risk reduction expected to result from the MACT standards. Monetary values are assigned to noncancer benefits using a direct-cost approach which focuses on the expenditures averted by decreasing the occurrence of an illness or other health effect. Ecological benefits are also included in the 1999 Assessment.

The peer reviewers suggested that easily burned waste streams would command lower prices and that this should be reflected in the economic modeling. They also indicated that certain combustion sectors may only handle these easy-to-burn waste types and that this should be reflected in baseline costs for these combustors. The pricing approach used in the 1999 Assessment assigns different prices to different types of wastes. Waste management prices depend on several factors, which include: waste form (solid/liquid/sludge), heat content, method of delivery (*e.g.,* bulk versus drum), and contamination level (*e.g.,* metals or chlorine content). In addition, regulatory constraints (*e.g.,* prohibitions against burning certain types of wastes) and technical constraints (*e.g.,* adverse effects of certain waste streams on cement product quality) also influence combustion prices. Although data limitations prevent us from accounting for all factors, the information on heat content and constituent concentrations from EPA's National Hazardous Waste Constituent Survey (NHWCS) allowed us to enhance the characterization of combusted waste. In addition to pricing refinements, the 1999 Assessment adjusts baseline costs to reflect differences in the performance and capabilities across combustion systems.

The peer reviewers were also concerned that the 1995 RIA applied outdated data in the analysis. The most recent available data were used in the 1995 RIA. The 1999 Assessment, once again, applies the most recently available, and verified data.

The peer reviewers suggested that fully-loaded cost-per-ton estimates should be provided for each waste minimization alternative so that these could be compared with combustion prices. For the 1999 Assessment, we conducted an expanded and significantly improved analysis of waste minimization alternatives. This analysis used a more detailed decision framework for evaluating waste minimization investment decisions that captures the full inventory of costs, savings, and revenues, including indirect, less tangible items typically omitted from waste minimization analysis, such as liability and corporate image. For each viable waste minimization alternative for currently combusted waste streams, cost curves were developed for a range of waste quantities because cost varies by waste quantity. These cost curves were then used to determine whether a waste generator would shift from combustion to waste minimization alternatives as combustion prices rise.

III. Why Is Today's Rule Needed?

Today's rule will reduce the level of several hazardous air pollutants, including dioxins and furans, mercury, semi-volatile and low volatile metals, and chlorine gas. Carbon monoxide, hydrocarbons, and particulate matter will also be reduced. Most hazardous waste combustion facilities are currently operating with some air pollution control devices in place. However, existing pollutants from these facilities are still emitted at levels found to result in risks to human health and the environment. Human exposure to these combustion air toxics occurs both directly and indirectly and leads to cancer, respiratory diseases, and possibly developmental abnormalities. A preliminary screening analysis suggests that ecosystems are also at risk from these air pollutants.

The hazardous waste combustion industry operates in a dynamic market. Several combustion facilities and systems have closed or consolidated over the past several years and this trend is likely to continue. These closures and consolidations may lead to reduced air pollution, in the aggregate, from hazardous waste facilities. However, the ongoing demand for hazardous waste combustion services will ultimately result in a steady equilibrium as the market adjusts over the long-term. We therefore expect that air pollution problems from these facilities, and the corresponding threats to human health and ecological receptors, will continue if today's rule were not implemented.

The market has generally failed to correct the air pollution problems resulting from the combustion of hazardous wastes. This has occurred for several reasons. First, there exists no natural market incentive for hazardous waste combustion facilities to incur additional costs implementing control measures because the individuals and entities who bear the negative human health and ecological impacts associated with these actions have no direct control over waste burning decisions. This may be referred to as an environmental externality, where the private industry costs of combustion do not fully reflect the human health and environmental costs of hazardous waste combustion. Second, the parties injured by the combusted pollutants are not likely to have the resources or technological expertise to seek compensation from the damaging entity (combustion facility) through legal or other means. Finally, emissions from hazardous waste combustion facilities directly affect a ''public good,'' the air. Improved air quality benefits human health and the environment. These benefits cannot be limited to just those who pay for reduced pollution. The absence of government intervention, therefore, will result in a free market that does not provide the socially optimal quantity and quality of public goods, such as air.

We recognize the need for federal regulation as the optimal means of correcting market failures leading to the negative environmental externalities resulting from the combustion of hazardous waste. The complex nature of the pollutants, waste feeds, waste generators, and the diverse nature of the combustion market would limit the effectiveness of a non-regulatory approach such as taxes, fees, or an educational-outreach program. Furthermore, requirements for MACT standards under the Clean Air Act, as mandated by Congress, has compelled us to select today's regulatory approach.

IV. What Were the Regulatory Options?

We carefully assembled and evaluated all data and relevant information acquired since the proposal. We considered several alternative MACT options since the proposal, ultimately leading to today's rule. Please refer to Part Four of this preamble for more detail on option development and the specific approach and methodology used in developing the final standards. This section of today's preamble briefly discusses and assesses the final regulatory levels and two primary options. The final regulatory levels, as discussed in Part Four, establish a combination of floor and beyond-the-floor standards for the pollutants of concern. Of the options analyzed, one addresses a floor only scenario and the other examines beyond-the-floor levels for dioxins/furans and mercury, based on activated carbon injection (ACI). The reader may wish to examine the Assessment document for a complete discussion of the analytical methodology, costs, benefits, and other projected impacts of today's rule and options. This Assessment document is available in the RCRA docket for today's rule.

V. What Are the Potential Costs and Benefits of Today's Rule?

A. Introduction

The value of any regulatory policy is traditionally measured by the net change in social welfare that it generates. Our economic assessment for today's rule evaluates costs, benefits, economic impacts, and other impacts such as environmental justice, children's health, unfunded mandates, waste minimization incentives, and small entity impacts. To conduct this analysis, we examined the current combustion market and practices, developed and implemented a methodology for examining compliance and social costs, applied an economic model to analyze industry economic impacts, quantified (and, where possible, monetized) benefits, and followed appropriate guidelines and procedures for examining equity considerations, children's health, and other impacts. The data we used in this analysis were the most recently available at the time of the analysis. Data verification, relevance, and public disclosure issues prevented us from incorporating data from certain sources. Furthermore, because our data were limited, the estimated findings from these analyses should be viewed as national, not site specific impacts.

B. Combustion Market Overview

The hazardous waste industry comprises three key segments: hazardous waste generators, fuel blenders and intermediaries, and hazardous waste incinerators. Hazardous waste is combusted at three main types of facilities: Commercial incinerators, on-site incinerators, and waste burning kilns (cement kilns and lightweight aggregate kilns). Commercial incinerators are generally larger in size and designed to manage virtually all types of solids, as well as liquid wastes. On-site incinerators are more often designed as liquid-injection systems that handle liquids and pumpable solids. Waste burning kilns burn hazardous wastes to generate heat and power for their manufacturing processes.

As of the date of our analysis, 172 combustion facilities are permitted to burn hazardous waste in the United States. On-site incinerators (private and government) represent 129 facilities (or 75 percent of this total), commercial incinerators represent 20 facilities, cement kilns represent 18 facilities, and lightweight aggregate kilns represent five facilities. A facility may have one or more combustion systems. Companies that generate large quantities of uniform hazardous wastes generally find it more economical and efficient to combust these wastes on-site using their own noncommercial systems. Commercial incineration facilities manage a wide range of waste streams generated in small to medium quantities by diverse industries. Cement kilns and lightweight aggregate kilns derive heat and energy by combining clean burning (solvents and organics) high-Btu liquid hazardous wastes with conventional fuels. The EPA Biennial Reporting System (BRS) reports a total demand for all combusted hazardous waste, across all three types of facilities, at nearly 3.3 million tons in 1995.

Most of the waste managed by combustion comes from a relatively narrow set of industries. The entire chemical industry in 1995 generated 74 percent of all combusted waste. Within this sector, the organic chemicals subsector was the largest source of waste sent to combustion, providing about 32 percent of all combusted waste. The pesticide and agricultural chemical industry generated 12 percent of the total. No other single sector generated more than 10 percent of the total.

Regulatory requirements, liability concerns, and economics influence the demand for combustion services. Regulatory forces influence the demand for combustion by mandating certain hazardous waste treatment standards (land disposal restriction requirements, etc.). Liability concerns of waste generators affect combustion demand because combustion, by destroying organic wastes, greatly reduces the risk of future environmental problems. Finally, if alternative waste management options are more expensive, hazardous waste generators will likely choose to send their wastes to combustion facilities in order to increase their overall profitability.

Throughout much of the 1980s, hazardous waste combustors enjoyed a strong competitive position and generally maintained a high level of profitability. During this period, EPA regulations requiring combustion greatly expanded the waste tonnage for this market. In addition, federal permitting requirements, as well as powerful local opposition to siting of new incinerators, constrained the entry of new combustion systems. As a result, combustion prices rose steadily, ultimately reaching record levels in 1987. The high profits of the late 1980s induced many firms to enter the market, in spite of the difficulties and delays anticipated in the permitting and siting process. Hazardous waste markets have changed significantly since the late 1980s. In the early 1990s, substantial overcapacity resulted in fierce competition, declining prices, poor financial performance, numerous project cancellations, and some facility closures. Since the mid 1990s, several additional combustion facilities have closed, while many of those that have remained open have consolidated their operations. There still remains significant overcapacity throughout the hazardous waste combustion industry.

C. Baseline Specification

Proper and consistent baseline specification is vital to the accurate assessment of incremental costs, benefits, and other economic impacts associated with today's rule. The baseline essentially describes the world absent today's rule. The incremental impacts of today's rule are evaluated by predicting post MACT compliance responses with respect to the baseline. The baseline, as applied in this analysis, is the point at which today's rule is promulgated. We recognize that the baseline should not simply describe a point in time, but rather should describe the state of the world over time, absent today's rule. The Assessment describes the data sources used in specifying the baseline and examines how each of these factors are likely to change over time in the absence of today's rule. Finally, because this analysis precedes final rule promulgation, data sources used to determine the baseline will necessarily predate the point of rule promulgation. A full discussion of baseline specification is presented in the Assessment document for today's rule.

D. Analytical Methodology and Findings—Engineering Compliance Cost Analysis

The total compliance costs for existing hazardous waste combustion facilities are developed using engineering models that assign pollution control measures and costs to each modeled combustion system. The engineering model also incorporates other compliance costs, such as monitoring requirements, permit modifications, sampling and analyses, and other recordkeeping and reporting requirements. We applied the same basic approach in developing compliance costs for new sources as was used for existing sources. Please see the Assessment document for a complete discussion of the analytical methodology applied for existing and new facilities.

Compliance costs presented in this section are based on a static analysis assuming no market adjustments.

Results from this static analysis should therefore be considered ''high-end'' estimates. The engineering compliance cost analysis reveals that each combustion system will likely comply with the final standards through a different combination of pollution control measures. This is likely to result in widely diverse per system compliance costs across combustion sectors. The average annualized per system costs, across all sectors, are projected to range from about $0.16 to $0.72 million for compliance with the final standards. Per system costs at the floor are estimated to range from $0.16 to $0.68 million, while these costs under the beyond-the-floor activated carbon injection (ACI) option would range from $0.36 to $0.99 million. Cement kilns were generally found to experience the highest per system compliance costs, while the commercial and on-site incinerators would generally experience the lowest per system costs. The compliance costs per ton of hazardous waste burned are projected to increase from 31 to 41 percent for cement kilns and about 35 percent for lightweight aggregate kilns. The increase for commercial incinerators is estimated at 20 percent of the baseline burn costs. The regulated community is also likely to experience some cost savings as a result of the streamlined administrative procedures established through today's final rule.

The compliance cost analysis contains a variety of uncertainties. The most significant include: The limited availability of emissions data upon which engineering controls are based, lack of baseline air pollution control device data for a number of facilities, and the difficulty in determining the extent to which feed control may be used as a feasible alternative method of compliance. While uncertainties are acknowledged, we do not believe that the above data limitations significantly bias the results either upward or downward.

In addition to costs incurred by the private sector, today's rule is also likely to result in incremental costs and savings to government regulatory entities at different levels as they administer and enforce the new emissions standards and related requirements. EPA Regional offices, state agencies, as well as some local agencies may incur some combination of incremental costs associated with permitting. Modifications of the permitting process related to Clean Air Act provisions could cost governmental entities, nationwide, approximately $330,000 per year. Potential government activities could also include the state rulemaking efforts necessary for agencies to modify their RCRA permitting processes as part of the ''Fast-Track'' provisions. State rulemakings and authorization of the modified procedures could cost states between $500,000 and $700,000, nationwide. Streamlined RCRA permit modification procedures may also result in aggregate savings ranging from $0.4 to $2.1 million. Overall economic impacts on particular governmental regulatory entities will depend on a variety of factors that are difficult to characterize with precision. Furthermore, economic impacts associated with governmental activities will differ in the way in which a particular governmental entity may choose to implement the requirements.

E. Analytical Methodology and Findings—Social Cost Analysis

We examined social cost impacts potentially associated with today's rule. Total social costs include the value of resources used to comply with the standards by the private sector, the value of resources used to administer the regulation by the government, and the value of output lost due to shifts of resources to less productive uses. To evaluate these shifts in resources and changes in output requires predicting changes in behavior by all affected parties in response to the regulation, including responses of directly-affected entities, as well as indirectly-affected private parties.

For this analysis, social costs are grouped into two categories: economic welfare (changes in consumer and producer surplus), and government administrative costs. The economic welfare analysis conducted for today's rule uses a simplified partial equilibrium approach to estimate social costs. In this analysis, changes in economic welfare are measured by summing the changes in consumer and producer surplus. This simplified approach bounds potential economic welfare losses associated with the rule by considering two scenarios: Compliance costs assuming no market adjustments, and market adjusted compliance costs.

Social costs presented in this section assume market adjustments. Under this scenario, increased compliance costs are examined in the context of likely incentives combustion facilities would have to continue burning hazardous wastes and the competitive balance in different combustion sectors. Furthermore, combustion facilities are likely to try to recover these increased costs by charging higher prices to generators and fuel blenders. This scenario estimates market adjusted compliance costs by assessing baseline profitability, profitability post-rule using different price increase scenarios, and waste management alternatives in order to help predict combustion price increases.

Overall, the difference in aggregate compliance costs for all sectors of the existing regulated community to meet any of the examined scenarios is not substantial. Total annualized market adjusted costs for all sectors are estimated to range from $44 to $50 million under the floor option. Under the beyond-the-floor (ACI) option, these costs are estimated to range from $98 to $107 million. For all sectors to meet the final standards, our best estimate of total annualized costs ranges from $50 to $63 million, depending upon level of price pass-through. All cost estimates are incremental to the baseline. These estimates, however, are not incremental to any mutual requirements potentially associated with cement kilns meeting standards established under the nonhazardous waste burner cement kiln rule.

Cement kilns ($17–24 million) and private on-site incinerators ($20–24 million) make up about 76 percent of aggregate national costs under the final standards. For cement kilns, this is due primarily to the high costs per system. For private on-site incinerators, the high costs are primarily due to the large number of combustion systems. Total costs are less for commercial incinerators ($5–6 million, or 10 percent) because of lower costs per system relative to cement kilns and due to the limited number of commercial units relative to on-site incinerators. Lightweight aggregate kilns ($3 million) represent about 5 to 6 percent of the total costs, due primarily to the limited number of units. Government on-site units make up the remainder.

F. Analytical Methodology and Findings—Economic Impact Analysis

Various market adjustments are expected in response to the increased costs of hazardous waste combustion associated with today's rule. Economic impacts may be measured through numerous factors. This analysis examines market exit estimates, waste reallocations, employment impacts, combustion price increases, industry impacts, and the multirule or joint impacts analysis. Economic impacts presented in this section are distinct from the social costs analysis, which represents only the monetary value of market disturbances.

1. Market Exit Estimates

The hazardous waste combustion industry operates in a dynamic market, with a number of systems/facilities projected to exit the hazardous waste burning market under baseline conditions (see Section V. B of this Part). As a result, this analysis presents market exit estimates expected to result under the baseline, as well as from today's rule. This approach is developed in an effort to present a more accurate estimate of ''real-world'' incremental impacts resulting from the final standards. Market exit estimates are derived from a breakeven analysis designed to determine system and facility viability. This analysis is subject to several assumptions, including: engineering cost data on the baseline costs of waste burning, cost estimates for pollution control devices, prices for combustion services, and assumptions about the waste quantities burned at these facilities. It is important to note that, for most sectors, exiting the hazardous waste combustion market is not equivalent to closing a plant. (Actual plant closure would only be expected in the case of an exit from the hazardous waste combustion market of a commercial incinerator closing all its systems.)

A relatively small percentage of facilities (including no lightweight aggregate kilns) are projected to stop burning hazardous waste as a result of the incremental requirements associated with today's rule. Those facilities that do exit were found to be marginally profitable in the baseline, burning low quantities of hazardous waste. The economic model post-consolidation results indicate that, in response to today's rule, the following number of combustion facilities are expected to cease burning hazardous waste in the short term: Cement kilns, zero out of 18 facilities; lightweight aggregate kilns, zero out of five facilities; commercial incinerators, zero out of 20 facilities; and private on-site incinerators, 16 out of 111 facilities.

The number of anticipated market exits increases in the long term due to the necessity of recovering the capital costs of combustion. However, because this also holds true in the baseline, an increased number of projected long-term baseline market exits may, in some cases, actually decrease the number of incremental long-term exits. There remain zero incremental market exits for LWAKs and commercial incinerators over the long-term. Incremental market exits for cement kilns, however, increase from zero in the short-term to up to two over the long-term. Incremental market exits for private on-site incinerators decline from 16 in the short-term to 13 over the long-term. This is due to a 62 percent increase in baseline market exits from the short-term to the long-term.

2. Quantity of Waste Reallocated

Combustion systems that can no longer cover costs (i.e., those below the dynamic breakeven quantity) are projected to stop burning hazardous waste. Hazardous wastes from these systems will likely be reallocated to other viable combustion systems at the same facility if there is sufficient capacity, alternative combustion facilities that continue burning, or waste management alternatives (*e.g.*, solvent reclamation). Because combustion is likely to remain the lowest cost option, we expect most reallocated wastes will continue to be managed at combustion facilities.

The economic model indicates that, in response to today's rule, between 14,000 to 42,000 tons of currently burned hazardous waste could be reallocated to other facilities or waste management alternatives. This estimate represents between 0.4 and 1.3 percent of the total quantity of combusted hazardous wastes and is incremental to projected long-term baseline reallocations of approximately 100,000 tons. Currently, there is more than adequate capacity within the remaining sources of the combustion market to accommodate this reallocated waste, even at the high-end estimate.

3. Employment Impacts

Today's rule is likely to cause employment shifts across all of the hazardous waste combustion sectors. These shifts will occur as specific combustion facilities find it no longer economically feasible to keep all of their systems running, or to stay in the hazardous waste market at all. When this occurs, workers at these locations may lose their jobs. At the same time, the rule may result in employment gains, as new purchases of pollution control equipment stimulate additional hiring in the pollution control manufacturing sector and as additional staff are required at combustion facilities for various compliance activities.

a. Employment Impacts—Losses. Primary employment losses in the combustion industry are likely to occur when combustion systems consolidate the waste they are burning into fewer systems or when a facility exits the hazardous waste combustion market altogether. Operation and maintenance labor hours are expected to be reduced for each system that stops burning hazardous waste. For each facility that completely exits the market, employment losses will likely also include supervisory and administrative labor.

Total incremental employment dislocations potentially resulting from the final standards range from approximately 100 to 230 full-time-equivalent (FTE) jobs under the floor and the recommended options. Under the beyond-the-floor (ACI) option the high-end estimate of employment dislocations increases by almost 9 percent to approximately 250 FTEs. Among the different sectors, on-site incinerators are responsible for most of the total estimated number of job losses. Their significant share of the losses is a function of both the large number of on-site incinerators in the universe as well as the relatively high number of expected exits within this sector. Cement kilns are responsible for the second largest number of expected employment losses due to the number of systems that consolidate waste-burning at these facilities.

b. Employment Impacts—Gains. In addition to employment losses, today's rule will also lead to job gains as firms invest to comply with the various requirements of the rule and add additional operation and maintenance personnel for the new pollution equipment and other compliance activities, such as new reporting and record keeping requirements.

The total annual employment gains (without particulate matter continuous emission monitors) associated with the floor and recommended final standards are approximately 300 FTEs. The beyond-the-floor (ACI) option may increase the high-end employment gain estimate to as much as 620 FTEs. About one-third to one-half of all estimated job gains are projected to occur in the pollution control equipment industry. The remaining job gains will occur at the combustion facilities as additional personnel are hired for operation and maintenance and permitting requirements.

While it may appear that this analysis suggests overall net job creation under particular options and within particular combustion sectors, such a conclusion would be inappropriate. Because the gains and losses occur in different sectors of the economy, they should not be added together. Doing so would mask important distributional effects of the rule. In addition, the employment gain estimates reflect within sector impacts only and therefore do not account for job displacement across sectors as

investment funds are diverted from other areas of the larger economy.

4. Combustion Price Increases

All combustion facilities that remain in operation will experience increased operational costs under today's rule. To protect their profits, each facility will have an incentive to pass these increased costs on to their customers (generators and blenders) in the form of higher combustion prices. Generators and blenders are expected to pay these higher prices unless they have less expensive waste management alternatives.

Under the theory of market price adjustments, as applied in the economic model, waste would be sent to the least expensive alternatives first, all else being equal. At the same time, prices would rise to the point at which all demand for waste management is met. In theory, the last tons would be managed by substituting non-combustion or waste minimization alternatives. The most efficient waste management substitute for these wastes would cap price increases, resulting in a new market price. Combustion facilities, in turn, would each set their prices at this market price in order to maximize profits. Less efficient waste management scenarios may earn just enough to stay in business over the short term, but would not recover capital costs. Combustion systems operating above the market price would lower their prices or exit the market. In reality, the hazardous waste combustion marketplace is very complex, and the determination of an adjusted market price would be an ongoing process affected by numerous factors, including price differentials among regions, waste stream types, and generators.

Available economic data on the cost of waste management alternatives for combusted hazardous waste, including source reduction and other waste minimization options, are not precise enough to allow for an accurate estimate of the maximum price increase that combustors may pass through to generators and fuel blenders. However, available data do indicate that the demand for hazardous waste combustion is relatively inelastic and that combustion facilities are likely to pass through approximately 75 percent of compliance costs in the least-cost sector. High-cost sectors, however, may pass through less than the 75 percent estimate. We also analyzed a 25 percent price pass through scenario. Under the recommended final standards, the weighted average combustion price per ton is projected to increase anywhere from about 0.5 to 11 percent, depending upon sector and scenario. Prices were found to increase by as much as 25 percent under the beyond-the-floor (ACI) option.

5. Industry Profits

Hazardous waste-burning profits for all combustion sectors, on average, are expected to decline post-rule. This decline, however, will not be consistent across sectors. Hazardous waste-burning profits for cement kilns are projected to decrease by no more than 10 percent, while profits for commercial incinerators would decrease by no more than 2 percent. These profit margin estimates are based on a simple calculation that subtracts projected operating costs from revenues. These estimates provide relative measures of profit changes and should not be used to predict absolute profit margins in these industries.

Compliance costs associated with meeting today's rule are estimated to represent less than 2 percent of the pollution control expenditures in industries that contain facilities with on-site incinerators. For cement kilns, however, compliance costs are expected to increase total pollution control expenditures by no more than 60 percent at waste-burning facilities.

To comply with today's rule, many facilities will need to purchase additional pollution control equipment. From the perspective of the pollution control industry, these expenditures will translate into additional revenues and profits. Total profits for the air pollution control industry are likely to increase as a result of today's rule.

6. National-Level Joint Economic Impacts

Analyzing national-level economic impacts in a market context provides an opportunity to assess the distributional effects on cement producers, lightweight aggregate kilns, and commercial incinerators. As a supplement to today's analysis, we used the model developed for the Portland Cement MACT rulemaking to estimate national-level economic impacts of today's Hazardous Waste Combustion (HWC) MACT rule in an interactive market context. This analysis was conducted to estimate joint impacts of today's rule in conjunction with the Portland Cement MACT rule and the Cement Kiln Dust rule. The Portland Cement MACT model incorporates compliance costs for each affected cement kiln, lightweight aggregate kiln, and commercial incinerator and then projects national level impacts associated with these facilities and for the general Portland cement market. On-site incinerators were not included in this analysis because they do not generally compete in the commercial hazardous waste combustion market. Results from this analysis are separated into three categories: Market-, industry-, and social-level impacts associated with imposition of the recommended final standards and the two HWC MACT options (floor and beyond-the-floor (ACI)).

Joint national-level economic impact results combining the HWC MACT options with the Portland Cement MACT and Cement Kiln Dust Rule are summarized in this section. Market, industry, and social cost impacts are discussed. This analysis assumes simultaneous implementation of all three rules.

Market-level impacts for this joint scenario, assuming the floor option, result in increased costs of cement production and burning hazardous waste at affected cement kilns. The national market price of Portland cement is projected to increase by about 2.0 percent, while domestic production would decline by about 4.0 percent. Market impacts for the joint scenario with the recommended final standards and the beyond-the-floor (ACI) option were found to be generally equivalent to results under the floor option. The extent to which domestic cement producers face competition from foreign cement imports will limit the degree of domestic price increases. Furthermore, the U.S. cement market is regionally specific. While nationwide average market price and production impacts are estimated to be relatively minor, producers in selected regions may experience significant revenue and production impacts, either positive or negative.

Under the joint scenario with the floor option, the market prices for both liquid and solid hazardous waste incineration are projected to increase by about 8.6 percent and 1.4 percent, respectively. The price change for liquids is higher than that observed for the floor only, while the price change for solids is virtually the same. For cement kilns, the increased costs associated with all three regulations, combined with their reductions in cement production, is projected to cause their supply of hazardous waste incineration services to fall by around 11.0 percent for both liquids and solids. In response to the regulatory costs, lightweight aggregate kilns also reduce their supply of liquid hazardous waste incineration by around 9.0 percent. For commercial incinerators, the supply of hazardous waste incineration increases by nearly 6.0 percent for liquids and close to 3.0

percent for solids. The market impacts for the joint scenario, using the recommended final standards and the beyond-the-floor (ACI) alternative, were found to be similar to those for the floor option. One exception is the market price for liquids, which increases by a greater percentage under the joint scenario with the beyond-the-floor (ACI) alternative. This results in a greater reduction in liquid hazardous waste burned at cement kilns and lesser decreases in liquids incinerated at commercial incinerators.

Industry-level impacts under the joint impacts scenario with the floor option indicate that Portland cement plants may see total gross revenues decline by nearly 3.0 percent from their current baseline. This decline in total revenue results from foregone revenues associated with producing less Portland cement and lost revenues from burning hazardous waste. The total net costs for these cement plants are also projected to decrease, reflecting the increase in costs associated with burning hazardous waste, plus the increase in cement kiln dust management costs, and the decrease in costs associated with producing less cement. The net result, indicates a decline in aggregate nationwide earnings before interest and taxes (EBIT) of about 5.5 percent from the current baseline. Lightweight aggregate kilns are also projected to incur a decline in hazardous waste-related EBIT of about 5.5 percent. Alternatively, as a group, the commercial incinerators are expected to experience a net gain of around 11.0 percent in annual earnings under this joint scenario with the floor option. These joint industry-level impacts on EBIT indicate a similar pattern across each regulatory scenario, except for lightweight aggregate kilns under the beyond-the-floor (ACI) option, where EBIT declines by nearly 14.0 percent. Industry-level impacts under the joint impact analysis also includes estimates of plant or system closures. The joint analysis under each hazardous waste combustion scenario indicates that three cement plants and 14 to 15 kilns may cease production. Furthermore, five cement kilns are projected to stop burning hazardous waste. The analysis also indicates that one lightweight aggregate kiln may discontinue burning hazardous waste and one to two commercial incinerators may close operations and stop burning hazardous waste with the joint implementation of all three rules. These market exit estimates include projected baseline closures.

Social-level impacts, or social costs, under the joint scenarios indicate that, for both Portland cement and hazardous waste incineration services, consumers are worse off due to the increase in prices and reductions in consumption. For producers of Portland cement and incineration services, cement kilns and lightweight aggregate kilns are worse off (on a nationwide basis) due to the decline in market share, while commercial incinerators are better off due to the increase in prices and market share.

Refer to the final Assessment document and appendices for a complete discussion of joint impacts.

G. Analytical Methodology and Findings—Benefits Assessment

This section discusses the benefits assessment for today's rule. Results from our multi-pathway human health and ecological risk assessment are used to evaluate incremental benefits to society of emission reductions at hazardous waste combustion facilities.[351] Total monetized benefits are estimated at $19.2 million. This section also summarizes how today's rule may lead to changes in the types and quantities of wastes generated and managed at combustion facilities through increased waste minimization.

1. Human Health and Ecological Benefits

a. Risk Assessment Overview. The basis for the benefits assessment is our multi-pathway risk assessment model. This model estimates baseline risks from hazardous waste combustion emissions, as well as expected risks after today's rule is implemented. The model examines both inhalation and ingestion pathways to estimate human health risks. A less detailed screening-level analysis is used to identify the potential for ecological risks. The risk assessment is carried out for the regulatory baseline (no regulation), the final recommended standards, and the two MACT options (floor and beyond-the-floor (ACI)). The assessment uses a case study approach in which 76 hazardous waste combustion facilities and their site-specific land uses and environmental settings are characterized. The randomly selected facilities in the study include 43 on-site incinerators, 13 commercial incinerators, 15 cement kilns, and five lightweight aggregate kilns.

The pollutants analyzed in the risk assessment are dioxins and furans, selected metals, particulate matter, chlorine, and hydrogen chloride. The metals modeled in the analysis include antimony, arsenic, barium, beryllium, cadmium, chromium, copper, cobalt, lead, manganese, mercury, nickel, selenium, silver, and thallium. The fate and transport of the emissions of these pollutants is modeled to arrive at concentrations in air, soil, surface water, and sediments. To assess human health risks, these concentrations can be converted to estimated doses to the exposed populations using exposure factors such as inhalation and ingestion rates. These doses are then used to calculate cancer and noncancer risks, if the appropriate health benchmarks are available. To assess potential ecological risks, soil, surface water and sediment concentrations are compared with eco-toxicological criteria representing protective screening values for ecological risks. Because these criteria are based on *de minimis* ecological effects and thus represent conservative values, an exceedance of the eco-toxicological criteria does not necessarily indicate ecological damages. It simply suggests that potential damages cannot be ruled out.

To characterize the cancer and noncancer risks to the populations listed above, the risk assessment breaks down the area surrounding each modeled combustion facility into 16 polar grid sectors. For each polar grid sector, risk estimates can be developed for different age groups and receptor populations (*e.g.*, 0 to 5 year old children of subsistence fishers). This approach is used because geographic and demographic differences across polar grid sectors leads to sectoral variation in individual risks. Thus, individual risk results are aggregated across sectors to generate the distribution of risk to individuals in the affected area. An additional Monte Carlo analysis was conducted to incorporate variability in other exposure factors such as inhalation and ingestion rates for three scenarios that were thought to comprise the majority of the risk to the study area population. These scenarios address cancer risk from dioxin exposure to beef and dairy farms and noncancer risk from methyl mercury exposure to recreational anglers.

b. Human Health Benefits—Methodology. Human health benefits are assessed by identifying those pollutants for which emission reductions are expected to result in improvements to human health or the

[351] The RIA for the proposal included results from a screening analysis designed to assess the potential magnitude of property value benefits caused by the MACT standards. This analysis is not included in the Economic Assessment for the Final Rule due to limitations of the benefits transfer approach and because property value benefits likely overlap with human health and ecological benefits. Including property value benefits would result in double-counting.

environment. The relevant results from the risk assessment for the pollutants of concern are then examined, focusing on population risk results based on central tendency exposure parameters. The risk assessment data are expressed as indicators of potential benefits, such as reduced cancer incidence or reduced potential for developing particular illnesses or abnormalities. Where possible, monetary values are assigned to these benefits using a benefits transfer approach.

To assign monetary values to cancer risk reduction estimates, we apply the value of a statistical life to the risk reduction expected to result from the MACT standards. The value of a statistical life is based on an individual's willingness to pay to reduce a risk of premature death or their willingness to accept increases in mortality risk. Because there are many different estimates of value of a statistical life in the economic literature, we estimate the reduced mortality benefits using a range of value of a statistical life estimates from 26 policy-relevant value-of-life studies. The estimated value of a statistical life figures from these studies range from $0.7 million to $15.9 million (adjusted to 1996 dollars), with a mean value of $5.6 million. The expected number of annual premature statistical deaths avoided are multiplied by the value of a statistical life estimate to determine the estimated monetary value of the mortality risk reductions.

A variety of approaches are used to evaluate the benefits associated with noncancer risk reductions. For particulate matter, both morbidity and mortality benefits are estimated. Particulate matter is the only non-carcinogen in the risk assessment for which there is sufficient dose-response information to estimate numbers of cases of disease and deaths from exposures. For lead and mercury, upper bound estimates of the population at risk are used. This is because information is only available on the potential of an adverse effect, with no estimates available on the likelihood of these effects.

We assign monetary values to noncancer benefits using a direct cost approach which focuses on the expenditures averted, and the opportunity cost of time spent in the hospital, by decreasing the occurrence of an illness or other health effect. While the willingness to pay approach used for valuing the cancer risk reductions is conceptually superior to the direct cost approach, measurement difficulties, such as estimating the severity of various illnesses, precludes us from using this approach here. Direct cost measures are expected to understate true benefits because they do not include cost of pain, suffering, and time lost. On the other hand, because we use upper bound estimates of the population at risk, we cannot conclude that the results are biased in one direction or the other.

c. Human Health Benefits—Results. Human health benefits are expected from both cancer and noncancer risk reductions. Less than one cancer case per year is expected to be avoided due to reduced emissions from combustion facilities. The majority of the cancer risk reductions are linked to consumption of dioxin-contaminated agricultural products exported beyond the boundaries of the study area. Less than one-third of the cancer risk reductions occur in local populations living near combustion facilities. Cancer risks for local populations are attributed primarily to reductions in arsenic and chromium emissions. These pollutants account for almost 85 percent of total local cancer incidences in the baseline. By applying value of a statistical life estimates to these cases, the total annual cancer risk reductions (benefits) in going from the baseline to the final standards, are valued at between $0.13 and $9.9 million, with a best estimate of approximately $2.02 million.

Across all receptor populations, individual cancer risks are greatest for subsistence farmers. Dioxin is the primary pollutant that drives the cancer risk for this sensitive receptor population. A lack of population data prevented us from quantifying benefits for this sub-population. It is possible, however, to characterize the reduction in risk from baseline to implementation of today's rule. With the exception of one particular scenario, the cancer risk for all subsistence farmers is reduced to below levels of concern after implementation of today's rule. Today's rule is also expected to result in lower cancer risks for children of subsistence farmers.

Most of the noncancer human health benefits from today's rule come from reductions in particulate matter. Some additional noncancer benefits come from reduced blood lead levels in children living near combustion facilities. Total annual noncancer benefits from quantifiable sources are valued at between $9.85 and $73.8 million, with a best estimate of about $17.2 million. Uncertainties implicit in the quantitative mercury analysis continue to be sufficiently great so as to limit its ultimate use in the monetization of noncancer benefits. Please review the Addendum and chapter six of the Assessment document for a complete discussion of human health benefits resulting from today's rule.

d. Ecological Benefits—Methodology. Ecological benefits are based on a screening analysis for ecological risks that compares soil, surface water, and sediment concentrations with eco-toxicological criteria based on *de minimis* thresholds for ecological effects. Because these criteria represent conservative values, an exceedance of the eco-toxicological criteria only indicates the potential for adverse ecological effects and does not necessarily indicate ecological damages. For this reason, benefits of avoiding adverse ecological impacts are discussed only in qualitative terms.

The basic approach for determining whether ecosystems or biota are potentially at risk consists of five steps: (1) Identify susceptible ecological receptors that represent relatively common species and communities of wildlife, (2) develop eco-toxicological criteria for receptors that represent acceptable pollutant concentrations, (3) estimate baseline and post-rule pollutant concentrations in sediments, soils, and surface waters of the study areas, (4) for each land area or water body modeled, compare the modeled media concentrations to ecologically protective levels to estimate eco-toxicological hazard quotients, and (5) total the land and water areas containing hazard quotients exceeding one and compare this number for the baseline and post-rule scenario. The reduction in the land and water area potentially at risk indicates a potential for avoiding adverse ecological impacts. Monetary values are not assigned to these potential benefits.

e. Ecological Benefits—Results. Ecological benefits are attributable primarily to reductions in dioxin and mercury for terrestrial ecosystems. For these ecosystems, hazard quotients are reduced to acceptable levels for approximately 115 to 150 square kilometers of land located within 20 kilometers of all combustion facilities. Ecological benefits associated with freshwater aquatic ecosystems are attributable to reductions in lead, with hazard quotients reduced to acceptable levels for approximately 35 to 40 square kilometers of these surface waters. These reductions of ecological risk criteria below levels of concern only indicates a potential for ecological improvement.

2. Waste Minimization Benefits

While many facilities may implement end-of-pipe controls such as fabric

filters and high-energy scrubbers to achieve MACT control, emission reductions may also be accomplished by reducing the volume or toxicity of wastes currently combusted. In addition, generators may also consider waste management alternatives such as solvent recycling. For purposes of this analysis, these types of responses will be referred to as ''waste minimization.'' This section summarizes the potential waste minimization benefits resulting from implementation of today's rule.

As today's rule is implemented, the costs of burning hazardous waste will increase, resulting in market incentives for greater waste minimization. To predict the quantity of waste that could be reallocated from combustion to waste minimization due to economic considerations, we conducted a comprehensive waste minimization analysis that considered in-process recycling, out-of-process recycling, and source reduction. The objective of the analysis was to predict the quantity of hazardous wastes that may be reallocated to these waste minimization alternatives under different combustion price increase scenarios.

Overall, the analysis shows that a variety of waste minimization alternatives are available for managing those hazardous waste streams that are currently combusted. The quantity projected to be reallocated from combustion to waste minimization alternatives, however, depends upon the expected price increase for combustion services. At potential price increases ranging from $10 to $20 per ton, as much as 240,000 tons of hazardous waste may be reallocated from combustion to waste minimization alternatives. This represents approximately 7 percent of the total quantity of hazardous waste currently combusted.

VI. What Considerations Were Given to Issues Like Equity and Children's Health?

By applicable statute and executive order, we are required to complete an analysis of today's rule with regard to equity considerations and other regulatory concerns. This section assesses the potential impacts of today's rule as it relates to environmental justice, children's health issues, and unfunded federal mandates. Small entity impacts are examined in a separate section.

A. Executive Order 12898, ''Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations'' (February 11, 1994)

This Order is designed to address the environmental and human health conditions of minority and low-income populations. To comply with the Executive Order, we have assessed whether today's rule may have disproportionate effects on minority populations or low-income populations. We have analyzed demographic data presented in the reports ''Race, Ethnicity, and Poverty Status of the Populations Living Near Cement Plants in the United States'' (EPA, August 1994) and ''Race, Ethnicity, and Poverty Status of the Populations Living Near Hazardous Waste Incinerators in the United States'' (EPA, October 1994). These reports examine the number of low-income and minority individuals living near a relatively large sample of cement kilns and hazardous waste incinerators and provide county, state, and national population percentages for various sub-populations. The demographic data in these reports provide several important findings when examined in conjunction with the risk reductions projected from today's rule.

We find that combustion facilities, in general, are not located in areas with disproportionately high minority and low-income populations. However, there is evidence that hazardous waste burning cement kilns are somewhat more likely to be located in areas that have relatively higher low-income populations. Furthermore, there are a small number of commercial hazardous waste incinerators located in highly urbanized areas where there is a disproportionately high concentration of minorities and low-income populations within one and five mile radii. The reduced emissions at these facilities due to today's rule could represent meaningful environmental and health improvements for these populations. Overall, today's rule should not result in any adverse environmental or health effects on minority or low-income populations. Any impacts on these populations are likely to be positive due to the reduction in emissions from combustion facilities near minority and low-income population groups. The Assessment document available in the RCRA docket established for today's rule presents the full Environmental Justice Analysis.

B. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997)

Executive Order 13045: ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Today's final rule is not subject to the Executive Order because it is not economically significant as defined under point one of the Order, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

The topic of environmental threats to children's health is growing in regulatory importance as scientists, policy makers, and village members continue to recognize the extent to which children are particularly vulnerable to environmental hazards. Recent EPA actions including today's rule, are in the forefront of addressing environmental threats to the health of children. The risk assessment conducted in support of today's rule indicates that children are the beneficiaries of much of the reduction in potential illnesses and other adverse effects associated with combustion facility emissions. The risk assessment used a multi-pathway and multi-constituent evaluation in order to examine potential effects of combined exposures on children. Setting environmental standards that address combined exposures and that are protective of the heightened risks faced by children are both goals named within EPA's ''National Agenda to Protect Children's Health from Environmental Threats.'' Areas for potential reductions in risks and related health effects that were identified by the risk assessment are all targeted as priority issues within EPA's September 1996 report, Environmental Health Threats to Children.

A few significant physiological characteristics are largely responsible for children's increased susceptibility to

environmental hazards. First, children eat proportionately more food, drink proportionately more fluids, and breathe more air per pound of body weight than do adults. As a result, children potentially experience greater levels of exposure to environmental threats than do adults. Second, because children's bodies are still in the process of development, their immune systems, neurological systems, and other immature organs can be more easily and considerably affected by environmental hazards. The connection between these physical characteristics and children's susceptibility to environmental threats are reflected in the higher baseline risk levels for children living near hazardous waste combustion facilities. The risk assessment addresses threats to children's health associated with hazardous waste combustion by evaluating reductions in risk for children as well as for adults and the population overall. For all exposed sub-populations, the assessment evaluated risks to four different age groups: 0 to 5 years, 6 to 11 years, 12 to 19 years, and adults over 20 years. Where possible, the risk assessment has provided both population and individual risk results for children. Both cancer and noncancer risks are examined across the age groups of children, focusing on the most susceptible sub-populations. The combined effects of several carcinogens, one of the goals named within the Agency's ''National Agenda to Protect Children's Health from Environmental Threats,'' were examined.

The key findings from the risk assessment indicate that children do not face significant cancer risks from hazardous waste combustion emissions. Only in the case of children of subsistence farmers do baseline cancer risks exceed 1×10^{-5} for the most highly exposed children. Implementation of the final standards would reduce these risks below levels of concern [352].

The analysis also found that much of the noncancer risk reductions resulting from implementation of today's rule may benefit children specifically. These are projected as a result of lower exposures to mercury, lead, and particulate matter, three types of pollutants addressed in the noncancer risk reductions which primarily affect children. Mercury emission reductions may reduce risks of developmental abnormalities in potential future offspring of recreational anglers and subsistence fishermen. In addition, particulate matter reductions may prevent some asthma attacks affecting children, but these benefits have not been quantified. Finally, reduced lead exposures for children are expected from today's rule. This benefit may help prevent cognitive and nervous system developmental abnormalities for children of the most highly exposed sub-populations, including subsistence fishermen and beef and dairy farmers. Analytical and data limitations prevented reasonable monetization of these findings.

C. Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104–4)

Executive Order 12875, ''Enhancing the Intergovernmental Partnership'' (October 26, 1993), calls on federal agencies to provide a statement supporting the need to issue any regulation containing an unfunded federal mandate and describing prior consultation with representatives of affected state, local, and tribal governments. Signed into law on March 22, 1995, the Unfunded Mandates Reform Act (UMRA) supersedes Executive Order 12875, reiterating the previously established directives while also imposing additional requirements for federal agencies issuing any regulation containing an unfunded mandate.

Today's rule is not subject to the requirements of sections 202, 204 and 205 of UMRA. In general, a rule is subject to the requirements of these sections if it contains ''Federal mandates'' that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. Today's final rule does not result in $100 million or more in expenditures. The aggregate annualized social costs for today's rule are projected to range from $50 to $63 million under the final standards.

For rules that are subject to the requirements of these sections, key requirements include a written statement with an analysis of benefits and costs; input from state, local and tribal governments; and selection of the least burdensome option (if allowed by law) or an explanation for the option selected. We recognize the potential for aggregate one-time capital expenditures to exceed $100 million in any one year should various industry sectors choose not to amortize capital expenditures. Under this scenario, the Assessment document for today's rule meets analytical requirements established under UMRA.

Today's rule is not subject to the requirements of section 203 of UMRA. Section 203 requires agencies to develop a small government Agency plan before establishing any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments. EPA has determined that this rule will not significantly or uniquely affect small governments. The small entity impacts analysis, presented in Appendix G of the final Assessment, found that no hazardous waste combustion units are owned by small governments.

Finally, because we are issuing today's rule under the statutory authority of the Clean Air Act, the rule should be exempt from all relevant requirements of the UMRA. In addition, compliance with the rule is voluntary for nonfederal governmental entities since state and local agencies choose whether or not to apply to EPA for the permitting authority necessary to implement today's rule.

VII. Is Today's Rule Cost Effective?

We have developed a cost-effectiveness measure that examines cost per unit reduction of emissions for each hazardous air pollutant, pollutant group, or surrogate. Cost-effectiveness measures are useful for comparing across different air pollution regulations. Moreover, we have typically used cost-effectiveness measures (defined as ''dollar-per-unit of pollutant removed'') to assess the decision to go beyond-the-floor for MACT standards.

Developing cost-effectiveness estimates for individual air pollutants assists us in making beyond-the-floor decisions for individual pollutants. The two analytic components of the individual cost-effectiveness analysis are: (1) Estimates of emission control expenditures per air pollutant for each regulatory option, and (2) estimates of emission reductions under each regulatory option. Individual cost-effectiveness measures for each MACT option are calculated as follows:

- HWC MACT Floor—Costs and emission reductions are incremental to the baseline,
- HWC MACT Final Standards—Costs and emission reductions are incremental to the MACT Floor, and
- Beyond-the-Floor—Activated Carbon Injection (ACI) MACT—Costs and emission reductions are incremental to the MACT Floor.

Single-level cost-effectiveness results across all HWC MACT options range

[352] Also, the analysis used the same approach to estimate cancer risks in both adults and children. However, individuals exposed to carcinogens in the first few years of life may be at increased risk of developing cancer. For this reason, we recognize that significant uncertainties and unknowns exist regarding the estimation of lifetime cancer risks in children. We also note that this analysis of cancer risks in children has not been externally peer reviewed.

from seven hundred dollars to $34.3 million per megagram reduced for all pollutants, individually, except dioxin. Dioxin control ranges from $25,000 to $903,000 per gram reduced. Dioxin control for incinerators to meet the floor standard is estimated at $903,000 per gram, with an additional $368,000 per gram to go from the floor to the final BTF TEQ standard. The control of SVM emitted from cement kilns is estimated to cost $67,000 per megagram from the baseline to the floor. Moving from the floor standard to the final BTF SVM standard for cement kilns is estimated to cost $502,000 per megagram. These results indicate that the more highly toxic pollutants such as dioxin are often much more expensive to control on a per-gram basis.

We did not apply cost-effectiveness alone in establishing beyond-the-floor levels for selected constituents regulated under the final HWC MACT standards. Several other measurement factors were incorporated into the beyond-the-floor decision, including: health benefits (especially those for children), regulatory precedent, cost-effectiveness of other MACT standards, and reliability of baseline data.

The method for calculating cost-effectiveness makes several simplifying assumptions. The two most important address the metrics employed for measuring cost-effectiveness and the actual methodology used to estimate the cost and emission reduction figures. Alternative measurement criteria for different constituents may lead to perceived distortions in scope. The cost-effectiveness methodology assumes that all facilities continue operating and install pollution control equipment or implement feed reductions to comply with the MACT standards. Both of these limiting assumptions may lead to overstatement or understatement of results. Other limitations that will influence these cost-effectiveness estimates include: (1) The feed control costing approach, which may lead to the overstatement of expenditures per pollutant due to the assumption of upper-bound cost estimates, (2) apportionment of costs, which are currently assigned according to the percentage reduction required to meet the standard for each pollutant controlled by the device, and (3) the assumption that units control emissions to the 70 percent design level.

VIII. How Do the Costs of Today's Rule Compare to the Benefits?

Comparing overall costs and benefits may help provide an assessment of this rule's overall efficiency and impacts on society. This section compares the total social costs of today's rule with its total monetized and nonmonetized benefits. The total annual monetized benefits of today's rule are estimated at $19.2 million (undiscounted) for the recommended final standards. These monetized benefits, however, may represent only a subset of potential avoided health effects, both cancer and noncancer cases. In comparison, the total annualized social costs of the rule are projected to range from $50 to $63 million. Social costs also include government administrative costs.

Across regulatory options, costs exceed monetized benefits more than two-fold. However, today's rule is expected to provide benefits that cannot be readily expressed in monetary terms. These benefits include health benefits to sensitive sub-populations such as subsistence anglers and improvements to terrestrial and aquatic ecological systems. When these benefits are taken into account, along with equity-enhancing effects such as environmental justice and impacts on children's health, the benefit-cost comparison becomes more complex but also more favorable. Consequently, the final regulatory decision becomes a policy judgment which takes into account efficiency as well as equity concerns and the positive direction of real, but unquantifiable, benefits.

IX. What Consideration Was Given to Small Businesses?

A. Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 USC 601 et seq.

This Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

We have determined that hazardous waste combustion facilities are not owned by small entities (local governments, tribes, etc.) other than businesses. Therefore, only businesses were analyzed. For the purposes of the impact analyses, small entity is defined either by the number of employees or by the dollar amount of sales. The level at which a business is considered small is determined for each Standard Industrial Classification (SIC) code by the Small Business Administration.[353]

Affected individual waste combustors (incinerators, cement kilns, and lightweight aggregate kilns) will bear the impacts of today's rule. These units will incur direct economic impacts as a result of today's rule. While not required under the Act and guidelines, we have also examined potential secondary impacts on small business units potentially affected by today's rule, such as hazardous waste generators and fuel blenders. Although hazardous waste combustors are the only group that would bear direct economic impacts from today's rule, this ''secondary impacts'' analysis was conducted because we assume that some portion of the burden would be passed on to customers of combustion facilities through price increases. This section describes the small entity analysis we conducted in support of today's rule.

B. Analytical Methodology

For combustors and blenders, we conducted facility-by-facility analyses of small businesses. We examined company data on employment and sales and then compared these data to statutory small business thresholds based on employment or annual sales, as defined for its industry by the Small Business Administration in 13 CFR part 121. Combustion or blender units where the facility or parent company data fell below the small business thresholds were classified as small businesses. The analysis was more complex for generators, however, because the rule may indirectly affect more than 11,000 generators. Given the large number of generators who would be affected by today's rule, it was necessary to conduct an initial, broad screening analysis to identify small business generators that might face significant secondary impacts. This screening analysis involved assigning each facility to an industry group, identifying industry groups that are dominated by small businesses, and then assuming that all generators in those small business dominated industries are small. Further analyses were then conducted on these groups or specific facilities.

We next compiled compliance cost data in an effort to establish a threshold for measuring ''significant economic impact.'' This threshold was set where compliance costs exceed one percent of

[353] SIC codes are used rather than the new NAICS codes because waste generator, blender, and combustor data were only available according to SIC code. However, a general conversion table containing NAICS codes for each reported SIC code is presented in the Assessment document.

facility gross sales. If costs do not exceed one percent of sales, then the regulation is unlikely to have a significant economic impact on small businesses within the category examined. Finally, we examined whether the significant economic impact (if any) would be borne by a ''substantial number'' of small businesses. If the regulation results in required compliance costs exceeding one percent of gross sales for more than 100 small businesses or 20 percent of all small businesses within the industry category examined, then the ''substantial number'' threshold is exceeded.

The cost of compliance with the new standards will determine the severity of impacts on small businesses. The costs to combustors used in this analysis coincide with the 70 percent engineering standard analyzed in the full economic assessment. The price increases experienced by generators and blenders were calculated on a per ton basis of waste shipped using 25 and 75 percent price pass-through scenarios. The price impacts were assumed to be uniform across facility types, with both generators and blenders experiencing the price pass-through effect. In practice, this pass through would likely be split between the two, depending on market factors. Note that the impacts from these price increases are indirect effects, as only hazardous waste combustors bear direct economic impact of today's rule.

C. Results—Direct Impacts

Only six facilities, out of the total universe of 172 hazardous waste combustion facilities, met the definition of small businesses. Of these six, two were found to experience annual compliance costs exceeding one percent of sales. Both of these facilities are owned by a common parent that qualifies as a small business. Therefore, this final rule affects a very limited number of small business combustors and has effects of greater than one percent on only two of these facilities (one business).

While the significant economic impact threshold was exceeded for two facilities (one corporation), these impacts do not extend to a substantial number of small entities. With just two facilities exceeding the one percent threshold, neither a substantial number of facilities nor a substantial fraction of an affected industry would face these impacts. After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities.

Although this final rule will not have a significant economic impact on a substantial number of directly impacted small entities, EPA nonetheless has assessed the potential of this rule to adversely impact small entities subject to the rule.

D. Results—Indirect Impacts

Direct impacts of the rule extend only to combustors of hazardous waste. To supplement our analysis, indirect impacts on generators and blenders were also examined. We understand that some portion of the combustor's compliance costs would most likely be passed on to generators and blenders, and we have made an effort to analyze these impacts in the spirit of the legislation.

We found that indirect economic effects on generators would not impose a significant impact on a substantial number of small generators. Under both price pass-through scenarios (25 and 75 percent), some generators exceeded the one percent cost as percentage of sales threshold for ''significant impacts.'' In no case, however, was the ''substantial number'' threshold exceeded. Under the 25 percent pass-through scenario, 18 generators had a cost as percentage of sales greater than one percent, but that accounts for only 0.85 percent of all small business generators. While the impact threshold was exceeded by 58 generators in the 75 percent pass through scenario, this is still less than the 100 entity threshold established for a substantial number. You should note that the sales thresholds were selected conservatively as the average sales for the smallest establishments in the SIC code.

Like generators, blenders do not incur direct costs as a result of the rule. However, they may bear a portion of its impact indirectly as costs are passed through from combustors. A total of 21 small business blenders were identified. Depending on the pass-through assumption, between six and 14 blenders exceed the significant impact threshold. Impacts for some of these facilities were found to represent a significant share of their annual gross sales.

Under the 25 percent price pass-through scenario, the number of blenders exceeding the cost as percentage of sales threshold do not represent a substantial number of facilities, either in absolute number or as a percentage of total blenders. Under the 75 percent scenario, however, the 14 establishments with cost as percentage of sales greater than one percent represent just over 20 percent of the 67 blenders identified for this analysis. In a few cases, the cost as percentage of sales could exceed 10 percent.

E. Key Assumptions and Limitations

This analysis was based on several simplifying assumptions. Four key assumptions may have the most significant impact on findings. First, not all small generators may be captured in our analysis of small business dominated industries. This exclusion may be offset by the fact that some generators who are not small may be incorporated in the small business dominated industries. Second, to calculate the benchmark sales for generators, we used average sales by four-digit SIC code for firms with fewer than 20 employees. This may understate economic impacts for the smallest firms in the industry while overstating impacts for larger firms. Third, compliance costs were assumed to be passed through almost completely to the shipper of the waste. This may overstate the impact on generators and blenders. Finally, we assumed that all waste currently managed by combustion continues to be disposed of in this manner. Impacts on combustors, generators, and blenders may be overstated if waste minimization or other lower cost alternatives are available.

Results from this report should also be evaluated within the context of some key analytical limitations. For example, in recent years there has been significant volatility in market behavior and pricing practices in the hazardous waste combustion industry. Furthermore, combustion prices have experienced a general downward tend since 1985 as a result of overcapacity in the market and slow growth in the generation of hazardous waste. Accounting for this price trend, the increase expected under today's rule may affect generators and blenders less significantly than anticipated. Finally, many hazardous waste generators may be more concerned about other aspects of waste management than with prices.

X. Were Derived Air Quality and Non-Air Impacts Considered?

The final Combustion MACT standards are projected to result in the reallocation and diversion of relatively small amounts of hazardous waste resulting in an unspecified increase in the level of fossil fuel substitution. This substitution with nonhazardous waste fuel sources may result in marginal increases in the annual number of mining and transport injuries, in addition to potential increased emissions of criteria pollutants (SO_x, NO_x, and CO_2). We recognize these

concerns but feel any potential non-air impacts are largely addressed through alternative regulatory or market scenarios. First, some of the hazardous waste reallocated from current combustors will likely be sent to other waste-burning facilities, thereby off-setting primary or supplementary fossil fuel usage. Even if fossil fuel burning does increase to some degree, these SO_2 and NO_x emissions are expected to be regulated under existing standards, *e.g.*, criteria pollutant emissions are currently addressed by the Clean Air Act. Finally, we find that even if fossil fuel use is increased, the risks to miners (primarily coal miners) are voluntary risks. Miners are compensated for these increased risks through wage premiums established in response to market dynamics and recurrent negotiations between union and corporate representatives.

While the primary environmental impact of the MACT standards are improvements in air quality resulting from emissions reductions at combustion facilities, other non-air environmental impacts also result from the rule. Namely, use of some air pollution control equipment and shifts in waste burning result in increased water, solid waste, and energy impacts. We did not assess the monetary costs of these impacts because we expect the incremental costs will be small relative to the total compliance costs of the rule. You are requested to review the Addendum prepared in support of today's final rule for an expanded discussion of these impacts.

XI. The Congressional Review Act (5 U.S.C. 801 et seq., as Added by the Small Business Regulatory Enforcement Fairness Act of 1996)

Is Today's Rule Subject to Congressional Review?

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective September 30, 1999.

XII. Paperwork Reduction Act (PRA), 5 U.S.C. 3501–3520

How Is the Paperwork Reduction Act Considered in Today's Rule?

The Office of Management and Budget (OMB) has approved the information collection requirements (ICR) contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control numbers 2050–0073 (''New and Amended RCRA Reporting and Recordkeeping Requirements for Boilers and Industrial Furnaces Burning Hazardous Waste'') for the RCRA provisions and 2060–0349 (''New and Amended Reporting and Recordkeeping Requirements for National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors'') for the CAA provisions.

EPA is required under section 112(d) of the Clean Air Act to regulate emissions of HAPs listed in section 112(b). The requested information is needed as part of the overall compliance and enforcement program. The ICR requires that affected sources retain records of parameter and emissions monitoring data at facilities for a period of five years, which is consistent with the General Provisions to 40 CFR part 63 and the permit requirements under 40 CFR part 70. All sources subject to this rule will be required to obtain operating permits either through the State-approved permitting program or, if one does not exist, in accordance with the provisions of 40 CFR part 71, when promulgated. Section 3007(b) of RCRA and 40 CFR part 2, subpart B, which defines EPA's general policy on the public disclosure of information, contain provisions for confidentiality.

The public reporting burden for this collection of information for the CAA provisions under OMB control number 2060–0349 is estimated to average 297 hours per respondent per year for an estimated 229 respondents. The annual public reporting and record keeping burden for collection of information is estimated to be 67,977 hours and a cost of approximately $1.6 million. The total annualized capital costs and total annualized operation and maintenance costs associated with these requirements are $15,000 and nearly $1.6 million, respectively.

The estimates for RCRA provisions under OMB control number 2050–0073 include an annual public reporting and record keeping burden *reduction* for collection of information of 131,228 hours and a cost burden *reduction* of $4.9 million. The reductions in total annualized capital costs and total annualized operation and maintenance costs associated with these requirements are $2.1 million and $2.8 million, respectively. The negative cost represents the reduced burden on 25 facilities getting out of the hazardous waste combustor universe due to the comparable fuels exemption. A further reduction in this RCRA information collection requirement burden will occur after three years when the combustors will start reporting under the CAA information collection requirements.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. EPA is amending the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information requirements contained in this final rule.

XIII. National Technology Transfer and Advancement Act of 1995 (Pub L. 104–113, § 12(d) (15 U.S.C. 272 Note)

Was the National Technology Transfer and Advancement Act Considered?

The rulemaking involves technical standards. Therefore, EPA conducted a search to identify potentially applicable voluntary consensus standards (VCS). However, we identified no such standards, and none were brought to our attention in the comments, that would ensure consistency throughout the regulated community. Our response-to-comments document discusses this determination. Therefore, we have decided to use the Air Methods contained in part 60, appendix A.

As noted in the proposed rule, the National Technology Transfer and Advancement Act of 1995 (NTTAA) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

In the proposal, we discussed the manual emission test methods that would be required for emission tests and calibration of continuous emission monitors and relied heavily on the BIF methods in 40 CFR part 266, appendix IX. On December 30, 1997, we published a NODA which in part questioned whether the task of determining the appropriate manual method tests to be used for compliance should be simplified. The stack sampling and analysis methods for hazardous waste combustors are under the current BIF and incinerator rules for compliance tests (with a few exceptions) that are located in SW–846. For compliance with the New Source Performance Standard and other air rules, methods are located in 40 CFR part 60, appendix A. Potentially, you could be required to perform two identical tests, one for compliance with MACT or RCRA and one for compliance with other air rules, using identical test methods simply because one method is an ''SW–846'' method and the other an ''air method.'' Further, the NODA stated that stack test methods hazardous waste combustors use for compliance should be found in one place to facilitate compliance. Therefore, we stated our intention to reference 40 CFR part 60, appendix A (Except for dioxin/furans, where we stated method 0023A of SW–846.), when it requires a specific stack-sampling test method.

Since the time of the proposal, we instituted the ''Performance-Based Measurement System.'' This system identifies performance related criteria that can be used to evaluate alternative methods. Methods determined to contain criteria or are a ''Methods-Based Parameters'' method are required, and are the only methods that can be used for regulatory tests.

Commenters generally supported use of the Air Methods contained in part 60, appendix A, or their ''SW–846'' equivalent. Furthermore, because these methods were used to establish the final standards contained in today's rulemaking, application of non approved methods would result in unreliable and inconsistent measurements. Therefore, today's rule will require the use of the Air Methods contained in part 60, appendix A. Section 63.7 describes procedures for the use of alternative test methods for MACT sources. This procedure involves using Method 301 of part 63, appendix A, to validate an alternate test method and submitting the data to us. We then decide if the proposed method is acceptable. Absent this approval under § 63.7 procedures, alternate methods cannot be used.

Today's rule, by requiring the use of only part 60, appendix A methods (method 0023A of SW–846 for dioxin/furans) for compliance determinations and particulate matter continuous emission monitor correlations, would maintain national consistency with the selection of specific manual stack sampling methods. We have determined that this approach would facilitate ease of implementation with today's ''self implementing'' MACT rule. Again, alternate methods may be approved by the Administrator via the provisions of § 63.7(f) and part § 63, appendix A, Method 301, Field Validation or Pollutant Measurement Methods from Various Waste Media.

XIV. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments (63 FR 27655)

Were Tribal Government Issues Considered?

The requirements of section 3(b) of Executive Order 13084 do not apply to this rule. They apply to rules that are not required by statute, that significantly or uniquely affect the communities of Indian tribal governments, and that impose substantial direct compliance costs on those communities. EPA cannot issue those rules unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments and gives required information to OMB. But today's rule does not significantly or uniquely affect the communities of Indian tribal governments.

For many of the same reasons described in the Unfunded Mandates Reform Act discussion (section VI.C above), the requirements of Executive Order 13084 do not apply to today's rule. Promulgation of today's rule is under the statutory authority of the CAA. Also, while Executive Order 13084 does not provide a specific gauge for determining whether a regulation ''significantly or uniquely affects'' an Indian tribal government, today's rule does not impose substantial direct compliance costs on tribal governments and their communities. Tribal communities are not predominantly located near hazardous waste combustion facilities, when compared with other communities throughout the nation. Finally, tribal governments will not be required to assume any permitting responsibilities associated with this final rule because permitting authority is voluntary for nonfederal government entities.

Shortly after forming the regulatory workgroup for this rulemaking in April 1994, we looked for ways to obtain the input of state, local, and tribal governments into the rulemaking process. As a result, representatives from four State environmental agencies agreed to participate in the workgroup. These representatives were asked to consider the impacts of this rule of the state, local, and tribal level. These representatives served on the workgroup until Final Agency Review in November 1998. As members of the workgroup, they participated in workgroup meetings and conference calls resulting in the development of rulemaking issues and their solutions. They also provided written comments on our work products on several occasions, including the proposal, the May 1997 NODA, and the Final Agency Review package.

In their comments on the proposal and subsequent notices of data availability, these representatives raised concerns over the following issues:

—Use of site-specific risk assessments under RCRA
—Continuous emissions monitors
—Manual sampling methods
—Compliance schedule
—Use of test data to establish operating limits
—Automatic waste feed cutoffs
—Performance testing schedule
—Recordkeeping requirements
—Permitting issues
—Assessment of potential costs and benefits
—Human health benefits
—Area sources
—Notification and reporting requirements
—Protectiveness of human health as required by RCRA
—Redundant requirements
—State authorization
—Public participation
—CAAA and RCRA coordination

—Adequate public comment
—Implementation flexibility
—Allocation of grants
—And many other technical issues

We addressed the issues raised by these four representatives to the fullest extent possible in today's rule. The comments received from these representatives are included in the rulemaking docket, together with all other comments received. We highlighted and addressed some of these comments in today's preamble. We responded to all comments in the Response to Comments document, which has been made available to the Office of Management and Budget and is available in the docket for today's rule.

Part Nine: Technical Amendments to Previous Regulations

I. Changes to the June 19, 1998 ''Fast-Track'' Rule

A. Permit Streamlining Section

Today's regulations correct a typographical error to § 270.42 Appendix I entry L(9) promulgated in the Fast-track rule. Entry L(9) incorrectly cited § 270.42(i), whereas today's regulations correctly amends entry L(9) to cite § 270.42(j).

B. Comparable Fuels Section

In the June 19th rule, we explained that our methodology for identifying the comparable fuels specifications was to select the highest benchmark fuel value in our data base for each constituent (see 63 FR at 33786). However, the results reported in the final rule—Table 1 to § 261.38—do not consistently follow our methodology. In several instances, the highest value was not presented in the table, as pointed out by commenters to the final rule. Therefore, in today's rule, we are amending the comparable fuels portion of the Fast-track rule to make necessary conforming changes to the comparable fuels specifications as listed in Table 1 of § 261.38—Detection and Detection Limit Values for Comparable Fuel Specifications. Please see the USEPA, ''Final Technical Support Document for HWC MACT Standards, Volume 4'' July 1999, for a detailed discussion of the changes to Table 1.

In addition, because these are technical corrections (i.e. corrections where we made arithmetic or other inadvertent mistakes in applying our stated methodology for calculating the comparative fuel levels) we find that giving notice and opportunity for public comment is unnecessary within the meaning of 5 U.S.C. 553 (b) (B). In fact, the errors were brought to our attention by an entity that applied the stated methodology and derived the correct values which we are restoring in this amendment. (We did, however, provide actual notice of these intended corrections to entities we believed most interested in the issue, so that these entities did have an opportunity for comment to us.) For the same reasons, we find that there is good cause for the rule to take effect immediately, rather than wait 30 days. See 5 U.S.C. 553 (d) (3). Finally, since notice and comment is unnecessary, this correction is not a ''rule'' for purposes of the Regulatory Flexibility Act (see 5 U.S.C. 601 (2)), and may take effect immediately before submission to Congress for review (see 5 U.S.C. 808 (2)).

List of Subjects

40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Aluminum, Ammonium sulfate plants, Batteries, Beverages, Carbon monoxide, Cement industry, Coal, Copper, Dry cleaners, Electric power plants, Fertilizers, Fluoride, Gasoline, Glass and glass products, Grains, Graphic arts industry, Heaters, Household appliances, Insulation, Intergovernmental relations, Iron, Labeling, Lead, Lime, Metallic and nonmetallic mineral processing plants, Metals, Motor vehicles, Natural gas, Nitric acid plants, Nitrogen dioxide, Paper and paper products industry, Particulate matter, Paving and roofing materials, Petroleum, Phosphate, Plastics materials and synthetics, Polymers, Reporting and recordkeeping requirements, Sewage disposal, Steel, Sulfur oxides, Sulfuric acid plants, Tires, Urethane, Vinyl, Volatile organic compounds, Waste treatment and disposal, Zinc.

40 CFR Part 63

Air pollution control, Hazardous substances, Incorporation by Reference, Reporting and recordkeeping requirements

40 CFR Part 260

Administrative practice and procedure, Confidential business information, Environmental protection, Hazardous waste.

40 CFR Part 261

Environmental Protection Hazardous waste, Recycling, Reporting and recordkeeping requirements.

40 CFR Part 264

Air pollution control, Environmental protection, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds.

40 CFR Part 265

Air pollution control, Environmental protection, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

40 CFR Part 266

Environmental protection, Energy, Hazardous waste, Recycling, Reporting and recordkeeping requirements.

40 CFR Part 270

Administrative practice and procedure, Confidential business information, Environmental Protection Agency, Hazardous materials transportation, Hazardous waste, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Part 271

Administrative practice and procedure, Confidential business information, Environmental Protection Agency, Hazardous materials transportation, Hazardous waste, Indians-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Dated: July 30, 1999.

Carol M. Browner,

Administrator..

For the reasons set out in the preamble, title 40 of the Code of Federal Regulations is amended as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401–7601.

2. Appendix A to part 60 is amended by adding a new entry for ''Method 5I'' in numerical order to read as follows:

Appendix A—Test Methods

* * * * *

Method 5I—Determination of Low Level Particulate Matter Emissions From Stationary Sources

Note: This method does not include all of the specifications (*e.g.*, equipment and supplies) and procedures (*e.g.*, sampling and analytical) essential to its performance. Certain information is contained in other EPA procedures found in this part. Therefore, to obtain reliable results, persons using this method should have experience with and a thorough knowledge of the following Methods: Methods 1, 2, 3, 4 and 5.

1. *Scope and Application.*

1.1 Analyte. Particulate matter (PM). No CAS number assigned.

1.2 Applicability. This method is applicable for the determination of low level particulate matter (PM) emissions from stationary sources. The method is most effective for total PM catches of 50 mg or less. This method was initially developed for performing correlation of manual PM measurements to PM continuous emission monitoring systems (CEMS), however it is also useful for other low particulate concentration applications.

1.3 Data Quality Objectives. Adherence to the requirements of this method will enhance the quality of the data obtained from air pollutant sampling methods. Method 5I requires the use of paired trains. Acceptance criteria for the identification of data quality outliers from the paired trains are provided in Section 12.2 of this Method.

2. *Summary of Method.*

2.1. Description. The system setup and operation is essentially identical to Method 5. Particulate is withdrawn isokinetically from the source and collected on a 47 mm glass fiber filter maintained at a temperature of 120 ± 14°C (248 ± 25°F). The PM mass is determined by gravimetric analysis after the removal of uncombined water. Specific measures in this procedure designed to improve system performance at low particulate levels include:

1. Improved sample handling procedures
2 Light weight sample filter assembly
3. Use of low residue grade acetone

Accuracy is improved through the minimization of systemic errors associated with sample handling and weighing procedures. High purity reagents, all glass, grease free, sample train components, and light weight filter assemblies and beakers, each contribute to the overall objective of improved precision and accuracy at low particulate concentrations.

2.2 Paired Trains. This method must be performed using a paired train configuration. These trains may be operated as co-located trains (to trains operating collecting from one port) or as simultaneous trains (separate trains operating from different ports at the same time). Procedures for calculating precision of the paired trains are provided in Section 12.

2.3 Detection Limit. a. Typical detection limit for manual particulate testing is 0.5 mg. This mass is also cited as the accepted weight variability limit in determination of ''constant weight'' as cited in Section 8.1.2 of this Method. EPA has performed studies to provide guidance on minimum PM catch. The minimum detection limit (MDL) is the minimum concentration or amount of an analyte that can be determined with a specified degree of confidence to be different from zero. We have defined the minimum or target catch as a concentration or amount sufficiently larger than the MDL to ensure that the results are reliable and repeatable. The particulate matter catch is the product of the average particulate matter concentration on a mass per volume basis and the volume of gas collected by the sample train. The tester can generally control the volume of gas collected by increasing the sampling time or to a lesser extent by increasing the rate at which sample is collected. If the tester has a reasonable estimate of the PM concentration from the source, the tester can ensure that the target catch is collected by sampling the appropriate gas volume.

b. However, if the source has a very low particulate matter concentration in the stack, the volume of gas sampled may need to be very large which leads to unacceptably long sampling times. When determining compliance with an emission limit, EPA guidance has been that the tester does not always have to collect the target catch. Instead, we have suggested that the tester sample enough stack gas, that if the source were exactly at the level of the emission standard, the sample catch would equal the target catch. Thus, if at the end of the test the catch were smaller than the target, we could still conclude that the source is in compliance though we might not know the exact emission level. This volume of gas becomes a target volume that can be translated into a target sampling time by assuming an average sampling rate. Because the MDL forms the basis for our guidance on target sampling times, EPA has conducted a systematic laboratory study to define what is the MDL for Method 5 and determined the Method to have a calculated practical quantitation limit (PQL) of 3 mg of PM and an MDL of 1 mg.

c. Based on these results, the EPA has concluded that for PM testing, the target catch must be no less than 3 mg. Those sample catches between 1 mg and 3 mg are between the detection limit and the limit of quantitation. If a tester uses the target catch to estimate a target sampling time that results in sample catches that are less than 3 mg, you should not automatically reject the results. If the tester calculated the target sampling time as described above by assuming that the source was at the level of the emission limit, the results would still be valid for determining that the source was in compliance. For purposes other than determining compliance, results should be divided into two categories—those that fall between 3 mg and 1 mg and those that are below 1 mg. A sample catch between 1 and 3 mg may be used for such purposes as calculating emission rates with the understanding that the resulting emission rates can have a high degree of uncertainty. Results of less than 1 mg should not be used for calculating emission rates or pollutant concentrations.

d. When collecting small catches such as 3 mg, bias becomes an important issue. Source testers must use extreme caution to reach the PQL of 3 mg by assuring that sampling probes are very clean (perhaps confirmed by low blank weights) before use in the field. They should also use low tare weight sample containers, and establish a well-controlled balance room to weigh the samples.

3. *Definitions.*

3.1 *Light Weight Filter Housing.* A smaller housing that allows the entire filtering system to be weighed before and after sample collection. (See. 6.1.3)

3.2 *Paired Train.* Sample systems trains may be operated as co-located trains (two sample probes attached to each other in the same port) or as simultaneous trains (two separate trains operating from different ports at the same time).

4. *Interferences.*

a. There are numerous potential interferents that may be encountered during performance of Method 5I sampling and analyses. This Method should be considered more sensitive to the normal interferents typically encountered during particulate testing because of the low level concentrations of the flue gas stream being sampled.

b. Care must be taken to minimize field contamination, especially to the filter housing since the entire unit is weighed (not just the filter media). Care must also be taken to ensure that no sample is lost during the sampling process (such as during port changes, removal of the filter assemblies from the probes, etc.).

c. Balance room conditions are a source of concern for analysis of the low level samples. Relative humidity, ambient temperatures variations, air draft, vibrations and even barometric pressure can affect consistent reproducible measurements of the sample media. Ideally, the same analyst who performs the tare weights should perform the final weights to minimize the effects of procedural differences specific to the analysts.

d. Attention must also be provided to weighing artifacts caused by electrostatic charges which may have to be discharged or neutralized prior to sample analysis. Static charge can affect consistent and reliable gravimetric readings in low humidity environments. Method 5I recommends a relative humidity of less than 50 percent in the weighing room environment used for sample analyses. However, lower humidity may be encountered or required to address sample precision problems. Low humidity conditions can increase the effects of static charge.

e. Other interferences associated with typical Method 5 testing (sulfates, acid gases, etc.) are also applicable to Method 5I.

5. *Safety.*

Disclaimer. This method may involve hazardous materials, operations, and equipment. This test method may not address all of the safety concerns associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to determine the applicability and observe all regulatory limitations before using this method.

6. *Equipment and Supplies.*

6.1 Sample Collection Equipment and Supplies. The sample train is nearly identical in configuration to the train depicted in Figure 5–1 of Method 5. The primary difference in the sample trains is the lightweight Method 5I filter assembly that attaches directly to the exit to the probe. Other exceptions and additions specific to Method 5I include:

6.1.1 Probe Nozzle. Same as Method 5, with the exception that it must be constructed of borosilicate or quartz glass tubing.

6.1.2 Probe Liner. Same as Method 5, with the exception that it must be

constructed of borosilicate or quartz glass tubing.

6.1.3 Filter Holder. The filter holder is constructed of borosilicate or quartz glass front cover designed to hold a 47-mm glass fiber filter, with a wafer thin stainless steel (SS) filter support, a silicone rubber or Viton O-ring, and Teflon tape seal. This holder design will provide a positive seal against leakage from the outside or around the filter. The filter holder assembly fits into a SS filter holder and attaches directly to the outlet of the probe. The tare weight of the filter, borosilicate or quartz glass holder, SS filter support, O-ring and Teflon tape seal generally will not exceed approximately 35 grams. The filter holder is designed to use a 47-mm glass fiber filter meeting the quality criteria in of Method 5. These units are commercially available from several source testing equipment vendors. Once the filter holder has been assembled, desiccated and tared, protect it from external sources of contamination by covering the front socket with a ground glass plug. Secure the plug with an impinger clamp or other item that will ensure a leak-free fitting.

6.2 Sample Recovery Equipment and Supplies. Same as Method 5, with the following exceptions:

6.2.1 Probe-Liner and Probe-Nozzle Brushes. Teflon® or nylon bristle brushes with stainless steel wire handles, should be used to clean the probe. The probe brush must have extensions (at least as long as the probe) of Teflon, nylon or similarly inert material. The brushes must be properly sized and shaped for brushing out the probe liner and nozzle.

6.2.2 Wash Bottles. Two Teflon wash bottles are recommended however, polyethylene wash bottles may be used at the option of the tester. Acetone should not be stored in polyethylene bottles for longer than one month.

6.2.3 Filter Assembly Transport. A system should be employed to minimize contamination of the filter assemblies during transport to and from the field test location. A carrying case or packet with clean compartments of sufficient size to accommodate each filter assembly can be used. This system should have an air tight seal to further minimize contamination during transport to and from the field.

6.3 Analysis Equipment and Supplies. Same as Method 5, with the following exception:

6.3.1 Lightweight Beaker Liner. Teflon or other lightweight beaker liners are used for the analysis of the probe and nozzle rinses. These light weight liners are used in place of the borosilicate glass beakers typically used for the Method 5 weighings in order to improve sample analytical precision.

6.3.2 Anti-static Treatment. Commercially available gaseous anti-static rinses are recommended for low humidity situations that contribute to static charge problems.

7. *Reagents and Standards.*

7.1 Sampling Reagents. The reagents used in sampling are the same as Method 5 with the following exceptions:

7.1.1 Filters. The quality specifications for the filters are identical to those cited for Method 5. The only difference is the filter diameter of 47 millimeters.

7.1.2 Stopcock Grease. Stopcock grease cannot be used with this sampling train. We recommend that the sampling train be assembled with glass joints containing O-ring seals or screw-on connectors, or similar.

7.1.3 Acetone. Low residue type acetone, ≤0.001 percent residue, purchased in glass bottles is used for the recovery of particulate matter from the probe and nozzle. Acetone from metal containers generally has a high residue blank and should not be used. Sometimes, suppliers transfer acetone to glass bottles from metal containers; thus, acetone blanks must be run prior to field use and only acetone with low blank values (≤0.001 percent residue, as specified by the manufacturer) must be used. Acetone blank correction is not allowed for this method; therefore, it is critical that high purity reagents be purchased and verified prior to use.

7.1.4 Gloves. Disposable, powder-free, latex surgical gloves, or their equivalent are used at all times when handling the filter housings or performing sample recovery.

7.2 Standards. There are no applicable standards or audit samples commercially available for Method 5I analyses.

8. *Sample Collection, Preservation, Storage, and Transport.*

8.1 Pretest Preparation. Same as Method 5 with several exceptions specific to filter assembly and weighing.

8.1.1 Filter Assembly. Uniquely identify each filter support before loading filters into the holder assembly. This can be done with an engraving tool or a permanent marker. Use powder free latex surgical gloves whenever handling the filter holder assemblies. Place the O-ring on the back of the filter housing in the O-ring groove. Place a 47 mm glass fiber filter on the O-ring with the face down. Place a stainless steel filter holder against the back of the filter. Carefully wrap 5 mm (¼ inch) wide Teflon'' tape one timearound the outside of the filter holder overlapping the stainless steel filter support by approximately 2.5 mm (⅛ inch). Gently brush the Teflon tape down on the back of the stainless steel filter support. Store the filter assemblies in their transport case until time for weighing or field use.

8.1.2 Filter Weighing Procedures. a. Desiccate the entire filter holder assemblies at 20 ± 5.6°C (68 ± 10°F) and ambient pressure for at least 24 hours. Weigh at intervals of at least 6 hours to a constant weight, *i.e.*, 0.5 mg change from previous weighing. Record the results to the nearest 0.1 mg. During each weighing, the filter holder assemblies must not be exposed to the laboratory atmosphere for a period greater than 2 minutes and a relative humidity above 50 percent. Lower relative humidity may be required in order to improve analytical precision. However, low humidity conditions increase static charge to the sample media.

b. Alternatively (unless otherwise specified by the Administrator), the filters holder assemblies may be oven dried at 105°C (220°F) for a minimum of 2 hours, desiccated for 2 hours, and weighed. The procedure used for the tare weigh must also be used for the final weight determination.

c. Experience has shown that weighing uncertainties are not only related to the balance performance but to the entire weighing procedure. Therefore, before performing any measurement, establish and follow standard operating procedures, taking into account the sampling equipment and filters to be used.

8.2 Preliminary Determinations. Select the sampling site, traverse points, probe nozzle, and probe length as specified in Method 5.

8.3 Preparation of Sampling Train. Same as Method 5, Section 8.3, with the following exception: During preparation and assembly of the sampling train, keep all openings where contamination can occur covered until justbefore assembly or until sampling is about to begin. Using gloves, place a labeled (identified) and weighed filter holder assembly into the stainless steel holder. Then place this whole unit in the Method 5 hot box, and attach it to the probe. Do not use stopcock grease.

8.4 Leak-Check Procedures. Same as Method 5.

8.5 Sampling Train Operation.

8.5.1. Operation. Operate the sampling train in a manner consistent with those described in Methods 1, 2, 4 and 5 in terms of the number of sample points and minimum time per point. The sample rate and total gas volume should be adjusted based on estimated grain loading of the source being characterized. The total sampling time must be a function of the estimated mass of particulate to be collected for the run. Targeted mass to be collected in a typical Method 5I sample train should be on the order of 10 to 20 mg. Method 5I is most appropriate for total collected masses of less than 50 milligrams, however, there is not an exact particulate loading cutoff, and it is likely that some runs may exceed 50 mg. Exceeding 50 mg (or less than 10 mg) for the sample mass does not necessarily justify invalidating a sample run if all other Method criteria are met.

8.5.2 Paired Train. This Method requires PM samples be collected with paired trains.

8.5.2.1 It is important that the systems be operated truly simultaneously. This implies that both sample systems start and stop at the same times. This also means that if one sample system is stopped during the run, the other sample systems must also be stopped until the cause has been corrected.

8.5.2.2 Care should be taken to maintain the filter box temperature of the paired trains as close as possible to the Method required temperature of 120 ± 14°C (248 ± 25°F). If separate ovens are being used for simultaneously operated trains, it is recommended that the oven temperature of each train be maintained within ± 14°C (± 25°F) of each other.

8.5.2.3 The nozzles for paired trains need not be identically sized.

8.5.2.4 Co-located sample nozzles must be within the same plane perpendicular to the gas flow. Co-located nozzles and pitot assemblies should be within a 6.0 cm × 6.0 cm square (as cited for a quadruple train in Reference Method 301).

8.5.3 Duplicate gas samples for molecular weight determination need not be collected.

8.6 Sample Recovery. Same as Method 5 with several exceptions specific to the filter housing.

8.6.1 Before moving the sampling train to the cleanup site, remove the probe from the train and seal the nozzle inlet and outlet of the probe. Be careful not to lose any condensate that might be present. Cap the filter inlet using a standard ground glass plug and secure the cap with an impinger clamp. Remove the umbilical cord from the last impinger and cap the impinger. If a flexible line is used between the first impinger condenser and the filter holder, disconnect the line at the filter holder and let any condensed water or liquid drain into the impingers or condenser.

8.6.2 Transfer the probe and filter-impinger assembly to the cleanup area. This area must be clean and protected from the wind so that the possibility of losing any of the sample will be minimized.

8.6.3 Inspect the train prior to and during disassembly and note any abnormal conditions such as particulate color, filter loading, impinger liquid color, etc.

8.6.4 Container No. 1, Filter Assembly. Carefully remove the cooled filter holder assembly from the Method 5 hot box and place it in the transport case. Use a pair of clean gloves to handle the filter holder assembly.

8.6.5 Container No. 2, Probe Nozzle and Probe Liner Rinse. Rinse the probe and nozzle components with acetone. Be certain that the probe and nozzle brushes have been thoroughly rinsed prior to use as they can be a source of contamination.

8.6.6 All Other Train Components. (Impingers) Same as Method 5.

8.7 Sample Storage and Transport. Whenever possible, containers should be shipped in such a way that they remain upright at all times. All appropriate dangerous goods shipping requirements must be observed since acetone is a flammable liquid.

9. *Quality Control.*

9.1 Miscellaneous Field Quality Control Measures.

9.1.1 A quality control (QC) check of the volume metering system at the field site is suggested before collecting the sample using the procedures in Method 5, Section 4.4.1.

9.1.2 All other quality control checks outlined in Methods 1, 2, 4 and 5 also apply to Method 5I. This includes procedures such as leak-checks, equipment calibration checks, and independent checks of field data sheets for reasonableness and completeness.

9.2 Quality Control Samples.

9.2.1 Required QC Sample. A laboratory reagent blank must be collected and analyzed for each lot of acetone used for a field program to confirm that it is of suitable purity. The particulate samples cannot be blank corrected.

9.2.2 Recommended QC Samples. These samples may be collected and archived for future analyses.

9.2.2.1 A field reagent blank is a recommended QC sample collected from a portion of the acetone used for cleanup of the probe and nozzle. Take 100 ml of this acetone directly from the wash bottle being used and place it in a glass sample container labeled ''field acetone reagent blank.'' At least one field reagent blank is recommended for every five runs completed. The field reagent blank samples demonstrate the purity of the acetone was maintained throughout the program.

9.2.2.2 A field bias blank train is a recommended QC sample. This sample is collected by recovering a probe and filter assembly that has been assembled, taken to the sample location, leak checked, heated, allowed to sit at the sample location for a similar duration of time as a regular sample run, leak-checked again, and then recovered in the same manner as a regular sample. Field bias blanks are not a Method requirement, however, they are recommended and are very useful for identifying sources of contamination in emission testing samples. Field bias blank train results greater than 5 times the method detection limit may be considered problematic.

10. *Calibration and Standardization* Same as Method 5, Section 5.

11. *Analytical Procedures.*

11.1 Analysis. Same as Method 5, Sections 11.1—11.2.4, with the following exceptions:

11.1.1 Container No. 1. Same as Method 5, Section 11.2.1, with the following exception: Use disposable gloves to remove each of the filter holder assemblies from the desiccator, transport container, or sample oven (after appropriate cooling).

11.1.2 Container No. 2. Same as Method 5, Section 11.2.2, with the following exception: It is recommended that the contents of Container No. 2 be transferred to a 250 ml beaker with a Teflon liner or similar container that has a minimal tare weight before bringing to dryness.

12. *Data Analysis and Calculations.*

12.1 Particulate Emissions. The analytical results cannot be blank corrected for residual acetone found in any of the blanks. All other sample calculations are identical to Method 5.

12.2 Paired Trains Outliers. a. Outliers are identified through the determination of precision and any systemic bias of the paired trains. Data that do not meet this criteria should be flagged as a data quality problem. The primary reason for performing dual train sampling is to generate information to quantify the precision of the Reference Method data. The relative standard deviation (RSD) of paired data is the parameter used to quantify data precision. RSD for two simultaneously gathered data points is determined according to:

$$RSD = 100\% * \left|\left(C_a - C_b\right)\right| / \left(C_a + C_b\right)$$

where, Ca and Cb are concentration values determined from trains A and B respectively. For RSD calculation, the concentration units are unimportant so long as they are consistent.

b. A minimum precision criteria for Reference Method PM data is that RSD for any data pair must be less than 10% as long as the mean PM concentration is greater than 10 mg/unit volume. If the mean PM concentration is less than 10 mg/unit volume higher RSD values are acceptable. At mean PM concentration of 1 mg/unit volume acceptable RSD for paired trains is 25%. Between 1 and 10 mg/unit volume acceptable RSD criteria should be linearly scaled from 25% to 10%. Pairs of manual method data exceeding these RSD criteria should be eliminated from the data set used to develop a PM CEMS correlation or to assess RCA.

13. *Method Performance. [Reserved]*

14. *Pollution Prevention. [Reserved]*

15. *Waste Management. [Reserved]*

16. *Alternative Procedures.* Same as Method 5.

17. *Bibliography.* Same as Method 5.

18. *Tables, Diagrams, Flowcharts and Validation Data.* Figure 5I–1 is a schematic of the sample train.

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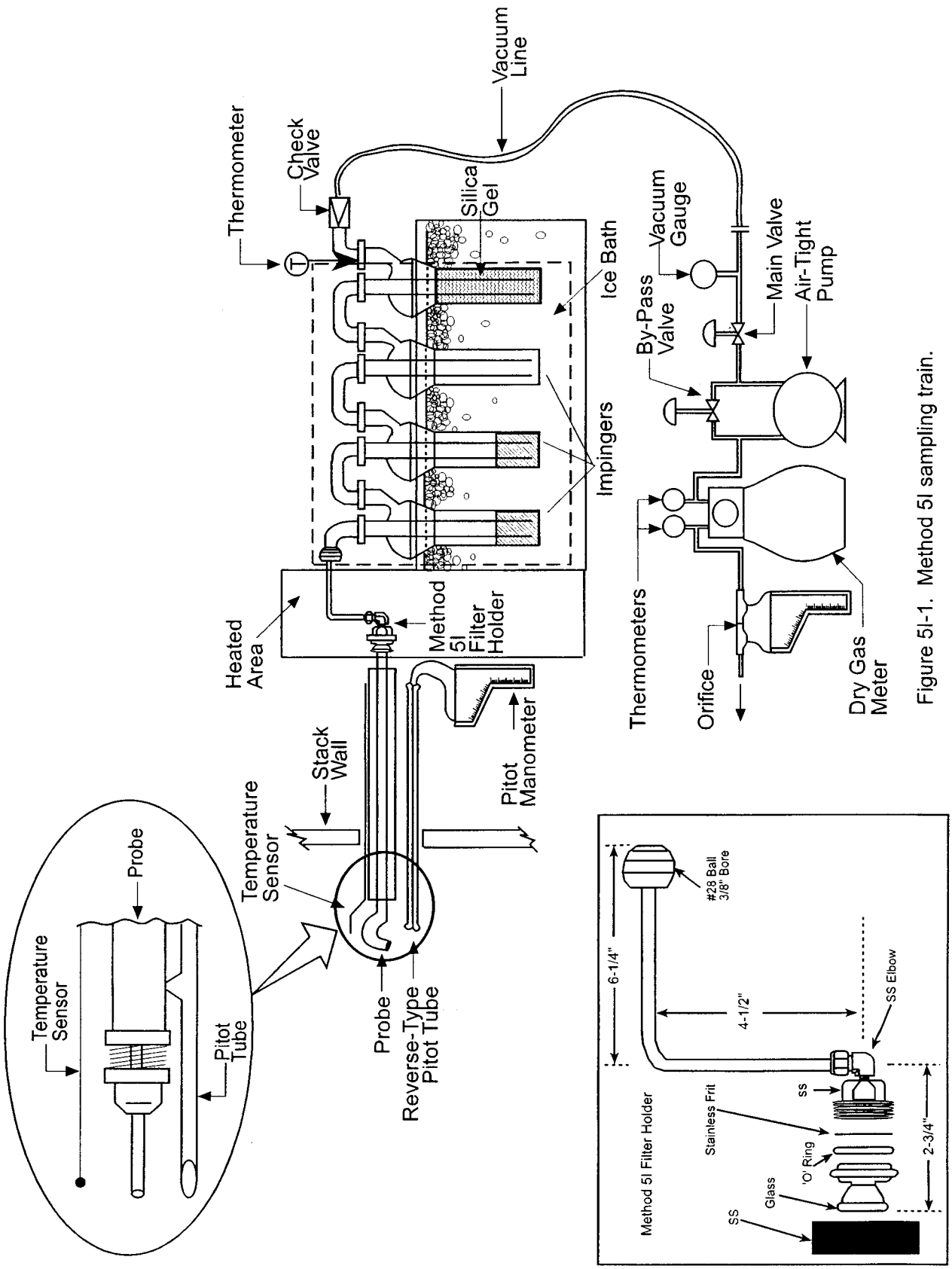

Figure 5I-1. Method 5I sampling train.

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3. Appendix B to part 60 is amended by adding Performance Specifications 4B and 8A in numerical order to read as follows:

Appendix B—Performance Specifications

* * * * *

Performance Specification 4B—-Specifications and test procedures for carbon monoxide and oxygen continuous monitoring systems in stationary sources

a. Applicability and Principle

1.1 Applicability. a. This specification is to be used for evaluating the acceptability of carbon monoxide (CO) and oxygen (O_2) continuous emission monitoring systems (CEMS) at the time of or soon after installation and whenever specified in the regulations. The CEMS may include, for certain stationary sources, (a) flow monitoring equipment to allow measurement of the dry volume of stack effluent sampled, and (b) an automatic sampling system.

b. This specification is not designed to evaluate the installed CEMS' performance over an extended period of time nor does it identify specific calibration techniques and auxiliary procedures to assess the CEMS' performance. The source owner or operator, however, is responsible to properly calibrate, maintain, and operate the CEMS. To evaluate the CEMS' performance, the Administrator may require, under section 114 of the Act, the operator to conduct CEMS performance evaluations at times other than the initial test.

c. The definitions, installation and measurement location specifications, test procedures, data reduction procedures, reporting requirements, and bibliography are the same as in PS 3 (for O_2) and PS 4A (for CO) except as otherwise noted below.

1.2 Principle. Installation and measurement location specifications, performance specifications, test procedures, and data reduction procedures are included in this specification. Reference method tests, calibration error tests, calibration drift tests, and interferant tests are conducted to determine conformance of the CEMS with the specification.

b. Definitions

2.1 *Continuous Emission Monitoring System (CEMS).* This definition is the same as PS 2 Section 2.1 with the following addition. A continuous monitor is one in which the sample to be analyzed passes the measurement section of the analyzer without interruption.

2.2 *Response Time.* The time interval between the start of a step change in the system input and when the pollutant analyzer output reaches 95 percent of the final value.

2.3 *Calibration Error (CE).* The difference between the concentration indicated by the CEMS and the known concentration generated by a calibration source when the entire CEMS, including the sampling interface is challenged. A CE test procedure is performed to document the accuracy and linearity of the CEMS over the entire measurement range.

3. Installation and Measurement Location Specifications

3.1 *The CEMS Installation and Measurement Location.* This specification is the same as PS 2 Section 3.1 with the following additions. Both the CO and O_2 monitors should be installed at the same general location. If this is not possible, they may be installed at different locations if the effluent gases at both sample locations are not stratified and there is no in-leakage of air between sampling locations.

3.1.1 *Measurement Location.* Same as PS 2 Section 3.1.1.

3.1.2 *Point CEMS.* The measurement point should be within or centrally located over the centroidal area of the stack or duct cross section.

3.1.3 *Path CEMS.* The effective measurement path should: (1) Have at least 70 percent of the path within the inner 50 percent of the stack or duct cross sectional area, or (2) be centrally located over any part of the centroidal area.

3.2 *Reference Method (RM) Measurement Location and Traverse Points.* This specification is the same as PS 2 Section 3.2 with the following additions. When pollutant concentration changes are due solely to diluent leakage and CO and O_2 are simultaneously measured at the same location, one half diameter may be used in place of two equivalent diameters.

3.3 *Stratification Test Procedure.* Stratification is defined as the difference in excess of 10 percent between the average concentration in the duct or stack and the concentration at any point more than 1.0 meter from the duct or stack wall. To determine whether effluent stratification exists, a dual probe system should be used to determine the average effluent concentration while measurements at each traverse point are being made. One probe, located at the stack or duct centroid, is used as a stationary reference point to indicate change in the effluent concentration over time. The second probe is used for sampling at the traverse points specified in Method 1 (40 CFR part 60 appendix A). The monitoring system samples sequentially at the reference and traverse points throughout the testing period for five minutes at each point.

d. Performance and Equipment Specifications

4.1 Data Recorder Scale. For O_2, same as specified in PS 3, except that the span must be 25 percent. The span of the O_2 may be higher if the O_2 concentration at the sampling point can be greater than 25 percent. For CO, same as specified in PS 4A, except that the low-range span must be 200 ppm and the high range span must be 3000 ppm. In addition, the scale for both CEMS must record all readings within a measurement range with a resolution of 0.5 percent.

4.2 *Calibration Drift.* For O_2, same as specified in PS 3. For CO, the same as specified in PS 4A except that the CEMS calibration must not drift from the reference value of the calibration standard by more than 3 percent of the span value on either the high or low range.

4.3 *Relative Accuracy (RA).* For O_2, same as specified in PS 3. For CO, the same as specified in PS 4A.

4.4 *Calibration Error (CE).* The mean difference between the CEMS and reference values at all three test points (see Table I) must be no greater than 5 percent of span value for CO monitors and 0.5 percent for O_2 monitors.

4.5 *Response Time.* The response time for the CO or O_2 monitor must not exceed 2 minutes.

e. Performance Specification Test Procedure

5.1 *Calibration Error Test and Response Time Test Periods.* Conduct the CE and response time tests during the CD test period.

F. The CEMS Calibration Drift and Response Time Test Procedures

The response time test procedure is given in PS 4A, and must be carried out for both the CO and O_2 monitors.

7. Relative Accuracy and Calibration Error Test Procedures

7.1 *Calibration Error Test Procedure.* Challenge each monitor (both low and high range CO and O_2) with zero gas and EPA Protocol 1 cylinder gases at three measurement points within the ranges specified in Table I.

TABLE I. CALIBRATION ERROR CONCENTRATION RANGES

Measurement point	CO Low range (ppm)	CO High range (ppm)	O_2 (%)
1	0–40	0–600	0–2
2	60–80	900–1200	8–10
3	140–160	2100–2400	14–16

Operate each monitor in its normal sampling mode as nearly as possible. The calibration gas must be injected into the sample system as close to the sampling probe outlet as practical and should pass through all CEMS components used during normal sampling. Challenge the CEMS three non-consecutive times at each measurement point and record the responses. The duration of each gas

injection should be sufficient to ensure that the CEMS surfaces are conditioned.

7.1.1 *Calculations.* Summarize the results on a data sheet. Average the differences between the instrument response and the certified cylinder gas value for each gas. Calculate the CE results according to:

$$CE = |d/FS| \times 100 \qquad (1)$$

where *d* is the mean difference between the CEMS response and the known reference concentration and *FS* is the span value.

7.2 *Relative Accuracy Test Procedure.* Follow the RA test procedures in PS 3 (for O_2) section 3 and PS 4A (for CO) section 4.

7.3 *Alternative RA Procedure.* Under some operating conditions, it may not be possible to obtain meaningful results using the RA test procedure. This includes conditions where consistent, very low CO emission or low CO emissions interrupted periodically by short duration, high level spikes are observed. It may be appropriate in these circumstances to waive the RA test and substitute the following procedure.

Conduct a complete CEMS status check following the manufacturer's written instructions. The check should include operation of the light source, signal receiver, timing mechanism functions, data acquisition and data reduction functions, data recorders, mechanically operated functions, sample filters, sample line heaters, moisture traps, and other related functions of the CEMS, as applicable. All parts of the CEMS must be functioning properly before the RA requirement can be waived. The instrument must also successfully passed the CE and CD specifications. Substitution of the alternate procedure requires approval of the Regional Administrator.

8. Bibliography

1. 40 CFR Part 266, Appendix IX, Section 2, ''Performance Specifications for Continuous Emission Monitoring Systems.''

* * * * *

Performance Specification 8A—Specifications and test procedures for total hydrocarbon continuous monitoring systems in stationary sources

1. Applicability and Principle

1.1 *Applicability.* These performance specifications apply to hydrocarbon (HC) continuous emission monitoring systems (CEMS) installed on stationary sources. The specifications include procedures which are intended to be used to evaluate the acceptability of the CEMS at the time of its installation or whenever specified in regulations or permits. The procedures are not designed to evaluate CEMS performance over an extended period of time. The source owner or operator is responsible for the proper calibration, maintenance, and operation of the CEMS at all times.

1.2 *Principle.* A gas sample is extracted from the source through a heated sample line and heated filter to a flame ionization detector (FID). Results are reported as volume concentration equivalents of propane. Installation and measurement location specifications, performance and equipment specifications, test and data reduction procedures, and brief quality assurance guidelines are included in the specifications. Calibration drift, calibration error, and response time tests are conducted to determine conformance of the CEMS with the specifications.

2. Definitions

2.1 *Continuous Emission Monitoring System (CEMS).* The total equipment used to acquire data, which includes sample extraction and transport hardware, analyzer, data recording and processing hardware, and software. The system consists of the following major subsystems:

2.1.1 *Sample Interface.* That portion of the system that is used for one or more of the following: Sample acquisition, sample transportation, sample conditioning, or protection of the analyzer from the effects of the stack effluent.

2.1.2 *Organic Analyzer.* That portion of the system that senses organic concentration and generates an output proportional to the gas concentration.

2.1.3 *Data Recorder.* That portion of the system that records a permanent record of the measurement values. The data recorder may include automatic data reduction capabilities.

2.2 *Instrument Measurement Range.* The difference between the minimum and maximum concentration that can be measured by a specific instrument. The minimum is often stated or assumed to be zero and the range expressed only as the maximum.

2.3 *Span or Span Value.* Full scale instrument measurement range. The span value must be documented by the CEMS manufacturer with laboratory data.

2.4 *Calibration Gas.* A known concentration of a gas in an appropriate diluent gas.

2.5 *Calibration Drift (CD).* The difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment takes place. A CD test is performed to demonstrate the stability of the CEMS calibration over time.

2.6 *Response Time.* The time interval between the start of a step change in the system input (e.g., change of calibration gas) and the time when the data recorder displays 95 percent of the final value.

2.7 *Accuracy.* A measurement of agreement between a measured value and an accepted or true value, expressed as the percentage difference between the true and measured values relative to the true value. For these performance specifications, accuracy is checked by conducting a calibration error (CE) test.

2.8 *Calibration Error (CE).* The difference between the concentration indicated by the CEMS and the known concentration of the cylinder gas. A CE test procedure is performed to document the accuracy and linearity of the monitoring equipment over the entire measurement range.

2.9 *Performance Specification Test (PST) Period.* The period during which CD, CE, and response time tests are conducted.

2.10 *Centroidal Area.* A concentric area that is geometrically similar to the stack or duct cross section and is no greater than 1 percent of the stack or duct cross-sectional area.

3. Installation and Measurement Location Specifications

3.1 *CEMS Installation and Measurement Locations.* The CEMS must be installed in a location in which measurements representative of the source's emissions can be obtained. The optimum location of the sample interface for the CEMS is determined by a number of factors, including ease of access for calibration and maintenance, the degree to which sample conditioning will be required, the degree to which it represents total emissions, and the degree to which it represents the combustion situation in the firebox (where applicable). The location should be as free from in-leakage influences as possible and reasonably free from severe flow disturbances. The sample location should be at least two equivalent duct diameters downstream from the nearest control device, point of pollutant generation, or other point at which a change in the pollutant concentration or emission rate occurs and at least 0.5 diameter upstream from the exhaust or control device. The equivalent duct diameter is calculated as per 40 CFR part 60, appendix A, method 1, section 2.1. If these criteria are not achievable or if the location is otherwise less than optimum, the possibility of stratification should be investigated as described in section 3.2. The measurement point must be within the centroidal area of the stack or duct cross section.

3.2 *Stratification Test Procedure.* Stratification is defined as a difference in excess of 10 percent between the average concentration in the duct or stack and the concentration at any point more than 1.0 meter from the duct or stack wall. To determine whether effluent stratification exists, a dual probe system should be used to determine the average effluent concentration while measurements at each traverse point are being made. One probe, located at the stack or duct centroid, is used as a stationary reference point to indicate the change in effluent concentration over time. The second probe is used for sampling at the traverse points specified in 40 CFR part 60 appendix A, method 1. The monitoring system samples sequentially at the reference and traverse points throughout the testing period for five minutes at each point.

4. CEMS Performance and Equipment Specifications

If this method is applied in highly explosive areas, caution and care must be exercised in choice of equipment and installation.

4.1 *Flame Ionization Detector (FID) Analyzer.* A heated FID analyzer capable of meeting or exceeding the requirements of these specifications. Heated systems must maintain the temperature of the sample gas between 150 °C (300 °F) and 175 °C (350 °F) throughout the system. This requires all system components such as the probe, calibration valve, filter, sample lines, pump, and the FID to be kept heated at all times such that no moisture is condensed out of the

system. The essential components of the measurement system are described below:

4.1.1 *Sample Probe.* Stainless steel, or equivalent, to collect a gas sample from the centroidal area of the stack cross-section.

4.1.2 *Sample Line.* Stainless steel or Teflon tubing to transport the sample to the analyzer.

Note: Mention of trade names or specific products does not constitute endorsement by the Environmental Protection Agency.

4.1.3 *Calibration Valve Assembly.* A heated three-way valve assembly to direct the zero and calibration gases to the analyzer is recommended. Other methods, such as quick-connect lines, to route calibration gas to the analyzers are applicable.

4.1.4 *Particulate Filter.* An in-stack or out-of-stack sintered stainless steel filter is recommended if exhaust gas particulate loading is significant. An out-of-stack filter must be heated.

4.1.5 *Fuel.* The fuel specified by the manufacturer (e.g., 40 percent hydrogen/60 percent helium, 40 percent hydrogen/60 percent nitrogen gas mixtures, or pure hydrogen) should be used.

4.1.6 *Zero Gas.* High purity air with less than 0.1 parts per million by volume (ppm) HC as methane or carbon equivalent or less than 0.1 percent of the span value, whichever is greater.

4.1.7 *Calibration Gases.* Appropriate concentrations of propane gas (in air or nitrogen). Preparation of the calibration gases should be done according to the procedures in EPA Protocol 1. In addition, the manufacturer of the cylinder gas should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change by more than ±2 percent from the certified value.

4.2 *CEMS Span Value.* 100 ppm propane. The span value must be documented by the CEMS manufacturer with laboratory data.

4.3 *Daily Calibration Gas Values.* The owner or operator must choose calibration gas concentrations that include zero and high-level calibration values.

4.3.1 The zero level may be between zero and 0.1 ppm (zero and 0.1 percent of the span value).

4.3.2 The high-level concentration must be between 50 and 90 ppm (50 and 90 percent of the span value).

4.4 *Data Recorder Scale.* The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEMS' measurement range and must have a resolution of 0.5 ppm (0.5 percent of span value).

4.5 *Response Time.* The response time for the CEMS must not exceed 2 minutes to achieve 95 percent of the final stable value.

4.6 *Calibration Drift.* The CEMS must allow the determination of CD at the zero and high-level values. The CEMS calibration response must not differ by more than ±3 ppm (±3 percent of the span value) after each 24-hour period of the 7-day test at both zero and high levels.

4.7 *Calibration Error.* The mean difference between the CEMS and reference values at all three test points listed below must be no greater than 5 ppm (±5 percent of the span value).

4.7.1 *Zero Level.* Zero to 0.1 ppm (0 to 0.1 percent of span value).

4.7.2 *Mid-Level.* 30 to 40 ppm (30 to 40 percent of span value).

4.7.3 *High-Level.* 70 to 80 ppm (70 to 80 percent of span value).

4.8 *Measurement and Recording Frequency.* The sample to be analyzed must pass through the measurement section of the analyzer without interruption. The detector must measure the sample concentration at least once every 15 seconds. An average emission rate must be computed and recorded at least once every 60 seconds.

4.9 *Hourly Rolling Average Calculation.* The CEMS must calculate every minute an hourly rolling average, which is the arithmetic mean of the 60 most recent 1-minute average values.

4.10 *Retest.* If the CEMS produces results within the specified criteria, the test is successful. If the CEMS does not meet one or more of the criteria, necessary corrections must be made and the performance tests repeated.

5. Performance Specification Test (PST) Periods

5.1 *Pretest Preparation Period.* Install the CEMS, prepare the PTM test site according to the specifications in section 3, and prepare the CEMS for operation and calibration according to the manufacturer's written instructions. A pretest conditioning period similar to that of the 7-day CD test is recommended to verify the operational status of the CEMS.

5.2 *Calibration Drift Test Period.* While the facility is operating under normal conditions, determine the magnitude of the CD at 24-hour intervals for seven consecutive days according to the procedure given in section 6.1. All CD determinations must be made following a 24-hour period during which no unscheduled maintenance, repair, or adjustment takes place. If the combustion unit is taken out of service during the test period, record the onset and duration of the downtime and continue the CD test when the unit resumes operation.

5.3 *Calibration Error Test and Response Time Test Periods.* Conduct the CE and response time tests during the CD test period.

6. Performance Specification Test Procedures

6.1 *Relative Accuracy Test Audit (RATA) and Absolute Calibration Audits (ACA).* The test procedures described in this section are in lieu of a RATA and ACA.

6.2 *Calibration Drift Test.*

6.2.1 *Sampling Strategy.* Conduct the CD test at 24-hour intervals for seven consecutive days using calibration gases at the two daily concentration levels specified in section 4.3. Introduce the two calibration gases into the sampling system as close to the sampling probe outlet as practical. The gas must pass through all CEM components used during normal sampling. If periodic automatic or manual adjustments are made to the CEMS zero and calibration settings, conduct the CD test immediately before these adjustments, or conduct it in such a way that the CD can be determined. Record the CEMS response and subtract this value from the reference (calibration gas) value. To meet the specification, none of the differences may exceed 3 percent of the span of the CEM.

6.2.2 *Calculations.* Summarize the results on a data sheet. An example is shown in Figure 1. Calculate the differences between the CEMS responses and the reference values.

6.3 *Response Time.* The entire system including sample extraction and transport, sample conditioning, gas analyses, and the data recording is checked with this procedure.

6.3.1 Introduce the calibration gases at the probe as near to the sample location as possible. Introduce the zero gas into the system. When the system output has stabilized (no change greater than 1 percent of full scale for 30 sec), switch to monitor stack effluent and wait for a stable value. Record the time (upscale response time) required to reach 95 percent of the final stable value.

6.3.2 Next, introduce a high-level calibration gas and repeat the above procedure. Repeat the entire procedure three times and determine the mean upscale and downscale response times. The longer of the two means is the system response time.

6.4 *Calibration Error Test Procedure.*

6.4.1 *Sampling Strategy.* Challenge the CEMS with zero gas and EPA Protocol 1 cylinder gases at measurement points within the ranges specified in section 4.7.

6.4.1.1 The daily calibration gases, if Protocol 1, may be used for this test.

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SOURCE:	DATE:
MONITOR:	LOCATION:
SERIAL NUMBER:	SPAN:

	DAY	DATE	TIME	CALIBRATION VALUE	MONITOR RESPONSE	DIFFE RENCE	PERCENT OF SPAN[1]
ZERO/ LOW LEVEL	1						
	2						
	3						
	4						
	5						
	6						
	7						
HIGH LEVEL	1						
	2						
	3						
	4						
	5						
	6						
	7						

1/ = Acceptance Criteria: ≤ 3% of span each day for seven days.

FIGURE 1: Calibration Drift Determination

BILLING CODE 6560–50–C

6.4.1.2 Operate the CEMS as nearly as possible in its normal sampling mode. The calibration gas should be injected into the sampling system as close to the sampling probe outlet as practical and must pass through all filters, scrubbers, conditioners, and other monitor components used during normal sampling. Challenge the CEMS three non-consecutive times at each measurement point and record the responses. The duration of each gas injection should be for a sufficient period of time to ensure that the CEMS surfaces are conditioned.

6.4.2 *Calculations.* Summarize the results on a data sheet. An example data sheet is shown in Figure 2. Average the differences between the instrument response and the certified cylinder gas value for each gas. Calculate three CE results according to Equation 1. No confidence coefficient is used in CE calculations.

7. Equations

Calibration Error. Calculate CE using Equation 1.

$$CE = |d/FS| \times 100 \qquad \text{(Eq. 1)}$$

Where:

d= Mean difference between CEMS response and the known reference concentration, determined using Equation 2.

$$d = \frac{1}{n}\sum_{i=1}^{n} d_i \qquad \text{(Eq. 2)}$$

Where:

d_i = Individual difference between CEMS response and the known reference concentration.

8. Reporting

At a minimum, summarize in tabular form the results of the CD, response time, and CE test, as appropriate. Include all data sheets, calculations, CEMS data records, and cylinder gas or reference material certifications.

BILLING CODE 6560–50–P

SOURCE:	DATE:
MONITOR:	LOCATION:
SERIAL NUMBER:	SPAN:

RUN NUMBER	CALIBRATION VALUE	MONITOR RESPONSE	DIFFERENCE		
			Zero/Low	Mid	High
1 - Zero					
2 - Mid					
3 - High					
4 - Mid					
5 - Zero					
6 - High					
7 - Zero					
8 - Mid					
9 - High					
		Mean Difference =			
		Calibration Error =	%	%	%

FIGURE 2: Calibration Error Determination

BILLING CODE 6560–50–C

9. References

1. Measurement of Volatile Organic Compounds-Guideline Series. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, EPA–450/2–78–041, June 1978.

2. Traceability Protocol for Establishing True Concentrations of Gases Used for Calibration and Audits of Continuous Source Emission Monitors (Protocol No. 1). U.S. Environmental Protection Agency ORD/EMSL, Research Triangle Park, North Carolina, 27711, June 1978.

3. Gasoline Vapor Emission Laboratory Evaluation-Part 2. U.S. Environmental Protection Agency, OAQPS, Research Triangle Park, North Carolina, 27711, EMB Report No. 76–GAS–6, August 1975.

* * * * *

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. Part 63, subpart EEE, is revised to read as follows:

Subpart EEE—National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors

General

Sec.
63.1200 Who is subject to these regulations?
63.1201 Definitions and acronyms used in this subpart.
63.1202 [Reserved]

Emissions Standards and Operating Limits

63.1203 What are the standards for hazardous waste incinerators?
63.1204 What are the standards for hazardous waste burning cement kilns?
63.1205 What are the standards for hazardous waste burning lightweight aggregate kilns?

Monitoring and Compliance Provisions

63.1206 When and how must you comply with the standards and operating requirements?
63.1207 What are the performance testing requirements?
63.1208 What are the test methods?
63.1209 What are the monitoring requirements?

Notification, Reporting and Recordkeeping

63.1210 What are the notification requirements?
63.1211 What are the recordkeeping and reporting requirements?
63.1212 What are the other requirements pertaining to the NIC and associated progress reports?

Other

63.1213 How can the compliance date be extended to install pollution prevention or waste minimization controls?
Table 1 to Subpart EEE of Part 63—General Provisions Applicable to Subpart EEE
Appendix A to Subpart EEE—Quality Assurance Procedures for Continuous Emissions Monitors Used for Hazardous Waste Combustors

Subpart EEE—National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors General

§ 63.1200 Who is subject to these regulations?

The provisions of this subpart apply to all hazardous waste combustors: hazardous waste incinerators, hazardous waste burning cement kilns, and hazardous waste burning lightweight aggregate kilns, except as provided in Table 1 of this section. Hazardous waste combustors are also subject to applicable requirements under parts 260–270 of this chapter.

(a) *What if I am an area source?* (1) Both area sources and major sources are subject to this subpart.

(2) Both area sources and major sources, not previously subject to title V, are immediately subject to the requirement to apply for and obtain a title V permit in all States, and in areas covered by part 71 of this chapter.

(b) These regulations in this subpart do not apply to sources that meet the criteria in Table 1 of this Section, as follows:

TABLE 1 TO § 63.1200.— HAZARDOUS WASTE COMBUSTORS EXEMPT FROM SUBPART EEE

If	And if	Then
(1) You are a previously affected source	(i) You ceased feeding hazardous waste for a period of time greater than the hazardous waste residence time (*i.e.,* hazardous waste no longer resides in the combustion chamber);. (ii) You are in compliance with the closure requirements of subpart G, parts 264 or 265 of this chapter;. (iii) You begin complying with the requirements of all other applicable standards of this part (Part 63); and. (iv) You notify the Administrator in writing that you are no longer an affected source under this subpart (Subpart EEE).	You are no longer subject to this subpart (Subpart EEE).
(2) You are a research, development, and demonstration source.	You operate for no longer than one year after first burning hazardous waste (Note that the Administrator can extent this one-year restriction on a case-by-case basis upon your written request documenting when you first burned hazardous waste and the justification for needing additional time to perform research, development, or demonstration operations.).	You are not subject to this subpart (Subpart EEE). This exemption applies even if there is a hazardous waste combustor at the plant site that is regulated under this subpart. You still, however, remain subject to § 270.65 of this chapter.
(3) The only hazardous wastes you burn are exempt from regulation under § 266.100(b) of this chapter.	.....	You are not subject to the requirements of this subpart (Subpart EEE).

(c) Table 1 of this section specifies the provisions of subpart A (General Provisions, §§ 63.1–63.15) that apply and those that do not apply to sources affected by this subpart.

§ 63.1201 Definitions and acronyms used in this subpart.

(a) The terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Air pollution control system means the equipment used to reduce the release of particulate matter and other pollutants to the atmosphere.

Automatic waste feed cutoff (AWFCO) system means a system comprised of cutoff valves, actuator, sensor, data manager, and other necessary components and electrical circuitry designed, operated and maintained to stop the flow of hazardous waste to the combustion unit automatically and immediately (except as provided by § 63.1206(c)(2)(viii)) when any operating requirement is exceeded.

By-pass duct means a device which diverts a minimum of 10 percent of a cement kiln's off gas, or a device which the Administrator determines on a case-by-case basis diverts a sample of kiln gas that contains levels of carbon monoxide or hydrocarbons representative of the levels in the kiln.

Combustion chamber means the area in which controlled flame combustion of hazardous waste occurs.

Continuous monitor means a device which continuously samples the regulated parameter specified in § 63.1209 without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the CEMS Performance Specifications in appendix B, part 60 of this chapter.

Dioxin/furan and dioxins and furans mean tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans.

Existing source means any affected source that is not a new source.

Feedrate operating limits means limits on the feedrate of materials (*e.g.*, metals, chlorine) to the combustor that are established based on comprehensive performance testing. The limits are established and monitored by knowing the concentration of the limited material (*e.g.*, chlorine) in each feedstream and the flowrate of each feedstream.

Feedstream means any material fed into a hazardous waste combustor, including, but not limited to, any pumpable or nonpumpable solid, liquid, or gas.

Flowrate means the rate at which a feedstream is fed into a hazardous waste combustor.

Hazardous waste is defined in § 261.3 of this chapter.

Hazardous waste burning cement kiln means a rotary kiln and any associated preheater or precalciner devices that produce clinker by heating limestone and other materials for subsequent production of cement for use in commerce, and that burns hazardous waste at any time.

Hazardous waste combustor means a hazardous waste incinerator, hazardous waste burning cement kiln, or hazardous waste burning lightweight aggregate kiln.

Hazardous waste incinerator means a device defined as an incinerator in § 260.10 of this chapter and that burns hazardous waste at any time.

Hazardous waste lightweight aggregate kiln means a rotary kiln that produces clinker by heating materials such as slate, shale and clay for subsequent production of lightweight aggregate used in commerce, and that burns hazardous waste at any time.

Hazardous waste residence time means the time elapsed from cutoff of the flow of hazardous waste into the combustor (including, for example, the time required for liquids to flow from the cutoff valve into the combustor) until solid, liquid, and gaseous materials from the hazardous waste, excluding residues that may adhere to combustion chamber surfaces, exit the combustion chamber. For combustors with multiple firing systems whereby the residence time may vary for the firing systems, the hazardous waste residence time for purposes of complying with this subpart means the longest residence time for any firing system in use at the time of waste cutoff.

Initial comprehensive performance test means the comprehensive performance test that is used as the basis for initially demonstrating compliance with the standards.

In-line kiln raw mill means a hazardous waste burning cement kiln design whereby kiln gas is ducted through the raw material mill for portions of time to facilitate drying and heating of the raw material.

Instantaneous monitoring means continuously sampling, detecting, and recording the regulated parameter without use of an averaging period.

Monovent means an exhaust configuration of a building or emission control device (*e.g.* positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (*i.e.*, length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

MTEC means maximum theoretical emissions concentration of metals or HCl/Cl, expressed as μg/dscm, and is calculated by dividing the feedrate by the gas flowrate.

New source means any affected source the construction or reconstruction of which is commenced after April 19, 1996.

One-minute average means the average of detector responses calculated at least every 60 seconds from responses obtained at least every 15 seconds.

Operating record means a documentation retained at the facility for ready inspection by authorized officials of all information required by the standards to document and maintain compliance with the applicable regulations, including data and information, reports, notifications, and communications with regulatory officials.

Operating requirements means operating terms or conditions, limits, or operating parameter limits developed under this subpart that ensure compliance with the emission standards.

Raw material feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to a cement or lightweight aggregate kiln. Raw material feed does not include the fuels used in the kiln to produce heat to form the clinker product.

Research, development, and demonstration source means a source engaged in laboratory, pilot plant, or prototype demonstration operations:

(1) Whose primary purpose is to conduct research, development, or short-term demonstration of an innovative and experimental hazardous waste treatment technology or process; and

(2) Where the operations are under the close supervision of technically-trained personnel.

Rolling average means the average of all one-minute averages over the averaging period.

Run means the net period of time during which an air emission sample is collected under a given set of operating conditions. Three or more runs constitutes a test. Unless otherwise specified, a run may be either intermittent or continuous.

Run average means the average of the one-minute average parameter values for a run.

TEQ means toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.

You means the owner or operator of a hazardous waste combustor.

(b) The acronyms used in this subpart refer to the following:

AWFCO means automatic waste feed cutoff.

CAS means chemical abstract services registry.

CEMS means continuous emissions monitoring system.

CMS means continuous monitoring system.

DRE means destruction and removal efficiency.

MACT means maximum achievable control technology.

MTEC means maximum theoretical emissions concentration.

NIC means notification of intent to comply.

§ 63.1202 [Reserved]

Emissions Standards and Operating Limits

§ 63.1203 What are the standards for hazardous waste incinerators?

(a) *Emission limits for existing sources* You must not discharge or cause combustion gasses to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400°F or lower based on the average of the test run average temperatures; [1]

(2) Mercury in excess of 130 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 240 ''g/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 97 ''g/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in excess of 10 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 77 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 34 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) Dioxins and furans in excess of 0.20 ng TEQ/dscm, corrected to 7 percent oxygen;

(2) Mercury in excess of 45 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 24 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in excess of 10 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 21 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 34 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard.* (1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$\mathrm{DRE} = \left[1 - \left(\mathrm{W_{out}} / \mathrm{W_{in}}\right)\right] \times 100\%$$

Where:

W_{in}=mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}=mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27 (see § 261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetro-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60, for each waste to be burned. You must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

[1] For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400°F or lower requirement.

(e) *Air emission standards for equipment leaks, tanks, surface impoundments, and containers.* You are subject to the air emission standards of subparts BB and CC, part 264, of this chapter.

§ 63.1204 What are the standards for hazardous waste burning cement kilns?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400°F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 120 μg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 240 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 56 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) Carbon monoxide and hydrocarbons. (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Carbon monoxide in the by-pass duct or midkiln gas sampling system in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in the by-pass duct in excess of 10 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(B) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) Carbon monoxide in the main stack in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in the main stack in excess of 20 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7).

(6) Hydrochloric acid and chlorine gas in excess of 130 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis, corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 0.15 kg/Mg dry feed and opacity greater than 20 percent.

(i) You must use suitable methods to determine the kiln raw material feedrate.

(ii) Except as provided in paragraph (a)(7)(iii) of this section, you must compute the particulate matter emission rate, E, from the following equation:

$$E = \left(C_s \times Q_{sd}\right)/P$$

where:

E = emission rate of particulate matter, kg/Mg of kiln raw material feed;

C_s = concentration of particulate matter, kg/dscm;

Q_{sd} = volumetric flowrate of effluent gas, dscm/hr;

P = total kiln raw material feed (dry basis), Mg/hr.

(iii) If you operate a preheater or preheater/precalciner kiln with dual stacks, you must test simultaneously and compute the combined particulate matter emission rate, E_c, from the following equation:

$$E_c = \left(C_{sk} \times Q_{sdk} + C_{sb} \times Q_{sdb}\right)/P$$

where:

E_c = the combined emission rate of particulate matter from the kiln and bypass stack, kg/Mg of kiln raw material feed;

C_{sk} = concentration of particulate matter in the kiln effluent, kg/dscm;

Q_{sdk} = volumetric flowrate of kiln effluent gas, dscm/hr;

C_{sb} = concentration of particulate matter in the bypass stack effluent, kg/dscm;

Q_{sdb} = volumetric flowrate of bypass stack effluent gas, dscm/hr;

P = total kiln raw material feed (dry basis), Mg/hr.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 56 μg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 180 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 54 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) Carbon monoxide and hydrocarbons. (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, carbon monoxide and hydrocarbons emissions are limited in both the bypass duct or midkiln gas sampling system and the main stack as follows:

(A) Emissions in the by-pass or midkiln gas sampling system are limited to either:

(*1*) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in excess of 10 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(*2*) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; and

(B) Hydrocarbons in the main stack are limited, if construction of the kiln

commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, hydrocarbons and carbon monoxide are limited in the main stack to either:

(A) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) (*1*) Carbon monoxide not exceeding 100 part per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen; and

(*2*) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); and

(*3*) If construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, hydrocarbons are limited to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrochloric acid and chlorine gas in excess of 86 parts per million, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 0.15 kg/Mg dry feed and opacity greater than 20 percent.

(i) You must use suitable methods to determine the kiln raw material feedrate.

(ii) Except as provided in paragraph (a)(7)(iii) of this section, you must compute the particulate matter emission rate, E, from the equation specified in paragraph (a)(7)(ii) of this section.

(iii) If you operate a preheater or preheater/precalciner kiln with dual stacks, you must test simultaneously and compute the combined particulate matter emission rate, Ec, from the equation specified in paragraph (a)(7)(iii) of this section.

(c) *Destruction and removal efficiency (DRE) standard*—(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$\mathrm{DRE} = \left[1 - \left(W_{out} / W_{in}\right)\right] \times 100\%$$

Where:

W_{in}=mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}=mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27 (see § 261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetro-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to burn hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60, for each waste to be burned. You must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information.

(d) *Cement kilns with in-line kiln raw mills*—(1) *General.* (i) You must conduct performance testing when the raw mill is on-line and when the mill is off-line to demonstrate compliance with the emission standards, and you must establish separate operating parameter limits under § 63.1209 for each mode of operation, except as provided by paragraph (d)(1)(iv) of this section.

(ii) You must document in the operating record each time you change from one mode of operation to the alternate mode and begin complying with the operating parameter limits for that alternate mode of operation.

(iii) You must establish rolling averages for the operating parameter limits anew (*i.e.,* without considering previous recordings) when you begin complying with the operating limits for the alternate mode of operation.

(iv) If your in-line kiln raw mill has dual stacks, you may assume that the dioxin/furan emission levels in the by-pass stack and the operating parameter limits determined during performance testing of the by-pass stack when the raw mill is off-line are the same as when the mill is on-line.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emission standards on a time-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the time-weighted average emission concentration with the following equation:

Where:

C_{total}=time-weighted average concentration of a regulated constituent considering both raw mill on time and off time.

$C_{mill\text{-}off}$=average performance test concentration of regulated constituent with the raw mill off-line.

$C_{mill\text{-}on}$=average performance test concentration of regulated constituent with the raw mill on-line.

$T_{mill\text{-}off}$=time when kiln gases are not routed through the raw mill

$T_{mill\text{-}on}$=time when kiln gases are routed through the raw mill

$$C_{total} = \left\{C_{mill\text{-}off} \times \left(T_{mill\text{-}off} / \left(T_{mill\text{-}off} + T_{mill\text{-}on}\right)\right)\right\} + \left\{C_{mill\text{-}on} \times \left(T_{mill\text{-}on} / \left(T_{mill\text{-}off} + T_{mill\text{-}on}\right)\right)\right\}$$

(ii) *Compliance.* (A) If you use this emission averaging provision, you must document in the operating record compliance with the emission standards on an annual basis by using the equation provided by paragraph (d)(2) of this section.

(B) Compliance is based on one-year block averages beginning on the day you submit the initial notification of compliance.

(iii) *Notification.* (A) If you elect to document compliance with one or more emission standards using this emission averaging provision, you must notify the Administrator in the initial comprehensive performance test plan submitted under § 63.1207(e).

(B) You must include historical raw mill operation data in the performance test plan to estimate future raw mill down-time and document in the performance test plan that estimated emissions and estimated raw mill down-time will not result in an exceedance of an emission standard on an annual basis.

(C) You must document in the notification of compliance submitted under § 63.1207(j) that an emission standard will not be exceeded based on the documented emissions from the performance test and predicted raw mill down-time.

(e) *Preheater or preheater/precalciner kilns with dual stacks.*—(1) *General.* You must conduct performance testing on each stack to demonstrate compliance with the emission standards, and you must establish operating parameter limits under § 63.1209 for each stack, except as provided by paragraph (d)(1)(iv) of this section for dioxin/furan emissions testing and operating parameter limits for the by-pass stack of in-line raw mills.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emission standards specified in this section on a gas flowrate-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the gas flowrate-weighted average emission concentration using the following equation:

$$C_{tot} = \left\{C_{main} \times \left(Q_{main} / \left(Q_{main} + Q_{bypass}\right)\right)\right\} + \left\{C_{bypass} \times \left(Q_{bypass} / \left(Q_{main} + Q_{bypass}\right)\right)\right\}$$

Where

C_{tot}=gas flowrate-weighted average concentration of the regulated constituent

C_{main}=average performance test concentration demonstrated in the main stack

C_{bypass}=average performance test concentration demonstrated in the bypass stack

Q_{main}=volumetric flowrate of main stack effluent gas

Q_{bypass}=volumetric flowrate of bypass effluent gas

(ii) *Compliance.* (A) You must demonstrate compliance with the emission standard(s) using the emission concentrations determined from the performance tests and the equation provided by paragraph (e)(1) of this section; and

(B) You must develop operating parameter limits for bypass stack and main stack flowrates that ensure the emission concentrations calculated with the equation in paragraph (e)(1) of this section do not exceed the emission standards on a 12-hour rolling average basis. You must include these flowrate limits in the Notification of Compliance.

(iii) *Notification.* If you elect to document compliance under this emissions averaging provision, you must:

(A) Notify the Administrator in the initial comprehensive performance test plan submitted under § 63.1207(e). The performance test plan must include, at a minimum, information describing the flowrate limits established under paragraph (e)(2)(ii)(B) of this section; and

(B) Document in the Notification of Compliance submitted under § 63.1207(j) the demonstrated gas flowrate-weighted average emissions that you calculate with the equation provided by paragraph (e)(2) of this section.

(f) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(g) *Air emission standards for equipment leaks, tanks, surface impoundments, and containers.* You are subject to the air emission standards of subparts BB and CC, part 264, of this chapter.

(h) When you comply with the particulate matter requirements of paragraphs (a)(7) or (b)(7) of this section, you are exempt from the New Source Performance Standard for particulate matter and opacity under § 60.60 of this chapter.

§ 63.1205 What are the standards for hazardous waste burning lightweight aggregate kilns?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) is rapidly quenched to 400°F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 47 μg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 250 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 110 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) Carbon monoxide and hydrocarbons. (i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in excess of 20 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 230 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry

basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 57 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) is rapidly quenched to 400°F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 33 μg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 43 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 110 μg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen, and hydrocarbons in excess of 20 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by § 63.1206(b)(7); or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 41 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 57 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard*—(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$\mathrm{DRE} = \left[1 - \left(W_{out} / W_{in}\right)\right] \times 100\%$$

Where:

W_{in}=mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}=mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27 (see § 261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principal organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetro-, penta-, and hexachlorodibenzo-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to burn hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60, for each waste to be burned. You must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Air emission standards for equipment leaks, tanks, surface impoundments, and containers.* You are subject to the air emission standards of subparts BB and CC, part 264, of this chapter.

Monitoring and Compliance Provisions

§ 63.1206 When and how must you comply with the standards and operating requirements?

(a) *Compliance dates*— (1) *Compliance date for existing sources.* You must comply with the standards of this subpart no later than September 30, 2002 unless the Administrator grants you an extension of time under § 63.6(i) or § 63.1213, or you comply with the requirements of paragraph (a)(2) of this section for sources that do not intend to comply with the emission standards.

(2) *Sources that do not intend to comply.* Except for those sources meeting the requirements of § 63.1210(b)(1)(iv), sources:

(i) That signify in their Notification of Intent to Comply (NIC) an intent not to comply with the requirements of this subpart, must stop burning hazardous waste on or before October 1, 2001.

(ii) That do not intend to comply with this subpart must include in their NIC a schedule that includes key dates for the steps to be taken to stop burning hazardous waste. Key dates include the date for submittal of RCRA closure documents required under subpart G, part 264, of this chapter.

(3) *New or reconstructed sources.* (i) If you commenced construction or reconstruction of your hazardous waste combustor after April 19, 1996, you must comply with this subpart by the later of September 30, 1999 or the date the source starts operations, except as provided by paragraph (a)(3)(ii) of this section.

(ii) For a standard in this subpart that is more stringent than the standard proposed on April 19, 1996, you may achieve compliance no later than September 30, 2002 if you comply with the standard proposed on April 19, 1996 after September 30, 1999. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after September 30, 1999. As provided by § 63.6(b)(7), such sources must comply with this subpart at startup.

(b) *Compliance with standards*—(1) *Applicability.* The emission standards

and operating requirements set forth in this subpart apply at all times except:

(i) During startup, shutdown, and malfunction, provided that hazardous waste is not in the combustion chamber (*i.e.*, the hazardous waste feed to the combustor has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation, as provided by paragraph (c)(2)(ii) of this section; and

(ii) When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cutoff for a period of time not less than the hazardous waste residence time), and you have:

(A) Submitted a written, one-time notice to the Administrator documenting compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including sections 112 and 129; and

(B) Documented in the operating record that you are complying with such applicable requirements in lieu of the emission standards and operating requirements of this subpart.

(2) *Methods for determining compliance.* The Administrator will determine compliance with the emission standards of this subpart as provided by § 63.6(f)(2). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirements of §§ 63.6(f)(2)(iii)(B) and 63.7(e)(1) to conduct performance testing under representative operating conditions.

(3) *Finding of compliance.* The Administrator will make a finding concerning compliance with the emission standards and other requirements of this subpart as provided by § 63.6(f)(3).

(4) *Extension of compliance with emission standards.* The Administrator may grant an extension of compliance with the emission standards of this subpart as provided by §§ 63.6(i) and 63.1213.

(5) *Changes in design, operation, or maintenance*—(i) *Changes that may adversely affect compliance.* If you plan to change (as defined in paragraph (b)(6)(iii) of this section) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS:

(A) *Notification.* You must notify the Administrator at least 60 days prior to the change, unless you document circumstances that dictate that such prior notice is not reasonably feasible. The notification must include:

(1) A description of the changes and which emission standards may be affected; and

(2) A comprehensive performance test schedule and test plan under the requirements of § 63.1207(f) that will document compliance with the affected emission standard(s);

(B) *Performance test.* You must conduct a comprehensive performance test under the requirements of §§ 63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under § 63.1209, and submit to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d); and

(C) *Restriction on waste burning.* (1) Except as provided by paragraph (b)(5)(i)(C)(2) of this section, after the change and prior to submitting the notification of compliance, you must not burn hazardous waste for more than a total of 720 hours and only for purposes of pretesting or comprehensive performance testing.

(2) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements.

(ii) *Changes that will not affect compliance.* If you determine that a change will not adversely affect compliance with the emission standards or operating requirements, you must document the change in the operating record upon making such change. You must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes.

(iii) *Definition of ''change''.* For purposes of paragraph (b)(6) of this section, ''change'' means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan.

(6) *Compliance with the carbon monoxide and hydrocarbon emission standards.* This paragraph applies to sources that elect to comply with the carbon monoxide and hydrocarbon emissions standards under §§ 63.1203 through 63.1205 by documenting continuous compliance with the carbon monoxide standard using a continuous emissions monitoring system and documenting compliance with the hydrocarbon standard during the destruction and removal efficiency (DRE) performance test or its equivalent.

(i) If a DRE test performed after March 30, 1998 is acceptable as documentation of compliance with the DRE standard, you may use the highest hourly rolling average hydrocarbon level achieved during those DRE test runs to document compliance with the hydrocarbon standard. An acceptable DRE test is a test that was used to support successful issuance or reissuance of an operating permit under part 270 of this chapter.

(ii) If during this acceptable DRE test you did not obtain hydrocarbon emissions data sufficient to document compliance with the hydrocarbon standard, you must either:

(A) Perform, as part of the performance test, an ''equivalent DRE test'' to document compliance with the hydrocarbon standard. An equivalent DRE test is comprised of a minimum of three runs each with a minimum duration of one hour during which you operate the combustor as close as reasonably possible to the operating parameter limits that you established based on the initial DRE test. You must use the highest hourly rolling average hydrocarbon emission level achieved during the equivalent DRE test to document compliance with the hydrocarbon standard; or (B) Perform a DRE test as part of the performance test.

(7) *Compliance with the DRE standard.* (i) Except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section:

(A) You must document compliance with the Destruction and Removal Efficiency (DRE) standard under §§ 63.1203 through 63.1205 only once provided that you do not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard; and

(B) You may use DRE testing performed after March 30, 1998 for purposes of issuance or reissuance of a RCRA permit under part 270 of this chapter to document conformance with the DRE standard if you have not modified the design or operation of the source since the DRE test in a manner that could affect the ability of the source to achieve the DRE standard.

(ii) For sources that feed hazardous waste at a location in the combustion system other than the normal flame zone:

(A) You must demonstrate compliance with the DRE standard during each comprehensive performance test; and

(B) You may use DRE testing performed after March 30, 1998 for purposes of issuance or reissuance of a RCRA permit under part 270 of this chapter to document conformance with the DRE standard in lieu of DRE testing during the initial comprehensive performance test if you have not modified the design or operation of the source since the DRE test in a manner that could affect the ability of the source to achieve the DRE standard.

(iii) For sources that do not use DRE testing performed prior to the compliance date to document conformance with the DRE standard, you must perform DRE testing during the initial comprehensive performance test.

(8) *Applicability of particulate matter and opacity standards during particulate matter CEMS correlation tests.* (i) Any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter (*i.e.*, any title 40 particulate or opacity standards) applicable to a hazardous waste combustor do not apply while you conduct particulate matter continuous emissions monitoring system (CEMS) correlation tests (*i.e.*, correlation with manual stack methods) under the conditions of paragraphs (b)(8)(iii) through (vii) of this section.

(ii) Any permit or other emissions or operating parameter limits or conditions, including any limitation on workplace practices, that are applicable to hazardous waste combustors to ensure compliance with any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter (*i.e.*, any title 40 particulate or opacity standards) do not apply while you conduct particulate matter CEMS correlation tests under the conditions of paragraphs (b)(8)(iii) through (vii) of this section.

(iii) For the provisions of this section to apply, you must:

(A) Develop a particulate matter CEMS correlation test plan that includes the following information. This test plan may be included as part of the comprehensive performance test plan required under §§ 63.1207(e) and (f):

(1) Number of test conditions and number of runs for each test condition;

(2) Target particulate matter emission level for each test condition;

(3) How you plan to modify operations to attain the desired particulate matter emission levels; and

(4) Anticipated normal particulate matter emission levels; and

(B) Submit the test plan to the Administrator for approval at least 90 calendar days before the correlation test is scheduled to be conducted.

(iv) The Administrator will review and approve/disapprove the correlation test plan under the procedures for review and approval of the site-specific test plan provided by § 63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified by § 63.7(c)(3)(i), the plan is considered approved, unless the Administrator has requested additional information.

(v) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs of all test conditions.

(vi) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after you modify operations to attain the desired particulate matter emissions concentrations, unless you document in the correlation test plan that a longer period of conditioning is appropriate.

(vii) You must return to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

(9) *Alternative standards for existing or new hazardous waste burning lightweight aggregate kilns using MACT.* (i) You may petition the Administrator to recommend alternative semivolatile metal, low volatile metal, mercury, or hydrochloric acid/chlorine gas emission standards if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of the raw material contribution to emissions of the regulated metals or hydrochloric acid/chlorine gas; or

(B) You determine that mercury is not present at detectable levels in your raw material.

(ii) The alternative standard that you recommend under paragraph (b)(9)(i)(A) of this section may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or chlorine, and/or an emission limitation.

(iii) The alternative standard must include a requirement to use MACT, or better, applicable to the standard for which the source is seeking relief, as defined in paragraphs (b)(9)(viii) and (ix) of this section.

(iv) *Documentation required.* (A) The alternative standard petition you submit under paragraph (b)(9)(i)(A) of this section must include data or information documenting that raw material contributions to emissions of the regulated metals or hydrochloric acid/chlorine gas prevent you from complying with the emission standard even though the source is using MACT, as defined in paragraphs (b)(9)(viii) and (ix) of this section, for the standard for which you are seeking relief.

(B) Alternative standard petitions that you submit under paragraph (b)(9)(i)(B) of this section must include data or information documenting that mercury is not present at detectable levels in raw materials.

(v) You must include data or information with semivolatile metal and low volatility metal alternative standard petitions that you submit under paragraph (b)(9)(i)(A) of this section documenting that increased chlorine feedrates associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials.

(vi) You must include data or information with semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas alternative standard petitions that you submit under paragraph (b)(9)(i)(A) of this section documenting that semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emissions attributable to the hazardous waste only will not exceed the emission standards in § 63.1205(a) and (b).

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in § 63.1205(a) and (b):

(A) Unless the Administrator approves the provisions of the alternative standard petition request or establishes other alternative standards; and

(B) Until you submit a revised Notification of Compliance that incorporates the revised standards.

(viii) For purposes of this alternative standard provision, MACT for existing hazardous waste burning lightweight aggregate kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 24μg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 280,000 μg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 120,000 μg/dscm or less, and use of a particulate matter control

device that achieves particulate matter emissions of 57 mg/dscm or less; and

(D) For hydrochloric acid/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 2,000,000 µg/dscm or less, and use of an air pollution control device with a hydrochloric acid/chlorine gas removal efficiency of 85 percent or greater.

(ix) For purposes of this alternative standard provision, MACT for new hazardous waste burning lightweight aggregate kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 4 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 280,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 46,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(D) For hydrochloric acid/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 14,000,000 µg/dscm or less, and use of a wet scrubber with a hydrochloric acid/chlorine gas removal efficiency of 99.6 percent or greater.

(10) *Alternative standards for existing or new hazardous waste burning cement kilns using MACT.* (i) You may petition the Administrator to recommend alternative semivolatile, low volatile metal, mercury, and/or hydrochloric acid/chlorine gas emission standards if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of raw material contributions to emissions of the regulated metals or hydrochloric acid/chlorine gas; or (B) You determine that mercury is not present at detectable levels in your raw material.

(ii) The alternative standard that you recommend under paragraph (b)(10)(i)(A) of this section may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or chlorine, and/or an emission limitation.

(iii) The alternative standard must include a requirement to use MACT, or better, applicable to the standard for which the source is seeking relief, as defined in paragraphs (b)(10)(viii) and (ix) of this section.

(iv) *Documentation required.* (A) The alternative standard petition you submit under paragraph (b)(10)(i)(A) of this section must include data or information documenting that raw material contributions to emissions prevent you from complying with the emission standard even though the source is using MACT, as defined in paragraphs (b)(10)(viii) and (ix) of this section, for the standard for which you are seeking relief.

(B) Alternative standard petitions that you submit under paragraph (b)(10)(i)(B) of this section must include data or information documenting that mercury is not present at detectable levels in raw materials.

(v) You must include data or information with semivolatile metal and low volatile metal alternative standard petitions that you submit under paragraph (b)(10)(i)(A) of this section documenting that increased chlorine feedrates associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials.

(vi) You must include data or information with semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas alternative standard petitions that you submit under paragraph (b)(10)(i)(A) of this section documenting that emissions of the regulated metals and hydrochloric acid/chlorine gas attributable to the hazardous waste only will not exceed the emission standards in § 63.1204(a) and (b).

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in § 63.1204(a) and (b):

(A) Unless the Administrator approves the provisions of the alternative standard petition request or establishes other alternative standards; and

(B) Until you submit a revised Notification of Compliance that incorporates the revised standards.

(viii) For purposes of this alternative standard provision, MACT for existing hazardous waste burning cement kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 88µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 54,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less; and

(D) For hydrochloric acid/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 720,000 µg/dscm or less.

(ix) For purposes of this alternative standard provision, MACT for new hazardous waste burning cement kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 7 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 15,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(D) For hydrochloric acid/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 420,000 µg/dscm or less.

(11) *Calculation of hazardous waste residence time.* You must calculate the hazardous waste residence time and include the calculation in the performance test plan under § 63.1207(f) and the operating record. You must also provide the hazardous waste residence time in the Documentation of Compliance under § 63.1211(d) and the Notification of Compliance under §§ 63.1207(j) and 63.1210(d).

(12) *Documenting compliance with the standards based on performance testing.* (i) You must conduct a minimum of three runs of a performance test required under § 63.1207 to document compliance with the emission standards of this subpart.

(ii) You must document compliance with the emission standards based on the arithmetic average of the emission results of each run, except that you must document compliance with the destruction and removal efficiency standard for each run of the comprehensive performance test individually.

(13) *Cement kilns and lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired.* (i) Cement kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon standards of § 63.1204 as follows:

(A) Existing sources must comply with the 20 parts per million by volume hydrocarbon standard in the main stack under § 63.1204(a)(5)(ii)(A);

(B) New sources must comply with the 20 parts per million by volume hydrocarbon standard in the main stack under § 63.1204(b)(5)(ii)(A).

(ii) Lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon standards of § 63.1205 as follows:

(A) Existing sources must comply with the 20 parts per million by volume hydrocarbon standard under § 63.1205(a)(5)(ii);

(B) New sources must comply with the 20 parts per million by volume hydrocarbon standard under § 63.1205(b)(5)(ii).

(14) *Alternative particulate matter standard for incinerators with de minimis metals.* (i) *General.* You may petition the Administrator for an alternative particulate matter standard of 68 mg/dscm, corrected to 7% oxygen, if you meet the *de minimis* metals criteria of paragraph (b)(14)(ii) of this section.

(ii) *Documentation required.* The alternative standard petition you submit under paragraph (b)(14)(i) of this section must include data or information documenting that:

(A) Your feedstreams do not contain detectable levels of antimony, cobalt, manganese, nickel, selenium, lead, cadmium, chromium, arsenic and beryllium;

(B) Your combined uncontrolled lead, cadmium and selenium emissions, when assuming these metals are present in your feedstreams at one-half the detection limit, are below 240 ug/dscm, corrected to 7% oxygen.

(C) Your combined uncontrolled antimony, cobalt, manganese, nickel, chromium, arsenic and beryllium emissions, when assuming these metals are present in your feedstreams at one-half the detection limit, are below 97 ug/dscm, corrected to 7% oxygen.

(iii) *Frequency of analysis.* You must sample and analyze your feedstreams at least annually to document that you meet the de minimis criteria in paragraph (b)(14)(ii) of this section.

(iv) You must not operate pursuant to this alternative standard unless the Administrator determines and provides written confirmation that you meet the eligibility requirements in paragraph (b)(14)(ii) of this section.

(c) *Operating requirements.*—(1) *General.* (i) You must operate only under the operating requirements specified in the Documentation of Compliance under § 63.1211(d) or the Notification of Compliance under §§ 63.1207(j) and 63.1210(d), except:

(A) During performance tests under approved test plans according to § 63.1207(e), (f), and (g), and

(B) Under the conditions of paragraph (b)(1)(i) or (ii) of this section;

(ii) The Documentation of Compliance and the Notification of Compliance must contain operating requirements including, but not limited to, the operating requirements in this section and § 63.1209

(iii) Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of this subpart;

(iv) Operating requirements in the Notification of Compliance are applicable requirements for purposes of parts 70 and 71 of this chapter;

(v) The operating requirements specified in the Notification of Compliance will be incorporated in the title V permit.

(2) *Startup, shutdown, and malfunction plan.* (i) Except as provided by paragraph (c)(2)(ii) of this section, you are subject to the startup, shutdown, and malfunction plan requirements of § 63.6(e)(3).

(ii) Even if you follow the startup and shutdown procedures and the corrective measures upon a malfunction that are prescribed in the startup, shutdown, and malfunction plan, the emission standards and operating requirements of this subpart apply if hazardous waste is in the combustion chamber (*i.e.*, if you are feeding hazardous waste or if startup, shutdown, or a malfunction occurs before the hazardous waste residence time has transpired after hazardous waste cutoff).

(iii) You must identify in the plan a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown.

(iv) You must record the plan in the operating record.

(3) *Automatic waste feed cutoff (AWFCO).*— (i) *General.* Upon the compliance date, you must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section:

(A) When any of the following are exceeded: Operating parameter limits specified under § 63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure;

(B) When the span value of any CMS detector, except a CEMS, is met or exceeded;

(C) Upon malfunction of a CMS monitoring an operating parameter limit specified under § 63.1209 or an emission level; or

(D) When any component of the automatic waste feed cutoff system fails.

(ii) *Ducting of combustion gases.* During an AWFCO, you must continue to duct combustion gasses to the air pollution control system while hazardous waste remains in the combustion chamber (*i.e.*, if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).

(iii) *Restarting waste feed.* You must continue to monitor during the cutoff the operating parameters for which limits are established under § 63.1209 and the emissions required under that section to be monitored by a CEMS, and you must not restart the hazardous waste feed until the operating parameters and emission levels are within the specified limits.

(iv) *Failure of the AWFCO system.* If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of parameter required to be interlocked with the AWFCO system under paragraph (c)(3)(i) of this section, you have failed to comply with the AWFCO requirements of paragraph (c)(3) of this section.

(v) *Corrective measures.* If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (*i.e.*, whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), you must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record.

(vi) *Excessive exceedance reporting.* (A) For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (*i.e.*, when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.

(B) On a case-by-case basis, the Administrator may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period.

(vii) *Testing.* The AWFCO system and associated alarms must be tested at least weekly to verify operability, unless you

document in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, you must conduct operability testing at least monthly. You must document and record in the operating record AWFCO operability test procedures and results.

(viii) *Ramping down waste feed.* (A) You may ramp down the waste feedrate of pumpable hazardous waste over a period not to exceed one minute, except as provided by paragraph (c)(3)(viii)(B) of this section. If you elect to ramp down the waste feed, you must document ramp down procedures in the operating and maintenance plan. The procedures must specify that the ramp down begins immediately upon initiation of automatic waste feed cutoff and the procedures must prescribe a bona fide ramping down. If an emission standard or operating limit is exceeded during the ramp down, you have failed to comply with the emission standards or operating requirements of this subpart.

(B) If the automatic waste feed cutoff is triggered by an exceedance of any of the following operating limits, you may not ramp down the waste feed cutoff: Minimum combustion chamber temperature, maximum hazardous waste feedrate, or any hazardous waste firing system operating limits that may be established for your combustor.

(4) *ESV openings.*—(i) *Failure to meet standards.* If an emergency safety vent (ESV) opens when hazardous waste remains in the combustion chamber (*i.e.*, when the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated) such that combustion gases are not treated as during the most recent comprehensive performance test (*e.g.*, if the combustion gas by-passes any emission control device that was operating during the performance test), it is evidence of your failure to comply with the emission standards of this subpart.

(ii) *ESV operating plan.* (A) You must develop an ESV operating plan, comply with the operating plan, and keep the plan in the operating record.

(B) The ESV operating plan must provide detailed procedures for rapidly stopping the waste feed, shutting down the combustor, and maintaining temperature and negative pressure in the combustion chamber during the hazardous waste residence time, if feasible. The plan must include calculations and information and data documenting the effectiveness of the plan's procedures for ensuring that combustion chamber temperature and negative pressure are maintained as is reasonably feasible.

(iii) *Corrective measures.* After any ESV opening that results in a failure to meet the emission standards as defined in paragraph (c)(4)(i) of this section, you must investigate the cause of the ESV opening, take appropriate corrective measures to minimize such future ESV openings, and record the findings and corrective measures in the operating record.

(iv) *Reporting requirement.* You must submit to the Administrator a written report within 5 days of an ESV opening that results in failure to meet the emission standards of this subpart (as defined in paragraph (c)(4)(i) of this section) documenting the result of the investigation and corrective measures taken.

(5) *Combustion system leaks.* (i) Combustion system leaks of hazardous air pollutants must be controlled by:

(A) Keeping the combustion zone sealed to prevent combustion system leaks; or

(B) Maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor; or

(C) Upon prior written approval of the Administrator, an alternative means of control to provide control of combustion system leaks equivalent to maintenance of combustion zone pressure lower than ambient pressure; and

(ii) You must specify in the operating record the method used for control of combustion system leaks.

(6) *Operator training and certification.* (i) You must establish a training and certification program for each person who has responsibilities affecting operations that may affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, ash and waste handlers, and maintenance personnel.

(ii) You must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants.

(iii) For hazardous waste incinerators, the training and certification program must conform to a state-approved training and certification program or, if there is no such state program, to the American Society of Mechanical Engineers Standard Number QHO–1–1994.

(iv) For hazardous waste burning cement and lightweight aggregate kilns, the training and certification program must be approved by the state or the Administrator, and must be complete and reliable and conform to principles of good operator and operating practices (including training and certification).

(v) You must record the operator training and certification program in the operating record.

(7) *Operation and maintenance plan.*—(i) *General.* (A) You must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.

(B) The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

(C) This plan ensures compliance with the operation and maintenance requirements of § 63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.

(D) You must record the plan in the operating record.

(ii) *Requirements for baghouses at lightweight aggregate kilns and incinerators.* If you own or operate a hazardous waste incinerator or hazardous waste burning lightweight aggregate kiln equipped with a baghouse (fabric filter), you must prepare and at all times operate according to an operations and maintenance plan that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective measures for each baghouse used to comply with the standards under this subpart.

(A) The operation and maintenance plan for baghouses must be submitted to the Administrator with the initial comprehensive performance test plan for review and approval.

(B) The procedures specified in the operations and maintenance plan for inspections and routine maintenance of a baghouse must, at a minimum, include the following requirements:

(*1*) Daily visual observation of baghouse discharge or stack;

(*2*) Daily confirmation that dust is being removed from hoppers through visual inspection, or equivalent means

of ensuring the proper functioning of removal mechanisms;

(*3*) Daily check of compressed air supply for pulse-jet baghouses;

(*4*) Daily visual inspection of isolation dampers for proper operation;

(*5*) An appropriate methodology for monitoring cleaning cycles to ensure proper operation;

(*6*) Weekly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means;

(*7*) Weekly check of bag tension on reverse air and shaker-type baghouses. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices;

(*8*) Monthly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks;

(*9*) Monthly inspection of bags and bag connections;

(*10*) Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means; and

(*11*) Continuous operation of a bag leak detection system as a continuous monitor.

(C) The procedures for maintenance specified in the operation and maintenance plan must, at a minimum, include a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance.

(D) The bag leak detection system required by paragraph (c)(*7*)(ii)(B)(*11*) of this section must meet the following specifications and requirements:

(*1*) The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter or less;

(*2*) The bag leak detection system sensor must provide output of relative particulate matter loadings;

(*3*) The bag leak detection system must be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level;

(*4*) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system;

(*5*) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time;

(*6*) Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the operation and maintenance plan required under paragraph (c)(7)(ii)(A) of this section. You must not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition;

(*7*) For negative pressure or induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector must be installed downstream of the baghouse and upstream of any wet acid gas scrubber; and

(*8*) Where multiple detectors are required, the system's instrumentation and alarm system may be shared among the detectors.

(E) The operation and maintenance plan required by paragraph (c)(7)(ii) of this section must include a corrective measures plan that specifies the procedures you will follow in the case of a bag leak detection system alarm. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in this subpart.

(*1*) You must initiate the procedures used to determine the cause of the alarm within 30 minutes of the time the alarm first sounds; and

(*2*) You must alleviate the cause of the alarm by taking the necessary corrective measure(s) which may include, but are not to be limited to, the following measures:

(i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media, or otherwise repairing the control device;

(iv) Sealing off a defective baghouse compartment;

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or

(vi) Shutting down the combustor.

§ 63.1207 What are the performance testing requirements?

(a) *General.* The provisions of § 63.7 apply, except as noted below.

(b) *Types of performance tests*—(1) *Comprehensive performance test.* You must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by §§ 63.1203, 63.1204, and 63.1205, establish limits for the operating parameters provided by § 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

(2) *Confirmatory performance test.* You must conduct confirmatory performance tests to:

(i) Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and

(ii) Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under § 63.1209(k).

(c) *Initial comprehensive performance test*—(1) *Test date.* Except as provided by paragraph (c)(2) of this section, you must commence the initial comprehensive performance test not later than six months after the compliance date.

(2) *Data in lieu of the initial comprehensive performance test.* (i) You may request that previous emissions test data serve as documentation of conformance with the emission standards of this subpart provided that the previous testing was:

(A) Initiated after March 30, 1998;

(B) For the purpose of demonstrating emissions under a RCRA permit issuance or reissuance proceeding under part 270 of this chapter;

(C) In conformance with the requirements of paragraph (g)(1) of this section; and

(D) Sufficient to establish the applicable operating parameter limits under § 63.1209.

(ii) You must submit data in lieu of the initial comprehensive performance test in lieu of (i.e., if the data are in lieu of all performance testing) or with the notification of performance test required under paragraph (e) of this section.

(d) *Frequency of testing.* You must conduct testing periodically as prescribed in paragraphs (d)(1) through (3) of this section. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next

comprehensive performance test. You may conduct performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under paragraph (i) of this section, you must conduct testing as follows:

(1) *Comprehensive performance testing.* You must commence testing no later than 61 months after the date of commencing the previous comprehensive performance test. If you submit data in lieu of the initial performance test, you must commence the subsequent comprehensive performance test within 61 months of the date six months after the compliance date.

(2) *Confirmatory performance testing.* You must commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. If you submit data in lieu of the initial performance test, you must commence the initial confirmatory performance test within 31 months of the date six months after the compliance date. To ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the Administrator will not approve a test plan that schedules testing within 18 months of commencing the previous comprehensive performance test.

(3) *Duration of testing.* You must complete performance testing within 60 days after the date of commencement, unless the Administrator determines that a time extension is warranted based on your documentation in writing of factors beyond your control that prevent you from meeting the 60-day deadline.

(e) *Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan.* (1) The provisions of § 63.7(b) and (c) and § 63.8(e) apply, except:

(i) *Comprehensive performance test.* You must submit to the Administrator a notification of your intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation plan at least one year before the performance test and performance evaluation are scheduled to begin.

(A) The Administrator will notify you of approval or intent to deny approval of the test plan and CMS performance evaluation plan within 9 months after receipt of the original plan.

(B) You must submit to the Administrator a notification of your intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.

(ii) *Confirmatory performance test.* You must submit to the Administrator a notification of your intention to conduct a confirmatory performance test and CMS performance evaluation and a test plan and CMS performance evaluation plan at least 60 calendar days before the performance test is scheduled to begin. The Administrator will notify you of approval or intent to deny approval of the test and CMS performance evaluation plans within 30 calendar days after receipt of the original plans.

(2) After the Administrator has approved the test and CMS performance evaluation plans, you must make the plans available to the public for review. You must issue a public notice announcing the approval of the plans and the location where the plans are available for review.

(f) *Content of performance test plan.* The provisions of §§ 63.7(c)(2)(i)–(iii) and (v) regarding the content of the test plan apply. In addition, you must include the following information in the test plan:

(1) *Content of comprehensive performance test plan.* (i) An analysis of each feedstream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:

(A) Heating value, levels of ash (for hazardous waste incinerators only), levels of semivolatile metals, low volatile metals, mercury, and total chlorine (organic and inorganic); and

(B) Viscosity or description of the physical form of the feedstream;

(ii) For organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60:

(A) An identification of such organic hazardous air pollutants that are present in the feedstream, except that you need not analyze for organic hazardous air pollutants that would reasonably not be expected to be found in the feedstream. You must identify any constituents you exclude from analysis and explain the basis for excluding them. You must conduct the feedstream analysis according to § 63.1208(g);

(B) An approximate quantification of such identified organic hazardous air pollutants in the feedstreams, within the precision produced by the analytical procedures of § 63.1208(g); and

(C) A description of blending procedures, if applicable, prior to firing the feedstream, including a detailed analysis of the materials prior to blending, and blending ratios;

(iii) A detailed engineering description of the hazardous waste combustor, including:

(A) Manufacturer's name and model number of the hazardous waste combustor;

(B) Type of hazardous waste combustor;

(C) Maximum design capacity in appropriate units;

(D) Description of the feed system for each feedstream;

(E) Capacity of each feed system;

(F) Description of automatic hazardous waste feed cutoff system(s);

(G) Description of the design, operation, and maintenance practices for any air pollution control system; and

(H) Description of the design, operation, and maintenance practices of any stack gas monitoring and pollution control monitoring systems;

(iv) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

(v) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;

(vi) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the emission standards;

(vii) A description of, and planned operating conditions for, any emission control equipment that will be used;

(viii) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction;

(ix) A determination of the hazardous waste residence time;

(x) If you are requesting to extrapolate metal feedrate limits from comprehensive performance test levels:

(A) A description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards;

(B) Documentation of the historical range of normal (*i.e.*, other than during compliance testing) metals feedrates for each feedstream;

(C) Documentation that the level of spiking recommended during the

performance test will mask sampling and analysis imprecision and inaccuracy to the extent that extrapolation of feedrates and emission rates from performance test data will be as accurate and precise as if full spiking were used;

(xi) If you do not continuously monitor regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems, you must include documentation of the expected levels of regulated constituents in those feedstreams;

(xii) Documentation justifying the duration of system conditioning required to ensure the combustor has achieved steady-state operations under performance test operating conditions, as provided by paragraph (g)(1)(iii) of this section; and

(xiii) Such other information as the Administrator reasonably finds necessary to determine whether to approve the performance test plan.

(2) *Content of confirmatory test plan.* (i) A description of your normal hydrocarbon or carbon monoxide operating levels, as specified in paragraph (g)(2)(i) of this section, and an explanation of how these normal levels were determined;

(ii) A description of your normal applicable operating parameter levels, as specified in paragraph (g)(2)(ii) of this section, and an explanation of how these normal levels were determined;

(iii) A description of your normal chlorine operating levels, as specified in paragraph (g)(2)(iii) of this section, and an explanation of how these normal levels were determined;

(iv) If you use carbon injection or a carbon bed, a description of your normal cleaning cycle of the particulate matter control device, as specified in paragraph (g)(2)(iv) of this section, and an explanation of how these normal levels were determined;

(v) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

(vi) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;

(vii) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the dioxin/furan emission standard;

(viii) A description of, and planned operating conditions for, any emission control equipment that will be used;

(ix) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction; and

(x) Such other information as the Administrator reasonably finds necessary to determine whether to approve the confirmatory test plan.

(g) *Operating conditions during testing.* You must comply with the provisions of § 63.7(e). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirement of § 63.7(e)(1) to conduct performance testing under representative operating conditions.

(1) *Comprehensive performance testing.*—(i) *Operations during testing.* For the following parameters, you must operate the combustor during the performance test under normal conditions (or conditions that will result in higher than normal emissions):

(A) *Chlorine feedrate.* You must feed normal (or higher) levels of chlorine during the dioxin/furan performance test;

(B) *Ash feedrate.* For hazardous waste incinerators, you must conduct the following tests when feeding normal (or higher) levels of ash: The semivolatile metal and low volatile metal performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used; and

(C) *Cleaning cycle of the particulate matter control device.* You must conduct the following tests when the particulate matter control device undergoes its normal (or more frequent) cleaning cycle: The particulate matter, semivolatile metal, and low volatile metal performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used.

(ii) *Modes of operation.* Given that you must establish limits for the applicable operating parameters specified in § 63.1209 based on operations during the comprehensive performance test, you may conduct testing under two or more operating modes to provide operating flexibility.

(iii) *Steady-state conditions.* (A) Prior to obtaining performance test data, you must operate under performance test conditions until you reach steady-state operations with respect to emissions of pollutants you must measure during the performance test and operating parameters under § 63.1209 for which you must establish limits. During system conditioning, you must ensure that each operating parameter for which you must establish a limit is held at the level planned for the performance test. You must include documentation in the performance test plan under paragraph (f) of this section justifying the duration of system conditioning.

(B) If you own or operate a hazardous waste cement kiln that recycles collected particulate matter (*i.e.,* cement kiln dust) into the kiln, you must sample and analyze the recycled particulate matter prior to obtaining performance test data for levels of selected metals that must be measured during performance testing to document that the system has reached steady-state conditions (*i.e.,* that metals levels have stabilized). You must document the rationale for selecting metals that are indicative of system equilibrium and include the information in the performance test plan under paragraph (f) of this section. To determine system equilibrium, you must sample and analyze the recycled particulate matter hourly for each selected metal, unless you submit in the performance test plan a justification for reduced sampling and analysis and the Administrator approves in writing a reduced sampling and analysis frequency.

(2) *Confirmatory performance testing.* You must conduct confirmatory performance testing for dioxin/furan under normal operating conditions for the following parameters:

(i) Carbon monoxide (or hydrocarbon) CEMS emission levels must be within the range of the average value to the maximum value allowed. The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months divided by the number of rolling averages recorded during that time;

(ii) Each operating limit (specified in § 63.1209) established to maintain compliance with the dioxin/furan emission standard must be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed. The average value is defined as the sum of the rolling average values recorded over the previous 12 months divided by the number of rolling averages recorded during that time. The average value must not include calibration data, malfunction data, and data obtained when not burning hazardous waste;

(iii) You must feed chlorine at normal feedrates or greater; and (iv) If the

combustor is equipped with carbon injection or carbon bed, normal cleaning cycle of the particulate matter control device.

(h) *Operating conditions during subsequent testing.* (1) Current operating parameter limits established under § 63.1209 are waived during subsequent comprehensive performance testing under an approved test plan.

(2) Current operating parameter limits are also waived during pretesting prescribed in the approved test plan prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation. Pretesting means:

(i) Operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrochloric acid/chlorine gas is being performed; and

(ii) Operations to reach steady-state operating conditions prior to stack emissions testing under paragraph (g)(1)(iii) of this section.

(i) *Time extension for subsequent performance tests.* After the initial comprehensive performance test, you may request up to a one-year time extension for conducting a comprehensive or confirmatory performance test to consolidate performance testing with other state or federally required emission testing, or for other reasons deemed acceptable by the Administrator. If the Administrator grants a time extension for a comprehensive performance test, the deadlines for commencing the next comprehensive and confirmatory tests are based on the date that the subject comprehensive performance test commences.

(1) You must submit in writing to the Administrator any request under this paragraph for a time extension for conducting a performance test.

(2) You must include in the request for an extension for conducting a performance test the following:

(i) A description of the reasons for requesting the time extension;

(ii) The date by which you will commence performance testing.

(3) The Administrator will notify you in writing of approval or intention to deny approval of your request for an extension for conducting a performance test within 30 calendar days after receipt of sufficient information to evaluate your request. The 30-day approval or denial period will begin after you have been notified in writing that your application is complete. The Administrator will notify you in writing whether the application contains sufficient information to make a determination within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that you submit.

(4) When notifying you that your application is not complete, the Administrator will specify the information needed to complete the application. The Administrator will also provide notice of opportunity for you to present, in writing, within 30 calendar days after notification of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(5) Before denying any request for an extension for performance testing, the Administrator will notify you in writing of the Administrator's intention to issue the denial, together with:

(i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for you to present in writing, within 15 calendar days after notification of the intended denial, additional information or arguments to the Administrator before further action on the request.

(6) The Administrator's final determination to deny any request for an extension will be in writing and will set forth specific grounds upon which the denial is based. The final determination will be made within 30 calendar days after the presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(j) *Notification of compliance.*—(1) *Comprehensive performance test.* (i) Except as provided by paragraph (j)(4) of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance or noncompliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under § 3.1209.

(ii) Upon postmark of the Notification of Compliance, you must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under § 63.1211(d).

(2) *Confirmatory performance test.* Except as provided by paragraph (j)(4) of this section, within 90 days of completion of a confirmatory performance test, you must postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard.

(3) See §§ 63.7(g), 63.9(h), and 63.1210(d) for additional requirements pertaining to the Notification of Compliance (e.g., you must include results of performance tests in the Notification of Compliance).

(4) *Time extension.* You may submit a written request to the Administrator for a time extension documenting that, for reasons beyond your control, you may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. The Administrator will determine whether a time extension is warranted.

(k) *Failure to submit a timely notification of compliance.* (1) If you fail to postmark a Notification of Compliance by the specified date, you must cease hazardous waste burning immediately.

(2) Prior to submitting a revised Notification of Compliance as provided by paragraph (k)(3) of this section, you may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing and only for a maximum of 720 hours (renewable at the discretion of the Administrator).

(3) You must submit to the Administrator a Notification of Compliance subsequent to a new comprehensive performance test before resuming hazardous waste burning.

(l) *Failure of performance test.*—(1) *Comprehensive performance test.* (i) If you determine (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that you have exceeded any emission standard during a comprehensive performance test for a mode of operation, you must cease hazardous waste burning immediately under that mode of operation. You must make this determination within 90 days following completion of the performance test.

(ii) If you have failed to demonstrate compliance with the emission standards for any mode of operation:

(A) Prior to submitting a revised Notification of Compliance as provided by paragraph (l)(1)(ii)(C) of this section, you may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing under revised operating conditions, and only for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by paragraph (l)(3) of this section;

(B) You must conduct a comprehensive performance test under revised operating conditions following

the requirements for performance testing of this section; and

(C) You must submit to the Administrator a Notification of Compliance subsequent to the new comprehensive performance test.

(2) *Confirmatory performance test.* If you determine (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that you have failed the dioxin/furan emission standard during a confirmatory performance test, you must cease burning hazardous waste immediately. You must make this determination within 90 days following completion of the performance test. To burn hazardous waste in the future:

(i) You must submit to the Administrator for review and approval a test plan to conduct a comprehensive performance test to identify revised limits on the applicable dioxin/furan operating parameters specified in § 63.1209(k);

(ii) You must submit to the Administrator a Notification of Compliance with the dioxin/furan emission standard under the provisions of paragraphs (j) and (k) of this section and this paragraph (l). You must include in the Notification of Compliance the revised limits on the applicable dioxin/furan operating parameters specified in § 63.1209(k); and

(iii) Until the Notification of Compliance is submitted, you must not burn hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by paragraph (l)(3) of this section.

(3) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information including data from the failed performance test. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.

(m) *Waiver of performance test.* (1) The waiver provision of this paragraph applies in addition to the provisions of § 63.7(h).

(2) You are not required to conduct performance tests to document compliance with the mercury, semivolatile metal, low volatile metal or hydrochloric acid/chlorine gas emission standards under the conditions specified below. You are deemed to be in compliance with an emission standard if the twelve-hour rolling average maximum theoretical emission concentration (MTEC) determined as specified below does not exceed the emission standard:

(i) Determine the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride from all feedstreams;

(ii) Determine the stack gas flowrate; and

(iii) Calculate a MTEC for each standard assuming all mercury, semivolatile metals, low volatile metals, or total chlorine (organic and inorganic) from all feedstreams is emitted;

(3) To document compliance with this provision, you must:

(i) Monitor and record the feedrate of mercury, semivolatile metals, low volatile metals, and total chlorine and chloride from all feedstreams according to § 63.1209(c);

(ii) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(iii) Continuously calculate and record in the operating record the MTEC under the procedures of paragraph (m)(2) of this section; and

(iv) Interlock the MTEC calculated in paragraph (m)(2)(iii) of this section to the AWFCO system to stop hazardous waste burning when the MTEC exceeds the emission standard.

(4) In lieu of the requirement in paragraphs (m)(3)(iii) and (iv) of this section, you may:

(i) Identify in the notification of compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride from all feedstreams that ensures the MTEC as calculated in paragraph (m)(2)(iii) of this section is below the applicable emission standard; and

(ii) Interlock the minimum gas flowrate limit and maximum feedrate limit in paragraph (m)(3)(iv) of this section to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride feedrate exceeds the limit in paragraph (m)(4)(i) of this section.

(5) When you determine the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride for purposes of this provision, except as provided by paragraph (m)(6) of this section, you must assume that the analyte is present at the full detection limit when the feedstream analysis determines that the analyte is not detected in the feedstream.

(6) Owners and operators of hazardous waste burning cement kilns and lightweight aggregate kilns may assume that mercury is present in raw material at half the detection limit when the raw material feedstream analysis determines that mercury is not detected.

(7) You must state in the site-specific test plan that you submit for review and approval under paragraph (e) of this section that you intend to comply with the provisions of this paragraph. You must include in the test plan documentation that any surrogate that is proposed for gas flowrate adequately correlates with the gas flowrate.

(n) *Feedrate limits for nondetectable constituents.* (1) You must establish separate semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and/or ash feedrate limits for each feedstream for which the comprehensive performance test feedstream analysis determines that these constituents are not present at detectable levels.

(2) You must define the feedrate limits established under paragraph (n)(1) of this section as nondetect at the full detection limit achieved during the performance test.

(3) You will not be deemed to be in violation of the feedrate limit established in paragraph (n)(2) of this section when detectable levels of the constituent are measured, whether at levels above or below the full detection limit achieved during the performance test, provided that:

(i) Your total feedrate for that constituent, including the detectable levels in the feedstream which is limited to nondetect levels, is below your feedrate limit for that constituent; or

(ii) Except for ash, your maximum theoretical emission concentration (MTEC) for the constituent (*i.e.*, semivolatile metal, low volatile metal, mercury, and/or hydrochloric acid/chlorine gas) calculated according to paragraph (m) of this section, and considering the contribution from all feedstreams including the detectable levels in the feedstream which is limited to nondetect levels, is below the emission standard in §§ 63.1203, 63.1204, and 63.1205.

§ 63.1208 What are the test methods?

(a) *References.* When required in subpart EEE of this part, the following publication is incorporated by reference, ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW–846 Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), and III (December 1996). The Third Edition of SW–846 and Updates I, II, IIA, IIB, and III (document number 955–001–00000–1) are available for the Superintendent of Document, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800. Copies of the Third Edition and its updates are also available from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487–4650. Copies may be inspected at the Library, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

(b) *Test methods.* You must use the following test methods to determine compliance with the emissions standards of this subpart:

(1) *Dioxins and furans.* (i) You must use Method 0023A, Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans emissions from Stationary Sources, EPA Publication SW–846, as incorporated by reference in paragraph (a) of this section, to determine compliance with the emission standard for dioxins and furans;

(ii) You must sample for a minimum of three hours, and you must collect a minimum sample volume of 2.5 dscm;

(iii) You may assume that nondetects are present at zero concentration.

(2) *Mercury.* You must use Method 29, provided in appendix A, part 60 of this chapter, to demonstrate compliance with emission standard for mercury.

(3) *Cadmium and lead.* You must use Method 29, provided in appendix A, part 60 of this chapter, to determine compliance with the emission standard for cadmium and lead (combined).

(4) *Arsenic, beryllium, and chromium.* You must use Method 29, provided in appendix A, part 60 of this chapter, to determine compliance with the emission standard for arsenic, beryllium, and chromium (combined).

(5) *Hydrochloric acid and chlorine gas.* You may use Methods 26A, 320, or 321 provided in appendix A, part 60 of this chapter, to determine compliance with the emission standard for hydrochloric acid and chlorine gas (combined). You may use Methods 320 or 321 to make major source determinations under § 63.9(b)(2)(v).

(6) *Particulate matter.* You must use Methods 5 or 5I, provided in appendix A, part 60 of this chapter, to demonstrate compliance with the emission standard for particulate matter.

(7) *Other Test Methods.* You may use applicable test methods in EPA Publication SW-846, as incorporated by reference in paragraph (a) of this section, as necessary to demonstrate compliance with requirements of this subpart, except as otherwise specified in paragraphs (b)(2)–(b)(6) of this section.

(8) *Feedstream analytical methods.* You may use any reliable analytical method to determine feedstream concentrations of metals, chlorine, and other constituents. It is your responsibility to ensure that the sampling and analysis procedures are unbiased, precise, and that the results are representative of the feedstream. For each feedstream, you must demonstrate that:

(i) Each analyte is not present above the reported level at the 80% upper confidence limit around the mean; and

(ii) The analysis could have detected the presence of the constituent at or below the reported level at the 80% upper confidence limit around the mean. (See Guidance for Data Quality Assessment—Practical Methods for Data Analysis, EPA QA/G–9, January 1998, EPA/600/R–96/084).

(9) *Opacity.* If you determine compliance with the opacity standard under the monitoring requirements of §§ 63.1209(a)(1)(iv) and (a)(1)(v), you must use Method 9, provided in appendix A, part 60 of this chapter.

§ 63.1209 What are the monitoring requirements?

(a) *Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS).* (1)(i) You must use a CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standards under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen.

(ii) For cement kilns, except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of this section, you must use a COMS to demonstrate and monitor compliance with the opacity standard under §§ 63.1204(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.

(A) You must maintain and operate each COMS in accordance with the requirements of § 63.8(c) except for the requirements under § 63.8(c)(3). The requirements of § 63.1211(d) shall be complied with instead of § 63.8(c)(3); and

(B) Compliance is based on six-minute block average.

(iii) You must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under this subpart. However, compliance with the requirements in their section to install, calibrate, maintain and operate the PM CEMS is not required until such time that the Agency promulgates all performance specifications and operational requirements applicable to PM CEMS.

(iv) If you operate a cement kiln subject to the provisions of this subpart and use a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks, you may, in lieu of installing the COMS required by paragraph (a)(1)(ii) of this section, comply with the opacity standard in accordance with the procedures of Method 9 to part 60 of this chapter:

(A) You must conduct the Method 9 test while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day;

(B) The duration of the Method 9 test shall be at least 30 minutes each day;

(C) You must use the Method 9 procedures to monitor and record the average opacity for each six-minute block period during the test; and

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard under §§ 63.1204(a)(7) and (b)(7).

(v) If you operate a cement kiln subject to the provisions of this subpart and use a particulate matter control device that exhausts through a monovent, or if the use of a COMS in accordance with the installation specification of Performance Specification 1 (PS–1) of appendix B to part 60 of this chapter is not feasible, you may, in lieu of installing the COMS required by paragraph (a)(1)(ii) of this section, comply with the opacity standard in accordance with the procedures of Method 9 to part 60 of this chapter:

(A) You must conduct the Method 9 test while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day;

(B) The duration of the Method 9 test shall be at least 30 minutes each day;

(C) You must use the Method 9 procedures to monitor and record the

average opacity for each six-minute block period during the test; and

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard under §§ 63.1204(a)(7) and (b)(7).

(2) *Performance specifications.* You must install, calibrate, maintain, and continuously operate the CEMS and COMS in compliance with the quality assurance procedures provided in the appendix to this subpart and Performance Specifications 1 (opacity), 4B (carbon monoxide and oxygen), and 8A (hydrocarbons) in appendix B, part 60 of this chapter.

(3) *Carbon monoxide readings exceeding the span.* (i) Except as provided by paragraph (a)(3)(ii) of this section, if a carbon monoxide CEMS detects a response that results in a one-minute average at or above the 3,000 ppmv span level required by Performance Specification 4B in appendix B, part 60 of this chapter, the one-minute average must be recorded as 10,000 ppmv. The one-minute 10,000 ppmv value must be used for calculating the hourly rolling average carbon monoxide level.

(ii) Carbon monoxide CEMS that use a span value of 10,000 ppmv when one-minute carbon monoxide levels are equal to or exceed 3,000 ppmv are not subject to paragraph (a)(3)(i) of this section. Carbon monoxide CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other carbon monoxide CEMS, except:

(A) Calibration drift must be less than 300 ppmv; and

(B) Calibration error must be less than 500 ppmv.

(4) *Hydrocarbon readings exceeding the span.* (i) Except as provided by paragraph (a)(4)(ii) of this section, if a hydrocarbon CEMS detects a response that results in a one-minute average at or above the 100 ppmv span level required by Performance Specification 8A in appendix B, part 60 of this chapter, the one-minute average must be recorded as 500 ppmv. The one-minute 500 ppmv value must be used for calculating the hourly rolling average HC level.

(ii) Hydrocarbon CEMS that use a span value of 500 ppmv when one-minute hydrocarbon levels are equal to or exceed 100 ppmv are not subject to paragraph (a)(4)(i) of this section. Hydrocarbon CEMS that use a span value of 500 ppmv are subject to the same CEMS performance and equipment specifications when operating in the range of 100 ppmv to 500 ppmv that are provided by Performance Specification 8A for other hydrocarbon CEMS, except:

(A) The zero and high-level calibration gas must have a hydrocarbon level of between 0 and 100 ppmv, and between 250 and 450 ppmv, respectively;

(B) The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEM measurement range and must have a resolution of 2.5 ppmv;

(C) The CEMS calibration must not differ by more than ±15 ppmv after each 24-hour period of the seven day test at both zero and high levels;

(D) The calibration error must be no greater than 25 ppmv; and

(E) The zero level, mid-level, and high level calibration gas used to determine calibration error must have a hydrocarbon level of 0–200 ppmv, 150–200 ppmv, and 350–400 ppmv, respectively.

(5) *Petitions to use CEMS for other standards.* You may petition the Administrator to use CEMS for compliance monitoring for particulate matter, mercury, semivolatile metals, low volatile metals, and hydrochloric acid/chlorine gas under § 63.8(f) in lieu of compliance with the corresponding operating parameter limits under this section.

(6) *Calculation of rolling averages.*—(i) *Calculation of rolling averages initially.* The carbon monoxide and hydrocarbon CEMS must begin recording one-minute average values by 12:01 am and hourly rolling average values by 1:01 am, when 60 one-minute values will be available for calculating the initial hourly rolling average.

(ii) *Calculation of rolling averages upon intermittent operations.* You must ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the first one-minute value is added to the previous 59 values to calculate the hourly rolling average.

(iii) *Calculation of rolling averages when the hazardous waste feed is cutoff.* (A) Except as provided by paragraph (a)(6)(iii)(B) of this section, you must continue to monitoring carbon monoxide and hydrocarbon when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if the emission levels exceed the standard.

(B) You are not subject to the CEMS requirements of this subpart during periods of time you meet the requirements of § 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste).

(7) *Operating parameter limits for hydrocarbons.* If you elect to comply with the carbon monoxide and hydrocarbon emission standards by continuously monitoring carbon monoxide with a CEMS, you must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits you establish on the destruction and removal efficiency (DRE) operating parameters required under paragraph (j) of this section also ensure that you maintain compliance with the hydrocarbon emission standard. If you do not conduct the hydrocarbon demonstration and DRE tests concurrently, you must establish separate operating parameter limits under paragraph (j) of this section based on each test and the more restrictive of the operating parameter limits applies.

(b) *Other continuous monitoring systems (CMS).* (1) You must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under this section.

(2) Except as specified in paragraphs (b)(2)(i) through (ii) of this section, you must install and operate non-CMS in conformance with § 63.8(c)(3) that requires you, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system:

(i) *Calibration of thermocouples.* The calibration of a thermocouple or other temperature sensor must be verified at least once every three months; and

(ii) *Accuracy and calibration of weight measurement devices.* The accuracy of weight measurement devices used to monitor flowrate of a feedstream (e.g., activated carbon feedrate, sorbent feedrate, nonpumpable waste) must be ± 1 percent of the weight being measured. The calibration of the device must be verified at least once every three months.

(3) CMS must sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds.

(4) The span of the non-CEMS CMS detector must not be exceeded. You must interlock the span limits into the automatic waste feed cutoff system required by § 63.1206(c)(3).

(5) *Calculation of rolling averages.*—(i) *Calculation of rolling averages*

initially. Continuous monitoring systems must begin recording one-minute average values at 12:01 am on the compliance data and begin recording rolling averages when enough one-minute average values are available to calculate the required rolling average (e.g., when 60 one-minute averages are available to calculate an hourly rolling average; when 720 one-minute averages are available to calculate a 12-hour rolling average).

(ii) *Calculation of rolling averages upon intermittent operations.* You must ignore periods of time when one-minute values are not available for calculating rolling averages. When one-minute values become available again, the first one-minute value is added to the previous one-minute values to calculate rolling averages.

(iii) *Calculation of rolling averages when the hazardous waste feed is cutoff.* (A) Except as provided by paragraph (b)(5)(iii)(B) of this section, you must continue to monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if an operating parameter exceeds its limit.

(B) You are not subject to the CMS requirements of this subpart during periods of time you meet the requirements of § 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste).

(c) *Analysis of feedstreams.*—(1) *General.* Prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section.

(2) *Feedstream analysis plan.* You must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum:

(i) The parameters for which you will analyze each feedstream to ensure compliance with the operating parameter limits of this section;

(ii) Whether you will obtain the analysis by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information;

(iii) How you will use the analysis to document compliance with applicable feedrate limits (*e.g.*, if you blend hazardous wastes and obtain analyses of the wastes prior to blending but not of the blended, as-fired, waste, the plan must describe how you will determine the pertinent parameters of the blended waste);

(iv) The test methods which you will use to obtain the analyses;

(v) The sampling method which you will use to obtain a representative sample of each feedstream to be analyzed using sampling methods described in appendix I, part 26, of this chapter, or an equivalent method; and

(vi) The frequency with which you will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date.

(3) *Review and approval of analysis plan.* You must submit the feedstream analysis plan to the Administrator for review and approval, if requested.

(4) *Compliance with feedrate limits.* To comply with the applicable feedrate limits of this section, you must monitor and record feedrates as follows:

(i) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;

(ii) Determine and record the mass or volume flowrate of each feedstream by a CMS. If you determine flowrate of a feedstream by volume, you must determine and record the density of the feedstream by sampling and analysis (unless you report the constituent concentration in units of weight per unit volume (e.g., mg/l)); and

(iii) Calculate and record the mass feedrate of the parameter per unit time.

(5) *Waiver of monitoring of constituents in certain feedstreams.* You are not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the feedrate limits under this section provided that you document in the comprehensive performance test plan the expected levels of the constituent in the feedstream and account for those assumed feedrate levels in documenting compliance with feedrate limits: natural gas, process air, and feedstreams from vapor recovery systems.

(d) *Performance evaluations.* (1) The requirements of §§ 63.8(d) (Quality control program) and (e) (Performance evaluation of continuous monitoring systems) apply, except that you must conduct performance evaluations of components of the CMS under the frequency and procedures (for example, submittal of performance evaluation test plan for review and approval) applicable to performance tests as provided by § 63.1207.

(2) You must comply with the quality assurance procedures for CEMS prescribed in the appendix to this subpart.

(e) *Conduct of monitoring.* The provisions of § 63.8(b) apply.

(f) *Operation and maintenance of continuous monitoring systems.* The provisions of § 63.8(c) apply except:

(1) *Section 63.8(c)(3).* The requirements of § 63.1211(d), that requires CMSs to be installed, calibrated, and operational on the compliance date, shall be complied with instead of section 63.8(c)(3);

(2) *Section 63.8(c)(4)(ii).* The performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMSs in subpart B, part 60 of this chapter that requires detectors to measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds shall be complied with instead of section 63.8(c)(4)(ii); and

(3) Sections 63.8(c)(4)(i), (c)(5), and (c)(7)(i)(C) pertaining to COMS apply only to owners and operators of hazardous waste burning cement kilns..

(g) *Alternative monitoring requirements other than continuous emissions monitoring systems (CEMS).*—(1) *Requests to use alternative methods.* (i) You may submit an application to the Administrator under this paragraph for approval of alternative monitoring requirements to document compliance with the emission standards of this subpart. For requests to use additional CEMS, however, you must use paragraph (a)(5) of this section and § 63.8(f).

(A) The Administrator will not approve averaging periods for operating parameter limits longer than specified in this section unless you document using data or information that the longer averaging period will ensure that emissions do not exceed levels achieved during the comprehensive performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(B) If the Administrator approves the application to use an alternative monitoring requirement, you must continue to use that alternative monitoring requirement until you receive approval under this paragraph to use another monitoring requirement.

(ii) You may submit an application to waive an operating parameter limit specified in this section based on documentation that neither that operating parameter limit nor an alternative operating parameter limit is needed to ensure compliance with the emission standards of this subpart.

(iii) You must comply with the following procedures for applications submitted under paragraphs (g)(1)(i) and (ii) of this section:

(A) *Timing of the application.* You must submit the application to the Administrator not later than with the comprehensive performance test plan.

(B) *Content of the application.* You must include in the application:

(1) Data or information justifying your request for an alternative monitoring requirement (or for a waiver of an operating parameter limit), such as the technical or economic infeasibility or the impracticality of using the required approach;

(2) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach/technique (*e.g.*, type of detector, monitoring location), the averaging period for the limit, and how the limit is to be calculated; and

(3) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard, or that it is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable.

(C) *Approval of request to use an alternative monitoring requirement or waive an operating parameter limit.* The Administrator will notify you of approval or intention to deny approval of the request within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that you submit. The Administrator will not approve an alternative monitoring request unless the alternative monitoring requirement provides equivalent or better assurance of compliance with the relevant emission standard, or is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. Before disapproving any request, the Administrator will notify you of the Administrator's intention to disapprove the request together with:

(1) Notice of the information and findings on which the intended disapproval is based; and

(2) Notice of opportunity for you to present additional information to the Administrator before final action on the request. At the time the Administrator notifies you of intention to disapprove the request, the Administrator will specify how much time you will have after being notified of the intended disapproval to submit the additional information.

(D) *Responsibility of owners and operators.* You are responsible for ensuring that you submit any supplementary and additional information supporting your application in a timely manner to enable the Administrator to consider your application during review of the comprehensive performance test plan. Neither your submittal of an application, nor the Administrator's failure to approve or disapprove the application, relieves you of the responsibility to comply with the provisions of this subpart.

(2) *Administrator's discretion to specify additional or alternative requirements.* The Administrator may determine on a case-by-case basis at any time (e.g., during review of the comprehensive performance test plan, during compliance certification review) that you may need to limit additional or alternative operating parameters (e.g., opacity in addition to or in lieu of operating parameter limits on the particulate matter control device) or that alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of this subpart.

(h) *Reduction of monitoring data.* The provisions of § 63.8(g) apply.

(i) *When an operating parameter is applicable to multiple standards.* Paragraphs (j) through (p) of this section require you to establish limits on operating parameters based on comprehensive performance testing to ensure you maintain compliance with the emission standards of this subpart. For several parameters, you must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE standard of paragraph (j) of this section and the dioxin/furan standard of paragraph (k) of this section. If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests applies.

(j) *DRE.* To remain in compliance with the destruction and removal efficiency (DRE) standard, you must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of § 63.1206(b)(7)) for the following parameters, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber (*i.e.*, the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated):

(1) *Minimum combustion chamber temperature.* (i) You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under § 63.1207(e);

(ii) You must establish a minimum hourly rolling average limit as the average of the test run averages;

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Maximum hazardous waste feedrate.* (i) You must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed.

(ii) You must establish the limits as the average of the maximum hourly rolling averages for each run.

(iii) You must comply with the feedrate limit(s) on a hourly rolling average basis;

(4) *Operation of waste firing system.* You must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.

(k) *Dioxins and furans.* You must comply with the dioxin and furans emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Gas temperature at the inlet to a dry particulate matter control device.* (i) For hazardous waste burning incinerators and cement kilns, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, you must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. You must establish the hourly rolling average limit as the average of the test run averages.

(ii) For hazardous waste burning lightweight aggregate kilns, you must establish a limit on the maximum temperature of the gas at the exit of the (last) combustion chamber (or exit of

any waste heat recovery system) on an hourly rolling average. The limit must be established as the average of the test run averages;

(2) *Minimum combustion chamber temperature.* (i) You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §§ 63.1207(e) and (f);

(ii) You must establish a minimum hourly rolling average limit as the average of the test run averages.

(3) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(4) *Maximum waste feedrate.* (i) You must establish limits on the maximum pumpable and total (pumpable and nonpumpable) waste feedrate for each location where waste is fed.

(ii) You must establish the limits as the average of the maximum hourly rolling averages for each run.

(iii) You must comply with the feedrate limit(s) on a hourly rolling average basis;

(5) *Particulate matter operating limit.* If your combustor is equipped with an activated carbon injection or a carbon bed system, you must limit particulate matter emissions to the level achieved during the comprehensive performance test as prescribed by paragraph (m) of this section;

(6) *Activated carbon injection parameter limits.* If your combustor is equipped with an activated carbon injection system:

(i) *Carbon feedrate.* You must establish a limit on minimum carbon injection rate on an hourly rolling average calculated as the average of the test run averages. If your carbon injection system injects carbon at more than one location, you must establish a carbon feedrate limit for each location.

(ii) *Carrier fluid.* You must establish a limit on minimum carrier fluid (gas or liquid) flowrate or pressure drop as an hourly rolling average based on the manufacturer's specifications. You must document the specifications in the test plan you submit under §§ 63.1207(e) and (f);

(iii) *Carbon specification.* (A) You must specify and use the brand (*i.e.*, manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§ 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.

(B) You may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test and conforms to the key sorbent parameters you identify under paragraph (k)(6)(iii)(A) of this section. You must include in the operating record documentation that the substitute carbon will provide the same level of control as the original carbon.

(7) *Carbon bed parameter limits.* If your combustor is equipped with a carbon bed system:

(i) *Maximum bed age.* (A) Except as provided by paragraph (k)(7)(i)(C) of this section, the maximum age of the carbon in each segment of the bed before you must replace the carbon is the age of the bed during the comprehensive performance test.

(B) You must measure carbon age in terms of the cumulative volume of combustion gas flow through carbon since its addition. For beds with multiple segments, you must establish the maximum age for each segment.

(C) For the initial comprehensive performance test, you may base the initial limit on maximum age of the carbon in each segment of the bed on manufacturer's specifications. If you use manufacturer's specifications rather than actual bed age to establish the initial limit, you must also recommend in the initial comprehensive performance test plan a schedule for subsequent dioxin/furan emissions testing, prior to the confirmatory performance test, that you will use to document to the Administrator that the initial limit on maximum bed age ensures compliance with the dioxin/furan emission standard. If you fail to confirm compliance with the emission standard during this testing, you must conduct additional testing as necessary to document that a revised lower limit on maximum bed age ensures compliance with the standard.

(ii) *Carbon specification.* (A) You must specify and use the brand (*i.e.*, manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§ 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.

(B) You may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test. You must include in the operating record documentation that the substitute carbon will provide an equivalent or improved level of control as the original carbon.

(iii) *Maximum temperature.* You must measure the temperature of the carbon bed at either the bed inlet or exit and you must establish a maximum temperature limit on an hourly rolling average as the average of the test run averages.

(8) *Catalytic oxidizer parameter limits.* If your combustor is equipped with a catalytic oxidizer, you must establish limits on the following parameters:

(i) *Minimum flue gas temperature at the entrance of the catalyst.* You must establish a limit on minimum flue gas temperature at the entrance of the catalyst on an hourly rolling average as the average of the test run averages.

(ii) *Maximum time in-use.* You must replace a catalytic oxidizer with a new catalytic oxidizer when it has reached the maximum service time specified by the manufacturer.

(iii) *Catalyst replacement specifications.* When you replace a catalyst with a new one, the new catalyst must be equivalent to or better than the one used during the previous comprehensive test, as measured by:

(A) Catalytic metal loading for each metal;

(B) Space time, expressed in the units s^{-1}, the maximum rated volumetric flow of combustion gas through the catalyst divided by the volume of the catalyst; and

(C) Substrate construction, including materials of construction, washcoat type, and pore density.

(iv) *Maximum flue gas temperature.* You must establish a maximum flue gas temperature limit at the entrance of the catalyst as an hourly rolling average, based on manufacturer's specifications.

(9) *Inhibitor feedrate parameter limits.* If you feed a dioxin/furan inhibitor into the combustion system, you must establish limits for the following parameters:

(i) *Minimum inhibitor feedrate.* You must establish a limit on minimum inhibitor feedrate on an hourly rolling

average as the average of the test run averages.

(ii) *Inhibitor specifications.* (A) You must specify and use the brand (*i.e.*, manufacturer) and type of inhibitor used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§ 63.1207(e) and (f) key parameters that affect the effectiveness of the inhibitor and establish limits on those parameters based on the inhibitor used in the performance test.

(B) You may substitute at any time a different brand or type of inhibitor provided that the replacement has equivalent or improved properties compared to the inhibitor used in the performance test and conforms to the key parameters you identify under paragraph (k)(9)(ii)(A) of this section. You must include in the operating record documentation that the substitute inhibitor will provide the same level of control as the original inhibitor.

(l) *Mercury.* You must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Feedrate of total mercury.* You must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the hourly rolling averages for each run, unless mercury feedrate limits are extrapolated from performance test feedrate levels under the following provisions.

(i) You may request as part of the performance test plan under §§ 63.7(b) and (c) and §§ 63.1207(e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates.

(ii) The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

(A) Performance test metal feedrates are appropriate (*i.e.*, whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and

(B) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.

(iii) The Administrator will review the performance test results in making a finding of compliance required by §§ 63.6(f)(3) and 63.1206(b)(3) to ensure that you have interpreted emission test results properly and that the extrapolation procedure is appropriate for your source.

(2) *Wet scrubber.* If your combustor is equipped with a wet scrubber, you must establish operating parameter limits prescribed by paragraph (o)(3) of this section.

(3) *Activated carbon injection.* If your combustor is equipped with an activated carbon injection system, you must establish operating parameter limits prescribed by paragraph (k)(7) of this section.

(4) *Activated carbon bed.* If your combustor is equipped with a carbon bed system, you must establish operating parameter limits prescribed by paragraph (k)(8) of this section.

(m) *Particulate matter.* You must comply with the particulate matter emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Control device operating parameter limits (OPLs).* (i) *Wet scrubbers.* For sources equipped with wet scrubbers, including ionizing wet scrubbers, high energy wet scrubbers such as venturi, hydrosonic, collision, or free jet wet scrubbers, and low energy wet scrubbers such as spray towers, packed beds, or tray towers, you must establish limits on the following parameters:

(A) For high energy scrubbers only, minimum pressure drop across the wet scrubber on an hourly rolling average, established as the average of the test run averages;

(B) For all wet scrubbers:

(*1*) To ensure that the solids content of the scrubber liquid does not exceed levels during the performance test, you must either:

(i) Establish a limit on solids content of the scrubber liquid using a CMS or by manual sampling and analysis. If you elect to monitor solids content manually, you must sample and analyze the scrubber liquid hourly unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval; or

(ii) Establish a minimum blowdown rate using a CMS and either a minimum scrubber tank volume or liquid level using a CMS.

(*2*) For maximum solids content monitored with a CMS, you must establish a limit on a twelve-hour rolling average as the average of the test run averages.

(*3*) For maximum solids content measured manually, you must establish an hourly limit, as measured at least once per hour, unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval. You must establish the maximum hourly limit as the average of the manual measurement averages for each run.

(*4*) For minimum blowdown rate and either a minimum scrubber tank volume or liquid level using a CMS, you must establish a limit on an hourly rolling average as the average of the test run averages.

(C) For high energy wet scrubbers only, you must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph (m)(2) of this section. You must establish these hourly rolling average limits as the average of the test run averages; and

(D) You must establish limits on minimum power input for ionizing wet scrubbers on an hourly rolling average as the average of the test run averages.

(ii) *Baghouses.* If your combustor is equipped with a baghouse, you must establish a limit on minimum pressure drop and maximum pressure drop across each baghouse cell based on manufacturer's specifications. You must comply with the limit on an hourly rolling average.

(iii) *Electrostatic precipitators.* If your combustor is equipped with an electrostatic precipitator, you must establish a limit on minimum secondary power input (kVa) for each field on an hourly rolling average as the average of the test run averages. Secondary power is power actually fed to the electrostatic precipitator rather than primary power fed to the transformer-rectifier sets.

(iv) *Other particulate matter control devices.* For each control device that is not a high energy or ionizing wet scrubber, baghouse, or electrostatic precipitator but is operated to comply with the particulate matter emission standards of this subpart, you must ensure that the control device is properly operated and maintained as required by § 63.1206(c)(7) and by monitoring the operation of the control device as follows:

(A) During each comprehensive performance test conducted to demonstrate compliance with the particulate matter emissions standard, you must establish a range of operating values for the control device that is a representative and reliable indicator that the control device is operating within the same range of conditions as during the performance test. You must establish this range of operating values as follows:

(*1*) You must select a set of operating parameters appropriate for the control device design that you determine to be a representative and reliable indicator of the control device performance.

(*2*) You must measure and record values for each of the selected operating parameters during each test run of the performance test. A value for each selected parameter must be recorded using a continuous monitor.

(*3*) For each selected operating parameter measured in accordance with the requirements of paragraph (m)(1)(iv)(A)(*1*) of this section, you must establish a minimum operating parameter limit or a maximum operating parameter limit, as appropriate for the parameter, to define the operating limits within which the control device can operate and still continuously achieve the same operating conditions as during the performance test.

(*4*) You must prepare written documentation to support the operating parameter limits established for the control device and you must include this documentation in the performance test plan that you submit for review and approval. This documentation must include a description for each selected parameter and the operating range and monitoring frequency required to ensure the control device is being properly operated and maintained.

(B) You must install, calibrate, operate, and maintain a monitoring device equipped with a recorder to measure the values for each operating parameter selected in accordance with the requirements of paragraph (m)(1)(iv)(A)(*1*) of this section. You must install, calibrate, and maintain the monitoring equipment in accordance with the equipment manufacturer's specifications. The recorder must record the detector responses at least every 60 seconds, as required in the definition of continuous monitor.

(C) You must regularly inspect the data recorded by the operating parameter monitoring system at a sufficient frequency to ensure the control device is operating properly. An excursion is determined to have occurred any time that the actual value of a selected operating parameter is less than the minimum operating limit (or, if applicable, greater than the maximum operating limit) established for the parameter in accordance with the requirements of paragraph (m)(1)(iv)(A)(3) of this section.

(D) Operating parameters selected in accordance with paragraph (m)(1)(iv) of this section may be based on manufacturer specifications provided you support the use of manufacturer specifications in the performance test plan that you submit for review and approval.

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Maximum ash feedrate.* Owners and operators of hazardous waste incinerators must establish a maximum ash feedrate limit as the average of the highest hourly rolling averages for each run.

(n) *Semivolatile metals and low volatility metals.* You must comply with the semivolatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Maximum inlet temperature to dry particulate matter air pollution control device.* You must establish a limit on the maximum inlet temperature to the primary dry metals emissions control device (*e.g.*, electrostatic precipitator, baghouse) on an hourly rolling average basis as the average of the test run averages.

(2) *Maximum feedrate of semivolatile and low volatile metals.* (i) *General.* You must establish feedrate limits for semivolatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) as follows, except as provided by paragraph (n)(2)(ii) of this section:

(A) You must establish a 12-hour rolling average limit for the feedrate of cadmium and lead, combined, in all feedstreams as the average of the average hourly rolling averages for each run;

(B) You must establish a 12-hour rolling average limit for the feedrate of arsenic, beryllium, and chromium, combined, in all feedstreams as the average of the average hourly rolling averages for each run; and

(C) You must establish a 12-hour rolling average limit for the feedrate of arsenic, beryllium, and chromium, combined, in all pumpable feedstreams as the average of the average hourly rolling averages for each run. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if you base the total feedrate limit solely on the feedrate of pumpable feedstreams.

(ii) *Feedrate extrapolation.* (A) You may request as part of the performance test plan under §§ 63.7(b) and (c) and §§ 63.1207(e) and (f) to use the semivolatile metal and low volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates.

(B) The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

(*1*) Performance test metal feedrates are appropriate (*i.e.*, whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and

(*2*) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.

(C) The Administrator will review the performance test results in making a finding of compliance required by §§ 63.6(f)(3) and 63.1206(b)(3) to ensure that you have interpreted emission test results properly and that the extrapolation procedure is appropriate for your source.

(3) *Control device operating parameter limits (OPLs).* You must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section;

(4) *Maximum total chlorine and chloride feedrate.* You must establish a 12-hour rolling average limit for the feedrate of total chlorine and chloride in all feedstreams as the average of the average hourly rolling averages for each run.

(5) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the

maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis.

(o) *Hydrochloric acid and chlorine gas.* You must comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Feedrate of total chlorine and chloride.* You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the average hourly rolling averages for each run.

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Wet scrubber.* If your combustor is equipped with a wet scrubber:

(i) If your source is equipped with a high energy wet scrubber such as a venturi, hydrosonic, collision, or free jet wet scrubber, you must establish a limit on minimum pressure drop across the wet scrubber on an hourly rolling average as the average of the test run averages;

(ii) If your source is equipped with a low energy wet scrubber such as a spray tower, packed bed, or tray tower, you must establish a minimum pressure drop across the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average;

(iii) If your source is equipped with a low energy wet scrubber, you must establish a limit on minimum liquid feed pressure to the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average;

(iv) You must establish a limit on minimum pH on an hourly rolling average as the average of the test run averages;

(v) You must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average as the average of the test run averages. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph (o)(2) of this section; and

(vi) You must establish a limit on minimum power input for ionizing wet scrubbers on an hourly rolling average as the average of the test run averages.

(4) *Dry scrubber.* If your combustor is equipped with a dry scrubber, you must establish the following operating parameter limits:

(i) *Minimum sorbent feedrate.* You must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.

(ii) *Minimum carrier fluid flowrate or nozzle pressure drop.* You must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.

(iii) *Sorbent specifications.* (A) You must specify and use the brand (*i.e.*, manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§ 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the sorbent used in the performance test.

(B) You may substitute at any time a different brand or type of sorbent provided that the replacement has equivalent or improved properties compared to the sorbent used in the performance test and conforms to the key sorbent parameters you identify under paragraph (o)(4)(iii)(A) of this section. You must record in the operating record documentation that the substitute sorbent will provide the same level of control as the original sorbent.

(p) *Maximum combustion chamber pressure.* If you comply with the requirements for combustion system leaks under § 63.1206(c)(5) by maintaining the maximum combustion chamber zone pressure lower than ambient pressure, you must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not maintained at any time.

(q) *Operating under different modes of operation.* If you operate under different modes of operation, you must establish operating parameter limits for each mode. You must document in the operating record when you change a mode of operation and begin complying with the operating parameter limits for an alternative mode of operation. You must begin calculating rolling averages anew (*i.e.*, without considering previous recordings) when you begin complying with the operating parameter limits for the alternative mode of operation.

Notification, Reporting and Recordkeeping

§ 63.1210 What are the notification requirements?

(a) *Summary of requirements.* (1) You must submit the following notifications to the Administrator:

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE of this Part.
63.1210(b) and (c)	Notification of intent to comply.
63.9(d)	Notification that you are subject to special compliance requirements.
63.1207(e), 63.9(e) 63.9(g)(1) and (3)	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan.[1]
63.1210(d), 63.1207(j), 63.9(h), 63.10(d)(2), 63.10(e)(2).	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.
63.1206(b)(6)	Notification of changes in design, operation, or maintenance.
63.9(j)	Notification and documentation of any change in information already provided under § 63.9.

[1] You may also be required on a case-by-case basis to submit a feedstream analysis plan under § 63.1209(c)(3).

(2) You must submit the following notifications to the Administrator if you request or elect to comply with alternative requirements:

Reference	Notification, request, petition, or application
63.1206(b)(5), 63.1213, 63.6(i), 63.9(c)	You may request an extension of the compliance date for up to one year.
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.1209(g)(1)	You may request approval of: (1) alternative monitoring methods, except for standards that you must monitor with a continuous emission monitoring system (CEMS) and except for requests to use a CEMS in lieu of operating parameter limits; or (2) a waiver of an operating parameter limit.
63.1209(a)(5), 63.8(f)	You may request: (1) approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (2) approval to use a CEMS in lieu of operating parameter limits.
63.1204(d)(4)	Notification that you elect to comply with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(4)	Notification that you elect to comply with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)(A)	Notification that you elect to document compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE of this Part when not burning hazardous waste.
63.1206(b)(5)(i)(C)(2)	You may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting after a making a change in the design or operation that could affect compliance with emission standards and prior to submitting a revised Notification of Compliance.
63.1206(b)(9)(iii)(B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b)(10)	Owners and operators of lightweight aggregate kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1206(b)(11)	Owners and operators of cement kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1206(b)(14)	Owners and operators of incinerators may comply with an alternative particulate matter standard of 68 mg/dscm, corrected to 7% oxygen, under a petition documenting de minimis metals levels in feedstreams.
63.1207(c)(2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.
63.1207(d)(3)	You may request more than 60 days to complete a performance test if additional time is needed for reasons beyond your control.
63.1207(i)	You may request up to a one-year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1207(j)(4)	You may request more than 90 days to submit a Notification of Compliance after completing a performance test if additional time is needed for reasons beyond your control.
63.1207(l)(3)	After failure of a performance test, you may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting.
63.1209(l)(1)	You may request to extrapolate mercury feedrate limits.
63.1209(n)(2)(ii)	You may request to extrapolate semivolatile and low volatile metal feedrate limits.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1211(e)	You may request to use data compression techniques to record data on a less frequent basis than required by § 63.1209.

(b) *Notification of intent to comply (NIC).* (1) You must prepare a Notification of Intent to Comply that includes the following information:

(i) General information:

(A) The name and address of the owner/operator and the source;

(B) Whether the source is a major or an area source;

(C) Waste minimization and emission control technique(s) being considered;

(D) Emission monitoring technique(s) you are considering;

(E) Waste minimization and emission control technique(s) effectiveness;

(F) A description of the evaluation criteria used or to be used to select waste minimization and/or emission control technique(s); and

(G) A statement that you intend to comply with the emission standards of this subpart.

(ii) Information on key activities and estimated dates for these activities that will bring the source into compliance with emission control requirements of this subpart. The submission of key activities and dates is not intended to be static and you may revise them during the period the NIC is in effect. You must submit revisions to the Administrator and make them available to the public. You must include the following key activities and dates:

(A) The dates for beginning and completion of engineering studies to evaluate emission control systems or process changes for emissions;

(B) The date by which you will award contracts for emission control systems or process changes for emission control, or the date by which you will issue orders for the purchase of component parts to accomplish emission control or process changes;

(C) The date by which you will submit construction applications;

(D) The date by which you will initiate on-site construction, installation of emission control equipment, or process change;

(E) The date by which you will complete on-site construction, installation of emission control equipment, or process change; and

(F) The date by which you will achieve final compliance. The individual dates and milestones listed in paragraphs (b)(1)(ii)(A) through (F) of this section as part of the NIC are not requirements and therefore are not enforceable deadlines; the requirements of paragraphs (b)(1)(ii)(A) through (F) of this section must be included as part of the NIC only to inform the public of

your intention to comply with the emission standards of this subpart.

(iii) A summary of the public meeting required under paragraph (c) of this section.

(iv) If you do not intent to comply, but will not stop burning hazardous waste by October 1, 2001 a certification that:

(A) You will stop burning hazardous waste on or before September 30, 2002; and

(B) It is necessary to combust the hazardous waste from another on-site source, during the year prior to September 30, 2002 because that other source is:

(*1*) Installing equipment to come into compliance with the emission standards of this subpart; or

(*2*) Installing source reduction modifications to eliminate the need for further combustion of wastes.

(2) You must make a draft of the NIC available for public review no later than 30 days prior to the public meeting required under paragraph (c)(1) of this section.

(3) You must submit the final NIC to the Administrator no later than October 2, 2000.

(c) *NIC public meeting and notice.* (1) Prior to the submission of the NIC to the permitting agency, and no later than July 31, 2000, you must hold at least one informal meeting with the public to discuss anticipated activities described in the draft NIC for achieving compliance with the emission standards of this subpart. You must post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(2) You must submit a summary of the meeting, along with the list of attendees and their addresses developed under paragraph (b)(1) of this section, and copies of any written comments or materials submitted at the meeting, to the Administrator as part of the final NIC, in accordance with paragraph (b)(1)(iii) of this section.

(3) You must provide public notice of the NIC meeting at least 30 days prior to the meeting. You must provide public notice in all of the following forms:

(i) *Newspaper advertisement.* You must publish a notice in a newspaper of general circulation in the county or equivalent jurisdiction of your facility. In addition, you must publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdiction where such publication would be necessary to inform the affected public. You must publish the notice as a display advertisement.

(ii) *Visible and accessible sign.* You must post a notice on a clearly marked sign at or near the source. If you place the sign on the site of the hazardous waste combustor, the sign must be large enough to be readable from the nearest spot where the public would pass by the site.

(iii) *Broadcast media announcement.* You must broadcast a notice at least once on at least one local radio station or television station.

(iv) *Notice to the facility mailing list.* You must provide a copy of the notice to the facility mailing list in accordance with § 124.10(c)(1)(ix) of this chapter.

(4) You must include the following in the notices required under paragraph (c)(3) of this section:

(i) The date, time, and location of the meeting;

(ii) A brief description of the purpose of the meeting;

(iii) A brief description of the source and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the source location;

(iv) A statement encouraging people to contact the source at least 72 hours before the meeting if they need special access to participate in the meeting;

(v) A statement describing how the draft NIC can be obtained; and

(vi) The name, address, and telephone number of a contact person for the NIC.

(d) *Notification of compliance.* (1) The Notification of Compliance status requirements of § 63.9(h) apply, except that:

(i) The notification is a Notification of Compliance, rather than compliance status;

(ii) The notification is required for the initial comprehensive performance test and each subsequent comprehensive and confirmatory performance test; and

(iii) You must postmark the notification before the close of business on the 90th day following completion of relevant compliance demonstration activity specified in this subpart rather than the 60th day as required by § 63.9(h)(2)(ii).

(2) Upon postmark of the Notification of Compliance, the operating parameter limits identified in the Notification of Compliance, as applicable, shall be complied with, the limits identified in the Documentation of Compliance or a previous Notification of Compliance are no longer applicable.

(3) The Notification of Compliance requirements of § 63.1207(j) also apply.

§ 63.1211 What are the recordkeeping and reporting requirements?

(a) *Summary of reporting requirements.* You must submit the following reports to the Administrator:

Reference	Report
63.1211(b)	Compliance progress report associated and submitted with the notification of intent to comply.
63.10(d)(4)	Compliance progress reports, if required as a condition of an extension of the compliance date granted under § 63.6(i).
63.1206(c)(3)(vi)	Excessive exceedances reports.
63.1206(c)(4)(iv)	Emergency safety vent opening reports.
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports.
63.10(e)(3)	Excessive emissions and continuous monitoring system performance report and summary report.

(b) *Compliance progress reports associated with the notification of intent to comply.* (1) General. Not later than October 1, 2001, you must comply with the following, unless you comply with paragraph (b)(2)(ii) of this section:

(i) Complete engineering design for any physical modifications to the source needed to comply with the emission standards of this subpart;

(ii) Submit applicable construction applications to the Administrator; and

(iii) Enter into a binding contractual commitment to purchase, fabricate, and install any equipment, devices, and ancillary structures needed to comply with the emission standards of this subpart.

(2) *Demonstration.* (i) You must submit to the Administrator a progress report on or before October 1, 2001 which contains information demonstrating that you have met the requirements of paragraph (b)(1) of this section. This information will be used by the Administrator to determine if you have made adequate progress towards compliance with the emission standards of this subpart.

(ii) If you intend to comply with the emission standards of this subpart, but can do so without undertaking any of the activities described in paragraph (b)(1) of this section, you must submit documentation either:

(A) Demonstrating that you, at the time of the progress report, are in compliance with the emission standards and operating requirements; or

(B) Specifying the steps that you will take to comply, without undertaking any of the activities listed in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(iii) If you do not comply with paragraph (b)(1) or (b)(2)(ii) of this section, you must stop burning hazardous waste on or before October 1, 2001.

(3) *Schedule.* (i) You must include in the progress report a detailed schedule that lists key dates for all projects that will bring the source into compliance with the emission standards and operating requirements of this subpart (i.e., key dates for the activities required under paragraphs (b)(1)(i) through (iii) of this section). Dates must cover the time frame from the progress report through the compliance date of the emission standards and operating requirements of this subpart.

(ii) The schedule must contain the following dates:

(A) Bid and award dates for construction contracts and equipment supply contractors;

(B) Milestones such as ground breaking, completion of drawings and specifications, equipment deliveries, intermediate construction completions, and testing;

(C) The dates on which applications were submitted for or obtained operating and construction permits or licenses;

(D) The dates by which approvals of any permits or licenses are anticipated; and

(E) The projected date by which you will comply with the emission standards and operating requirements of this subpart.

(4) *Notice of intent to comply.* You must include a statement in the progress report that you intend or do not intend to comply with the emission standards and operating requirements of this subpart.

(5) *Sources that do not intend to comply.* (i) If you indicated in your NIC your intent not to comply with the emission standards and operating requirements of this subpart and stop burning hazardous waste prior to submitting a progress report, or if you meet the requirements of § 63.1206(a)(2), you are exempt from the requirements of paragraphs (b)(2) and (b)(3) of this section. However, you must include in your progress report the date on which you stopped burning hazardous waste and the date(s) you submitted RCRA closure documents.

(ii) If you signify in the progress report, submitted not later than October 1, 2001, your intention not to comply with the emission standards and operating requirements of this subpart, you must stop burning hazardous waste on or before October 1, 2001.

(c) *Summary of recordkeeping requirements.* You must retain the following in the operating record:

Reference	Document, data, or information
63.1201(a), 63.10(b) and (c)	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by continuous monitoring systems (CMS), and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1211(d)	Documentation of compliance.
63.1206(c)(3)(vii)	Documentation and results of the automatic waste feed cutoff operability testing.
63.1209(c)(2)	Feedstream analysis plan.
63.1204(d)(3)	Documentation of compliance with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(3)	Documentation of compliance with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)(B)	If you elect to comply with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.
63.1206(c)(2)	Startup, shutdown, and malfunction plan.
63.1206(c)(3)(v)	Corrective measures for any automatic waste feed cutoff that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c)(4)(ii)	Emergency safety vent operating plan.
63.1206(c)(4)(iii)	Corrective measures for any emergency safety vent opening.
63.1206(c)(6)	Operator training and certification program.
63.1206(c)(7)	Ramp down procedures for waste feed cutoffs.
63.1209(k)(6)(iii), 63.1209(k)(7)(ii), 63.1209(k)(9)(ii), 63.1209(o)(4)(iii).	Documentation that a substitute activated carbon, dioxin/furan formation reaction inhibitor, or dry scrubber sorbent will provide the same level of control as the original material.

(d) *Documentation of compliance.* (1) By the compliance date, you must develop and include in the operating record a Documentation of Compliance.

(2) The Documentation of Compliance must identify the applicable emission standards under this subpart and the limits on the operating parameters under § 63.1209 that will ensure compliance with those emission standards.

(3) You must include a signed and dated certification in the Documentation of Compliance that:

(i) Required CEMs and CMS are installed, calibrated, and continuously operating in compliance with the requirements of this subpart; and

(ii) Based on an engineering evaluation prepared under your direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams, and available emissions data:

(A) You are in compliance with the emission standards of this subpart; and

(B) The limits on the operating parameters under § 63.1209 ensure compliance with the emission standards of this subpart.

(4) You must comply with the emission standards and operating parameter limits specified in the Documentation of Compliance.

(e) *Data compression*. You may submit a written request to the Administrator for approval to use data compression techniques to record data from CMS, including CEMS, on a frequency less than that required by § 63.1209. You must submit the request for review and approval as part of the comprehensive performance test plan.

(1) You must record a data value at least once each ten minutes.

(2) For each CEMS or operating parameter for which you request to use data compression techniques, you must recommend:

(i) A fluctuation limit that defines the maximum permissible deviation of a new data value from a previously generated value without requiring you to revert to recording each one-minute value.

(A) If you exceed a fluctuation limit, you must record each one-minute value for a period of time not less than ten minutes.

(B) If neither the fluctuation limit nor the data compression limit are exceeded during that period of time, you may reinitiate recording data values on a frequency of at least once each ten minutes; and

(ii) A data compression limit defined as the closest level to an operating parameter limit or emission standard at which reduced data recording is allowed.

(A) Within this level and the operating parameter limit or emission standard, you must record each one-minute average.

(B) The data compression limit should reflect a level at which you are unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average.

§ 63.1212 What are the other requirements pertaining to the NIC and associated progress reports?

(a) *Certification of intent to comply*. (1) The Notice of Intent to Comply (NIC) and Progress Report must contain the following certification signed and dated by an authorized representative of the source: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(2) An authorized representative should be a responsible corporate officer (for a corporation), a general partner (for a partnership), the proprietor (of a sole proprietorship), or a principal executive officer or ranking elected official (for a municipality, State, Federal, or other public agency).

(b) *Sources that begin burning hazardous waste after September 30, 1999*. (1) If you begin to burn hazardous waste after September 30, 1999 but prior to June 30, 2000 you must comply with the requirements of §§ 63.1206(a)(2), 63.1210(b) and (c), 63.1211(b), and paragraph (a) of this section, and associated time frames for public meetings and document submittals.

(2) If you intend to begin burning hazardous waste after June 30, 2000, you must comply with the requirements of §§ 63.1206(a)(2), 63.1210(b) and (c), 63.1211(b), and paragraph (a) of this section prior to burning hazardous waste. In addition:

(i) You must make a draft NIC available to the public, notice the public meeting, conduct a public meeting, and submit a final NIC prior to burning hazardous waste; and

(ii) You must submit your progress report at the time you submit your final NIC.

Other

§ 63.1213 How can the compliance date be extended to install pollution prevention or waste minimization controls?

(a) *Applicability*. You may request from the Administrator or State with an approved Title V program an extension of the compliance data of up to one year. An extension may be granted if you can reasonably document that the installation of pollution prevention or waste minimization measures will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the hazardous waste combustor(s), and that you could not install the necessary control measures and comply with the emission standards and operating requirements of this subpart within three years after their effective date.

(b) *Requirements for requesting an extension*. (1) You must make your requests for a (up to) one-year extension in writing, and it must be received not later than 12 months before the compliance date. The request must contain the following information:

(i) A description of pollution prevention or waste minimization controls that, when installed, will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the hazardous waste combustor(s). Pollution prevention or waste minimization measures may include: equipment or technology modifications, reformulation or redesign of products, substitution of raw materials, improvements in work practices, maintenance, training, inventory control, or recycling practices conducted as defined in § 261.1(c) of this chapter;

(ii) A description of other pollution controls to be installed that are necessary to comply with the emission standards and operating requirements;

(iii) A reduction goal or estimate of the annual reductions in quantity and/or toxicity of hazardous waste(s) entering combustion feedstream(s) that you will achieve by installing the proposed pollution prevention or waste minimization measures;

(iv) A comparison of reductions in the amounts and/or toxicity of hazardous wastes combusted after installation of pollution prevention or waste minimization measures to the amounts and/or toxicity of hazardous wastes combusted prior to the installation of these measures. If the difference is less than a fifteen percent reduction, include a comparison to pollution prevention and waste minimization reductions recorded during the previous five years;

(v) Reasonable documentation that installation of the pollution prevention or waste minimization changes will not result in a net increase (except for documented increases in production) of hazardous constituents released to the environment through other emissions, wastes or effluents;

(vi) Reasonable documentation that the design and installation of waste minimization and other measures that are necessary for compliance with the emission standards and operating requirements of this subpart cannot otherwise be installed within the three year compliance period, and

(vii) The information required in § 63.6(i)(6)(i)(B) through (D).

(2) You may enclose documentation prepared under an existing State-required pollution prevention program that contains the information prescribed in paragraph (b) of this section with a request for extension in lieu of complying with the time extension requirements of that paragraph.

(c) *Approval of request for extension of compliance date*. Based on the information provided in any request made under paragraph (a) of this section, the Administrator or State with an approved title V program may grant an extension of the compliance date of this subpart. The extension will be in writing in accordance with §§ 63.6(i)(10)(i) through 63.6(i)(10)(v)(A).

TABLE 1 TO SUBPART EEE.—GENERAL PROVISIONS APPLICABLE TO SUBPART EEE

Reference	Applies to Subparts EEE	Explanation
63.1	Yes.	
63.2	Yes.	
63.3	Yes.	
63.4	Yes.	
63.5	Yes.	
63.6(a), (b), (c), and (d)	Yes.	
63.6(e)	Yes	Except § 63.1206(b)(1) and (c)(2)(ii) require compliance with the emission standards during startup, shutdown, and malfunction if hazardous waste is burned or remains in the combustion chamber during those periods of operation.
63.6(f)(1)	Yes	Same exception that applies to § 63.6(e).
63.6(f)(2)	Yes	Except that the performance test requirements of § 63.1207 apply instead of § 63.6(f)(2)(iii)(B).
63.6(f)(3)	Yes.	
63.6(g)	Yes.	
63.6(h)	Yes	Except only cement kilns are subject to an opacity standard, and § 63.1206(b)(1) requires compliance with the opacity standard at all times that hazardous waste is in the combustion chamber.
63.6(i)	Yes	Section § 63.1213 specifies that the compliance date may also be extended for inability to install necessary emission control equipment by the compliance date because of implementation of pollution prevention or waste minimization controls.
63.6(j)	Yes.	
63.7(a)	Yes.	
63.7(b)	Yes	Except § 63.1207(e) requires you to submit the site-specific test plan for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(c)	Yes	Except § 63.1207(e) requires you to submit the site-specific test plan (including the quality assurance provisions under § 63.7(c)) for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(d)	Yes.	
63.7(e)	Yes	Except: (1) § 63.1207 prescribes operations during performance testing; (2) § 63.1209 specifies operating limits that will be established during performance testing (such that testing is likely to be representative of the extreme range of normal performance); and (3) §§ 63.1206(b)(1) and (c)(2) require compliance with the emission standards during startup, shutdown, and malfunction if hazardous waste is burned or remains in the combustion chamber during those periods of operation.
63.7(f)	Yes.	
63.7(g)	Yes	Except that § 63.1207(j) requiring the results of the performance test (and the notification of compliance) to be submitted within 90 days of completing the test, unless the Administrator grants a time extension, applies instead of § 63.7(g)(1).
63.7(h)	Yes	Except § 63.1207(c)(2) allows data in lieu of the initial comprehensive performance test, and § 63.1207(m) provides a waiver of certain performance tests. You must submit requests for these waivers with the site-specific test plan.
63.8(a) and (b)	Yes.	
63.8(c)	Yes	Except: (1) § 63.1211(d) that requires CMS to be installed, calibrated, and operational on the compliance date applies instead of § 63.8(c)(3); (2) the performance specifications for CO, HC, and O_2 CEMS in subpart B, part 60, of this chapter requiring that the detectors measure the sample concentration at least once every 15 seconds for calculating an average emission level once every 60 seconds apply instead of § 63.8(c)(4)(ii); and (3) §§ 63.8(c)(4)(i), (c)(5), and (c)(7)(i)(C) pertaining to COMS apply only to cement kilns.
63.8(d)	Yes.	
63.8(e)	Yes	Except § 63.1207(e) requiring sources to submit the site-specific comprehensive performance test plan and the CMS performance evaluation plan for approval at least one year prior to the planned test date applies instead of §§ 63.8(e)(2) and (3)(iii).
63.8(f)	Yes.	
63.8(g)	Yes	Except § 63.8(g)(2) regarding data reduction for COMS applies only to cement kilns.
63.9(a)	Yes.	
63.9(b)	Yes	NOTE: Section 63.9(b)(1)(ii) pertains to notification requirements for area sources that become a major source, and § 93.9(b)(2)(v) requires a major source determination. Although area sources are subject to all provisions of this subpart (Subpart EEE), these sections nonetheless apply because the major source determination may affect the applicability of part 63 standards or title V permit requirements to other sources (i.e., other than a hazardous waste combustor) of hazardous air pollutants at the facility.
63.9(c) and (d)	Yes.	
63.9(e)	Yes	Except § 63.1207(e) which requires the comprehensive performance test plan to be submitted for approval one year prior to the planned performance test date applies instead of § 63.9(e).
63.9(f)	No.	
63.9(g)	Yes	Except § 63.9(g)(2) pertaining to COMS does not apply.
63.9(h)	Yes	Except § 63.1207(j) requiring the notification of compliance to be submitted within 90 days of completing a performance test unless the Administrator grants a time extension applies instead of § 63.9(h)(2)(ii). *Note:* Even though area sources are subject to this subpart, the major source determination required by § 63.9(h)(2)(i)(E) is applicable to hazardous waste combustors for the reasons discussed above.
63.9(i) and (j)	Yes.	

TABLE 1 TO SUBPART EEE.—GENERAL PROVISIONS APPLICABLE TO SUBPART EEE—Continued

Reference	Applies to Subparts EEE	Explanation
63.10	Yes	Except reports of performance test results required under § 63.10(d)(2) may be submitted up to 90 days after completion of the test.
63.11	No.	
63.12–63.15	Yes.	

Appendix to Subpart EEE of Part 63—Quality Assurance Procedures for Continuous Emissions Monitors Used for Hazardous Waste Combustors

1. Applicability and Principle

1.1 Applicability. a. These quality assurance requirements are used to evaluate the effectiveness of quality control (QC) and quality assurance (QA) procedures and the quality of data produced by continuous emission monitoring systems (CEMS) that are used for determining compliance with the emission standards on a continuous basis as specified in the applicable regulation. The QA procedures specified by these requirements represent the minimum requirements necessary for the control and assessment of the quality of CEMS data used to demonstrate compliance with the emission standards provided under subpart EEE of this part 63. Owners and operators must meet these minimum requirements and are encouraged to develop and implement a more extensive QA program. These requirements superede those found in part 60, appendix F of this chapter. Appendix F does not apply to hazardous waste-burning devices.

b. Data collected as a result of the required QA and QC measures are to be recorded in the operating record. In addition, data collected as a result of CEMS performance evaluations required by Section 5 in conjunction with an emissions performance test are to be submitted to the Administrator as provided by § 63.8(e)(5). These data are to be used by both the Agency and the CEMS operator in assessing the effectiveness of the CEMS QA and QC procedures in the maintenance of acceptable CEMS operation and valid emission data.

1.2 Principle. The QA procedures consist of two distinct and equally important functions. One function is the assessment of the quality of the CEMS data by estimating accuracy. The other function is the control and improvement of the quality of the CEMS data by implementing QC policies and corrective actions. These two functions form a control loop. When the assessment function indicates that the data quality is inadequate, the source must immediately stop burning hazardous waste. The CEM data control effort must be increased until the data quality is acceptable before hazardous waste burning can resume.

a. In order to provide uniformity in the assessment and reporting of data quality, this procedure explicitly specifies the assessment methods for response drift and accuracy. The methods are based on procedures included in the applicable performance specifications provided in appendix B to part 60 of this chapter. These procedures also require the analysis of the EPA audit samples concurrent with certain reference method (RM) analyses as specified in the applicable RM's.

b. Because the control and corrective action function encompasses a variety of policies, specifications, standards, and corrective measures, this procedure treats QC requirements in general terms to allow each source owner or operator to develop a QC system that is most effective and efficient for the circumstances.

2. Definitions

2.1 *Continuous Emission Monitoring System (CEMS).* The total equipment required for the determination of a pollutant concentration. The system consists of the following major subsystems:

2.1.1 *Sample Interface.* That portion of the CEMS used for one or more of the following: sample acquisition, sample transport, and sample conditioning, or protection of the monitor from the effects of the stack effluent.

2.1.2 *Pollutant Analyzer.* That portion of the CEMS that senses the pollutant concentration and generates a proportional output.

2.1.3 *Diluent Analyzer.* That portion of the CEMS that senses the diluent gas (O2) and generates an output proportional to the gas concentration.

2.1.4 *Data Recorder.* That portion of the CEMS that provides a permanent record of the analyzer output. The data recorder may provide automatic data reduction and CEMS control capabilities.

2.2 *Relative Accuracy (RA).* The absolute mean difference between the pollutant concentration determined by the CEMS and the value determined by the reference method (RM) plus the 2.5 percent error confidence coefficient of a series of test divided by the mean of the RM tests or the applicable emission limit.

2.3 *Calibration Drift (CD).* The difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

2.4 *Zero Drift (ZD).* The difference in CEMS output readings at the zero pollutant level after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

2.5 *Calibration Standard.* Calibration standards produce a known and unchanging response when presented to the pollutant analyzer portion of the CEMS, and are used to calibrate the drift or response of the analyzer.

2.6 *Relative Accuracy Test Audit (RATA).* Comparison of CEMS measurements to reference method measurements in order to evaluate relative accuracy following procedures and specification given in the appropriate performance specification.

2.7 *Absolute Calibration Audit (ACA).* Equivalent to calibration error (CE) test defined in the appropriate performance specification using NIST traceable calibration standards to challenge the CEMS and assess accuracy.

2.8 *Rolling Average.* The average emissions, based on some (specified) time period, calculated every minute from a one-minute average of four measurements taken at 15-second intervals. CEMS other than carbon monoxide and total hydrocarbon CEMS may have rolling averages calculated every hour from a one-hour average of at least four measurements taken at intervals not exceeding 15 minutes.

c. QA/QC Requirements

3.1 QC Requirements. a. Each owner or operator must develop and implement a QC program. At a minimum, each QC program must include written procedures describing in detail complete, step-by-step procedures and operations for the following activities.

1. Checks for component failures, leaks, and other abnormal conditions.
2. Calibration of CEMS.
3. CD determination and adjustment of CEMS.
4. Integration of CEMS with the automatic waste feed cutoff (AWFCO) system.
5. Preventive Maintenance of CEMS (including spare parts inventory).
6. Data recording, calculations, and reporting.
7. Checks of record keeping.
8. Accuracy audit procedures, including sampling and analysis methods.
9. Program of corrective action for malfunctioning CEMS.
10. Operator training and certification.
11. Maintaining and ensuring current certification or naming of cylinder gasses, metal solutions, and particulate samples used for audit and accuracy tests, daily checks, and calibrations.

b. Whenever excessive inaccuracies occur for two consecutive quarters, the current written procedures must be revised or the CEMS modified or replaced to correct the deficiency causing the excessive inaccuracies. These written procedures must be kept on record and available for inspection by the enforcement agency.

3.2 QA Requirements. Each source owner or operator must develop and implement a QA plan that includes, at a minimum, the following.

1. QA responsibilities (including maintaining records, preparing reports, reviewing reports).
2. Schedules for the daily checks, periodic audits, and preventive maintenance.
3. Check lists and data sheets.
4. Preventive maintenance procedures.
5. Description of the media, format, and location of all records and reports.
6. Provisions for a review of the CEMS data at least once a year. Based on the results of the review, the owner or operator must revise or update the QA plan, if necessary.

d. CD and ZD Assessment and Daily System Audit

4.1 *CD and ZD Requirement.* Owners and operators must check, record, and quantify the ZD and the CD at least once daily (approximately 24 hours) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, at a minimum, be adjusted whenever the daily ZD or CD exceeds the limits in the Performance Specifications. If, on any given ZD and/or CD check the ZD and/or CD exceed(s) two times the limits in the Performance Specifications, or if the cumulative adjustment to the ZD and/or CD (see Section 4.2) exceed(s) three times the limits in the Performance Specifications, hazardous waste burning must immediately cease and the CEMS must be serviced and recalibrated. Hazardous waste burning cannot resume until the owner or operator documents that the CEMS is in compliance with the Performance Specifications by carrying out an ACA.

4.2 *Recording Requirements for Automatic ZD and CD Adjusting Monitors.* Monitors that automatically adjust the data to the corrected calibration values must record the unadjusted concentration measurement prior to resetting the calibration, if performed, or record the amount of the adjustment.

4.3 *Daily System Audit.* The audit must include a review of the calibration check data, an inspection of the recording system, an inspection of the control panel warning lights, and an inspection of the sample transport and interface system (e.g., flowmeters, filters, etc.) as appropriate.

4.4 *Data Recording and Reporting.* All measurements from the CEMS must be retained in the operating record for at least 5 years.

5. Performance Evaluation

Carbon Monoxide (CO), Oxygen (O_2), and Hydrocarbon (HC) CEMS. An Absolute Calibration Audit (ACA) must be conducted quarterly, and a Relative Accuracy Test Audit (RATA) (if applicable, see sections 5.1 and 5.2) must be conducted yearly. An Interference Response Tests must be performed whenever an ACA or a RATA is conducted. When a performance test is also required under § 63.1207 to document compliance with emission standards, the RATA must coincide with the performance test. The audits must be conducted as follows.

5.1 *Relative Accuracy Test Audit (RATA).* This requirement applies to O_2 and CO CEMS. The RATA must be conducted at least yearly. Conduct the RATA as described in the RA test procedure (or alternate procedures section) described in the applicable Performance Specifications. In addition, analyze the appropriate performance audit samples received from the EPA as described in the applicable sampling methods.

5.2 *Absolute Calibration Audit (ACA).* The ACA must be conducted at least quarterly except in a quarter when a RATA (if applicable, see section 5.1) is conducted instead. Conduct an ACA as described in the calibration error (CE) test procedure described in the applicable Performance Specifications.

5.3 *Interference Response Test.* The interference response test must be conducted whenever an ACA or RATA is conducted. Conduct an interference response test as described in the applicable Performance Specifications.

5.4 *Excessive Audit Inaccuracy.* If the RA from the RATA or the CE from the ACA exceeds the criteria in the applicable Performance Specifications, hazardous waste burning must cease immediately. Hazardous waste burning cannot resume until the owner or operator takes corrective measures and audit the CEMS with a RATA to document that the CEMS is operating within the specifications.

6. Other Requirements

6.1 *Performance Specifications.* CEMS used by owners and operators of HWCs must comply with the following performance specifications in appendix B to part 60 of this chapter:

TABLE I: PERFORMANCE SPECIFICATIONS FOR CEMS

CEMS	Performance specification
Carbon monoxide	4B
Oxygen	4B
Total hydrocarbons	8A

6.2 *Downtime due to Calibration.* Facilities may continue to burn hazardous waste for a maximum of 20 minutes while calibrating the CEMS. If all CEMS are calibrated at once, the facility must have twenty minutes to calibrate all the CEMS. If CEMS are calibrated individually, the facility must have twenty minutes to calibrate each CEMS. If the CEMS are calibrated individually, other CEMS must be operational while the individual CEMS is being calibrated.

6.3 Span of the CEMS.

6.3.1 *CO CEMS.* The CO CEM must have two ranges, a low range with a span of 200 ppmv and a high range with a span of 3000 ppmv at an oxygen correction factor of 1. A one-range CEM may be used, but it must meet the performance specifications for the low range in the specified span of the low range.

6.3.2 *O_2* CEMS. The O_2 CEM must have a span of 25 percent. The span may be higher than 25 percent if the O_2 concentration at the sampling point is greater than 25 percent.

6.3.3 *HC CEMS.* The HC CEM must have a span of 100 ppmv, expressed as propane, at an oxygen correction factor of 1.

6.3.4 *CEMS Span Values.* When the Oxygen Correction Factor is Greater than 2. When an owner or operator installs a CEMS at a location of high ambient air dilution, *i.e.*, where the maximum oxygen correction factor as determined by the permitting agency is greater than 2, the owner or operator must install a CEM with a lower span(s), proportionate to the larger oxygen correction factor, than those specified above.

6.3.5 *Use of Alternative Spans.* Owner or operators may request approval to use alternative spans and ranges to those specified. Alternate spans must be approved in writing in advance by the Administrator. In considering approval of alternative spans and ranges, the Administrator will consider that measurements beyond the span will be recorded as values at the maximum span for purposes of calculating rolling averages.

6.3.6 *Documentation of Span Values.* The span value must be documented by the CEMS manufacturer with laboratory data.

6.4.1 *Moisture Correction.* Method 4 of appendix A, part 60 of this chapter, must be used to determine moisture content of the stack gasses.

6.4.2 *Oxygen Correction Factor.* Measured pollutant levels must be corrected for the amount of oxygen in the stack according to the following formula:

$$P_c = P_m \times 14/(E - Y)$$

Where:

P_c = concentration of the pollutant or standard corrected to 7 percent oxygen, dry basis;

P_m = measured concentration of the pollutant, dry basis;

E = volume fraction of oxygen in the combustion air fed into the device, on a dry basis (normally 21 percent or 0.21 if only air is fed);

Y = measured fraction of oxygen on a dry basis at the sampling point.

The oxygen correction factor is:

$$OCF = 14/(E - Y)$$

6.4.3 *Temperature Correction.* Correction values for temperature are obtainable from standard reference materials.

6.5 *Rolling Average.* A rolling average is the arithmetic average of all one-minute averages over the averaging period.

6.5.1 *One-Minute Average for CO and HC CEMS and Operating Parameter Limits.* One-minute averages are the arithmetic average of the four most recent 15-second observations and must be calculated using the following equation:

$$\bar{c} = \sum_{i=1}^{4} \frac{c_i}{4}$$

Where:

$\bar{c}$ = the one minute average

c_i = a fifteen-second observation from the CEM

Fifteen second observations must not be rounded or smoothed. Fifteen-second observations may be disregarded only as a

result of a failure in the CEMS and allowed in the source's quality assurance plan at the time of the CMS failure. One-minute averages must not be rounded, smoothed, or disregarded.

6.5.2 Ten Minute Rolling Average Equation. The ten minute rolling average must be calculated using the following equation:

$$C_{RA} = \sum_{i=1}^{10} \frac{\bar{c}_i}{10}$$

Where:

C_{RA} = The concentration of the standard, expressed as a rolling average

$\bar{c}_i$ = a one minute average

6.5.3 *Hourly Rolling Average Equation for CO and THC CEMS and Operating Parameter Limits.* The rolling average, based on a specific number integer of hours, must be calculated using the following equation:

$$C_{RA} = \sum_{i=1}^{60} \frac{\bar{c}_i}{60}$$

Where:

c_{RA} = The concentration of the standard, expressed as a rolling average

$\bar{c}_i$ = a one minute average

6.5.4 Averaging Periods for CEMS other than CO and THC. The averaging period for CEMS other than CO and THC CEMS must be calculated as a rolling average of all one-hour values over the averaging period. An hourly average is comprised of 4 measurements taken at equally spaced time intervals, or at most every 15 minutes. Fewer than 4 measurements might be available within an hour for reasons such as facility downtime or CEMS calibration. If at least two measurements (30 minutes of data) are available, an hourly average must be calculated. The *n*-hour rolling average is calculated by averaging the *n* most recent hourly averages.

6.6 Units of the Standards for the Purposes of Recording and Reporting Emissions. Emissions must be recorded and reported expressed after correcting for oxygen, temperature, and moisture. Emissions must be reported in metric, but may also be reported in the English system of units, at 7 percent oxygen, 20°C, and on a dry basis.

6.7 Rounding and Significant Figures. Emissions must be rounded to two significant figures using ASTM procedure E–29–90 or its successor. Rounding must be avoided prior to rounding for the reported value.

7. Bibliography

1. 40 CFR Part 60, Appendix F, ''Quality Assurance Procedures: Procedure 1. Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used For Compliance Determination''.

Subpart LLL—National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry

3. Section 63.1350 is amended by revising paragraph (k) to read as follows:

§ 63.1350 Monitoring requirements.

* * * * *

(k) The owner or operator of an affected source subject to a particulate matter standard under § 63.1343 shall install, calibrate, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.

* * * * *

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921–6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

Subpart B—Definitions

2. Section 260.10 is amended by adding definitions in alphabetical order to read as follows:

§ 260.10 Definitions.

* * * * *

Dioxins and furans (D/F) means tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and furans.

* * * * *

TEQ means toxicity equivalence, the international method of relating the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.

* * * * *

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, 6924(y), and 6938.

2. Section 261.38 is amended by revising Table 1 to read as follows:

§ 261.38 Comparable/Syngas Fuel Exclusion.

* * * * *

TABLE 1 TO § 261.38.—DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION

Chemical name	CAS No.	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Total Nitrogen as N	NA	9000	18400	4900	.....
Total Halogens as Cl	NA	1000	18400	540	.....
Total Organic Halogens as Cl	NA	.....	.....	(1)	.....
Polychlorinated biphenyls, total [Arocolors, total]	1336–36–3	ND	.....	ND	1.4
Cyanide, total	57–12–5	ND	.....	ND	1.0
Metals:					
Antimony, total	7440–36–012	ND	.....	0.23	.....
Arsenic, total	7440–38–2	ND	.....	0.23	.....
Barium, total	7440–39–3	ND	.....	23	.....
Beryllium, total	7440–41–7	ND	.....	1.2	.....
Cadmium, total	7440–43–9	.....	ND	.....	1.2
Chromium, total	7440–47–3	ND	.....	2.3	.....
Cobalt	7440–48–4	ND	.....	4.6	.....
Lead, total	7439–92–1	57	18100	31	.....
Manganese	7439–96–5	ND	.....	1.2	.....
Mercury, total	7439–97–6	ND	.....	0.25	.....
Nickel, total	7440–02–0	106	18400	58	.....
Selenium, total	7782–49–2	ND	.....	0.23	.....

TABLE 1 TO § 261.38.—DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Silver, total	7440–22–4	ND	.....	2.3	.....
Thallium, total	7440–28–0	ND	.....	23	.....
Hydrocarbons:					
Benzo[a]anthracene	56–55–3	ND	.....	2400	.....
Benzene	71–43–2	8000	19600	4100	.....
Benzo[b]fluoranthene	205–99–2	ND	.....	2400	.....
Benzo[k]fluoranthene	207–08–9	ND	.....	2400	.....
Benzo[a]pyrene	50–32–8	ND	.....	2400	.....
Chrysene	218–01–9	ND	.....	2400	.....
Dibenzo[a,h]anthracene	53–70–3	ND	.....	2400	.....
7,12-Dimethylbenz[a]anthracene	57–97–6	ND	.....	2400	.....
Fluoranthene	206–44–0	ND	.....	2400	.....
Indeno(1,2,3-cd)pyrene	193–39–5	ND	.....	2400	.....
3-Methylcholanthrene	56–49–5	ND	.....	2400	.....
Naphthalene	91–20–3	6200	19400	3200	.....
Toluene	108–88–3	69000	19400	36000	.....
Oxygenates:					
Acetophenone	98–86–2	ND	.....	2400	.....
Acrolein	107–02–8	ND	.....	39	.....
Allyl alcohol	107–18–6	ND	.....	30	.....
Bis(2-ethylhexyl)phthalate [Di-2-ethylhexyl phthalate]	117–81–7	ND	.....	2400	.....
Butyl benzyl phthalate	85–68–7	ND	.....	2400	.....
o-Cresol [2-Methyl phenol]	95–48–7	ND	.....	2400	.....
m-Cresol [3-Methyl phenol]	108–39–4	ND	.....	2400	.....
p-Cresol [4-Methyl phenol]	106–44–5	ND	.....	2400	.....
Di-n-butyl phthalate	84–74–2	ND	.....	2400	.....
Diethyl phthalate	84–66–2	ND	.....	2400	.....
2,4-Dimethylphenol	105–67–9	ND	.....	2400	.....
Dimethyl phthalate	131–11–3	ND	.....	2400	.....
Di-n-octyl phthalate	117–84–0	ND	.....	2400	.....
Endothall	145–73–3	ND	.....	100	.....
Ethyl methacrylate	97–63–2	ND	.....	39	.....
2-Ethoxyethanol [Ethylene glycol monoethyl ether]	110–80–5	ND	.....	100	.....
Isobutyl alcohol	78–83–1	ND	.....	39	.....
Isosafrole	120–58–1	ND	.....	2400	.....
Methyl ethyl ketone [2-Butanone]	78–93–3	ND	.....	39	.....
Methyl methacrylate	80–62–6	ND	.....	39	.....
1,4-Naphthoquinone	130–15–4	ND	.....	2400	.....
Phenol	108–95–2	ND	.....	2400	.....
Propargyl alcohol [2-Propyn-1-ol]	107–19–7	ND	.....	30	.....
Safrole	94–59–7	ND	.....	2400	.....
Sulfonated Organics:					
Carbon disulfide	75–15–0	ND	.....	ND	39
Disulfoton	298–04–4	ND	.....	ND	2400
Ethyl methanesulfonate	62–50–0	ND	.....	ND	2400
Methyl methanesulfonate	66–27–3	ND	.....	ND	2400
Phorate	298–02–2	ND	.....	ND	2400
1,3-Propane sultone	1120–71–4	ND	.....	ND	100

TABLE 1 TO § 261.38.—DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Tetraethyldithiopyrophosphate [Sulfotepp]	3689–24–5	ND	.....	ND	2400
Thiophenol [Benzenethiol]	108–98–5	ND	.....	ND	30
O,O,O-Triethyl phosphorothioate	126–68–1	ND	.....	ND	2400
Nitrogenated Organics:					
Acetonitrile [Methyl cyanide]	75–05–8	ND	.....	ND	39
2-Acetylaminofluorene [2-AAF]	53–96–3	ND	.....	ND	2400
Acrylonitrile	107–13–1	ND	.....	ND	39
4-Aminobiphenyl	92–67–1	ND	.....	ND	2400
4-Aminopyridine	504–24–5	ND	.....	ND	100
Aniline	62–53–3	ND	.....	ND	2400
Benzidine	92–87–5	ND	.....	ND	2400
Dibenz[a,j]acridine	224–42–0	ND	.....	ND	2400
O,O-Diethyl O-pyrazinyl phosphorothioate [Thionazin]	297–97–2	ND	.....	ND	2400
Dimethoate	60–51–5	ND	.....	ND	2400
p-(Dimethylamino) azobenzene [4-Dime thylaminoazobenzene]	60–11–7	ND	.....	ND	2400
3,3′-Dimethylbenzidine	119–93–7	ND	.....	ND	2400
α,α-Dimethylphenethylamine	122–09–8	ND	.....	ND	2400
3,3′-Dimethoxybenzidine	119–90–4	ND	.....	ND	100
1,3-Dinitrobenzene [m-Dinitrobenzene]	99–65–0	ND	.....	ND	2400
4,6-Dinitro-o-cresol	534–52–1	ND	.....	ND	2400
2,4-Dinitrophenol	51–28–5	ND	.....	ND	2400
2,4-Dinitrotoluene	121–14–2	ND	.....	ND	2400
2,6-Dinitrotoluene	606–20–2	ND	.....	ND	2400
Dinoseb [2-sec-Butyl-4,6-dinitrophenol]	88–85–7	ND	.....	ND	2400
Diphenylamine	122–39–4	ND	.....	ND	2400
Ethyl carbamate [Urethane]	51–79–6	ND	.....	ND	100
Ethylenethiourea (2-Imidazolidinethione)	96–45–7	ND	.....	ND	110
Famphur	52–85–7	ND	.....	ND	2400
Methacrylonitrile	126–98–7	ND	.....	ND	39
Methapyrilene	91–80–5	ND	.....	ND	2400
Methomyl	16752–77–5	ND	.....	ND	57
2-Methyllactonitrile, [Acetone cyanohydrin]	75–86–5	ND	.....	ND	100
Methyl parathion	298–00–0	ND	.....	ND	2400
MNNG (N-Metyl-N-nitroso-N'-nitroguanidine)	70–25–7	ND	.....	ND	110
1-Naphthylamine, [α-Naphthylamine]	134–32–7	ND	.....	ND	2400
2-Naphthylamine, [β-Naphthylamine]	91–59–8	ND	.....	ND	2400
Nicotine	54–11–5	ND	.....	ND	100
4-Nitroaniline, [p-Nitroaniline]	100–01–6	ND	.....	ND	2400
Nitrobenzene	98–95–3	ND	.....	ND	2400
p-Nitrophenol, [p-Nitrophenol]	100–02–7	ND	.....	ND	2400
5-Nitro-o-toluidine	99–55–8	ND	.....	ND	2400
N-Nitrosodi-n-butylamine	924–16–3	ND	.....	ND	2400
N-Nitrosodiethylamine	55–18–5	ND	.....	ND	2400
N-Nitrosodiphenylamine, [Diphenylnitrosamine]	86–30–6	ND	.....	ND	2400
N-Nitroso-N-methylethylamine	10595–95–6	ND	.....	ND	2400
N-Nitrosomorpholine	59–89–2	ND	.....	ND	2400
N-Nitrosopiperidine	100–75–4	ND	.....	ND	2400
N-Nitrosopyrrolidine	930–55–2	ND	.....	ND	2400
2-Nitropropane	79–46–9	ND	.....	ND	30
Parathion	56–38–2	ND	.....	ND	2400
Phenacetin	62–44–2	ND	.....	ND	2400
1,4-Phenylene diamine, [p-Phenylenediamine]	106–50–3	ND	.....	ND	2400
N-Phenylthiourea	103–85–5	ND	.....	ND	57
2-Picoline [alpha-Picoline]	109–06–8	ND	.....	ND	2400
Propylthioracil, [6-Propyl-2-thiouracil]	51–52–5	ND	.....	ND	100
Pyridine	110–86–1	ND	.....	ND	2400

TABLE 1 TO § 261.38.—DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Strychnine	57–24–9	ND	.....	ND	100
Thioacetamide	62–55–5	ND	.....	ND	57
Thiofanox	39196–18–4	ND	.....	ND	100
Thiourea	62–56–6	ND	.....	ND	57
Toluene-2,4-diamine [2,4-Diaminotoluene]	95–80–7	ND	.....	ND	57
Toluene-2,6-diamine [2,6-Diaminotoluene]	823–40–5	ND	.....	ND	57
o-Toluidine	95–53–4	ND	.....	ND	2400
p-Toluidine	106–49–0	ND	.....	ND	100
1,3,5-Trinitrobenzene, [sym-Trinitobenzene]	99–35–4	ND	.....	ND	2400
Halogenated Organic:					
Allyl chloride	107–05–1	ND	.....	ND	39
Aramite	140–57–8	ND	.....	ND	2400
Benzal chloride [Dichloromethyl benzene]	98–87–3	ND	.....	ND	100
Benzyl chloride	100–44–77	ND	.....	ND	100
bis(2-Chloroethyl)ether [Dichoroethyl ether]	111–44–4	ND	.....	ND	2400
Bromoform [Tribromomethane]	75–25–2	ND	.....	ND	39
Bromomethane [Methyl bromide]	74–83–9	ND	.....	ND	39
4-Bromophenyl phenyl ether [p-Bromo diphenyl ether]	101–55–3	ND	.....	ND	2400
Carbon tetrachloride	56–23–5	ND	.....	ND	39
Chlordane	57–74–9	ND	.....	ND	14
p-Chloroaniline	106–47–8	ND	.....	ND	2400
Chlorobenzene	108–90–7	ND	.....	ND	39
Chlorobenzilate	510–15–6	ND	.....	ND	2400
p-Chloro-m-cresol	59–50–7	ND	.....	ND	2400
2-Chloroethyl vinyl ether	110–75–8	ND	.....	ND	39
Chloroform	67–66–3	ND	.....	ND	39
Chloromethane [Methyl chloride]	74–87–3	ND	.....	ND	39
2-Chloronaphthalene [beta-Chloronaphthalene]	91–58–7	ND	.....	ND	2400
2-Chlorophenol [o-Chlorophenol]	95–57–8	ND	.....	ND	2400
Chloroprene [2-Chloro-1,3-butadiene]	1126–99–8	ND	.....	ND	39
2,4-D [2,4-Dichlorophenoxyacetic acid]	94–75–7	ND	.....	ND	7.0
Diallate	2303–16–4	ND	.....	ND	2400
1,2-Dibromo-3-chloropropane	96–12–8	ND	.....	ND	39
1,2-Dichlorobenzene [o-Dichlorobenzene]	95–50–1	ND	.....	ND	2400
1,3-Dichlorobenzene [m-Dichlorobenzene]	541–73–1	ND	.....	ND	2400
1,4-Dichlorobenzene [p-Dichlorobenzene]	106–46–7	ND	.....	ND	2400
3,3′-Dichlorobenzidine	91–94–1	ND	.....	ND	2400
Dichlorodifluoromethane [CFC–12]	75–71–8	ND	.....	ND	39
1,2-Dichloroethane [Ethylene dichloride]	107–06–2	ND	.....	ND	39
1,1-Dichloroethylene [Vinylidene chloride]	75–35–4	ND	.....	ND	39
Dichloromethoxy ethane [Bis(2-chloroethoxy)methane	111–91–1	ND	.....	ND	2400
2,4-Dichlorophenol	120–83–2	ND	.....	ND	2400
2,6-Dichlorophenol	87–65–0	ND	.....	ND	2400
1,2-Dichloropropane [Propylene dichloride]	78–87–5	ND	.....	ND	39
cis-1,3-Dichloropropylene	10061–01–5	ND	.....	ND	39
trans-1,3-Dichloropropylene	10061–02–6	ND	.....	ND	39
1,3-Dichloro-2-propanol	96–23–1	ND	.....	ND	30
Endosulfan I	959–98–8	ND	.....	ND	1.4
Endosulfan II	33213–65–9	ND	.....	ND	1.4
Endrin	72–20–8	ND	.....	ND	1.4

TABLE 1 TO § 261.38.—DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Endrin aldehyde	7421–93–4	ND	.....	ND	1.4
Endrin Ketone	53494–70–5	ND	.....	ND	1.4
Epichlorohydrin [1-Chloro-2,3-epoxy propane]	106–89–8	ND	.....	ND	30
Ethylidene dichloride [1,1-Dichloroethane]	75–34–3	ND	.....	ND	39
2-Fluoroacetamide	640–19–7	ND	.....	ND	100
Heptachlor	76–44–8	ND	.....	ND	1.4
Heptachlor epoxide	1024–57–3	ND	.....	ND	2.8
Hexachlorobenzene	118–74–1	ND	.....	ND	2400
Hexachloro-1,3-butadiene [Hexachlorobutadiene]	87–68–3	ND	.....	ND	2400
Hexachlorocyclopentadiene	77–47–4	ND	.....	ND	2400
Hexachloroethane	67–72–1	ND	.....	ND	2400
Hexachlorophene	70–30–4	ND	.....	ND	59000
Hexachloropropene [Hexachloropropylene]	1888–71–7	ND	.....	ND	2400
Isodrin	465–73–6	ND	.....	ND	2400
Kepone [Chlordecone]	143–50–0	ND	.....	ND	4700
Lindane [gamma-BHC] [gamma-Hexachlorocyclohexane]	58–89–9	ND	.....	ND	1.4
Methylene chloride [Dichloromethane]	75–09–2	ND	.....	ND	39
4,4′-Methylene-bis(2-chloroaniline)	101–14–4	ND	.....	ND	100
Methyl iodide [Iodomethane]	74–88–4	ND	.....	ND	39
Pentachlorobenzene	608–93–5	ND	.....	ND	2400
Pentachloroethane	76–01–7	ND	.....	ND	39
Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozene]	82–68–8	ND	.....	ND	2400
Pentachlorophenol	87–86–5	ND	.....	ND	2400
Pronamide	23950–58–5	ND	.....	ND	2400
Silvex [2,4,5-Trichlorophenoxypropionic acid]	93–72–1	ND	.....	ND	7.0
2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD]	1746–01–6	ND	.....	ND	30
1,2,4,5-Tetrachlorobenzene	95–94–3	ND	.....	ND	2400
1,1,2,2-Tetrachloroethane	79–34–5	ND	.....	ND	39
Tetrachloroethylene [Perchloroethylene]	127–18–4	ND	.....	ND	39
2,3,4,6-Tetrachlorophenol	58–90–2	ND	.....	ND	2400
1,2,4-Trichlorobenzene	120–82–1	ND	.....	ND	2400
1,1,1-Trichloroethane [Methyl chloroform]	71–55–6	ND	.....	ND	39
1,1,2-Trichloroethane [Vinyl trichloride]	79–00–5	ND	.....	ND	39
Trichloroethylene	79–01–6	ND	.....	ND	39
Trichlorofluoromethane [Trichlormonofluoromethane]	75–69–4	ND	.....	ND	39
2,4,5-Trichlorophenol	95–95–4	ND	.....	ND	2400
2,4,6-Trichlorophenol	88–06–2	ND	.....	ND	2400
1,2,3-Trichloropropane	96–18–4	ND	.....	ND	39
Vinyl Chloride	75–01–4	ND	.....	ND	39

Notes:
NA—Not Applicable.
ND—Nondetect.
[1] 25 or individual halogenated organics listed below.

* * * * *

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, and 6925.

2. Section 264.340 is amended by redesignating paragraphs (b), (c), and (d) as paragraphs (c), (d), and (e), respectively, and adding paragraph (b), to read as follows:

§ 264.340 Applicability.

* * * * *

(b) *Integration of the MACT standards.* (1) Except as provided by paragraph (b)(2) of this section, the standards of this part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of subpart EEE of part 63 of this Chapter. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of this part will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The MACT standards do not replace the closure requirements of § 264.351 or the applicable requirements of subparts A through H, BB and CC of this part.

* * * * *

3. Section 264.601 is amended by revising the introductory text to read as follows:

§ 264.601 Environmental performance standards.

A miscellaneous unit must be located, designed, constructed, operated,

maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

* * * * *

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6906, 6912, 6922, 6923, 6924, 6925, 6935, 6936 and 6937.

2. Section 265.340 is amended by redesignating paragraph (b) as paragraph (c), and adding paragraph (b), to read as follows:

§ 265.340 Applicability.

* * * * *

(b) *Integration of the MACT standards.* (1) Except as provided by paragraph (b)(2) of this section, the standards of this part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE of this chapter.

(2) The following requirements continue to apply even where the owner or operator has demonstrated compliance with the MACT requirements of part 63, subpart EEE of this chapter: § 265.351 (closure) and the applicable requirements of subparts A through H, BB and CC of this part.

* * * * *

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

1. The authority citation for part 266 continues to read as follows:

Authority: Secs. 1006, 2002 (a), 3004, 6905, 6906, 6912, 6922, 6924, 6925, and 6937.

2. Section 266.100 is amended by redesignating paragraphs (b), (c), (d), (e), and (f) as paragraphs (c), (d), (e), (f), and (g), adding paragraph (b), revising introductory text to newly designated paragraph (d)(1), revising the introductory text to newly designated paragraph (d)(3), and adding paragraph (h), to read as follows:

§ 266.100 Applicability.

* * * * *

(b) *Integration of the MACT standards.* (1) Except as provided by paragraph (b)(2) of this section, the standards of this part no longer apply when an affected source demonstrates compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the standards of this part will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The following standards continue to apply:

(i) The closure requirements of §§ 266.102(e)(11) and 266.103(l);

(ii) The standards for direct transfer of § 266.111;

(iii) The standards for regulation of residues of § 266.212; and

(iv) The applicable requirements of subparts A through H, BB and CC of parts 264 and 265 of this chapter.

* * * * *

(d) * * *

(1) To be exempt from §§ 266.102 through 266.111, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of paragraph (d)(3) of this section, and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting NESHAP must comply with the requirements of paragraph (h) of this section.

* * * * *

(3) To be exempt from §§ 266.102 through 266.111, an owner or operator of a lead or nickel-chromium or mercury recovery furnace, except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting NESHAP,

* * * * *

(h) Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting NESHAP, are conditionally exempt from regulation under this subpart, except for § 266.101. To be exempt, an owner or operator must provide a one-time notice to the Director identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this paragraph. The notice also must state that the waste burned has a total concentration of non-metal compounds listed in part 261, appendix VIII, of this chapter of less than 500 ppm by weight, as fired and as provided in paragraph (d)(2)(i) of this section, or is listed in appendix XI to this part 266.

3. Section 266.101 is amended by revising paragraph (c)(1) to read as follows:

§ 266.101 Management prior to burning.

* * * * *

(c) *Storage and treatment facilities.* (1) Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of parts 264, 265, and 270 of this chapter, except as provided by paragraph (c)(2) of this section. These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

* * * * *

4. Section 266.105 is amended by redesignating paragraph (c) as paragraph (d) and adding paragraph (c), to read as follows:

§ 266.105 Standards to control particulate matter.

* * * * *

(c) Oxygen correction. (1) Measured pollutant levels must be corrected for the amount of oxygen in the stack gas according to the formula:

$$Pc = Pm \times 14/(E - Y)$$

Where:

Pc is the corrected concentration of the pollutant in the stack gas, Pm is the measured concentration of the pollutant in the stack gas, E is the oxygen concentration on a dry basis in the combustion air fed to the device, and Y is the measured oxygen concentration on a dry basis in the stack.

(2) For devices that feed normal combustion air, E will equal 21 percent. For devices that feed oxygen-enriched air for combustion (that is, air with an oxygen concentration exceeding 21 percent), the value of E will be the concentration of oxygen in the enriched air.

(3) Compliance with all emission standards provided by this subpart must be based on correcting to 7 percent oxygen using this procedure.

* * * * *

5. Section 266.112, paragraph (b)(1) introductory text is amended by adding a sentence at the end and paragraph (b)(2)(i) is revised to read as follows:

§ 266.112 Regulation of residues.

* * * * *

(b) * * *

(1) * * * For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8–TCDD equivalent values using the procedure specified in section 4.0 of appendix IX of this part.

* * * * *

(2) * * *

(i) *Nonmetal constituents.* The concentration of each nonmetal toxic constituent of concern (specified in paragraph (b)(1) of this section) in the waste-derived residue must not exceed the health-based level specified in appendix VII of this part, or the level of detection (using analytical procedures prescribed in SW–846), whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures contained in SW–846, or other appropriate methods), whichever is higher, must be used. The levels specified in appendix VII of this part (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of appendix VII of this paragraph) are administratively stayed under the condition, for those constituents specified in paragraph (b)(1) of this section, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in § 268.43 of this chapter for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable Agency guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by § 268.43 of this chapter for F039 nonwastewaters. In complying with the § 268.43 of this chapter F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans.

Note to this paragraph: The administrative stay, under the condition that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in § 268.43 of this chapter for F039 nonwastewaters, remains in effect until further administrative action is taken and notice is published in the **Federal Register** and the Code of Federal Regulations.

* * * * *

6. Appendix VIII to part 266 is revised to read as follows:

APPENDIX VIII TO PART 266.—ORGANIC COMPOUNDS FOR WHICH RESIDUES MUST BE ANALYZED

Volatiles	Semivolatiles
Benzene	Bis(2-ethylhexyl)phthalate
Toluene	Naphthalene
Carbon tetrachloride	Phenol
Chloroform	Diethyl phthalate
Methylene chloride	Butyl benzyl phthalate
Trichloroethylene	2,4–Dimethylphenol
Tetra chloroethylene	o-Dichlorobenzene
1,1,1–Trichloroethane	m-Dichlorobenzene
Chlorobenzene	p-Dichlorobenzene
cis-1,4–Dichloro-2-butene.	Hexachlorobenzene
Bromochloromethane	2,4,6–Trichlorophenol
Bromodichloromethane.	Fluoranthene
Bromoform	o-Nitrophenol

APPENDIX VIII TO PART 266.—ORGANIC COMPOUNDS FOR WHICH RESIDUES MUST BE ANALYZED—Continued

Volatiles	Semivolatiles
Bromomethane	1,2,4–Trichlorobenzene
Methylene bromide	o-Chlorophenol
Methyl ethyl ketone	Pentachlorophenol
	Pyrene
	Dimethyl phthalate
	Mononitrobenzene
	2,6–Toluene diisocyanate
	Polychlorinated dibenzo-p-dioxins [1]
	Plychlorinated dibenzo-furans [1]

[1] Analyses for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans are required only for residues collected from areas downstream of the combustion chamber (*e.g.,* ductwork, boiler tubes, heat exchange surfaces, air pollution control devices, *etc.*).

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

1. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6924, 6925, 6927, 6939, and 6974.

2. Section 270.19 is amended by revising the introductory text and adding paragraph (e) to read as follows:

§ 270.19 Specific part B information requirements for incinerators.

* * * * *

Except as § 264.340 of this Chapter and § 270.19(e) provide otherwise, owners and operators of facilities that incinerate hazardous waste must fulfill the requirements of paragraphs (a), (b), or (c) of this section.

* * * * *

(e) When an owner or operator demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance), the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

3. Section 270.22 is amended by adding introductory text to read as follows:

§ 270.22 Specific part B information requirements for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement or lightweight aggregate kiln demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance), the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

4. Appendix I to § 270.42 is amended by adding an entry 8 in numerical order in section A and revising entry 9 in section L to read as follows:

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Promulgation date	Title of regulation	Federal Register reference	Effective date
* *	* *	* *	*
September 30, 1999	Standards for Hazardous Air Pollutants for Hazardous Waste Combustors.	[Insert FR page numbers].	September 30, 1999.

APPENDIX I TO § 270.42—CLASSIFICATION OF PERMIT MODIFICATION

Modification	Class
A. General Permit Provisions:	
* * * * *	
8. Changes to remove permit conditions that are no longer applicable (*i.e.,* because the standards upon which they are based are no longer applicable to the facility).	[1] 1
* * * * *	
L. Incinerators, Boilers, and Industrial Furnaces:	
* * * * *	
9. Technology Changes Needed to meet Standards under 40 CFR part 63 (Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors), provided the procedures of § 270.42(j) are followed.	[1] 1
* * * * *	

[1] Class 1 modifications requiring prior Agency approval.

5. Section 270.62 is amended by adding introductory text to read as follows:

§ 270.62 Hazardous waste incinerator permits.

When an owner or operator demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (*i.e.,* by conducting a comprehensive performance test and submitting a Notification of Compliance), the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

6. Section 270.66 is amended by adding introductory text to read as follows:

§ 270.66 Permits for boilers and industrial furnaces burning hazardous waste.

When an owner or operator of a cement or lightweight aggregate kiln demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (*i.e.,* by conducting a comprehensive performance test and submitting a Notification of Compliance), the requirements of this section do not apply. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§ 270.10(k) and 270.32(b)(2).

* * * * *

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

1. The authority citation for part 271 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), and 6926.

2. Section 271.1(j) is amended by adding the following entries to Table 1 in chronological order by date of publication in the **Federal Register**, to read as follows:

§ 271.1 Purpose and scope.

* * * * *

(j) * * *

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Promulgation date	Title of regulation	Federal Register reference	Effective date
* *	* *	* *	*
September 30, 1999	Standards for Hazardous Air Pollutants for Hazardous Waste Combustors.		Sept. 30, 1999.

[FR Doc. 99–20430 Filed 9–29–99; 8:45 am]

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federal register

Thursday
September 30, 1999

Part III

Department of Labor

Mine Safety and Health Administration

30 CFR Parts 46 and 48

Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines; Final Rule

DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 46 and 48

RIN 1219–AB17

Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines

AGENCY: Mine Safety and Health Administration (MSHA), Labor.

ACTION: Final rule.

SUMMARY: This final rule amends MSHA's existing health and safety training regulations by establishing new training requirements for shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines. Congress has prohibited MSHA from expending funds to enforce training requirements at these mines since fiscal year 1980. This final rule implements the training requirements of section 115 of the Federal Mine Safety and Health Act of 1977 and provides for effective miner training at the affected mines. At the same time, the final rule allows mine operators the flexibility to tailor their training programs to the specific needs of their miners and operations.

EFFECTIVE DATE: This regulation is effective October 2, 2000.

FOR FURTHER INFORMATION CONTACT: Carol J. Jones, Acting Director, Office of Standards, Regulations, and Variances, MSHA; 4015 Wilson Boulevard, Room 631, Arlington, VA 22203; Ms. Jones may be reached at cjones@msha.gov (Internet E-mail); 703–235–1910 (voice); or 703–235–5551 (facsimile).

SUPPLEMENTARY INFORMATION:

I. Plain Language

We (MSHA) wrote this final rule in the more personal style advocated by the President's executive order on ''plain language.'' ''Plain language'' encourages the use of—

- personal pronouns (we and you);
- sentences in the active voice;
- a greater use of headings, lists, and questions, as well as charts, figures, and tables.

In this final rule, ''you'' refers to production-operators and independent contractors because they have the primary responsibility for compliance with MSHA regulations. We received several comments on the use of plain language. Commenters generally supported the use of plain language, but suggested that using ''you'' to refer to two entities was somewhat confusing. In response, the Agency uses the terms ''production-operators'' and ''independent contractors'' where the use of the term ''you'' could be confusing.

II. Paperwork Reduction Act of 1995

The information collection requirements contained in this final rule have been submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), as implemented by OMB in regulations at 5 CFR Part 1320. The Paperwork Reduction Act of 1995 (PRA 95) defines collection of information as ''the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public of facts or opinions by or for an agency regardless of form or format'' (44 U.S.C. 3502(3)(A)). Under PRA 95, no person may be required to respond to, or may be subjected to a penalty for failure to comply with, these information collection requirements until they have been approved and MSHA has announced the assigned OMB control number. The OMB control number, when assigned, will be announced by separate notice in the **Federal Register**. In accordance with § 1320.11(h) of the implementing regulations, OMB has 60 days from today's publication date in which to approve, disapprove, or instruct MSHA to make a change to the information collection requirements in this final rule.

Recordkeeping requirements in the final rule are found in §§ 46.3, 46.5, 46.6, 46.7, 46.8, 46.9, and 46.11. MSHA did not receive any comments on the methodology or assumptions used. Comments received on specific provisions of the proposed rule are addressed in the section-by-section discussion of § 46.9 ''Records of Training.'' The final rule provides that records are not required to be maintained at the mine site, and therefore can be electronically filed in a central location, so long as the records are made available upon request to the authorized representative of the Secretary and to miners or their representatives.

Although the final rule does not require backing up the data, some means are necessary to ensure that electronically stored information is not compromised or lost. MSHA encourages mine operators who store records electronically to provide a mechanism that will allow the continued storage and retrieval of records in the year 2000. Table 1 provides, by section, the paperwork requirements for Year 1 and then for every other succeeding year. Table 2 provides, by section, the annual paperwork requirements starting with the first year. Table 3 provides, by section, the paperwork requirements for Year 1 and then for every other succeeding year for miners and their representatives. Table 4 provides, by section, the annual paperwork requirements for miners and their representatives. Mine operators will incur a total of 233,594 burden hours at a cost of about $7.6 million in the first year, and in every other succeeding year (i.e., 3, 5, 7, 9). Mine operators will incur 220,776 burden hours at a cost of $7.1 million in years 2, 4, 6, 8, etc. The first year burden hours and costs are composed by summing the figures in Tables 1, 2, 3, and 4.

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Table 1 Mine Operators' First Year/Recurring Burden Hours and Costs								
	Mines (1-5)		Mines (6-19)		Mines (≥20)		Totals	
Prov.	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs
46.3	7,670	$259,458	3,360	$113,653	1,243	$43,321	12,273	$416,432

Table 2 Mine Operators' Annual Burden Hours and Costs								
	Mines (1-5)		Mines (6-19)		Mines (≥20)		Totals	
Prov.	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs
46.3	255	$8,614	166	$5,620	124	$4,321	545	$18,554
46.5	41,153	$1,481,519	21,604	$777,757	4,963	$178,654	67,720	$2,437,930
46.6	8,534	$307,213	4,641	$167,066	1,092	$39,327	14,267	$513,606
46.7	3,940	$141,828	7,299	$262,776	7,085	$255,049	18,324	$659,653
46.8	34,944	$1,257,994	15,538	$559,369	5,552	$199,882	56,035	$2,017,246
46.9	1,541	$40,829	3,145	$83,345	2,995	$79,357	7,680	$203,531
46.11	25,298	$581,843	22,155	$509,565	8,730	$200,790	56,183	$1,292,198
Total	115,664	$3,819,839	74,549	$2,365,499	30,541	$957,379	220,753	$7,142,717

Table 3 Miners and Miners' Representatives First Year/Recurring Burden Hours and Costs								
	Mines (1-5)		Mines (6-19)		Mines (≥20)		Totals	
Prov.	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs
46.3	358	$8,223	157	$3,601	31	$709	545	$12,534

Table 4 Miners and Miners' Representatives Annual Burden Hours and Costs								
	Mines (1-5)		Mines (6-19)		Mines (≥20)		Totals	
Prov.	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs	Hrs.	Costs
46.3	12	$273	8	$178	3	$71	23	$522

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III. Executive Order 12866 and Regulatory Flexibility Analysis

Executive Order (E.O.) 12866 requires that regulatory agencies assess both the costs and benefits of intended regulations. Based upon the economic analysis, we have determined that this final rule is not an economically significant regulatory action pursuant to section 3(f)(1) of E.O. 12866. MSHA does consider the final rule to be significant under section 3(f)(4) of the E.O. because of widespread interest in the rule, and has submitted the final rule to OMB for review.

The Regulatory Flexibility Act (RFA) requires regulatory agencies to consider a rule's impact on small entities. Under the RFA, MSHA must use the Small Business Administration's (SBA's) definition for a small mine of 500 or fewer employees or, after consultation with the SBA Office of Advocacy, establish an alternative definition for the mining industry by publishing that definition in the **Federal Register** for notice and comment. In this rule, none of the affected mines have 500 or more employees. Therefore for the purposes of the RFA, all of the affected mines are considered small. MSHA has analyzed the impact of the final rule on mines with 20 or more employees, mines with 6–19 employees, and mines with 1–5 employees. MSHA has determined that this rule will not impose a significant cost increase on a substantial number of small mines.

MSHA has prepared a Regulatory Economic Analysis (REA) and Regulatory Flexibility Certification Statement to fulfill the requirements of E.O. 12866 and the Regulatory Flexibility Act. This REA is available from MSHA upon request and is posted on our Internet Home Page at www.msha.gov.

Regulatory Flexibility Certification Statement

Based on MSHA's analysis of costs and benefits, the Agency certifies that this rule will not impose a significant economic impact on a substantial number of small entities.

Factual Basis for Certification

General approach: The Agency's analysis of impacts on ''small entities'' begins with a ''screening'' analysis. The screening compares the estimated compliance costs of the rule for small mine operators in the affected sector to the estimated revenues for that sector. When estimated compliance costs are less than 1 percent of estimated revenues (for the size categories considered) the Agency believes it is generally appropriate to conclude that there is no significant impact on a substantial number of small entities. When estimated compliance costs approach or exceed 1 percent of revenue, it tends to indicate that further analysis may be warranted.

Derivation of costs and revenues: In the case of this rule, because the compliance costs must be absorbed by the nonmetal mines affected by this rule, the Agency decided to focus its attention exclusively on the relationship between costs and revenues for these mines, rather than looking at the entire metal and nonmetal mining sector as a whole.

In deriving compliance costs there were areas where different assumptions had to be made for small mines in different employment sizes in order to account for the fact that the mining operations of small mines are not the same as those of large mines. For example, different assumptions for mine size categories were used to derive compliance costs concerning: the number of persons trained per mine and the number of training sessions a mine would have annually. In determining revenues for the nonmetal mines affected by this rulemaking, MSHA multiplied the production data (in tons) by the price per ton of the commodity.

Results of screening analysis. As shown in Table V–1 from the REA, with respect to the nonmetal mines covered by this rule that have 1 to 5 workers, the estimated annual costs of the rule as a percentage of their annual revenues are 0.32 percent. For nonmetal mines covered by this rule that have between 6 and 19 workers, the estimated annual costs of the rule as a percentage of their annual revenues are 0.14 percent. For nonmetal mines covered by this rule that have 20 or more workers, the estimated annual costs of the rule as a percentage of their annual revenues are 0.04 percent. Finally, for all nonmetal mines covered by this rule (all of which have 500 or fewer workers) the estimated annual costs of the rule as a percentage of their annual revenues are 0.10 percent.

In every case, the estimated compliance costs are substantially less than 1 percent of revenues, well below the level suggesting that the rule might have a significant impact on a substantial number of small entities. Accordingly, MSHA has certified that there is no such impact for small entities that mine the commodities that are affected by this rule.

As required under the law, MSHA has complied with its obligation to consult with the Chief Counsel for Advocacy at the Small Business Administration on this rule, and on the Agency's certification of no significant economic impact on the mines affected by this rule.

TABLE V–1.—EXEMPT NONMETAL MINES COVERED BY THE FINAL RULE [a]

[dollars in thousands]

Employment size	Estimated costs	Estimated revenues [b]	Costs as percentage of revenues
1–5	6,197	1,950,102	0.32
6–19	6,384	4,556,847	0.14
20 or more	3,975	9,756,081	0.04
All Mines [c]	16,556	16,263,030	0.10

[a] All mines covered by the final rule are surface mines.

[b] Data for revenues derived from U.S. Department of the Interior/U.S. Geological Survey. Mining and Quarrying Trends, 1997 Annual Review. 1997. Tables 2 and 3. Revenues for the three U.S. colloidal phosphate mines estimated using average revenues of the other exempt mines in the same size categories covered by the final rule.

[c] Every mine affected by the rule has 500 or fewer employees.

As required under the law, MSHA complied with its obligation to consult with the Chief Counsel for Advocacy on this rule, and on the Agency's certification of no significant economic impact on the mines affected by this rule.

Compliance Costs

MSHA estimates that the total net cost of the final 30 CFR part 46 training requirements will be approximately $17.94 million annually, of which about $16.55 million will be borne by mine operations in the following surface nonmetal mining sectors: shell dredging, sand, gravel, stone, clay, colloidal phosphate, and limestone.[1] Since fiscal year 1980, Congress has prohibited MSHA from enforcing existing MSHA health and safety training regulations in 30 CFR part 48 at mines (''exempt mines'') in these sectors of the surface nonmetal mining industry. The exempt mines that are not currently in compliance with the existing part 48 training requirements will incur costs of approximately $17.43 million annually to comply with the final rule, while those currently in compliance with the existing part 48 training requirements will derive net savings of approximately $0.89 million annually.

Over the past 20 years, MSHA has consistently categorized a mine as being small if it employs fewer than 20 workers and as being large if it employs 20 or more workers. For the purposes of this Regulatory Economic Analysis (REA), however, MSHA has identified three mine size categories based on the number of employees, which are relevant to the estimation of the cost of the final rule: (1) Mines employing 5 or fewer workers; (2) mines employing between 6 and 19 workers; and (3) mines employing 20 or more workers. These mine categories are important because they are believed to have significantly different compliance rates for existing part 48 training requirements. For this final rule, MSHA estimates that the following percentages of exempt mines by size category are currently *not* in compliance with existing part 48 requirements: 60 percent of mines with 5 or fewer employees; 40 percent of mines with between 6 and 19 employees; and 20 percent of mines with 20 or more employees.

In 1997, there were 10,152 exempt mines covered by the final rule. MSHA estimates that the average cost per exempt mine to comply with the final rule will be approximately $1,600 annually. For the 5,297 exempt mines with 5 or fewer employees, MSHA estimates that the average cost of the final rule per mine will be approximately $1,200 annually. For the 3,498 exempt mines with between 6 and 19 employees, MSHA estimates that the average cost of the final rule per mine will be approximately $1,800 annually. For the 1,357 exempt mines with 20 or more employees, MSHA estimates that the average cost of the final rule per mine will be approximately $2,900 annually.

These costs per mine may be slightly misleading insofar as the exempt mines currently in compliance with existing part 48 training requirements will also be, for the most part, in compliance with the final rule and will therefore incur only relatively modest compliance costs. In fact, as previously stated, these mines would derive net savings of approximately $0.89 million annually as a result of the final rule.[2] For the exempt mine operators (including independent contractors that employ miners) not currently in compliance with existing part 48 training requirements, the annual cost of complying with the final rule will, on average, be approximately $1,900 per mine operator with 5 or fewer workers; $4,500 per mine operator with between 6 and 19 workers; and $15,800 per mine operator with 20 or more workers.

Table IV–1 from the REA summarizes MSHA's estimate of the yearly costs of the final rule by mine size and by provision. These costs reflect first year costs of $18,140,889 and second year costs of $17,694,277.

TABLE IV–1.—SUMMARY OF YEARLY COMPLIANCE COSTS FOR THE FINAL RULE *

Requirement provision	Mines with 1–5 employees	Mines with 6–19 employees	Mines with 20+ employees	Total cost for all mines	Total cost for other parties	Total cost
§ 46,3	$158,780	$71,467	$28,827	$259,074	$7,628	$266,702
§ 46.5	2,436,253	1,953,064	774,018	5,163,335	.....	5,163,335
§ 46.6	426,676	313,628	113,382	853,686	.....	853,686
§ 46.7	351,365	828,761	1,183,662	2,363,787	.....	2,363,787
§ 46.8	2,139,686	2,540,586	1,527,819	6,208,091	.....	6,208,091
§ 46.9	45,449	92,781	88,338	226,568	.....	226,568
§ 46.11	581,912	509,544	200,597	1,292,053	1,292,053	2,584,105
§ 46.12	56,860	74,440	57,896	189,196	85,744	274,940
Total	6,196,980	6,384,271	3,974,539	16,555,790	1,385,425	17,941,215

* Source: Table IV–20, Table IV–25, Table IV–27, Table IV–30, Table IV–33, Table IV–35, Table IV–36 and Table IV–37.

Benefits

Safety and health professionals from all sectors of industry recognize that training is a critical element of an effective safety and health program. Training informs miners of safety and health hazards inherent in the workplace and enables them to identify and avoid such hazards. Training becomes even more important in light of certain conditions that can exist when production demands increase, such as: an influx of new and less experienced miners and mine operators; longer work hours to meet production demands; and increased demand for contractors who may be less familiar with the dangers on mine property.

Although there may be some differences in production technology and the production environment between the exempt mining industry and other surface nonexempt mining industries, the data presented in Chapter III of this document indicate that the lack of training in exempt mines contributes significantly to the disproportionate number of fatalities

[1] The remaining $1.39 million in costs associated with the final rule will be borne primarily by non-miners who receive hazard awareness training, or by their empolyers.

[2] The net savings consist of $1.18 million in compliance costs and $2.07 million in savings. The $2.07 million in savings arise from paragraph (e) of $46.4, which allows all documented employee safety meetings, *regardless of duration*, to be credited toward training requirements. (Under the existing part 48 training requirements, employee safety meetings lasting less than 30 minutes may not be credited toward training requirements.) For details about these savings, see Table IV–32 and the text that precedes it.

that occur at such mines. Chapter III points out that in the period from 1993 to 1997, there were 200 fatalities at surface mines. Of these, 163 occurred at exempt mines. Thus, exempt mines accounted for 82 percent of all fatalities at surface mines during this period. During the same period, however, employees at exempt mines accounted for only 64 percent of the total number of hours worked at surface mines.

One of the major reasons that exempt mines have experienced a higher fatality rate than the surface mining industry as a whole is that smaller operations, those which employ fewer than 20 workers, make up the vast majority of exempt mines. These small operations, as a group, have the highest rates of noncompliance with part 48 training requirements and also the highest fatality rates.

It is plausible to assert that at least some of these fatalities might have been prevented if victims had received appropriate miner safety training. Similarly, MSHA believes that compliance with the requirements of this final training rule will, in turn, reduce the number of fatalities at formerly exempt mines. As discussed in greater detail in Chapter III of this document, MSHA estimates that compliance with the final rule will prevent about 10 fatalities and 557 injuries per year. MSHA believes that this final rule will make training more responsive to the needs of the industry and more effective for individual miners, thereby raising the compliance rate and reducing mine injuries and fatalities.

IV. Unfunded Mandates Reform Act of 1995

We have determined that, for purposes of section 202 of the Unfunded Mandates Reform Act of 1995, this rule does not include any federal mandate that may result in increased expenditures by State, local, or tribal governments in the aggregate of more than $100 million, or increased expenditures by the private sector of more than $100 million. Moreover, the Agency has determined that for purposes of § 203 of that Act, this rule does not significantly or uniquely affect these entities.

Background

The Unfunded Mandates Reform Act was enacted in 1995. While much of the Act is designed to assist the Congress in determining whether its actions will impose costly new mandates on State, local, and tribal governments, the Act also includes requirements to assist federal agencies to make this same determination with respect to regulatory actions.

Analysis

Based on the analysis in the Agency's REA, the yearly compliance costs (annualized costs plus annual costs) resulting from the final rule will be approximately $17.9 million, of which about $16.6 million will be borne by the affected nonmetal operators. Accordingly, there is no need for further analysis under § 202 of the Unfunded Mandates Reform Act.

MSHA has concluded that small governmental entities would not be significantly or uniquely impacted by the regulation. The final rule will affect 10,152 surface nonmetal mining operations. MSHA data indicate that there are 185 nonmetal mines affected by this rule that are state or local government owned.

When MSHA issued the proposed rule, the Agency affirmatively sought input of any state, local, and tribal government which may be affected by the training rulemaking. This included state and local governmental entities who operate sand and gravel mines in the construction and repair of highways and roads. MSHA mailed a copy of the proposed rule to these entities. The Agency received comments from several state agencies and local government entities. No tribal government entity commented on the proposed rule. A speaker at the Pittsburgh public hearing on the proposed rule asserted that (in New York State, at least) there were many mines operated by local governments not counted or inspected by MSHA and not in compliance with existing part 48 training requirements. Even if this assertion were true, MSHA's analysis of regulatory impacts indicates that the cost of the final rule will range from only $1,900 per mine to $15,800 per mine not currently in compliance with existing part 48 training requirements. MSHA believes that these costs do not significantly or uniquely impact these small government entities. MSHA will mail a copy of the final rule to approximately 185 such entities.

We have determined that, for purposes of § 202 of the Unfunded Mandates Reform Act of 1995, this rule does not include any federal mandate that may result in increased expenditures by State, local, or tribal governments in the aggregate of more than $100 million, or increased expenditures by the private sector of more than $100 million. Moreover, the Agency has determined that for purposes of § 203 of that Act, this rule does not significantly or uniquely affect these entities.

V. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

In accordance with E.O. 13045, MSHA has evaluated the environmental health and safety effects of the final rule on children. MSHA has determined that the final rule will have no effect on children.

VI. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

MSHA certifies that the final rule will not impose substantial direct compliance costs on Indian tribal governments.

VII. Executive Order 12612: Federalism

Executive Order 12612, regarding federalism, requires that agencies, to the extent possible, refrain from limiting state policy options, consult with states prior to taking any actions which would restrict state policy options, and take such actions only when there is clear constitutional authority and the presence of a problem of national scope. Because this final rule does not limit state policy options, it complies with the principles of federalism and with Executive Order 12612.

VIII. Executive Order 12630: Government Actions and Interference With Constitutionally Protected Property Rights

This final rule is not subject to Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights, because it does not involve implementation of a policy with takings implications.

IX. Executive Order 12875: Enhancing the Intergovernmental Partnership

Executive Order (E.O.) 12875 requires executive agencies and departments to reduce unfunded mandates on State, local, and tribal governments; to consult with these governments prior to promulgation of any unfunded mandate; and to develop a process that permits meaningful and timely input by State, local, and tribal governments in the development of regulatory proposals containing a significant unfunded mandate. E.O. 12875 also requires executive agencies and departments to increase flexibility for State, local, and tribal governments to obtain a waiver from Federal statutory or regulatory requirements.

MSHA estimates that there are 185 sand and gravel, surface limestone, and stone operations that are run by State, local, or tribal governments for the construction and repair of highways and

roads. When MSHA issued the proposed rule, the Agency affirmatively sought input of any state, local, and tribal government which may be affected by the training rulemaking. This included state and local governmental entities who operate sand and gravel mines in the construction and repair of highways and roads. MSHA mailed a copy of the proposed rule to these entities. The Agency received comments from several state agencies and local government entities. No tribal government entity commented on the proposed rule.

X. Executive Order 12988: Civil Justice Reform

The Agency has reviewed Executive Order 12988, Civil Justice Reform, and determined that this rulemaking will not unduly burden the Federal court system. The regulation has been written so as to provide a clear legal standard for affected conduct, and has been reviewed carefully to eliminate drafting errors and ambiguities.

XI. Statutory and Rulemaking Background

Section 115 of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. 801 *et seq.*, directed the Secretary of Labor to promulgate regulations requiring that mine operators subject to the Mine Act establish health and safety training programs for their miners. MSHA issued final miner training regulations in 30 CFR part 48 on October 13, 1978 (43 FR 47453). At that time, some industry representatives expressed concern over the appropriateness of applying the requirements of part 48 to smaller, less technical surface nonmetal mining operations. They also maintained that many small nonmetal operators would have difficulties in complying with part 48.

In 1979, various segments of the metal and nonmetal mining industry raised these concerns with Congress and requested relief from the comprehensive specifications of part 48. In response, Congress inserted language in the Department of Labor's appropriations bill that prohibited the expenditure of appropriated funds to enforce miner health and safety training requirements at approximately 10,200 surface nonmetal work sites. Congress has inserted this language into each Department of Labor appropriations bill since fiscal year 1980. This language specifically prohibits the use of appropriated funds to:

> * * * carry out § 115 of the Federal Mine Safety and Health Act of 1977 or to carry out that portion of § 104(g)(1) of such Act relating to the enforcement of any training requirements, with respect to shell dredging, or with respect to any sand, gravel, surface stone, surface clay, colloidal phosphate, or surface limestone mine.

This language remains in place under MSHA's appropriations contained in the Omnibus Appropriations Act for 1999, Pub. L. 105–277, signed by the President on October 21, 1998. The congressional appropriations rider for fiscal year 1999, however, authorized us to expend funds to propose and promulgate final training regulations by September 30, 1999, for operations affected by the prohibition (''exempt mines''). The 1999 rider also directed us to work with the affected industry representatives, mine operators, workers, labor organizations, and other interested parties to promulgate the training regulations and to base the regulations on a draft submitted to MSHA no later than February 1, 1999, by the Coalition for Effective Miner Training (Coalition).

The Coalition is comprised of producers, associations that represent producers, and three labor organizations. Coalition members are:

American Portland Cement Alliance
Arizona Rock Products Association
Construction Materials Association of California
China Clay Producers Association
Dry Branch Kaolin Company
Georgia Crushed Stone Association
Georgia Mining Association
Indiana Mineral Aggregates Association
International Brotherhood of Teamsters
International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers, and Helpers
Laborers-AGC Education and Training Fund
National Aggregates Association
National Industrial Sand Association
National Lime Association
National Stone Association
North Carolina Aggregates Association
Sorptive Minerals Institute
United Metro Materials, Inc.
Virginia Aggregates Association

On November 3, 1998, we published a **Federal Register** notice (63 FR 59258) announcing seven preproposal public meetings. These meetings were held in California, Colorado, Georgia, Illinois, New York, Oregon, and Texas in December 1998 and January 1999 to receive comments from the public on development of the training rule for miners at exempt mines. We selected the meeting locations to provide as many miners, miners' representatives, and mine operators, both large and small, with the opportunity to attend at least one of the meetings and present their views. More than 220 individuals, including representatives from the Coalition, labor, contractors, mining associations, State agencies, small and large operators, and trainers, attended the meetings. Many attendees made oral presentations of their views on effective miner health and safety training. We also received a number of written comments on pertinent training issues.

The Coalition presented us with a final joint industry/labor draft proposed rule on February 1, 1999, the congressionally established deadline. We considered this draft, along with written comments and oral testimony received during the preproposal period, in developing a proposed rule, which we published in the **Federal Register** on April 14, 1999 (64 FR 18498). The notice of proposed rulemaking also included language that would amend existing part 48 to specify that mines covered under part 46 are not subject to part 48 training requirements.

The notice of public hearings on the proposed rule appeared in the **Federal Register** on the same day as the proposal (64 FR 18528). In May 1999, we held four public hearings in Florida, California, Pennsylvania, and Washington, D.C., to receive public comment on the proposal. The rulemaking record closed on June 16, 1999. The agency received many comments concerning training and retraining of miners. We held 7 informational meetings around the country to seek input from the mining community. In response, we received a total of 30 written and electronic comments. In addition, 67 speakers provided oral comments. After publication of the proposed rule, we received 136 written and electronic comments, and 15 speakers provided oral comments. We received comments from various entities including mine operators, organized labor groups, such as United Steelworkers of America, United Mine Workers of America, International Union of Operating Engineers, State agencies and local municipalities, colleges and universities, and the Coalition.

XII. General Discussion

Crushed stone and sand and gravel account for the majority of operations where we have been prohibited from enforcing training requirements. The United States Geological Survey, United States Department of the Interior (USGS), derives domestic production data for crushed stone and sand and gravel from voluntary surveys of U.S. producers. USGS makes these data available in quarterly Mineral Industry Surveys and in annual Mineral Commodities Summaries. Annual crushed stone tonnage ranks first in the nonfuel minerals industry, with annual sand and gravel tonnage ranking second. USGS data show that domestic

production of sand and gravel and crushed stone increased every year between 1991 and 1999, an indication of the continuing strong demand for construction aggregates in the United States. The most recent USGS data show that sand and gravel production increased approximately 14 percent and crushed stone production increased approximately 7 percent in the first three months of 1999, as compared to the first three months of 1998.

The number of hours worked at sand and gravel and crushed stone operations has been increasing steadily since 1991. In 1991, the hours worked at crushed stone operations totaled approximately 104 million employee-hours, rising to 121 million employee-hours in 1998. Similarly, the number of employee-hours at sand and gravel operations rose from approximately 65 million in 1991 to 75 million in 1998. Based on hours reported for the first three months of 1999, the total hours worked for 1999 will exceed the total hours worked in 1998. Although some of the increase in hours worked may be attributable to longer workdays, the data show that the aggregates industry workforce is growing.

Crushed stone and sand and gravel are essential and used widely in all major construction activities, including highway, road, and bridge construction and repair projects, as well as residential and nonresidential construction. Although crushed stone is used mostly by the construction industry, it is also used as a basic raw material in agricultural and chemical and metallurgical processes. The construction industry is by far the largest consumer of sand and gravel. Consequently, the level of construction activity largely determines the demand for, and resulting production levels of, these aggregate materials.

In 1998, President Clinton signed the Transportation Equity Act for the 21st Century, commonly known as ''TEA–21'' (Pub. L. 105–178), which authorizes highway, highway safety, transit, and other surface transportation programs for the fiscal years 1998 to 2003. The demand for materials produced by the surface nonmetal mining industry is anticipated to increase substantially due to, in significant part, transportation infrastructure construction resulting from the enactment of TEA–21. As the largest public works legislation in the nation's history, appropriating almost $218 billion for highway and transit programs, TEA–21 provides a 40 percent funding increase over the levels for such programs established by the Intermodal Surface Transportation Efficiency Act of 1991, which was the last major authorizing legislation for surface transportation.

In addition to the passage of TEA–21, other factors may also contribute to the continued growth in construction activity and, thus, the demand for aggregate materials. These include a healthy U.S. economy in general, low interest rates, and adverse weather conditions that have damaged and destroyed homes, roads, and bridges in various parts of the country.

Since fiscal year 1980, the year in which the congressional appropriations rider took effect, more than 650 miners have been killed in occupationally related incidents at mines where we cannot enforce miner training requirements. The rider affects approximately 10,200 surface nonmetal mines and 120,000 miners. Approximately 9,200 of these sites are surface aggregate operations (sand and gravel and crushed stone); the remainder are surface operations that mine other commodities such as clay or colloidal phosphate.

Our data indicate that, of the 243 miners involved in fatal accidents at surface metal and nonmetal mines from 1993 to 1998, about 80 percent (199 miners) worked at exempt mines. During this same period, exempt mines accounted for only 64 percent of the number of hours worked at surface mines. From 1993 to 1997, the annual number of fatal accidents at exempt mines almost doubled (from 24 fatalities in 1993 to 45 fatalities in 1997). In each of the years 1996 and 1997, 90 percent of fatalities at surface metal and nonmetal mines occurred at operations affected by the appropriations rider.

A large proportion of exempt mines are smaller operations, which experience a higher fatality rate than larger operations. For example, of the 9,200 surface aggregate mines, approximately 4,900 employ five or fewer miners, and approximately 8,100 employ fewer than 20 miners. Long-term data show that mines with fewer than six employees are three times as likely to experience fatalities as mines with 20 or more workers. Also, mines with between six and 19 employees are more than two times as likely to have fatal accidents as operations with larger workforces.

Several other factors may contribute to the number of fatal accidents, including—

(1) An influx of new and less experienced miners and mine operators;

(2) Longer work hours to meet production demands; and

(3) Increased demand for independent contractors, who may be less familiar with the hazards on mine property.

All of these factors are also more likely to exist when production activity accelerates to meet increases in demand.

We believe that some of these fatalities may have been prevented if victims had received appropriate, basic miner safety training. Our fatal accident investigations show that the majority of miners involved in fatal accidents at mines affected by the rider had not received health and safety training that complied with the requirements of part 48. In 1997, 80 percent of fatal accident victims at exempt mines had not received health and safety training in accordance with part 48. In 1998, this increased to 86 percent.

Safety and health professionals from all sectors of industry recognize that training is a critical element of an effective health and safety program. Training of new employees, refresher training for experienced miners, and training for new tasks serve to inform workers of health and safety hazards inherent in the workplace and, just as important, to enable workers to identify and avoid those hazards. Congress clearly recognized these principles by specifically including training provisions in the Mine Act.

XIII. Discussion of the Final Rule

A. Statutory Requirements

Section 115(a) of the Mine Act authorizes the Secretary of Labor to promulgate miner health and safety training regulations. Section 115(a), (b), and (c) set forth minimum requirements for miner training programs. These requirements include:

- Each operator must have a health and safety program approved by the Secretary of Labor;
- Each approved training program for new surface miners must provide for at least 24 hours of training in specified courses, including:

The statutory rights of miners and their representatives under the Act;

Use of self-rescue and respiratory devices, where appropriate;

Hazard recognition;

Emergency procedures;

Electrical hazards;

First aid;

Walkaround training; and

The health and safety aspects of the task to which the miner will be assigned;

- Each approved training program must provide for at least eight hours of refresher training every 12 months for all miners;
- Miners reassigned to new tasks must receive task training prior to performing that task;
- New miner training and new task training must include a period of

training as closely related as is practicable to the miner's work assignment;

- Training must be provided during normal working hours;
- During training, miners must be paid at their normal rate of compensation and reimbursed for any additional cost for attending training;
- Upon completion of each training program, each operator must certify, on a form approved by the Secretary, that the miner has received the specified training in each subject area of the approved health and safety training plan;
- A certificate for each miner must be maintained by the operator and available for inspection at the mine site;
- A copy of the certificate must be given to each miner at the completion of the training;
- When a miner leaves the operator's employ, the miner is entitled to a copy of his or her health and safety training certificates;
- False certification by an operator that training was given is punishable under section 110(a) and (f) of the 1977 Mine Act; and
- Each health and safety training certificate must indicate on its face, in bold letters, printed in a conspicuous manner, that such false certification is so punishable.

The final training rule takes a performance-oriented approach, where possible, to afford currently exempt operations, particularly small operations, the flexibility to tailor miner training to their particular needs and methods of operation.

B. Summary of the Final Rule

The final rule requires you to develop and implement a written training plan that includes programs for training new and newly hired experienced miners, training miners for new tasks, annual refresher training, and site-specific hazard awareness training. Plans that include the minimum information specified in the final rule are considered approved by us and are not required to be submitted to us for formal review, unless you, the miners, or miners' representative requests it.

The final rule requires new miners to receive 24 hours of new miner training, with a minimum of four hours of training in specific areas before they begin work; instruction in additional subjects no later than 60 days after beginning employment; and the balance of new miner training no later than 90 days after beginning employment.

Under the final rule, newly hired experienced miners must receive instruction in the same subjects required for new miners before they begin work, and in one additional subject no later than 60 days after beginning work.

Every 12 months, all miners must receive no less than eight hours of refresher training that addresses relevant occupational health and safety subjects. The refresher training must include instruction on changes at the mine that could adversely affect the miners' health or safety. You have the flexibility to determine other health and safety subjects addressed in refresher training, although the final rule identifies a number of recommended subjects.

The final rule requires training for every miner before the miner is reassigned to a task for which he or she has no previous experience. Training must also be given when a miner's task has changed. The training must cover the health and safety aspects and safe work procedures specific to the task. Site-specific hazard awareness training is required for persons who do not fall within the definition of ''miner'' and who are therefore not required to receive comprehensive training (i.e., new miner training or newly hired experienced miner training, as appropriate). The final rule also requires site-specific hazard awareness training for miners employed by production-operators and independent contractors who move from mine to mine as a regular part of their employment. These miners are required to receive comprehensive training but also need orientation in the hazards at the mines where they will be working.

You are required to certify that a miner has received required training and retain a copy of each miner's training records and certificates for the duration of the miner's employment, except that you must keep certificates of annual refresher training for at least two years. You must keep training records and certificates for miners who have terminated their employment with you for at least 60 days after the employment ends. You may use our existing form for the certification (MSHA Form 5000–23) or maintain the certificate in another format, so long as it contains the minimum information required in the final rule. You are also required to maintain a copy of the current training plan at the mine or have the capability to produce it upon request within one business day. You may keep training records and certificates at the mine site or at a different location, but must provide copies of the records to us and to miners and their representatives upon request.

We do not approve training instructors under the final rule. Instead, training must be provided by a competent person—someone with sufficient ability, training, knowledge, or experience in a specific area, who is also able to communicate the subject of the training and evaluate the effectiveness of the training provided.

The final rule adopts the Mine Act requirement that miners be trained during normal work hours and compensated at normal rates of pay. Miners must also be reimbursed for incidental costs, such as mileage, meals, and lodging, if training is given at a location other than the normal place of work.

The final rule also allows you, where appropriate, to substitute equivalent training required by OSHA or other federal or state agencies to satisfy your training obligations under part 46.

The final rule addresses responsibility for training and gives primary responsibility to the production-operator for ensuring that site-specific hazard awareness training is given to employees of independent contractors who are required to receive such training. Additionally, independent contractors who employ miners required to receive comprehensive training under the final rule are primarily responsible for ensuring that their employees are given training that satisfies these requirements.

C. Effective Date

Although the proposed rule did not specify an effective date, we solicited comment in the preamble to the proposal on how much time should be allowed for the mining community to come into compliance with the final rule. In the preamble, we stated that we recognized that a very large number of operations would attempt to come into compliance at the same time, and we wanted to allow a reasonable period of time after the final rule's publication for a smooth transition. We also indicated that speakers at the seven preproposal public meetings had recommended compliance periods ranging from six months to a year after the final rule is published. We questioned whether phased-in compliance deadlines, where certain part 46 requirements would go into effect at different stages, would facilitate compliance.

We received many comments on this issue. Only a few commenters favored phased-in compliance deadlines. One commenter suggested that the final rule designate a six-month preparation period during which operators could develop their training plans, establish recordkeeping systems, experiment with

training methods, and enroll trainers in instruction courses. This commenter believed that, after the six-month period, the rule should take effect and be enforceable, except that no citations would be issued for violations under this part during the first regular MSHA inspection. Other commenters believed that phased-in compliance deadlines would only serve as a source of confusion or impose unnecessary administrative burdens. These commenters strongly recommended against adoption of phased-in deadlines in the final rule.

Several commenters favored a six-month effective date, stating it would provide adequate time for compliance if MSHA and state agencies were available to assist operators in such areas as the development of training plans and training materials. One commenter indicated that many operators in his state were already in compliance with existing part 48 and that these operators would need to take little action to comply with part 46. One commenter believed that operators should be required to comply with the final rule no later than 90 days after it is published in the **Federal Register**, while another suggested a 24-month compliance deadline. However, the vast majority of commenters favored a one-year period before the final rule would take effect and become enforceable. One commenter who supported a one-year compliance period stated that many small operators will require assistance in preparing plans and in locating appropriate trainers and training materials. Other commenters advocated a one-year compliance period because they believed it would ensure that the mining community would be able to implement the final rule in a rational manner. Another commenter who advocated a one-year deadline stated that we needed to allow sufficient time for development of training materials appropriate for the mines affected by the final rule. This commenter also believed that significant time was needed to ensure that operators, many of whom are not currently providing training, were familiar with the new requirements in the final rule.

We have concluded that a one-year effective date, without interim compliance deadlines, will ensure that production-operators, independent contractors, and others affected by the final part 46 rule will have sufficient time to become familiar with the rule's requirements and take steps to come into compliance. Many operators, particularly larger mine operators, are currently in compliance with the majority of part 48 requirements and would need little time to ensure that their training programs are consistent with the provisions of the final rule. However, we are concerned that many small operations affected by this rule have limited or no training programs currently in place. These small operators typically also have limited resources from which to develop and implement new training programs. We recognize that we have an essential role to play in compliance assistance and outreach effort in the coming year, particularly to small operators. This is discussed in greater detail below under the heading ''Implementation of the Final Rule.''

The final rule takes effect one year after the rule's publication in the **Federal Register**, giving the mining community an adequate period of time in which to come into compliance with the rule's requirements. You must comply with § 46.3(a) and § 46.8(a) as prescribed in the following table:

COMPLIANCE DATES FOR PRODUCTION-OPERATORS/INDEPENDENT CONTRACTORS

Training plans	Compliance date
You must develop and implement a written plan, approved by us under either § 46.3(b) or (c), that contains effective programs for training new miners and newly hired experienced miners, training miners for new tasks, annual refresher training, and site-specific hazard awareness training..	October 2, 2000.
Annual refresher training	**Compliance dates**
You must provide each miner with no less than 8 hours of annual refresher training—.	(1) No later than 12 months after the miner begins work at the mine, or no later than March 30, 2001, whichever is later; and (2) Thereafter, no later than 12 months after the previous annual refresher training was completed.

D. Implementation of the Final Rule

Many commenters observed that effective compliance assistance is critical to the successful implementation of the final rule, and that small operations in particular are in need of assistance from state and federal agencies to be able to fulfill their training responsibilities. A number of commenters addressed the type of assistance that we should provide to facilitate compliance with the final rule.

We appreciate the commenters suggestions about the types of resources that would provide the greatest benefit to the mining community in complying with the final rule. We acknowledge that compliance assistance for the mining community will be a key element in the successful implementation of the final rule. We intend to provide extensive compliance assistance to you as our resources permit, not only through our staff in Metal and Nonmetal Mine Safety and Health, but also through our newly formed Educational Field Services Division in the Directorate of Educational Policy and Development. We also expect recipients of federal funds through our State Grants program to play a significant role in assisting you to develop effective training plans and, at the same time, to satisfy the requirements of the final rule.

We solicited comments in the preamble to the proposal on whether we should include examples of model training plans, appropriate for different types and sizes of mining operations, in a nonmandatory appendix to the final rule. One of the few commenters who addressed this issue supported including examples of training plans in a nonmandatory appendix. Another commenter recommended that we should encourage mine operators to contact agencies that are designed to provide compliance assistance services, such as our Educational Field Services Division and state grantees, instead of providing them as part of the final rule. This commenter believed that operators would receive more effective compliance assistance in plan development by reaching out to appropriate agencies for guidance. This commenter was concerned that including sample plans as an appendix to the regulation would make it less likely that operators would contact these agencies for assistance. We agree with this commenter, and we are also concerned that placing sample plans in a regulatory appendix could restrict our flexibility in making future refinements and improvements to the sample plans. We have concluded that it is more appropriate to provide mine operators with sample plans as part of an overall compliance assistance and outreach effort that we will initiate for the mining community after publication of the final

rule. We anticipate that other organizations, including state grantees and large operators, also may develop sample training plans and make them available to small operators to assist in training plan development.

A number of commenters who addressed implementation of the final rule advocated increased funding for our State Grants program. Under this program, authorized by section 503(a) of the Mine Act, we distribute federal funds to 43 states and the Navajo Nation to supplement their mining health and safety programs. Grants are made to the state agency responsible for miners' health and safety to support health and safety programs, and most of these funds are used to support health and safety training courses. State grantees play an essential role in workplace health and safety by providing effective training to thousands of miners across the country. MSHA's current budget includes $5 million for the States Grants program. Our budget request for fiscal year 2000 would increase that sum to $6.1 million, an increase of 22%.

E. Section-by-Section Discussion

This portion of the preamble discusses each final provision section-by-section. The text of the final rule is included at the end of the document.

Section 46.1 Scope

This section adopts with minor changes proposed § 46.1 and states that the provisions of part 46 set forth mandatory requirements for the training and retraining of miners and other persons at all shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines. Additionally, § 48.21, the existing scope section in part 48, is amended by this final rule to specifically exclude mines that now are covered by the training requirements of part 46. Part 46 requirements supersede the requirements of part 48 at those mines that have been subject to the congressional appropriations rider since fiscal year 1980.

The final rule states that the provisions of part 46 contain the mandatory requirements for training and retraining of ''miners and other persons'' at the mines covered by the final rule. Proposed § 46.1 would have provided that the training requirements of part 46 were for ''miners working'' at the covered mines. This adjustment in the final rule language recognizes that the final rule's requirements for site-specific hazard awareness training also apply to persons who are not miners and who may not in fact work at the mine, such as visitors or delivery personnel.

We have promulgated these regulations under a separate part of Title 30 of the Code of Federal Regulations to minimize confusion about which training requirements apply at what mines. We were concerned that if we promulgated these regulations as a subpart to existing part 48, it would make it more difficult for the mining community to distinguish between the two sets of requirements. The few commenters who addressed this issue generally favored the placement of these regulations under a new part.

As explained in the preamble to the proposed rule, the mining community should recognize that the list of the types of mines where part 46 will now apply, set forth in this section of the final rule, mirrors the language of the congressional budget rider and describes the affected operations in broad terms. The list of mines in this section does not detail every type of operation that falls within the scope of these requirements. For example, part 46 training requirements supersede part 48 requirements at operations that produce marble, granite, sandstone, slate, shale, traprock, kaolin, cement, feldspar, and lime, although these operations are not specifically included in the list of mines in this section.

As stated in the proposed preamble, part 48 remains in effect at all underground metal and nonmetal mines, all surface metal mines, and a few surface nonmetal mines, such as surface boron and talc mines. Operators at those mines continue to be responsible for complying with the provisions of part 48.

The final rule takes a flexible and performance-oriented approach to miner health and safety training requirements. This recognizes that the mines that were subject to the congressional budget rider and that are now governed by part 46 are different in size and type from many of the mines under part 48. When the rider was first included as a restriction to our budget appropriations for fiscal year 1980, some mining industry representatives contended that the part 48 regulations were inappropriate for the smaller and less complex operations that are covered by this final rule. There was concern in the industry that the part 48 requirements would be extremely burdensome and costly to implement, forcing many small operations to curtail production during training periods or go out of business altogether. Industry representatives also contended that the part 48 regulations were neither tailored to fit the needs of the various types of mining operations nor flexible enough to be adaptable to those needs. Additionally, the legislative history of the Mine Act reflects Congress' concern that ''miner training may strain the financial resources of many small operators.'' Conference Report No. 95–461, 95th Cong., 1st Sess., 63 (1977).

In recognition of these concerns, we have developed this rule with small businesses in mind. Almost 9,000 of the approximately 10,000 mines affected by the rule have fewer than 20 employees. All of the operations fall well within the Small Business Administration's definition of small business, which for the mining industry is a mine with 500 or fewer employees. Many of these smaller operations typically do not have a formal health and safety program in place.

A few commenters raised the issue of whether the performance-oriented requirements of the final rule provide less protection to miners than the existing training requirements in part 48, contrary to the mandate of the Mine Act. However, most commenters from industry and labor supported the proposed rule. In addition, the National Institute for Occupational Safety and Health (NIOSH) supported the proposed rule, stating the following:

> The National Institute for Occupational Safety and Health (NIOSH) supports MSHA in its effort to establish new training requirements for shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines. We believe that the proposed Part 46 regulations should provide numerous opportunities for effective training. We also support the performance-oriented approach taken by MSHA to make training responsive to the needs of small operators by tailoring miner training to their operations, thus making the training more meaningful and, as a result, reducing the number of injuries and fatalities.

Section 101(a)(9) of the Mine Act provides that ''[n]o mandatory health or safety standard promulgated under this title shall reduce the protection afforded miners by an existing mandatory health or safety standard.'' We interpret section 101(a)(9), consistent with the interpretation adopted by the U.S. Court of Appeals for the D.C. Circuit, to require that all of the health or safety benefits resulting from a new standard must be at least equivalent, taken together, to all of the health or safety benefits resulting from the existing standard. We have concluded that, especially in a time of rapid technological advancement and constantly changing mining methods, a more restrictive interpretation would frustrate Congress' intent to ''provide

more effective means and measures for improving the working conditions and practices in the Nation's coal or other mines in order to prevent death and serious physical harm * * *.'' Section 2(c) of the Mine Act, 30 U.S.C. section 801(c).

The requirements of this final rule amend the training requirements in part 48 for more than 10,000 surface nonmetal mines, requirements that we have been prohibited from enforcing at these mines for almost 20 years. We carefully considered the requirements of the final rule in light of the statutory requirement that no new standard shall reduce the protection afforded miners by our existing mandatory health and safety standards. Although the final rule will allow you greater flexibility in training development and implementation, MSHA has determined that the new requirements will not reduce the protection afforded to surface nonmetal miners under existing part 48. While the means used under part 46 may be more flexible and performance-oriented than part 48, the ultimate result—the effective safety and health training of surface nonmetal miners—will be attained under the new standard.

The final rule is intended to provide production-operators and independent contractors with the necessary flexibility to devise training programs that best suit their operations and employees. This also recognizes that a large number of the mines affected by the final rule are very small operations, many of which are sand and gravel operations with limited equipment and facilities. These mines frequently are small in size, employ few workers, use less complex equipment, and consist of relatively uncomplicated mining operations. The type of training appropriate for miners at such mines will differ from miner training at a large mine or processing facility with highly specialized and sophisticated equipment and hundreds of employees. The final rule allows operators, with the assistance of miners and their representatives, the latitude to tailor miner training programs to the specific needs of their operations and workforces.

We also wish to emphasize the enhanced safety and health benefits that result from the reduction in administrative burdens on operators under the final rule, which will allow them to concentrate on ensuring that effective training is being given at their specific operations. For example, the final rule does not require the traditional submission and review of training plans to gain our approval. Instead, operators may choose to develop training plans that are considered approved by us if they meet certain minimum requirements in the final rule. This approach will allow us to focus our resources on verification of plan execution and assistance to you in providing effective training at your mines, rather than on a paper review and approval of more than 10,000 training plans at our offices. Likewise, you and training providers would be able to focus on the development of training plans that address the safety and health concerns at your specific operations, rather than on traditional procedures to gain our approval.

The flexibility included within several sections of the final rule, offering the option of presenting training in short durations and in various formats, will allow miners to more easily retain information and receive effective training in close proximity to their work and associated hazards. Under existing part 48 requirements for annual refresher training, training sessions must last a minimum of 30 minutes. Under the part 46 final rule, training sessions may be of any duration and can be conducted at the work site near potential safety and health hazards. This approach would allow miners to receive training at a time and location close to where the training is needed.

Additional safety and health benefits will also result from the specific requirement in part 46 that provides that training must be presented in language understood by the miners who are receiving the training. The final rule also includes specific provisions which require production-operators to provide information about site-specific hazards to independent contractors who perform work at their mine. Similarly, the final rule provides that independent contractors must inform production-operators of any hazards they might present at the work site. In addition, unlike existing part 48, the requirements of this final rule would apply to construction workers who perform work at mine sites and are faced with similar hazards presented to other miners.

The final rule also includes a requirement for task training when a miner is reassigned to a task in which he or she has no previous work experience, or when a change occurs to the safety and health risks encountered by the miner while performing his or her tasks. Part 48 only applies to changes in ''regularly assigned tasks,'' and therefore would not provide for task training for the one-time assignment of tasks, such as emergency repairs. Accident and injury data show that miners under the scope of the final rule are routinely injured while performing such emergency repair tasks, even though it may be a one-time task. In addition, the part 46 final rule provides that a miner must be able to demonstrate that he or she can perform a new task in a safe and healthful manner, even if the miner has had previous experience or training in the task. Under part 48, a miner is allowed to perform the new task if he or she has experience or received training within the previous 12 months. Specific knowledge and skills can be lost or diminished significantly if they are not used. For these reasons, the final rule requires miners to demonstrate that they have retained the needed knowledge and skills to perform the task safely.

In developing the final rule, we have also attempted to develop practical requirements for effective safety and health training programs at mines covered by the rule. For example, the final rule does not require instructors to receive formal approval by MSHA, but instead provides that ''competent persons'' designated by the production-operator or independent contractor may instruct miners in subjects in the areas of the competent persons' expertise.

Additionally, the final rule recognizes the difficulty that some small operators may have in providing all 24 hours of new miner training before a miner starts work. Many operators indicated that it is not practical for all of this training to be provided before the miner is assigned job duties. In addition, commenters stated that training can be more effective if it is given over a two-or three-month period.

The final rule requires that a new miner receive a minimum of four hours of training in specific subjects before the miner begins work. The amount of time needed for this training will depend on the size and complexity of the mine where the training is given. In some cases this training may require eight hours or more to adequately introduce new employees to the work environment and mine site hazards, such as at a larger mine with complex operations. In other cases, no more than the required minimum of four hours of pre-work training may be needed to cover the necessary subjects at a very small mine with only a couple of employees and a few pieces of equipment.

The requirements of the final rule are sufficiently consistent with existing requirements in part 48, so that those of you who currently comply with part 48 will have to make little adjustment in your existing training programs to comply with the part 46 rule. As mentioned above, part 46 includes

several different requirements from part 48 which will result in the enhanced safety and health of workers at the mines covered by the final rule. These differences include such things as the application of training requirements to construction workers, the retention of certain training records for longer durations, and the requirement that training must be presented in language understood by the miners who are receiving the training. Certain provisions may require you to make adjustments to your existing training programs, for example:

Part 48	Part 46
DEFINITION	
48.22(a)(1)(i) This definition of miners does not include construction workers..	46.2 The definition of miner includes any construction worker who is exposed to hazards of mining operations.
RECORDS OF TRAINING	
(a) Upon a miner's completion of each MSHA approved training program, the operator must record and certify on MSHA Form 5000–23 that the miner has received the specified training.	(a) You must record and certify on MSHA Form 5000–23, or on a form that contains the information listed in § 46.9(b), that each miner has received training required under this part.
N/A	(b)(5) The record must include a statement signed by the person designated in the MSHA-approved training plan for the mine as responsible for health and safety training, that states ''I certify that the above training has been completed.''
(c) Copies of training certificates for currently employed miners must be kept at the mine site for 2 years, or for 60 days after termination of employment.	(h) You must maintain copies of training certificates and training records for each currently employed miner during his or her employment, except records and certificates of annual refresher training under § 46.8, which you must maintain for only two years. You must maintain copies of training certificates and training records for at least 60 calendar days after a miner terminates employment.

In the preamble to the proposed rule, we solicited comment on whether the final rule should specifically allow you the option of complying with the requirements of part 48 in lieu of part 46. Only a few commenters addressed this issue. One commenter stated that giving mine operators the option of complying with part 48 would adversely affect implementation of the rule. This commenter indicated that allowing such an option would make our enforcement of training requirements more difficult. Another commenter supported this option, stating that many of the operators who are covered by the final rule currently comply with part 48 and should be allowed to continue to do so.

The final rule does not allow operators the option of complying with part 48 in lieu of the requirements of part 46. We have concluded that providing such an option would provide less effective training and protection for the miners working at your mines. Part 46 requires training for construction workers and it takes a proactive approach toward the training of independent contractor employees that come onto mine property. We believe that these provisions, along with other enhancements included in part 46, will result in improved safety and health for the construction workers, independent contractor workers, and miners who work near these individuals at the mine. For these reasons, we have not adopted this compliance option in the final rule. However, the final rule does allow production-operators and independent contractors to substitute relevant training given under part 48 for training required under part 46.

Section 46.2 Definitions

This section of the final rule includes definitions of certain terms used in part 46. We are providing these definitions to assist the mining community in understanding the requirements of the rule.

We have adopted most of the definitions included in the proposal into the final rule. In some cases, we have made changes to the definitions to respond to concerns of commenters. We explain these changes in the preamble discussion for each term.

Act. Section 46.2(a) states that all references to the ''Act'' in the final rule mean the Federal Mine Safety and Health Act of 1977, 30 U.S.C. 801 *et seq.*

Competent person. Under the final rule, a ''competent person'' must conduct the training required under this part, and final § 46.2(b) adopts the proposed definition of this term, with some changes. The final rule defines ''competent person'' as a person designated by the production-operator or independent contractor who has the ability, training, knowledge, or experience to provide training to miners in his or her area of expertise. The competent person must be able both to communicate the training subject effectively to miners and to evaluate whether the training given to miners is effective.

The final definition of ''competent person'' is similar to the definition included in the proposed rule, but we have made several changes in the final definition in response to commenters. Instead of providing that the ''operator'' designate the competent person, as in the proposal, the final rule provides that the ''production-operator or independent contractor'' designate the competent person. Although the proposal would have defined the term ''operator'' to include both production-operators and independent contractors, we have concluded, based on comments, that the final rule definition should refer specifically to both. This emphasizes that independent contractors are ''operators'' under the Mine Act and are responsible for providing effective training to their employees under the requirements of the final rule. Use of both terms also eliminates any confusion that the use of the generic term ''operator'' may create. The proposed definition also did not include a specific reference to the competent person's ability to communicate. The final rule includes this requirement in response to commenters who believe that communication skills are critical to effective training.

Many commenters generally supported the proposed definition of ''competent person.'' They stated that instructors should not have to satisfy extensive qualification requirements or obtain MSHA approval before providing training to miners. A number of commenters indicated that the flexible provisions proposed would allow operators to have access to more than adequate resources to ensure quality training for miners.

Several commenters recommended that we insert language in the definition of ''competent person'' that requires instructors to have knowledge of mining and of the specific hazards miners face on the job. These commenters believed that this language would enhance the quality of training. Another commenter suggested that the definition include a requirement that the competent person have at least one year of mining experience.

We considered adopting these recommendations in the final rule. We have concluded, however, that such requirements would not guarantee quality instruction and may unnecessarily restrict otherwise qualified persons from providing training under the final rule. We agree with the views of one commenter who stated that there may be some situations where mining experience could enhance the quality of training, but that persons without such experience could still be competent in educating people and communicating necessary subjects to them. A wide variety of subjects will be relevant to health and safety conditions at the various mine sites covered by this rule. Persons who have expertise in certain relevant areas, but who lack actual mining experience or experience applicable to mining, can be effective instructors in their specialized areas. For example, the final rule requires that you instruct new miners and newly hired experienced miners in the statutory rights of miners. A requirement that the person who teaches this subject have either actual mining experience or mine-specific knowledge would serve no purpose. Someone without mining experience but with a legal background, such as a paralegal or an attorney familiar with the provisions of the Mine Act, could provide effective instruction on that subject. In the same vein, someone without mining experience but with a medical background, such as a nurse practitioner or an emergency medical technician, could provide effective instruction in first aid. Finally, an individual with expertise in electrical hazards on specific types of equipment that are used in both mining and non-mining applications could provide appropriate training on those hazards, even if that person has no mine-specific experience.

Several commenters stated that there are certain skills a person must have in order to be considered competent. One commenter stated that a person who conducts training should have not only substantive knowledge of the subject area but also the ability to effectively communicate the information to the persons receiving the training. Some commenters recommended that the definition of ''competent person'' address communication skills, such as lecturing and writing, and the ability to train adults. Several commenters recommended that, at a minimum, persons designated to provide training receive specific instructor training to ensure that they are able to teach miners effectively. Other commenters stated that the proposed definition was appropriate and that the final rule should not require specific training for instructors. These commenters maintained that production-operators and independent contractors were in the best position to determine who was capable of providing training and that the final rule should give them flexibility and latitude in designating competent persons. A number of commenters also stated that formal instructor training would not guarantee quality training.

As under the proposed rule, the definition in the final rule does not specify the type or extent of ability, training, knowledge, or experience needed for a person to be ''competent'' and, therefore, qualified to provide training under the final rule. This is consistent with the overall performance-oriented approach taken in the final rule. We agree with commenters who were concerned that more stringent requirements could seriously limit the pool of potential instructors, without any assurance that these requirements enhance the quality of the training provided. However, this approach places the responsibility on production-operators and independent contractors to ensure that their employees receive adequate health and safety training under the final rule. Production-operators and independent contractors must assess whether the person who will provide training has the requisite expertise, communication skills, and ability to evaluate the training.

The final rule does not adopt the recommendation of some commenters that the definition of ''competent person'' specifically require training in effective instruction or communication. However, in response to commenters who indicated that communication skills were essential for good training, the final rule definition of ''competent person'' includes language requiring that the competent person be able to effectively communicate the training subject to miners.

The final rule, like the proposal, also requires that the competent person have the ability to evaluate whether the training given to miners is effective. As addressed in greater detail in the preamble discussion for § 46.4, the final rule does not specify how the competent person should conduct such an evaluation. Instead, as part of our outreach efforts, we intend to provide compliance assistance to you to help you to identify competent persons to provide training for your miners.

One commenter stated that the ''competent person'' should be able to demonstrate the ability to identify hazards and should have the authority to take prompt corrective measures to eliminate existing or potential hazards. The definition suggested by this commenter is similar to the definition of ''competent person'' under OSHA regulations at 29 CFR 1926.32(f). OSHA regulations define ''competent person'' as—

> * * * one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

You should not confuse the OSHA definition of ''competent person'' with the same term under this final rule. Under OSHA regulations, a ''competent person'' is not only responsible for worker training, but also must have the authority to correct workplace hazards. Our final rule, like existing part 48, limits instructors' responsibilities to providing training to miners and does not require the instructor to have the authority to eliminate workplace hazards. Correction of hazards remains the responsibility of the production-operator and the independent contractor.

Equivalent experience. Final § 46.2(c) defines ''equivalent experience'' as work experience where the person performed duties similar to duties performed in mining operations at surface mines. The proposed rule included this term in several provisions but did not define the term. Several commenters questioned what constituted equivalent experience, stating that the final rule should provide mine operators with guidance in determining the kinds of experience that would be considered equivalent, in such areas as construction or public utility work. In response to these comments, the final rule provides examples of the types of experience that may be equivalent, such as work as a heavy equipment operator, truck driver, skilled craftsman, or plant operator. We intend that these examples serve to illustrate the types of work that may be counted as equivalent experience under the final rule, but these examples are not an exhaustive list. As we stated in the preamble to the proposal,

''equivalent experience'' includes such things as work at a construction site or other types of jobs where the miner has duties similar to the duties at the mine where he or she is employed, in a work environment similar to the mine environment.

Experienced miner. A number of commenters addressed the proposed definition of ''experienced miner.'' Like the proposal, final § 46.2(d) provides that a miner is ''experienced'' if he or she satisfies one of several criteria. The final rule adopts the criteria included in the proposal and, in response to comments, adds a provision that a miner with 12 months of cumulative surface mining or equivalent experience on or before the effective date of the final rule is an ''experienced miner.''

Section 46.2(d)(1)(i) of the final rule, like the proposal, brings within the definition of ''experienced miner'' any person employed as a miner on April 14, 1999—the date that the proposed rule was published in the **Federal Register**. Most regularly employed miners will be ''experienced'' under this definition, and therefore not subject to the new miner training requirements in § 46.5 of the final rule. This is similar to the approach taken in 1978 when part 48 went into effect. The definition of ''experienced miner'' in part 48 included all persons employed as miners on the effective date of the regulation, regardless of the length of their mining experience or the extent of their health and safety training. Most miners who were employed on April 14, 1999, even those at intermittent operations, will have accrued at least several months of experience by the rule's effective date.

Under final § 46.2(d)(1)(ii), a person will be considered an ''experienced miner'' if he or she has at least 12 months of cumulative surface mining or equivalent experience on or before the effective date of the final rule. In the preamble to the proposed rule, we pointed out that a miner with many years of experience who happened to be out of work on April 14, 1999, would not be an ''experienced miner'' under the proposal. We solicited comment on whether this would have an adverse impact at some operations, particularly those that operate on an intermittent or seasonal basis. Many commenters responded, expressing their concern that the proposed definition would mean that miners with extensive mine employment would not be considered experienced and would be required to receive new miner training. In contrast, a miner who was employed on one specific day—April 14, 1999—would be considered experienced and subject to less comprehensive training requirements. These commenters strongly recommended that the final rule include miners who had accrued at least 12 months of experience before the effective date of the final rule within the definition of ''experienced miner.'' We agree with the point made by these commenters, and the final rule adopts the suggestion of these commenters. Additionally, the final rule clarifies the intent of the proposal that the 12 months of experience are cumulative and may be accrued in non-consecutive months. This recognizes that many operations affected by this rule operate seasonally or intermittently, and that it is not uncommon for miners to work several months on and several months off. These patterns of employment make it difficult, if not impossible, for many miners to accrue 12 months of experience in one continuous period.

Commenters supported this interpretation, but strongly recommended that the language of the rule itself specifically provide that miners may accrue experience in non-consecutive months. We agree with commenters that this interpretation should be clarified, and the final rule provides that the requisite experience must total at least 12 ''cumulative'' months.

The final rule, like the proposal, allows equivalent experience to be counted toward the required 12 months of cumulative experience. We recognize that the operations and equipment at many of the mines covered by this final rule are very similar to the operations and equipment used at many non-mining operations, such as road construction sites. Although commenters generally supported credit for equivalent work under the definition of ''experienced miner,'' one commenter recommended against such credit. This commenter contended that credit for equivalent experience would not enhance miner health and safety because many injuries and deaths occur among newly hired experienced miners. We acknowledge that miners who are unfamiliar with a new mine site, even those with extensive experience, may be at risk of injury. To address such concerns, § 46.6 of the final rule requires newly hired experienced miners to receive specified training. This training is intended to ensure that experienced miners are thoroughly familiar with the particular environment and hazards present at a mine that is new to them.

Several commenters recommended that the final rule provide guidance on what constitutes equivalent experience. In response, the term ''equivalent experience'' has been defined in § 46.2 as ''work experience where the person performed duties similar to duties performed in mining operations at surface mines.'' This definition is described in more detail elsewhere in this section of the preamble.

Under the final rule, operators must determine the extent of the miner's experience, and also whether any non-mining experience is equivalent. The final rule imposes no specific requirements for tracking or recording the accumulated experience. It is the responsibility of production-operators and independent contractors to determine the miner's experience, based on the miner's work and training history.

Paragraph (d)(1)(iii) of final § 46.2 includes within the definition of ''experienced miner'' a person who began employment at a mine after April 14, 1999, the date of publication of the proposal, but before the effective date of the final rule, and who has received new miner training consistent with the requirements proposed under § 46.5 or with existing requirements for surface miners at § 48.25. This is similar to a provision included in the proposal and is intended to provide flexibility to those of you who are already providing training to your miners under part 48, or who wish to provide training under the requirements of proposed part 46 before the final rule takes effect. This provision is not intended to require compliance with the proposed rule, but was proposed as a voluntary option for those of you who wanted to begin developing a training program before the publication of the final rule.

This aspect of the proposed rule received little substantive comment. However, the final rule clarifies which miners are affected by this provision. Under the final rule, this paragraph will apply to miners who began employment as miners after April 14, 1999, but before the effective date of the final rule. You should be aware that a miner who began employment between these dates may otherwise be considered ''experienced'' under paragraph (d)(1)(ii) because he or she will accrue 12 months of experience by the rule's effective date. Miners who have not accrued the necessary experience and who do not otherwise fall within the definition of ''experienced miner'' must receive new miner training under the final rule.

Final § 46.2(d)(1)(iv) provides that a person employed as a miner on or after the effective date of the final rule who has completed 24 hours of new miner training under either § 46.5 or § 48.25 and who has at least 12 months of

cumulative surface mining or equivalent experience would be an ''experienced miner'' under the final rule. As discussed earlier, the use of the term ''cumulative'' in the final rule is intended to make clear that the necessary experience need not have been gained in consecutive months, but can be accumulated over a period of time. Also as discussed earlier, the final rule reflects the intent of the proposal and clarifies that this provision applies to miners who are employed as miners on or after the effective date of the final rule.

Several commenters recommended that the final rule define the term ''experienced miner'' as a person who either has 12 months of experience or has received the required 24 hours of new miner training, but not both. These commenters believed that either training or experience provided a sufficient basis to consider a miner ''experienced'' under the final rule.

As we indicated in the preamble to the proposed rule, we have concluded that an ''experienced miner'' should have both training and work experience. Nothing offered by commenters has persuaded us otherwise. However, we continue to recognize that many miners currently working at mining operations affected by the final rule have extensive experience in the industry and should not be treated as inexperienced miners when the final rule takes effect. The final rule therefore provides that a miner will be considered experienced on the rule's effective date if he or she either has accrued a certain level of mining experience or has received specified health and safety training. This recognizes that there will be a period of transition for the mining community on the effective date of the final rule and is intended to facilitate compliance. The definition in the final rule, like that in the proposal, allows equivalent experience to be counted towards the 12-month requirement.

Final § 46.2(d)(2) is adopted without change from the proposal and provides that an experienced miner retains that status permanently under part 46. This is consistent with recent revisions to part 48. This aspect of the proposal received little comment, but was generally supported by those commenters who addressed it. This provision applies in those situations where a miner is returning to work in the mining industry after being away, either because the miner took a job in another industry, such as construction, or because he or she had been laid off. Once a miner attains the status of an ''experienced miner'' under the final rule, he or she is considered experienced permanently. However, you should be aware that final § 46.6 requires that newly hired experienced miners complete newly hired experienced miner training no later than 60 days after beginning their employment.

Independent contractor. Final § 46.2(e), like the proposal, defines ''independent contractor'' as a person or entity that contracts to perform services at a mine under this part. This is consistent with the language of the Act, which includes independent contractors who perform services or construction at a mine within the definition of the term ''operator.'' This aspect of the proposal received little comment, except that several commenters found that the proposal's use of the term ''operator'' to refer to both production-operators and independent contractors was confusing. In response to these comments, the final rule use both ''production-operator'' and ''independent contractor,'' where appropriate, to avoid any misunderstanding.

Mine Site. Section 46.2(f) of the final rule defines the term ''mine site'' for purposes of part 46 as ''an area of the mine where mining operations occur.'' The final rule defines the term ''mining operations'' as ''mine development, drilling, blasting, extraction, milling, crushing, screening, or sizing of minerals at a mine; maintenance and repair of mining equipment; and associated haulage of materials within the mine from these activities.'' The proposed rule used the term ''mine site'' but did not define it. At some mines, there may be portions of mine property where no mining operations occur and where mining hazards are limited or nonexistent, such as an office building that is on mine property but is isolated from mining activities. This situation may be more common at larger mines with more extensive operations. The term ''mine site'' does not include such areas within its definition.

Miner. The term miner is defined in final § 46.2(g)(1)(i) as any person, including any operator or supervisor, who works at a mine and is engaged in mining operations. This definition specifically includes within its scope independent contractors and employees of independent contractors who are engaged in mining operations. Section 42.2(g)(1)(ii) also clarifies that the definition of ''miner'' includes any construction worker who is exposed to hazards of mining operations.

The definition of ''miner'' in the final rule differs from the definition in the proposal, which would have defined ''miner'' as a person engaged in mining operations integral to extraction or production. The proposed rule defined ''extraction or production'' as the mining, removal, milling, crushing, screening, or sizing of minerals, as well as the haulage of these materials, a narrower range of activities than the term ''mining operations'' under the final rule.

Many commenters supported the proposed definition of ''miner,'' stating that it was consistent with the overall approach of the proposal to provide training commensurate with the risks experienced by the person to be trained. The definition of ''miner'' in the final rule is intended to address the concerns of several commenters that the proposed definition was not sufficiently inclusive. Some of these commenters stated that workers are killed and disabled at mine sites every year even though they do not directly participate in the extraction and production process. Several commenters recommended that the final rule define ''miner'' to include persons who are regularly or frequently exposed to mine hazards. These commenters were concerned that limiting comprehensive training to those engaged in activities that were integral to extraction or production would mean that some workers exposed to hazards would not have the proper training and would be unable to recognize the hazards and protect themselves. One commenter pointed out that individuals who enter mine property to service, maintain, assemble, or disassemble mine extraction or production equipment are at risk, but it was not clear that the proposed definition of ''miner'' would include these workers.

We intend that the definition of ''miner'' include persons who are engaged in activities related to day-to-day mining operations. The final rule defines ''miner'' in terms of the activities the individual performs at the mine, which are activities that would expose workers to hazards associated with mining operations. We intend that workers who provide regular maintenance of mining equipment on the mine site be considered ''miners'' under the final rule. However, the proposed rule was not clear on this point. To address this, the definition of ''mining operations'' in the final rule specifically includes maintenance and repair within its scope, and those workers who maintain and repair equipment would be ''miners.''

You should be aware, however, that § 42.2(g)(2) provides that maintenance and service workers who do not work at a mine site for frequent or extended periods are excluded from the definition of ''miner.'' This means that maintenance and service workers who

come onto mine property infrequently or for short periods of time, and whose exposure to mine hazards is consequently limited, are not considered ''miners'' for purposes of part 46.

The final rule, like the proposal, specifically includes operators and supervisors within the definition of ''miner'' if they are engaged in mining operations; operators and supervisors who fall within the definition are covered by the same training requirements in the final rule as rank-and-file miners. Commenters were generally supportive of this aspect of the proposal and stated that the type of training that workers receive should depend on the types of work they are performing and the hazards that they encounter in performing that work, not on their job titles. The final rule also clarifies the intent of the proposal that independent contractors and independent contractor employees who are engaged in mining operations are also ''miners'' under the final rule. This clarification responds to several commenters who were concerned that the proposed rule did not make clear that independent contractors are included within this definition.

Final § 46.2(g)(1)(ii) provides that ''miner'' also means any construction worker who is exposed to hazards of mining operations. Although the proposed rule itself was not explicit that construction workers exposed to mining hazards were included, we stated in the proposed preamble that the requirements of this rule would apply to construction workers who work at mines covered by the rule. To ensure that there is no question under the final rule as to the status of construction workers, the final definition of ''miner'' specifically references construction workers.

Our intention under the proposal was that construction workers who were engaged in activities integral to extraction and production would be considered ''miners.'' We provided an example in the proposed preamble of a construction worker who might be a miner under the proposal. In this example the construction worker was building a new crusher in an active quarry. A number of commenters seriously questioned this example, stating that until the crusher is operational, extraction and production activities have not begun, and the construction worker would not be a ''miner'' under the definition in the proposed rule. We agree with commenters that this example may not be consistent with the language in the proposed rule. These comments highlight the fact that construction workers, because of the nature of their work, are not typically engaged in mining operations, such as in the example in the preamble to the proposal. However, construction workers who are at an active mine site will be exposed to significant hazards of mining. Construction workers are also typically at the mine site for extended periods because of the nature of their work, unlike many other employees of independent contractors. For these reasons, the final rule now provides that construction workers who are exposed to hazards of mining operations are considered ''miners'' under the final rule. This means that construction workers who work in an active mine site are considered ''miners'' and must receive comprehensive training (i.e., new miner training or newly hired experienced miner training, as appropriate). Construction workers who are not ''miners'' must receive site-specific hazard awareness training under § 46.11(b). We solicited comment in the preamble to the proposal on whether we should promulgate separate training standards for construction workers. Most commenters who addressed this issue opposed the development of separate training requirements for construction workers and supported the application of the final rule to those workers. These commenters maintained that it was appropriate to include construction workers under the training regulations that apply to other workers at mine sites, pointing out that many of the serious injuries and fatalities in the aggregates industry involve contract construction workers. Only one commenter expressed strong opposition to applying the requirements of the final rule to construction workers. This commenter asserted that including construction workers under the final rule was directly contrary to the Mine Act's statutory language directing MSHA to promulgate appropriate training standards specifically governing construction workers at mine sites. This commenter also maintained that construction workers should not be subject to mandatory training requirements until MSHA promulgates separate regulations under section 115(d) of the Mine Act.

We do not agree that the Mine Act mandates that training requirements for construction workers at mines must be developed as separate standards. As we indicated in the preamble to the proposal, the Mine Act does not prohibit the application of part 46 requirements to construction workers. Section 115(d) of the Mine Act simply directs the Secretary of Labor to ''promulgate appropriate standards for safety and health training for coal or other mine construction workers.'' There is nothing in the statutory language that requires independent training requirements that apply exclusively to mine construction workers.

Final § 46.2(g)(2) is adopted from the proposal with a minor change and further clarifies that the definition of ''miner'' does not include scientific workers, delivery workers, customers, vendors, visitors, or maintenance or service workers who do not work at a mine site for frequent or extended periods. The proposed rule would have excluded ''occasional, short-term maintenance or service workers'' as well as ''manufacturers' representatives'' from the definition of miner. The final rule adopts language that we use in our policy under part 48 to characterize maintenance and service workers who are not regularly exposed to mine hazards and who are therefore not required to receive comprehensive training. We determined that it would be more straightforward to adopt existing terms into the final rule rather than attempt to define new terms—i.e., ''occasional'' and ''short-term''—that we intend to mean essentially the same thing. We intend that the terms ''frequent'' and ''extended'' have the same meaning as under part 48. That is, ''frequent'' exposure is a pattern of exposure to mine hazards occurring intermittently and repeatedly over time. ''Extended'' exposure means exposure to mine hazards of more than five consecutive work days. Consequently, maintenance or service workers who are not at a mine site for frequent or extended periods would not be ''miners'' under the final rule.

Upon further consideration and in response to commenters, we have not adopted the proposed blanket exclusion of ''manufacturers' representatives'' from the definition of ''miner''. Instead, under the final rule, whether or not a manufacturer's representative is a ''miner'' depends on the circumstances of each case. A manufacturer's representative is a ''miner'' if he or she is engaged in mining operations at mine sites—such as maintaining or repairing equipment—for frequent or extended periods. Manufacturers' representatives who are frequently at mine sites but who are not engaged in mining operations would not be ''miners'' under this definition. For example, a manufacturers' representative who is merely marketing mine equipment

would not be a miner, even if he or she is at a mine site on a daily basis.

Several commenters suggested that the final rule provide examples of the types of workers who are considered ''miners.'' Commenters believed that examples would greatly benefit operators in determining who is a ''miner'' under the final rule. Although we agree that examples would provide clarification, we believe that this guidance is best provided in the compliance materials that we will be developing to assist production-operators and independent contractors in complying with the final rule.

Mining operations. As indicated in the preamble discussion of the definition of ''miner,'' the final rule defines ''miner'' as a person engaged in mining operations, and final § 46.2(h) defines ''mining operations''. The proposal would have defined ''miners'' as workers engaged in mining operations integral to ''extraction and production.'' This definition would also have specifically included the associated haulage of these materials at the mine. The proposed rule would have defined ''extraction or production'' as ''the mining, removal, milling, crushing, screening, or sizing of minerals at a mine.''

''Mining operations'' was not defined in the proposal, and, as discussed above, essentially replaces the proposed definition of ''extraction or production''. ''Mining operations'' is a slightly broader definition that includes mine development, drilling, blasting, extraction, milling, crushing, screening, or sizing of minerals at a mine; maintenance and repair of mining equipment; and associated haulage of materials within the mine from these activities. This change responds to commenters who were concerned that the proposed definition of ''miner'' was too narrow and that workers who were exposed to significant mining hazards, such as maintenance workers, would not be included within the definition. The definition of ''mining operations'' specifically includes maintenance and repair of mining equipment, as well as haulage of materials within the mine site. Because the enumerated activities are broader than ''extraction and production,'' they are referred to in the final rule by the term ''mining operations.''

One commenter stated that the haulage of processed materials from stockpiles to offsite customers should be excluded from the definition of ''extraction or production.'' The commenter believed that this would therefore exclude delivery drivers and customer drivers from the definition of ''miner.'' In fact, we intended to exclude customers and delivery personnel from the definition of ''miner.'' To clarify this point, the definition of ''mining operations'' includes the haulage of materials within the mine. Haulage of materials away from the mine is not included in the final rule's definition of ''mining operations,'' and persons who perform only this type of work do not fall within the definition of ''miner.'' Section 42.2(g)(2) also indicates that commercial over-the-road truck drivers may be considered ''customers'' under the final rule and excluded from the definition of ''miner.''

The definition of ''mining operations'' includes ''mine development'', to make clear that certain activities preliminary to extraction would be included. These activities include such things as drilling, mining and developmental work on both newly discovered and established mineral deposits. We have historically considered this phase of activities part of the extraction phase of mining and thus subject to our jurisdiction. However, this would not include exploratory drilling, reconnaissance, search, or prospecting that takes place off of an existing mine site and that is conducted in the search of the initial discovery of mineral deposits.

New miner. Section 46.2(i) of the final rule adopts the proposed definition of ''new miner'' with minor changes. The final rule defines a new miner as a person who is beginning employment as a miner with a production-operator or independent contractor and who is not an experienced miner. As discussed elsewhere in the preamble, the final rule substitutes the terms ''production-operator or independent contractor'' for the broader term of ''operator,'' to make it consistent with the wording of the definition in the final rule for ''newly hired experienced miner.''

Newly hired experienced miner. The definition of this term is similar to the definition of ''new miner''. ''Newly hired experienced miner'' was not defined in the proposed rule, but is defined in § 46.2(j) of the final rule as an experienced miner who is beginning employment with a production-operator or independent contractor.

Commenters questioned whether certain miners, such as those employed by an independent contractor who move from mine to mine, would be considered new miners or newly hired experienced miners. We agree with these commenters that the proposed rule was not clear on this distinction, and the definition of ''newly hired experienced miner'' specifically provides that experienced miners who move from one mine to another, such as drillers and blasters, but who remain employed by the same production-operator or independent contractor are not considered newly hired experienced miners and do not need training under § 46.6 of the final rule. However, final § 46.11 specifically requires that these miners receive site-specific hazard awareness training for each mine.

Normal working hours. Section 46.10 of the final rule, like the proposal, requires that training be conducted during ''normal working hours.'' Final § 46.2(k) adopts the proposed definition of ''normal working hours'' and provides that ''normal working hours'' means a period of time during which a miner is otherwise scheduled to work. This definition is based on a similar provision in part 48 and also provides that the sixth or seventh working day may be used to conduct training, provided that the miner's work schedule has been in place long enough to be accepted as a common practice. This aspect of the proposed rule did not receive much comment, and the final definition is adopted with a minor change from the proposal. The final rule references ''production-operator and independent contractor'' rather than ''operator.'' As discussed earlier, this change is intended to eliminate any confusion that may have been caused by the use of the term ''operator'' in the proposal.

As discussed under § 46.10 of the preamble, we intend that the schedule must have been in place long enough to provide reasonable assurance that the schedule change was not motivated by the desire to train miners on what had traditionally been a non-work day.

Comments received on the proposed definition raised the issue of whether travel to an off-site location and the training conducted at that location must be conducted during normal working hours. These issues are addressed under the preamble discussion for final § 46.10.

Operator. Operator is defined in § 46.2(l) of the final rule to mean both production-operators (defined in this section as owners, lessees, or other persons who operate or control a mine) and independent contractors who perform services at a mine. This definition is consistent with the definition of ''operator'' in section 3(d) of the Act. The term ''operator'' is used throughout the preamble to refer to the person or entities responsible for providing health and safety training under part 46. However, we use the terms ''production-operator'' and ''independent contractor'' in the final rule to distinguish between the two

types of operators and to emphasize that independent contractors also have responsibility for training.

Production-operator. Final § 46.2(m) defines ''production-operator'' as any owner, lessee, or other person who operates, controls, or supervises a mine covered by this part. This would mean the person or entity that actually operates the mine as a whole, as opposed to an independent contractor who provides services. Commenters were generally silent on this aspect of the proposal. This definition is derived from the definition of ''operator'' in section 3(d) of the Mine Act and is adopted without change from the proposal into the final rule.

Task. Final § 46.2(n) defines ''task'' as a work assignment or component of a job that requires specific job knowledge or experience. The proposal would have defined ''task'' as a component of a job that is performed on a regular basis. One commenter pointed out that a task may or may not be performed on a regular basis and questioned why that limitation was included in the proposed definition. The commenter was concerned that there could be instances where a miner is assigned to perform a task on a one-time basis, but a literal reading of the proposed definition of ''task'' suggests that task training would not be required in such a situation. We agree with this commenter, and the wording in the final rule has been clarified accordingly.

This definition identifies the type of job duties that would be subject to the new task training requirements under final § 46.7. Under that section, a miner must be provided with training when reassigned to a task for which he or she has no previous experience, or when the miner's assigned task is changed.

We and *us.* These terms are adopted in the final rule to refer to the Mine Safety and Health Administration (MSHA). We have written the final rule in the more personal style advocated by the President's executive order on ''plain language,'' which, among other things, encourages the use of personal pronouns. Commenters generally supported the use of plain language in both the regulatory language and the preamble, and ''we'' and us'' are used throughout the final rule and preamble to refer to MSHA.

You. The final rule, like the proposal, uses the term ''you'' to refer to production-operators and independent contractors, consistent with ''plain language'' concepts. However, a number of commenters indicated that using ''you'' to refer both to production-operators and independent contractors created some confusion. In response to these comments, we have limited our use of ''you'', both in the final rule language and the preamble, to instances where it is unlikely to be misunderstood or unclear.

The final rule, unlike the proposal, does not include a definition of ''hazard training.'' ''Hazard training'' was defined in the proposal as information or instructions on the hazards a person could be exposed to while on mine property, as well as on applicable emergency procedures. In response to comments, the concepts that were outlined in the proposed definition have been consolidated into final § 46.11, the section of the final rule that specifically addresses site-specific hazard awareness training. A separate definition for ''hazard training'' is not needed as a result, and the proposed definition has not been adopted in the final rule.

Section 46.3 Training Plans

Section 46.3 of the final rule requires production-operators and independent contractors to develop and implement a training plan and also addresses MSHA approval of training plans, how and where a copy of the training plan must be maintained, and who has access to the plan. The requirements of section 46.3 apply to production-operators and those independent contractors who have employees who fit the definition of ''miner'' under final § 46.2. These requirements have been adopted, with some changes, from the proposed rule.

In developing the final rule, we have attempted to develop practical requirements for health and safety training programs at the wide range of mines covered by part 46. Section 115 of the Mine Act provides that mine operators shall have a health and safety training program that shall be ''approved by the Secretary [of Labor].'' The Mine Act does not set forth a specific method by which we must approve an operator's health and safety training plan. We believe, therefore, that the drafters of the Mine Act intended some flexibility concerning the procedures to be followed by us when implementing MSHA approval of health and safety training plans. We are also mindful that regulatory considerations under section 115 of the Mine Act must be balanced with the congressional intent expressed in section 103(e) of the Mine Act. This provision directs us not to impose an unreasonable burden on mine operators, especially those operating small businesses, when requesting information consistent with the underlying purposes of the Act. As a result, we believe that the Mine Act provides us with the discretion to approve health and safety programs by requiring something other than the operator's submission to us of a proposed training plan.

While not establishing specific procedures to be followed, Congress did provide minimum requirements in section 115 of the Mine Act to guide us in determining what should be considered an approved health and safety training program. First, we interpret section 115(a) of the Act to require that each operator develop and implement an approved health and safety training program under which miners are provided certain minimum training as specified by section 115. For example, section 115 provides that ''new miners having no surface mining experience shall receive no less than 24 hours of training if they are to work on the surface'' and that any training must be provided ''during normal working hours.'' As a result, an operator's training program can only be approved if the proposed training fulfills the operator's compliance obligations under section 115 of the Act. In addition, we believe that in order for an operator's training program to be approved, it must be in compliance with any minimum requirements established in training standards developed by us in accordance with section 115 of the Act. Accordingly, we believe the Mine Act provides us with the authority to include a requirement in the part 46 final rule that would consider an operator's health and safety training plan to be approved by MSHA without formal submission and review, provided such a plan comports with the minimum requirements of section 115 of the Mine Act as well as the provisions for approved plans set forth in this section of the final rule.

Once the final rule goes into effect, we intend to have our inspectors review your health and safety training plans at the mine site during the normal inspection cycle. This will be accomplished in a manner similar to how our inspectors review other mine-specific plans for compliance. Inspectors and other MSHA personnel who review your plan would simply determine—

(1) That you in fact have developed a written training plan;

(2) That the written plan contains at a minimum the information specified in this section; and

(3) That the plan is being implemented consistent with the plan specifications.

Although final § 46.3 allows you greater flexibility in training plan content and implementation, MSHA has determined that the new requirements do not reduce the protection afforded to

surface nonmetal miners under similar standards in existing part 48. While the means used under part 46 may be more flexible and performance-oriented than part 48, the ultimate result—the effective health and safety training of surface nonmetal miners—will be attained under the new standard. In addition, because miners are in a good position to evaluate the health and safety concerns at their workplace, the final rule includes requirements that provide for the notification and involvement of miners and their representatives in the development of approved training plans before implementation. We also wish to emphasize the enhanced health and safety benefits to miners resulting from final § 46.3, which will allow us to focus our resources on verification of plan execution and assistance to you in providing effective training at your mines, rather than on a paper review and approval of training plans at our offices. Likewise, you and training providers can focus on the development of training plans that address the health and safety concerns at your operation, rather than on traditional procedures to gain our approval.

Final § 46.3(a) requires production-operators and independent contractors who have employees who are ''miners'' under the final rule to develop and implement a written plan, approved by us under either paragraph (b) or (c) of final § 46.3, that contains effective programs for training new miners and newly hired experienced miners, training miners for new tasks, annual refresher training, and site-specific hazard awareness training. We received few comments on this aspect of the proposal, and we have adopted this provision unchanged into the final rule.

Final § 46.3(b) provides that a training plan is considered approved by us if it contains—

(1) The name of the production-operator or independent contractor, mine name(s), and MSHA mine identification number(s) or independent contractor identification number(s);

(2) The name and position of the person designated by you who is responsible for the health and safety training at the mine. This person may be the production-operator or independent contractor;

(3) A general description of the teaching methods and the course materials that are to be used in each training program, including the subject areas to be covered and the approximate time to be spent on each subject area;

(4) A list of the persons and/or organizations who will provide the training, and the subject areas in which each person and/or organization is competent to instruct; and

(5) The evaluation procedures used to determine the effectiveness of training.

Plans that include the information listed in this section are considered ''approved,'' and you are not required to submit the plan to us for traditional review and approval. The required information is virtually the same information that would have been required by the proposal, with a few minor changes, explained below.

A number of commenters supported the proposed guidelines for plan content, emphasizing the wide variety in size and type of mining operations falling under part 46 requirements. These commenters stated that the most effective training plans are those that can be tailored to the particular operation, directed toward specific mine processes or hazards or on the accident and injury experience at the mine. These commenters favored the latitude that the proposed rule would give production-operators and independent contractors in developing training programs.

A number of commenters addressed the minimum information that the proposal would require in the operator's written training plan. One commenter believed that it was unnecessary for the training plan to specify the approximate time that would be spent on a particular subject and recommended that the final rule not require it. This commenter contended that the time spent on a particular topic is unique to the persons attending a specific training session, because different groups learn at different rates.

Commenters questioned the need for the plan to include the name of the persons providing the training and the subjects in which they are competent to instruct. These commenters recommended that the final rule not require this information. Other commenters contended that requiring instructors to be identified suggests that all training under part 46 must be provided in a classroom setting and recommended that the final rule clarify that operators can use alternative and innovative training methods as well as classroom training.

As stated in the preamble to the proposal, our intention is that the information that operators must include in their training plans will be sufficient to allow us to make a determination of your compliance with training plan requirements, without imposing an unnecessary paperwork or recordkeeping burden. Additionally, the training plan serves as an essential framework for the operator's training programs. We expect that operators will direct adequate time and resources to the development of their training plans. We intend that the flexible written plan requirements in the final rule will allow operators to devote the time saved from the reduction in administrative burden to be directed towards development of their training programs. Although part 46 gives operators flexibility in designing their training programs and attempts to minimize paperwork burdens, we do not intend that part 46 allow operators to deliver training to miners on an ad hoc basis. Although we strongly encourage operators to tailor their training programs to the needs of their particular operations, this does not mean that we advocate that operators change fundamental components of their miner training programs from one day to the next, at their convenience.

We do not believe that it is unduly burdensome to require operators to indicate the approximate amount of time that will be spent on a particular subject area. As a practical matter, operators must determine how much time will be spent on a particular subject as part of the development of an effective training program. We would point out that the final rule, like the proposal, requires that the ''approximate'' amount of time spent on a particular subject be included in the training plan. This provides operators with some leeway in organizing their training and also addresses the concern of one commenter that different groups learn at different rates of speed. For example, if an annual refresher training program includes a course in traffic hazards, the training plan could indicate that the course will last over a specified range of time, such as from one to two hours. For the same reasons, requiring a list of competent persons who will provide training is not unreasonably limiting. It would be acceptable under the final rule for the operator to include names of all potential instructors in a particular subject, even though the course will ultimately be taught by only one of the instructors listed. Further, we disagree with commenters who contend that requiring a list of instructors suggests that training must be conducted in a classroom setting. In fact, final § 46.4(d) specifically provides that training methods may consist of classroom instruction, instruction at the mine, interactive computer technology or any other innovative training methods, alternative training technologies, or any combination of methods. Additionally, we believe that the final rule's requirements are sufficiently flexible to allow operators to

readily address new or emerging health and safety concerns at their operations. For these reasons, we have not adopted these commenters' recommendations in the final rule.

Several commenters expressed concern that several of the informational requirements in § 46.3(b) were inappropriate and too restrictive for new task training and site-specific hazard awareness training. Some of these commenters indicated that it was unrealistic to require an operator to foresee all of the types of task and hazard awareness training that may be needed for all job categories and to write them up in the plan. One commenter stated that an operator needs the flexibility to offer such training by the most qualified person available at the time the training is to be conducted, and that requiring an operator to indicate the identity of the competent person who will provide this training in the plan will restrict this flexibility. These commenters also contended that evaluation of training effectiveness, particularly hazard awareness training for vendors and visitors, would be difficult to accomplish without the needed flexibility. These commenters therefore recommended that the required documentation of site-specific hazard awareness training and new task training be limited to a statement of the training objectives and the method of instruction.

We disagree that the plan information included in the proposed rule and adopted into the final rule is unduly restrictive for new task and hazard awareness training. As discussed above, it would be acceptable for an operator to include a list of potential instructors for a particular subject in the training plan, even though only one of the instructors will actually end up providing the training. Additionally, most operations covered by the final rule are small and typically operate with limited equipment, and the number of new tasks miners at these mines will be assigned is also limited. Including a list of these tasks in the training plan would not impose an unreasonable burden on production-operators and independent contractors at many mines. As mentioned above, the plan could identify several potential instructors for training in a particular task. Similarly, the plan could summarize the site-specific hazard awareness training that will be given based on the type of worker who will receive it. For example, the type of hazard awareness training given to independent contractors who are at the mine site to repair mining equipment would most likely differ in scope and content from the training given to truck drivers who come onto the mine site for brief periods to deliver supplies. The plan should provide a description of the training that will be given to different categories of workers. We believe that the final rule language affords operators adequate flexibility with regard to task and site-specific hazard awareness training. Consequently, we have not adopted the recommendation of these commenters that the final rule reduce the plan information requirements for these types of training.

One commenter pointed out that if an operator arranges with an outside organization to provide some or all of the required training, the operator probably will not know the names of the instructors from the training organization who will provide the training. For these reasons, this commenter asserted, it would not be possible for the operator to indicate the names of the instructors in the training plan. We agree that in such situations production-operators or independent contractors will be unable to indicate the specific instructors who will provide training. We also agree that it is appropriate to allow flexibility in these cases. The final rule therefore provides that the plan may indicate the person or organization that will provide the training, as appropriate. This means, for example, if a production-operator or independent contractor arranges for some portion of part 46 training to be provided by XYZ Training Company, the plan may simply indicate that an instructor from that company will provide training in specified areas. You should be aware, however, that final § 46.9 requires that the training records and certificates for this training indicate the name of the person who provided the training. Obviously, the identity of the instructor will be known at the time that the training is provided, and recording this information should present no problem to the production-operator or independent contractor.

One other commenter questioned the use of certain terms in the proposal, and asked whether there was a difference between a training ''plan'' and a training ''program.'' This commenter observed that the proposal provided that the training plan must cover five different programs—(1) New miner training; (2) newly hired experienced miner training; (3) annual refresher training; (4) new task training; and (5) site-specific hazard awareness training. Each training program is in turn made up of one or more courses, with each course covering a subject area. This commenter suggested that if his observation is correct, then the information in paragraphs (b)(1) through (b)(5) should be required for each training ''program,'' not each training ''plan.''

This commenter's understanding of the scheme of the plan requirements is correct. In response to this comment, we have made a minor change in paragraph (b)(3). The final rule requires that the plan include a general description of the teaching methods and the course materials that are to be used in each ''training program.'' If the operator is using the same teaching methods and course materials for all programs, the operator need not describe each individually but may simply state that methods and materials will be used for all programs. The proposal would simply have required that this description be provided for methods and materials used in ''providing the training.''

We have also made small clarifications in final § 46.3(b)(1). Instead of requiring the ''company'' name, as under the proposal, the final rule requires the ''name of the production-operator or independent contractor.'' This paragraph now also references the MSHA independent contractor identification number in addition to the MSHA mine identification number. This is intended to be consistent with the fact that both production-operators and independent contractors with employees who are miners under the final rule are responsible for developing training plans for their employees. Section 46.3(b)(1) also indicates that there may be multiple mine names and MSHA identification numbers indicated on a plan. This may be true in cases where a production-operator operates several mines and has one training plan that covers all of the mines. Additionally, independent contractors typically provide services at multiple mines, and the language of the final rule addresses those instances where a training plan is relevant for more than one mine.

The final rule, like the proposal, requires you to list or describe the evaluation procedures that you will use to determine the effectiveness of training. Evaluation of the effectiveness of training must be an integral part of the training process if accidents, injuries, and deaths resulting from unsafe conditions and work practices are to be reduced. We have retained a performance-oriented approach that allows you to select the method that you will use to determine that training has been effective. Possible evaluation methods include administering written or oral tests to miners, or a demonstration by a miner that he or she can perform all required duties or tasks

in a safe and healthful manner. You could also evaluate work practices to ensure that the miner retains and uses the skills, knowledge and ability to perform his or her duties safely. This evaluation could be accomplished by periodic work observations to identify areas where additional training may be needed. In addition, such observations, along with feedback from miners, could be used to modify and enhance the training program.

The final rule, like the proposal, uses the term ''effective programs'' to deal with instances where a training plan, as implemented, is inadequate or deficient. If we determine that you have not implemented an effective training program, we will issue a citation for a violation of § 46.3(a) that indicates how and why the training program fails to meet this requirement. In cases where the plan as designed falls short in some way, you must revise your plan to address the deficiencies that we have identified to abate the violation. In cases where the plan as designed is adequate but the plan is inadequately implemented, you must take steps to improve the quality of the implementation of the plan. In some cases, you may need both to revise your plan and address inadequacies in implementation. For example, if you have designated an individual as a ''competent person'' who in fact is incompetent to instruct, you must designate someone else to provide training as well as revise your plan to include the new competent person.

Under final section 46.3(a), production-operators and independent contractors are responsible for maintaining an effective training plan at all times at their operation. As a result, it will be necessary for production-operators and independent contractors to monitor the implementation of training plans to determine whether it is effective and therefore in compliance with section 46.3(a) of the standard. We expect production-operators and independent contractors to modify ineffective or deficient segments of their training plan in order to bring them into compliance.

The final rule reflects our determination that, while our review of your written training plan could provide an initial check on the quality of the written program, such review does not ensure that the program is successful in its implementation. This is the same approach taken in the proposal and was the subject of a number of comments. A number of commenters favored the implicit approval of a training plan that meets the minimum requirements in the rule, believing that this approach would allow operators to direct the time saved from the streamlined administrative process towards better plans and plan implementation. On the other hand, some commenters recommended that we maintain oversight of training plans through the plan submission and review process, to ensure that plans meet minimum standards of quality.

The final rule adopts the approach taken in the proposal, and provides that a training plan is considered approved by us if it includes the minimum information specified in this section. This reflects our conclusion that it is not necessary for production-operators and independent contractors to formally submit their training plans to us to achieve the protective purposes of the Mine Act. We believe that a training program can be effective if the operator develops and implements a health and safety training plan consistent with the requirements for an approved plan under this final rule. As we have indicated elsewhere in this preamble, we will provide compliance assistance to operators in developing effective training plans as our resources permit and will develop sample training plans that operators can use as the basis for their own mine-specific plans. Additionally, we will direct our resources toward verification of the effectiveness of training plans in their implementation. Similarly, operators and training instructors will be able to focus on the development and administration of training plans tailored specifically to mine operators' needs rather than on traditional procedures to gain our approval.

The final rule adopts the proposed rule's alternate process for plan approval, for those cases where a plan you develop does not include the minimum required information, where you choose to obtain traditional approval, or where the miners or miners' representative requests such approval. Final § 46.3(c) provides that a plan that does not include the minimum information listed in paragraphs (b)(1) through (b)(5) must be submitted for review and approval by the Educational Field Services Division Regional Manager, or designee, for the region in which the mine is located. The term ''Regional Manager'' refers to the Regional Manager in the Educational Field Services Division (EFS) of MSHA's Directorate of Educational Policy and Development (EPD). The EFS Division is divided into an Eastern and a Western region. In response to requests from the mining community, the responsibility for the approval of training plans was moved from District Managers in Coal and Metal and Nonmetal Mine Safety and Health to the EFS Regional managers or their designees in 1997. Paragraph (k) of this section includes the titles, postal and e-mail addresses, and facsimile and telephone numbers of both EFS Managers.

We anticipate that the majority of plans developed under this part will satisfy the requirements of paragraph (b) and consequently will not be required to be submitted to us for traditional approval. However, final § 46.3(c) allows you to voluntarily submit a training plan for Regional Manager approval. We expect that some of you may prefer to obtain our traditional approval to ensure that there is no question that your training plan satisfies minimum requirements. This aspect of the final rule addresses those concerns. Only a few commenters addressed this aspect of the proposal, and these commenters were generally supportive of it. One commenter endorsed voluntary submission of training plans to us and predicted that it would be used by many mine operators.

Final § 46.3(c), like the proposal, also allows miners and their representatives to request our traditional approval if they choose. Several commenters were opposed to this provision, contending that it was unnecessary and potentially burdensome and could be subject to abuse. One commenter was concerned that a single request from a miner or a miners' representative could trigger our traditional review of a plan. This commenter maintained that miners and their representatives have direct and effective recourse if they believe a training plan is inadequate—they can contact us and request that the plan be reviewed by an MSHA inspector. This commenter was of the opinion that the possibility that the inspector may cite the operator for an inadequate plan is a strong incentive for compliance, and that it was therefore unnecessary to give miners the right to request MSHA review of a training plan.

We disagree with those commenters who believe that miners' participation in the plan development and approval process is unnecessary. The Mine Act explicitly recognizes that miners have an important role in assisting mine operators in preventing unsafe and unhealthful conditions and practices in the nation's mines. The final rule appropriately allows miners and their representatives the right to request MSHA review of operators' training plans within two weeks of receiving the proposed plan from the mine operator in accordance with paragraph (e). The final rule clarifies the intent of the proposal that miners and their

representatives must request MSHA approval within the two-week period allowed for their review. The proposal was silent on when miners and their representatives must request MSHA approval, and the final rule addresses this omission.

Contrary to the assertions of some commenters, we believe that miners should have a role in the process before the plan is implemented. We encourage operators to involve the miners at their mines as much as possible in the plan development process and solicit miners' input in determining the subject areas to be covered and emphasized in the various training programs.

In most cases, we anticipate that miners and their representatives will bring concerns they may have about the training plan to your attention and that any concerns that miners or their representatives have will be resolved informally. However, there may be occasions when attempts at informal resolution of issues raised by miners or their representatives are unsuccessful. For these reasons, the final rule provides a mechanism for our direct involvement to resolve issues or concerns on the part of the miners or their representatives that cannot be resolved informally.

The proposed rule provided miners and their representatives the right to request MSHA review of operators' training plans. However, commenters questioned how an operator would know that miners or their representatives had requested MSHA review of the operator's plan or, conversely, how miners and their representatives would know if the operator requested MSHA review. The proposed rule was silent on these issues. To address these concerns, we have included additional notification requirements in the final rule. The final rule requires miners or their representatives to notify the production-operator or independent contractor when they request our approval of the training plan. In addition, the final rule also requires you to notify the miners or miners' representative when you request our approval of your training plan. The final rule does not specify how this notice must be given. We expect that, in most cases, the party requesting MSHA approval will provide a copy of the request to the operator or the miners' representative, as appropriate. Where an operator requests MSHA approval and there is no designated miners' representative, posting of the request on the mine bulletin board would satisfy this requirement. These provisions will ensure that affected parties are informed when a training plan is submitted to MSHA for review and approval.

Section 46.3(d) of the final rule, like the proposal, requires you to furnish the miners' representative, if any, with a copy of the training plan at least two weeks before the plan will be implemented or, if you request MSHA approval of your plan, at least two weeks before you submit the plan to the EFS Regional Manager for approval. At mines where no miners' representative has been designated, a copy of the plan must either be posted at the mine or a copy provided to each miner at least two weeks before the plan will be implemented or submitted to the Regional Manager for approval. This ensures that miners and their representatives are notified of the contents of your training plan before the plan goes into effect or is submitted to us for approval. This also provides them with an opportunity to comment on the proposed plan and suggest additions or improvements. This aspect of the proposal received little comment and has been adopted without change into the final rule.

We recognize that at many mines, particularly small operations, there may be no miners' representative, and the mine may also lack a mine office and therefore have no appropriate place for posting the plan. Therefore, the final rule, like the proposal, allows an alternative method for notifying miners of proposed training plan contents. Under the final rule, operators may provide a copy of the plan to each miner in lieu of posting.

Final § 46.6(e) gives miners and their representatives two weeks after the posting or receipt of the proposed training plan to submit comments on the plan to you, or to the Regional Manager if the plan is before the Manager for approval. This provision has been adopted unchanged from the proposal. This will provide miners and their representatives with a means to provide input on the training plan, either to you, if traditional approval is not being sought, or to the Regional Manager who is reviewing and approving the plan. This aspect of the proposal received little comment. Although some commenters questioned allowing miners and their representatives to request MSHA review and approval of an operator's training plan, no commenters took issue with giving miners and their representatives the opportunity to comment on a plan.

Final § 46.3(f) provides that the Regional Manager must notify you and miners or their representative, in writing, of the approval or the status of the approval of the training plan within 30 days of receipt of a training plan submitted to us for approval, or 30 days from the receipt of the request by the miner or miners' representative that we review and approve the plan. This requirement has been adopted with minor changes from the proposal and ensures that affected parties are notified of the status of our review of the training plan.

This aspect of the proposal received little comment. The proposed rule did not specify that the 30-day notification requirement would be triggered by a request by miners or their representatives for our review and approval of the plan, but the final rule clarifies this point. Additionally, the proposed rule would have provided that the notice be given within 30 days of the plan submission by the operator or the request for approval by miners or their representatives. We have modified the final rule slightly from the proposal to provide that the 30 day time period will begin to run upon our receipt of the submission or request. This small change will make it easier for us to track and fulfill this notification requirement.

As indicated earlier in this preamble, we anticipate that many of you will not seek our traditional approval of your training plans, and that in most cases concerns of miners or their representatives will be resolved informally. In those limited cases where we become directly involved in approval of a plan, we intend for the Regional Manager to provide reasonable notice to you and miners or their representatives of the status of plan approval or perceived deficiencies in the plan. The notice will also provide parties with a reasonable opportunity to express their views or offer solutions to the problem, without the need for detailed procedures.

A few commenters raised the issue of whether an operator could go ahead and implement a proposed plan pending formal approval by MSHA, in cases where the plan includes the minimum information required by § 46.3(b). These commenters maintained that an operator should not have to delay implementation of safety-related changes while a plan is undergoing review. One commenter also questioned whether a plan would be deemed approved if the 30-day deadline has passed and we have not made a final decision on approval.

Although we agree with commenters that improvements in training plans should be implemented as quickly as possible, we do not agree that the final rule should allow operators to implement plans that are before us for review and approval but that we have

not yet approved. To allow pre-approval implementation could make the approval process meaningless. In addition, such a provision would be inconsistent with the approval procedures contained in other MSHA regulations. Miners or miners' representatives who submit comments will expect MSHA to act on their concerns in the same manner that we do in other regulations. In other regulations a plan does not go into effect until we approve it. We assume that operators who are anxious to implement improved training plans would not seek our traditional review and approval of the plan in the first place, so this would not be an issue. Consequently, the situation referred to by commenters would most likely arise where the miner or miners' representative has requested our review and approval of the plan. We expect that a miner or miners' representative will request our review and approval because there is some concern or disagreement about one or more elements of the plan and the adequacy or effectiveness of the plan as proposed. In such cases, we believe that we should address the concerns or resolve the disagreement before the operator implements the plan. Similarly, we are not in favor of a provision that would deem a plan ''approved'' after a certain period of time has passed. Such a provision could mean that the concerns of miners or their representatives would not be addressed or considered through no fault of their own. We believe that this would be an unfair result, and we have not adopted such a provision in the final rule. We will direct our resources to ensure that we review the plans before us for approval as quickly as possible. We are committed to expeditious review, approval, and implementation of operators' training plans. For these reasons, the final rule does not allow plans to be implemented that are before us for review but that we have not yet approved.

The requirements of § 46.3(g) are new to the final rule, and we have included them in response to comments. This new paragraph (g) will only apply if you submit a plan to MSHA for approval. Under this paragraph, you must provide the miners' representative, if any, with a copy of the approved plan within one week after approval. At mines where no miners' representative has been designated, you must post a copy of the plan at the mine or provide a copy of the plan to each miner within one week after approval. This responds to commenters who were concerned that the proposed rule did not specifically provide that operators must provide miners or their representatives with copies of the approved training plan.

Section 46.3(h) of the final rule, like the proposal, provides you, miners, and miners' representatives the right to appeal the EFS Regional Manager's decision on a training plan to the Director for Educational Policy and Development. A Regional Manager's decision on a plan will be reviewed on appeal by the Director for EPD. Under this paragraph, an appeal must be submitted in writing within 30 days after notification of the Regional Manager's decision on the training plan. The Director for EPD will issue a decision on the appeal within 30 days after receipt of the appeal. We anticipate that this provision will be rarely used and expect that when a disagreement arises between us, you, and miners and their representatives about plan design or content, it can be resolved without the need for intervention of the Director for EPD. However, in those rare cases where the parties are unable to come to terms on the content of a particular training plan, the final rule provides parties the option of seeking review by the Director for EPD of the Regional Manager's decision on a plan. As indicated, parties have 30 days in which to file a written appeal of the Regional Manager's decision on a plan, and the Director for EPD has 30 days from the date of receipt of the appeal to reach a decision. This aspect of the proposal received little comment and is adopted without change into the final rule.

Final § 46.3(i), like the proposal, requires you to make available at the mine site a copy of the current training plan for inspection by us and for examination by miners and their representatives. If the training plan is not maintained at the mine site, you must have the capability to provide the plan upon request to us, the miners, or their representatives. Although the proposed rule was silent as to how quickly you must provide the plan upon request, the final rule specifies that the plan must be provided within one business day of the request. Under the final rule, you have the flexibility to maintain your training plan at a location other than the mine site, provided that you are able to produce a copy of the plan upon request to our inspectors or miners and their representatives within one business day.

Many commenters supported allowing the training plan to be maintained at a location away from the mine, observing that many small mines do not have a formal office. Commenters stated that flexibility in recordkeeping for these mines was appropriate. However, a few commenters recommended that a copy of the plan be kept at the mine site, even if it is in the glove compartment of the supervisor's truck. As indicated in the preamble discussion of final § 46.9, addressing recordkeeping requirements, we recognize that many operations covered by the final rule do not have facilities suitable for extensive recordkeeping. Additionally, § 103(e) of the Mine Act directs the Secretary of Labor not to impose an unreasonable burden on mine operators, especially those operating small businesses, when requesting information consistent with the underlying purposes of the Act. For these reasons, we have concluded that it is appropriate to allow mine operators some flexibility in maintaining their training plans. The final rule, like the proposal, allows you to maintain your training plan at a location other than at the mine site, provided that you can produce a copy upon request by us or miners or their representatives. Unlike the proposal, the final rule includes a deadline of one business day after the request for you to provide a copy of the plan. In the proposal, we solicited comments on whether the final rule should specify a deadline for an operator to produce a plan after a request has been made. A number of commenters recommended a deadline of one business day. We agree with these commenters that this would be reasonable, given the wide availability of overnight mail, electronic mail, and fax machines, and we have adopted this deadline in the final rule.

The requirements of § 46.3(j) have been added to the final rule in response to comments. Under this paragraph, you must follow the plan approval procedures of this section whenever you revise your training plan. In the preamble to the proposal, we indicated our intent that a training plan that underwent significant revisions would be required to go through the approval process of this section, just as though it was a new plan. However, the proposed rule did not include language that would have required this. A number of commenters strongly recommended that we include a provision in the final rule that addressed this.

Several commenters questioned what the process should be when operators revise their training plans. One commenter indicated that obtaining formal MSHA approval every time a training plan is amended is a tedious task that in no way relates to protecting workers. Other commenters recommended that operators be allowed to easily revise the plan when changing information such as the time spent on

a particular subject or on the emphasis given to particular training subjects. These commenters indicated that refresher training needs to be flexible as operators determine the subjects that need to be emphasized within the workforce, and that the training plan should not have to be changed each time such adjustments are made. Other commenters questioned whether adding a new subject to the task training program would necessitate a modification of the training plan and reposting the plan or resubmitting the plan to MSHA for reapproval.

We agree with those commenters who believe that it would be unduly burdensome to require operators to obtain traditional MSHA approval of their training plans even when they make minor revisions to their training plan. We attempted to develop a reasonable definition of ''significant revision,'' so that it would be clear what type of revisions would require an operator to go through the approval process. However, we concluded that what constitutes a ''significant revision'' is extremely subjective and incapable of definition. For example, many people would probably not consider the addition or deletion of one or two training subjects from a training program to be a significant revision of the plan. However, in limited cases, particular subjects may be of concern to miners at the mine, and the miners may consider minor changes to the subjects covered by a plan significant. Changes in training methods or course materials may be of little consequence in most situations. On the other hand, a change from primarily classroom training to interactive computer-based training could be considered a significant change by the miners who will be receiving the training, and they should be notified of this change and have the opportunity to provide input. Because one type of revision may be significant in one set of circumstances but not particularly significant in another situation, we are reluctant to define ''significant revision'' in the final rule. We are concerned that if the final rule were to define the term, there may be instances where a change may not fall within the definition, but nonetheless is something that miners or their representatives would want to be notified of and have the opportunity to comment on. For these reasons, the final rule requires you to follow the procedures for approval in § 46.3 whenever you make a revision to your training plan, including posting or providing copies of the proposed plan to miners, or submitting the plan to us for review and approval.

We anticipate that operators who make minor revisions to their plans will follow the informal plan approval procedures in final § 46.3(b) rather than request our traditional approval under § 46.3(c), even if we have formally approved previous versions of your training plan. Obtaining traditional MSHA approval of your plan does not lock you into the traditional approval procedures hereafter. We expect that when you make minor changes to your plan miners or their representatives will have limited comments on the revisions. However, this process will ensure that miners are notified of plan changes that may appear unimportant, but that represent significant changes to the miners who are trained under the plan.

The provisions of final § 46.3(k) are new to the final rule and include the postal and e-mail addresses, phone numbers, and fax numbers of the Eastern and Western Regional Managers for our Educational Field Services Division. The information is included in the final rule as a convenience to mine operators, miners, and miners' representatives who wish to contact EFS representatives, submit training plans to those offices for review and approval, or obtain information or assistance from MSHA on miner training issues. We have also provided the address of MSHA's Internet Home Page to allow those of you with access to the Internet to obtain current information about the EFS organization.

In the preamble to the proposal, we requested comment on whether we should include sample training plans as a nonmandatory appendix to the final rule. As indicated under the discussion in this preamble on implementation of the final rule, we have concluded that placing sample training plans in a regulatory appendix could restrict our flexibility in making future refinements and improvements to the sample plans. Instead, we will provide operators with sample plans as part of an overall compliance assistance and outreach effort for the mining community. To assist the mining community in complying with the training plan requirements in the final rule, we will post sample plans on our Internet Home Page at www.msha.gov. These plans can serve as the basis for operators' training plans tailored to their specific operations. Additionally, we are currently developing an interactive computer-based program that will assist operators in developing training plans appropriate for their specific operations.

Section 46.4 Training Plan Implementation

Section 46.4 of the final rule, which has been adopted with minor changes from the proposal, requires that training given under this part be consistent with the written training plan required under § 46.3 and be presented by a competent person. Under this section, training may be provided by outside instructors and may include the use of innovative training methods. This section also allows credit for equivalent training, provided to satisfy the requirements of the Occupational Safety and Health Administration (OSHA) or other federal or state agencies, to satisfy part 46 requirements. Finally, § 46.4 permits short health and safety talks and other informal instruction to satisfy training requirements under this part.

Although § 46.4 of the final rule will allow operators greater flexibility in training instruction and implementation, MSHA has determined that the new requirements will not reduce the protection afforded to surface nonmetal miners under similar standards in existing part 48. The flexibility included within final § 46.4, permitting the option of presenting training in short durations and in various formats, will allow miners to more easily retain information and receive effective training in close proximity to their work and associated hazards. Additional health and safety benefits will result from the specific requirement in final § 46.4(a)(3), which provides that training must be presented in language understood by the miners who are receiving the training.

This section was originally entitled ''Training Program Instruction.'' However, one commenter, who supported our use of plain language in the proposal, suggested that a clearer and more appropriate title for this section would be ''Training Plan Implementation,'' given that this section addresses various aspects of plan implementation. We agree that suggested title is more descriptive and makes the final rule easier to understand, and we have adopted the commenter's suggestion in the final rule.

Section 46.4(a)(1) of the final rule, like the proposal, requires that training provided under part 46 be conducted in accordance with the written training plan. No commenter addressed this aspect of the proposal, and it has been adopted without change into the final rule. This provision makes clear that training given to miners to satisfy the requirements of this part must be consistent with the training programs

outlined in your plan and the information included in the plan, such as course content and listed instructors.

Paragraph (a)(2) of final § 46.4 provides that the training must be presented ''by a competent person.'' A number of commenters recommended that the final rule allow training to be given ''under the direction of'' a competent person, to address those situations where a miner may receive training through an interactive computer program rather than through traditional face-to-face training from a live instructor. These commenters stated that this language would be consistent with the use of state-of-the-art training technologies that now exist and would give needed flexibility for the use of other training methods that may be developed in the future, where live instructors may not directly provide training to miners. Some of these commenters also indicated that inclusion of the suggested language in the final rule would allow other individuals to assist the competent person in providing training, even though those persons may not themselves meet the definition of ''competent person.''

Although we agree with commenters that instructors should have the flexibility to use a wide variety of training methods and technologies in providing training under the final rule, we believe that the language proposed allows sufficient flexibility to use new and innovative training methods, and we have not adopted the recommendation of commenters on this issue. As we indicated in the preamble to the proposed rule, we strongly encourage the use of computer-based and other innovative training methods, where a ''competent person'' would facilitate the delivery of training rather than provide it directly. Section 46.4(d) of the final rule specifically allows the use of these types of training methods in part 46 training. However, we are concerned that if the final rule specified that training may be provided ''under the direction of'' a competent person, some operators could wrongly interpret it to mean that computer-based or any other type of electronic or interactive training method could serve as a total substitute for a human instructor and human interaction under part 46. We consider computer-based or other interactive training technologies to be training ''methods,'' to be employed by an instructor effectively and appropriately.

We disagree with those commenters who believed that the language of the final rule should be amended to allow other individuals to assist the competent person in providing training, even though those persons may not themselves meet the definition of ''competent person.'' As a practical matter, a person who does not meet the definition of ''competent person'' does not have the minimum qualifications to provide effective training. The final rule does not allow such a person to instruct miners, even if under the oversight or direction of a competent person.

Like the proposal, the final rule does not require our approval of training instructors, but instead provides that training be given to miners by a ''competent person.'' ''Competent person'' is defined in final § 46.2 as a person designated by the production-operator or independent contractor who has the ability, training, knowledge, or experience to provide training to miners in his or her area of expertise. Additionally, under this definition, the competent person must be able both to effectively communicate the training subject to miners and to evaluate whether the training is effective. The definition of ''competent person'' is addressed in greater detail under the preamble discussion of § 46.2, the section that contains definitions of terms used in the final rule.

Many commenters supported the proposed requirements for training instructors, stating that the final rule should neither impose rigid minimum requirements for instructors nor require MSHA approval of instructors. Several commenters indicated that the flexibility of the proposed provisions would allow operators to have access to more than adequate resources to ensure quality training for miners. Other commenters stated that the approach taken in the proposal would minimize unnecessary administrative burdens on mine operators and allow them to focus their efforts on the effectiveness of their training programs. Commenters maintained that this would allow operators to utilize the best training available, without worrying about whether the instructor has obtained formal approval from MSHA to provide the training. Other commenters stated that operators are in the best position to judge who can most effectively provide required training. One commenter stated that a formal instructor approval program would unnecessarily tie the hands of operators in crafting effective, specifically tailored training programs and would be unlikely to have a significant positive effect on the quality of training delivered. Still others asserted that it is impractical to require certification of instructors, given the widely dispersed operations in the aggregates industry.

Several commenters observed that certifying an individual as an instructor does not guarantee that the person knows how to teach. Instead, commenters asserted that instructors should be judged on the basis of the effectiveness of the training they provide, not on their paper credentials. Along the same lines, one commenter noted that an individual with knowledge and experience in a particular subject may not be an outstanding speaker in the public arena, but nonetheless can be more effective in conveying information than an MSHA-approved instructor. One commenter favored the flexibility in the proposed rule, but recommended that federal and state agencies continue to provide training for instructors to assist the instructors in developing new training methods and techniques. Another commenter stated that there are many tools available to mine operators to ensure that training is effective, including support from trade associations and labor organizations, assistance from our Educational Field Services Division, videotapes, interactive training tools, literature, and, where appropriate, instructor training. This commenter endorsed the flexibility afforded mine operators in designating training instructors in the proposed rule and supported adopting such an approach in the final rule.

Several commenters disagreed with the approach taken in the proposal and instead recommended formal MSHA approval of instructors. These commenters maintained that operators would be unable to determine whether someone was competent to provide training. Several of these commenters were also concerned about whether a person who had extensive substantive knowledge in one area would have the necessary communication skills to provide effective training to miners. Some of these commenters stated that if the existing instructor approval scheme in existing part 48 is in need of improvement, necessary adjustments should be made, but that some form of instructor approval should be adopted in the final part 46 rule to ensure the quality of training.

Under existing part 48, instructors generally obtain our approval to provide training based on written evidence of their qualifications and teaching experience. Several commenters questioned whether these criteria ensured quality training. One commenter stated that becoming a polished instructor by meeting some criteria for MSHA instructor approval is secondary to the person being competent and knowledgeable.

Some of the commenters who supported a formal instructor approval scheme similar to the part 48 approach recommended that if the final rule did not require our approval of instructors, trainers should, at a minimum, receive some form of communications training to ensure that they will present training materials correctly and effectively. Several commenters contended that a person who is going to conduct training needs not only substantive knowledge of the subject area but also the ability to convey the material effectively to the persons receiving the training. One commenter suggested that instructors be required to attend a formal program of instruction to prepare them to instruct adults.

A number of commenters stated that the final rule should impose no additional qualifications for trainers beyond those that were included in the proposed rule. Some indicated that operators should have broad latitude to use on-site trainers for some, or all, of their training needs. Other commenters believed that it is impossible to regulate the quality of instruction with minimum criteria such as academic training, mining experience, years of training experience, etc., and that an instructor certification program would not guarantee the quality of instruction.

The final rule, like the proposal, does not require a formal program for the approval or certification of instructors, or establish extensive minimum qualifications for instructors. We are persuaded by those commenters who insisted that a formal instructor approval program would not guarantee that training will be effective and that any benefits realized from a formal program would not justify the additional administrative burden. We are also persuaded by commenters who stated that there are many experienced and knowledgeable people currently working in the industry who can provide effective training in a wide variety of subject areas, and that their abilities would not be enhanced by a formal instructor approval program.

We are also persuaded by the statements of some commenters that a formal instructor approval program would place limitations on the pool of people who can provide effective training under the final rule, which could have an adverse impact on the successful implementation of the rule's requirements. The large majority of mines covered by the final rule are small operations, employing fewer than 20 people; a significant percentage of these mines have fewer than 5 employees. The flexibility of the final rule will enhance their ability to meet their training obligations. We expect that many small mines will arrange with outside training providers to conduct some portion of required training, supplemented by site-specific health and safety training provided by experienced miners who are competent to instruct in their areas of expertise.

We have not included in the final rule a requirement that trainers receive instruction in how to provide training before they serve as instructors. We agree with the commenters who indicated that such a requirement would provide no real guarantee of the quality of training provided and would instead serve as an unnecessary hurdle for an individual with the knowledge and experience to provide effective training to qualify as a ''competent person'' under the final rule. Instead, the final rule's definition of the term ''competent person'' provides that the competent person must be able to effectively communicate the training subject to miners. We intended in the proposal that the ability to communicate effectively would be an essential element of being a ''competent person.'' However, because many commenters emphasized the importance of communications skills and expressed concerns about the lack of a reference to these skills in the proposal, we have included such a reference in the final rule. Under the final rule you must, therefore, make an assessment of how well a person can communicate in determining whether he or she is capable of providing training for your miners. A person with extensive knowledge in a particular subject area may not be a good choice as an instructor if he or she is unable to convey the information to miners clearly and effectively. If a person has extensive knowledge in a subject area but has weak communication skills, you must either designate someone else as the competent person or take steps to enhance the person's skills, such as by arranging for the person to take a course in effective communication.

Under the final rule, as under the proposal, a competent person must be able to evaluate whether the training given to miners is effective. Several commenters suggested that the final rule provide specific guidance in how the competent person should evaluate the effectiveness of training. One commenter questioned whether the final rule should require that a paper-based evaluation form be distributed to miners at the conclusion of the training session, to be reviewed by us at some later point. This commenter also asked whether the rule should require that students be interviewed after the fact to determine whether the training was adequate.

Another commenter expressed concern over how a competent person who neither works at the mine site nor regularly visits the site will be able to evaluate the effectiveness of the training that has been given. This commenter suggested that the competent person have some mechanism to follow up to evaluate the effectiveness of the training either in person or through the operator.

The final rule does not provide specifications for conducting such an evaluation, because the evaluation method will be determined to a large extent by the type of training given. For example, a written test might be appropriate in a traditional classroom setting, while a miner receiving new task training may be asked to demonstrate to the trainer that he or she can perform the task in a safe and healthful manner. We have concluded that the final rule is not the place to address the wide variety of appropriate evaluation methods that may be used. However, we intend to provide assistance to production-operators and independent contractors in all aspects of the final rule's requirements, including ensuring that the training provided to miners is effective.

A few commenters questioned whether we would have the authority to revoke an individual's status as a ''competent person'' if we conclude that the person does not have the ability to deliver effective training. As a practical matter, because the final rule does not establish a formal instructor approval program, there is no basis for including formal rules to revoke such an approval. Instead, in cases where we determine that an instructor lacks the ability to provide effective miner training, we will cite the mine operator for a violation of § 46.4 of the final rule, for failing to designate a person who is competent to provide required training. To abate the violation, the operator could either designate someone else to provide training, or take steps to address the deficiencies we identify in the abilities of the person providing the training.

Section 46.4(a)(3) has been added to the final rule in response to comments. It provides that training must be presented in a language understood by the miners who are receiving the training. This provision has been added in response to several commenters who were concerned about language barriers that exist at mines across the country where miners are not fluent in English. These commenters stated that failure to address this issue would present a serious obstacle to effective training and that the final rule should be specific in

dealing with such situations. We agree with these commenters, and the final rule has adopted their recommendation. You should be aware that this requirement applies to both oral presentations and written materials. For example, if an instructor is giving oral presentations in Spanish to Spanish-speaking miners who are not fluent in English, any written materials that are used to supplement the oral presentation must also be in Spanish. Similarly, if warning signs at the mine serve as a component of the site-specific hazard awareness training, the signs must be in a language or languages that are understood by the persons who come onto the mine site.

Section 46.4(b) has been adopted with a nonsubstantive change from the proposal and provides that you may conduct your own training or may arrange for training to be conducted by state or federal agencies; associations of production-operators or independent contractors; miners' representatives; consultants; manufacturers' representatives; private associations; educational institutions; or other training providers.

The proposal used the term ''associations of operators.'' The final rule refers to ''associations of production-operators and independent contractors,'' in response to commenters who stated that the term ''operator,'' referring to both production-operators and independent contractors, was ambiguous and a possible source of confusion. The final rule, therefore, includes a specific reference to both production-operators and independent contractors, to eliminate any possible misunderstanding. We have also deleted redundant references to ''other operators'' and ''contractors'' that were included in the proposed rule, and have eliminated the specific reference to ''us.'' Although MSHA works to facilitate effective training, we typically do not provide miner health and safety training. This will avoid creating the impression in the final rule that MSHA will serve as a training provider.

This provision makes clear that you may arrange with a wide variety of training providers to satisfy the requirements of the final rule. This aspect of the proposal received little comment, but those commenters who addressed this provision generally supported it. Although some production-operators and independent contractors, particularly larger companies with formal health and safety programs, may choose to provide all required training in-house, we expect that many operators will make arrangements with outside organizations to provide at least some portion of the required training. A wide variety of effective miner training is available from many types of organizations across the country, and this section of the final rule makes clear that you are free to contract with outside training providers to satisfy your training obligations. In addition, we will be available to assist you in determining what training is appropriate for your specific operations.

Section 46.4(c) has been adopted from the proposal with some change and provides that training required by OSHA or other federal and state agencies may be used to satisfy the training requirements under part 46, provided that the training is relevant to the subjects required in part 46. The final rule also specifies that you must document the training in accordance with § 46.9 of this part. The final rule includes the added language that the training must be relevant to training subjects required in this part, to make clear that only some of the training used to satisfy OSHA requirements or the requirements of other agencies may be credited under part 46. This provision recognizes that many operations regulated by us, such as sand and gravel or crushed stone sites, are also associated with other facilities not regulated by MSHA, such as OSHA-regulated construction sites. In many instances, employees may be shared across several operations under the same management and may perform the same duties at both sites.

The preamble to the proposed rule stated that training provided in accordance with § 46.4(c) must be documented in accordance with § 46.9 to be credited toward part 46 requirements. However, the proposed rule itself did not specifically require documentation. This requirement has been included in final § 46.4(c) to ensure that you are aware of these recordkeeping obligations. This record must not only reflect the duration of the training but must also provide evidence of the relevance and equivalency of the training. We anticipate that miners will in many cases provide you with a record of the equivalent training that was made at the time that the training was given. In cases where such a record is not available, you must document the necessary information in accordance with § 46.9.

A number of commenters supported the acceptance of OSHA training under part 46, stating that much of the training given to satisfy OSHA requirements is relevant to hazards and conditions at the mines covered by this rule. One commenter expressed concern that accepting OSHA or other training to satisfy part 46 requirements could create serious problems, because those programs do not cover all of the subjects required under the Mine Act, such as the rights of miners and their representatives, or address MSHA health and safety standards. Although the commenter is correct in his assertion that such subjects typically would not be covered in OSHA or other types of non-MSHA training, this provision in no way is intended to relieve production-operators or independent contractors of their obligations to ensure that those subjects are covered as part of new miner and newly hired experienced miner training. A production-operator or independent contractor who uses OSHA training to satisfy part 46 requirements must ensure that miners receive instruction in all required subjects. As a practical matter, we expect that OSHA training and other types of training can be used to satisfy only a portion of part 46 requirements, because this training will be relevant only to some of the subjects required under the final rule.

To illustrate how crediting would work, assume that you hire a new miner who worked in the construction industry and whose previous employer provided him with some health and safety training. You determine that the new miner has received four hours of training on first aid methods; one hour of training on instruction and demonstration on the use, care and maintenance of respiratory devices; six hours of training on the safe operation of a front-end loader; and four hours of instruction on the following subjects: electrical hazards, silica, fall prevention and protection, excavations, material handling and moving equipment.

You would be able to credit the miner for four hours for the first aid training. Additionally, if the miner will be required to use a respirator that is the same type as the one for which he received training, you may credit the miner with one hour of training on this subject. Further, if the new miner will be operating the same type of front-end loader that he was trained on as one of his tasks, you may credit some, if not all, of the six hours of training. Finally, you would have to determine how much of the training on electrical hazards, silica, fall prevention and protection, excavations, material handling, and moving equipment are relevant to the miner's exposure to hazards at your mine. If you determine that all of the training is relevant, you could credit the new miner with four hours of training. In this example you would be able to credit the new miner with up to 15 hours of training.

As mentioned above, you must document the previous training in order for it to be credited. One method of accomplishing this is obtaining documentation of the previous training. If this documentation is not available, you must create a written record that identifies the miner, the training which is being credited, when the training was given, the duration of the training, the training methods used, and the person who provided the training. Finally, you must ensure that this individual receives training in all of the other subject areas required to be covered under § 46.5 (b) and (c).

Section 46.4(d) adopts the proposed provision with a minor change and provides that training methods under part 46 may consist of classroom instruction, instruction at the mine, interactive computer-based instruction or other innovative training methods, alternative training technologies, or any combination thereof. The final rule includes a specific reference to ''interactive computer-based instruction'' to make clear that we encourage the use of computer technology in satisfying training requirements under this part. This provision also recognizes that a combination of different training methods can be extremely effective. Commenters were generally supportive of this aspect of the proposed rule.

One commenter stated that the most effective training will include a blend of classroom instruction and on-site workplace interaction. We anticipate that many of you will use a combination of approaches to provide training, including innovative technologies. The classroom may serve as the most appropriate forum for training on some subjects, such as instruction in first aid or the statutory rights of miners and their representatives. On the other hand, mine-site training in such areas as the hazards of certain equipment or mining operations also has a place in an effective training program.

Final § 46.4(e), like the proposal, allows employee safety meetings, including informal health and safety talks and instruction, to be credited toward new miner training, newly hired experienced miner training, or annual refresher training requirements. The final rule, also like the proposal, does not impose a minimum duration for training sessions. Several commenters recommended that the final rule adopt the requirement in part 48 that training sessions last at least 30 minutes. Other commenters suggested, in the alternative, that a 10- or 15-minute minimum be imposed. One commenter recommended that if the final rule allows short sessions to be credited toward training requirements, language should be included in the rule that spells out that only actual instruction be counted. This commenter was concerned that only a portion of a 15-minute session given to a group may be devoted to actual training, taking into account the time required to gather the group together and to focus their attention on the subject at hand. Many other commenters supported not requiring a minimum period of instruction, because in their view some of the best training occurs in sessions of less than 15 minutes. These commenters maintained that the rule should not impose an arbitrary restriction on the length of training sessions. Some commenters stated that trainees can and will retain information given to them in short concise sessions rather than in long classroom courses. One commenter stated that short safety meetings are often pointedly specific and can be given in close proximity to the particular work to which it relates. This commenter also stated that such training is often more memorable than material given in the context of lengthy classroom instruction.

A number of commenters indicated that short training sessions provided throughout the year can be very effective. One commenter stated that safety meetings that cover only job assignments and the expectations for production for the week should not be used to satisfy the requirements under the rule. However, this commenter added that safety meetings that review safe work procedures for a specific job or a specific piece of equipment should count toward part 46 requirements, provided that the competent person takes steps to ensure that the training has been effective within a reasonable period of time after the training has been given. This commenter stated that there are various ways the competent person could conduct such an evaluation, including asking informal questions or watching miners perform a task.

We are persuaded by those commenters who advocate flexibility in the length of training sessions, and this determination is reflected in the final rule. Final § 46.4(e), like the proposal, requires that short training sessions that are used to satisfy part 46 requirements be documented in accordance with § 46.9 of the final rule. This paragraph also provides that you must include only the portion of the session actually spent in training when you record how long the training lasted. This provision has been included in response to commenters who were concerned that a training session that is 20 minutes in length might include only 10 minutes of actual instruction. This commenter was of the opinion that credit should be given only for the time spent in actual training. The added language in this paragraph responds to these concerns. For example, if safety talks are scheduled to last 20 minutes but in reality only 10 minutes of that time is spent in delivering an actual safety or health message, only 10 minutes may be recorded and credited to training under part 46. Additionally, if the session addresses other subjects besides those relevant to health and safety, such as operational or production issues, only that portion of the session that actually covers relevant health and safety subjects may be counted and recorded.

Several commenters questioned when a record must be made of such training. For example, if short sessions are used to satisfy the eight-hour annual refresher training requirement under § 46.8, must mine operators document the training at the time that the training session is completed, or is the record required at the completion of the entire eight hours of training? We agree with commenters that this aspect of the proposal requires clarification, and final § 46.9, which contains the recordkeeping requirements under the final rule, addresses this issue in detail.

Section 46.5 New Miner Training

Final § 46.5 reflects changes from the proposed rule. The final rule, unlike the proposal, requires that a minimum of four hours of training be given to new miners before they begin work at the mine. Additionally, the final rule adjusts the time periods in which you must provide new miner training and includes a table that presents when and what new miner training must be provided. The final rule also clarifies the oversight under which new miners must work before they complete the full 24 hours of new miner training.

As in the proposal, final § 46.5 includes minimum requirements for training new miners when they begin work at a mine, lists subject areas that the training must address, and identifies the subjects that must be covered before new miners begin work at the mine and no later than 60 days after employment begins. The final rule also specifies the minimum number of hours of instruction required by the Mine Act for new miner training and the circumstances where previous training may satisfy new miner training requirements.

As in the proposed rule, § 46.5(a) of the final rule requires that new miners receive a minimum of 24 hours of

training. A few commenters questioned the need for a full 24 hours of training for new miners at very small operations, citing the expenses associated with training, the lack of complexity of their operations, and the limited number of hazards that are present at very small surface mines.

We recognize that there are expenses associated with providing new miner training. However, we believe that the cost of not providing effective training for new miners is considerable. As voiced by several commenters, prudent operators recognize that an investment in health and safety training for employees makes economic sense. Commenters pointed out that a safe and healthful workplace is typically a highly productive one. Attention to health and safety through effective worker training can minimize workers' compensation expenses and avoid extensive medical costs and elevated insurance rates that result from accidents and injuries. We do not agree with commenters who contended that there are fewer workplace hazards at exempt mines compared to other mines. Most significantly, we do not have the authority to reduce the 24-hour new miner training requirement. As noted in the preamble to the proposed rule, section 115(a)(2) of the Mine Act requires mine operators to provide at least 24 hours of training to inexperienced surface miners. It is beyond the scope of our rulemaking authority, and only within Congress' legislative powers, to reduce the 24-hour new miner training requirement. Consequently, we are committed to implementing the congressional directive of section 115(a)(2) of the Mine Act.

Proposed § 46.5(b) would have required that new miners be given instruction in certain subject areas prior to beginning work, but the proposal did not establish a minimum number of hours to be devoted to this initial training. Instead of requiring a minimum number of hours, the proposal delineated four subject areas on which new miners would receive pre-work training to ensure that they are familiar with the operations and environment at the mine, their job duties, and the hazards they may encounter at the mine site. We solicited comment on the appropriateness of this approach, including whether a minimum number of hours should be devoted to initial training, or whether certain criteria, such as mine size or complexity or type of operation or equipment, should govern how much initial training is required. We also described alternative approaches that we considered in developing this provision, including requiring that miners receive the full 24 hours of training, or a lesser amount such as two or four hours, before they begin work duties.

A number of commenters supported requiring a minimum number of hours of training before new miners begin work. One commenter favored an eight-hour minimum of a combination of hazard awareness training and task-specific training before a miner begins work. Another commenter recommended that the final rule require a minimum number of hours of pre-work training and that the minimum number of hours be tied to mine size. This commenter provided as examples an eight-hour minimum for new miners at small mine operations, a 16-hour minimum at mines of moderate size, and the full 24 hours of pre-work training at large mines. Another suggested an eight-hour minimum pre-work training requirement for operations with five or more miners and a minimum of two hours for operations employing fewer than five miners. One commenter who supported an eight-hour minimum stated that small aggregate mines, for example, could meet the requirement by having the new miner perform tasks to which he or she will be assigned. A few commenters stated that all 24 hours of new miner training should be required for some miners, such as independent contractor employees, before they start work at a mine, because these miners are frequently not on the site long enough to receive adequate comprehensive training.

Several commenters strongly advocated adoption of the 24-hour pre-work training requirement in part 48 and cautioned against allowing initial training in periods shorter than eight hours. Under part 48, an operator must give new miners the full 24 hours of training before assigning miners work at the mine, unless the district manager specifically permits the operator to do otherwise. Even with district manager approval, however, part 48 requires operators to provide new miners with a minimum of eight hours of training in certain subjects before they begin work duties. One commenter, who supported a 24-hour pre-work training requirement, maintained that inexperienced miners can be overwhelmed, often tragically, by too many hazards at one time. Supporters of the part 48 approach were particularly concerned that not requiring a specific length of time for training prior to assigning work duties is inconsistent with the Mine Act and part 48 and would lead to abuse in favor of production expediency. According to these commenters, various factors, such as the hazardous nature of mining, the cyclical nature of work, frequent employee turnover, and the inexperience of new miners, reinforce the need for comprehensive and complete training before work duties commence. One commenter added that tracking the amount of training to fulfill the mandated 24-hour requirement would be complicated if fewer than eight hours of initial training were permitted at certain mines based on their size or complexity.

Many commenters opposed any minimum initial training period requirement and asserted that it would be unduly burdensome and unnecessary to apply a minimum number of hours requirement at many mines, particularly at small mines with few employees and limited equipment. Several of these commenters endorsed the proposal's emphasis on a minimum curriculum requirement for new miners before they begin performing assigned job duties, rather than on the amount of time to be spent initially training new miners. Some commenters stated that by requiring a minimum course content, and not a minimum time for initial training, we would permit a more flexible approach to training that recognizes the wide variety of mines covered by part 46. This would allow mine operators to vary the length of individual training topics depending on their needs, mining operations, and experience of their new miners. According to the commenters, a ''one-size-fits-all'' miner training regulation could be costly and ultimately ineffective. One of these commenters maintained that the minimum curriculum requirement combined with the overall 24-hour new miner training requirement is, in fact, protective of the miner. A different commenter pointed out that specifying a minimum number of hours for initial training based upon mine size or complexity could have the unintended effect of depressing mine employment opportunities because operators would limit mine size to avoid stepping up to the next level of training requirements.

We believe it is imperative that new miners are trained and familiar with the operations and environment at the mine, their job duties, and the fundamental hazards they may encounter at the mine site before they actually commence work duties. After reviewing and considering the comments received, we have concluded that the final rule should establish a minimum number of hours of pre-work

training. As noted elsewhere in this preamble, our fatal accident investigations show that a majority of miners involved in fatal accidents at mines that have been exempt from enforcement under the training rider had not received health and safety training that complied with part 48. Moreover, miners at smaller mining operations, many of which are covered by the final rule, also experience higher fatality rates than those at larger operations. We are concerned that by not establishing a minimum number of hours of pre-work training we may inadvertently encourage some operators to devote less than an appropriate amount of time and attention to the pre-work training subjects and essential orientation of new miners. As pointed out by some commenters, inexperienced miners who are unfamiliar with mining methods in general and with the mine site in particular are especially vulnerable to the hazards of their new work environment. We believe that these miners need fundamental and critical health and safety information relevant to their work sites at the earliest stage of their employment. In addition, the time spent presenting this information must be of a sufficient minimum duration to ensure that the training is thorough, meaningful, and effective to orient the new miner to his or her workplace and its health and safety hazards.

We have determined, after reviewing the comments, that at least four hours of pre-work training is needed to provide a new miner with the knowledge and skills to work safely. For the most part, new miners do not possess the knowledge and skills they need to work at a mine in a safe and healthful manner. New miners need some formal and practical training and practice under observation to acquire the knowledge and master the skills they need to avoid endangering themselves or others.

For example, a new miner needs to know how to stop the conveyor belts in use at the mine before he or she begins work there, so that the miner can stop the belt in the event of an emergency. If a co-worker becomes entangled in a moving conveyor, quick action is essential to save the person's life. Unfortunately, some miners have lost their lives because a fellow miner did not know that he could pull the stop cord, located less than a foot away, to stop the belt and save his co-worker. New miners must also be aware that it is unsafe to walk close to storage piles or on top of surge piles. The miner also needs to be aware that he or she must exercise extra care around the mine site, because equipment operators' visibility is typically limited compared to the visibility of a driver in a car on a highway. New miners also need to be familiar with the mine's emergency procedures, including the location of the nearest telephone.

Consequently, final § 46.5(b) requires you to provide no less than four hours of training on the subjects specified before a new miner begins work at the mine. The four-hour pre-work training requirement is a minimum. Clearly, if your mining operation is large and complex, or if the new miner will be performing multiple tasks, more time may be necessary to present the pre-work training materials effectively and in accordance with your training plan. We believe that you are in the best position, with the assistance of miners and their representatives, to determine the correct amount of pre-work new miner training, beyond the four-hour minimum, that is warranted at your operation. You still have the flexibility to address specific problems that may exist at your mine and to vary the length of training time spent on each subject. In this way, you can provide the most effective learning situations for your new miners before they begin work. The length of time devoted to each subject may depend on such factors as the miners' prior experience and familiarity with the aspects of their new assignments, the mining methods used, the environmental conditions at the mine, the tasks to be performed, and the mine's health and safety procedures.

We recognize that some operators of very small mines with limited equipment and facilities may be initially concerned that the four-hour minimum presents too large a burden and is unnecessary. However, these operators should be aware that final § 46.5(e) permits you to satisfy some part of the pre-work training requirements by having the miner practice assigned tasks under controlled conditions.

Proposed § 46.5(b) would have required that operators provide instruction for new miners in four areas before they begin work—

(1) An introduction to the work environment, including a visit and tour of the mine, or portions of the mine that are representative of the entire mine. The method of mining or operation utilized must be explained;

(2) Instruction on the recognition and avoidance of hazards, including electrical hazards, at the mine;

(3) A review of the escape and emergency evacuation plans in effect at the mine and instruction on the firewarning signals and firefighting procedures; and

(4) Instruction on the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, and the mandatory health and safety standards pertinent to such tasks.

Proposed § 46.5(d) also would have required that within 60 days after a new miner begins work at a mine, the balance of the 24 hours of new miner training would be provided on the following subjects—

(1) Instruction on the statutory rights of miners and their representatives under the Act;

(2) A review and description of the line of authority of supervisors and miners' representatives and the responsibilities of such supervisors and miners' representatives;

(3) An introduction to your rules and procedures for reporting hazards;

(4) Instruction and demonstration on the use, care, and maintenance of self-rescue and respiratory devices, if used at the mine; and

(5) A review of first aid methods.

In the final rule, we have added three subject areas that were proposed as post-work training subjects under § 46.5(d)(1), (2), and (3), listed above, to the pre-work training requirements under final § 46.5(b)(5), (6), and (7). These additional subjects include miners' rights; company rules and procedures for reporting hazards; and the hierarchy of authority of supervisors and miners' representatives and their associated responsibilities. We explained in the preamble to the proposed rule that instruction in the delineated initial subjects is intended to ensure that new miners—

(1) Are sufficiently familiar with the hazards at the mine;

(2) Can avoid exposing themselves and others to unnecessary risks;

(3) Can perform their job assignments safely; and

(4) Are able to respond to mine emergencies.

After evaluating comments and testimony, we have concluded that these objectives are best served by requiring that instruction on the three additional subjects be given to new miners before they start work at the mine. Some commenters supported requiring instruction on the company safety policy and on miners' statutory rights as part of the pre-work training curriculum. They indicated that allowing operators up to 60 days to inform miners of this critical information was inappropriate and not protective of miners. To ensure that the health and safety of new miners is not compromised or jeopardized, we believe instruction on the three subject areas must be provided before a miner begins work at the mine. This information will ensure that a new miner knows what fundamental steps to take at the mine to prevent or respond to hazards, who the

management personnel and miners' representatives are at the mine, and what specific statutory rights protect the miner from an unsafe or unhealthful work environment.

The subject areas for new miner training specified in the proposed rule, which were based on those mandated by section 115(a)(2) of the Mine Act, have been retained with minor modifications in the final rule. The topics are sufficiently broad to provide operators with the flexibility not only to introduce new miners to the mining industry but also to address particular conditions and practices that present safety and health hazards at their mines. In addition, as mentioned earlier, portions of final § 46.5 are presented in a table format to make it easy for you to determine the subjects that you must cover for new miner training and when the subjects must be addressed.

We received few comments on the appropriateness of the subject areas delineated in the proposal. Of those who commented on the pre-work training subjects, several commenters supported the mandatory subject areas that were specified in the proposed rule. One of these commenters maintained that it was unacceptable to give operators total discretion on the subjects to be covered in new miner training. The commenter stated that to do so would leave many of these new miners, who are at high adverse occupational risk, unprepared for work at the mine.

We believe that it is not enough for new miners to receive only a general orientation before they begin work. The initial training must also address potential hazards and risks that new miners may encounter at the specific mine site where they will work. As a result, we have clarified the language of § 46.5(b) to provide that the pre-work new miner training in the specified subject areas must also address site-specific hazards at the mine.

Several other commenters suggested revisions in the language for the mandatory pre-work subjects. As a result, final provisions of § 46.5(b)(1) through (b)(3) vary slightly from the proposed rule. One commenter recommended that § 46.5(b)(1) include the term ''walkaround training'' within the description of ''introduction to the work environment.'' We have inserted this term in the referenced paragraph to clarify that the visit and tour of the mine, which is part of the introduction to the work environment, is considered the ''walkaround training'' specified in § 115(a)(2) of the Mine Act. One commenter recommended that the words ''and observed'' be inserted after the word ''explained'' in proposed § 46.5(b)(1) so that it would read that ''the method of mining or operation utilized must be explained and observed'' (emphasis added).

As indicated in the preamble discussion in the proposed rule, we had intended that proposed § 46.5(b)(1) would read essentially the same as the commenter has suggested. We inadvertently failed to include the language we had specified in the preamble in proposed § 46.5(b)(1). Accordingly, the final rule includes the language that was mistakenly omitted from the proposal.

Many commenters generally recommended that the final rule language include more illustrative examples to provide guidance to the regulated community. One commenter generally asserted that we should designate mandatory training subjects based on an analysis of accidents and injuries in our accident and injury database, which he indicated should show the subjects on which miners need training. Some commenters specifically recommended that final § 46.5(b)(2) include examples of hazards, other than just electrical, that might be included as training subjects. In response to these commenters' suggestions, we have identified other types of common mine hazards derived from our accident and injury database as examples of subject areas that might be relevant for new miner training, including traffic patterns and control, mobile equipment (haul trucks and front-end loaders), and adverse ground conditions. We intend these examples to serve only as illustrations of possible subjects for new miner training. They are not mandatory topics.

Proposed § 46.5(b)(3) covered general subject areas associated with emergencies, such as ''escape and emergency evacuation plans in effect at the mine and instruction on the firewarning signals and firefighting procedures,'' that would be required before a new miner begins assigned work duties. One commenter stated that comprehensive first aid training should be addressed, while another commenter advocated that emergency medical procedures be covered during this initial training period. We believe that it is not necessary for miners to receive first aid training and/or a review of first aid methods before they start work. MSHA regulations at 30 CFR 56.18010 already require that an individual capable of providing first aid be available on all shifts, which ensures that a trained person is on site in case of emergency. For this reason, the final rule does not require first aid subjects to be covered as part of the pre-work training. On the other hand, instruction on emergency medical procedures at the mine will ensure that new miners will know from the beginning what steps must be taken in the event of a medical emergency. We have included this topic as part of pre-work training for new miners in paragraph (b)(3). Basically, training on emergency medical procedures could include, as appropriate, a briefing on what steps a miner should take in the event of a medical emergency, the identification of the people at the mine who have satisfactorily completed first aid training, the locations of first-aid equipment and supplies, arrangements that the mine operator has made for 24-hour emergency medical assistance (e.g., with local physicians, medical services, or hospitals, and with emergency transportation services), and where the information on these arrangements are posted at the mine.

Proposed § 46.5(c) would have allowed new miners to practice under the ''close supervision of a competent person'' to satisfy the § 46.5(b)(4) requirement for training on the health and safety aspects of an assigned task, provided that hazard recognition training for the assigned task is given before the miner actually performs the task. Although we did not define the term ''close supervision'' in the proposed rule, we explained in the preamble that we considered it to mean that the ''competent person is in the immediate vicinity of the miner and focusing his or her complete attention on the actions of the miner being trained.'' We also stated that ''[a] miner would not be considered under 'close supervision' if the competent person is occupied with any other task or is not in close proximity to the miner.''

The term ''close supervision'' was also used in proposed § 46.5(a), which would have required a new miner who had not completed the full 24 hours of new miner training to work ''under the close supervision of an experienced miner.'' Our rationale for this proposed requirement, which is modeled after a similar requirement in § 48.25(a), was to protect the health and safety of a new untrained miner until the miner had completed new miner training.

We received considerable comment on the use of the term ''close supervision'' in § 46.5 (a) and (c) of the proposed rule. Generally, commenters did not object to the concept that inexperienced personnel should be closely supervised or have a mentor until they acquire the knowledge, experience, and skills to perform their assigned duties in a safe and healthful manner.

A clear majority of commenters, however, provided unfavorable comment on the term ''close supervision,'' either disagreeing with our interpretation of how it would apply in proposed § 46.5(a) and (c) or disagreeing with the use of the term altogether. One sentiment echoed by most commenters was that the description of ''close supervision'' in the proposed rule preamble was too restrictive and appeared to prohibit the experienced miner in proposed § 46.5(a) and the competent person in proposed § 46.5(c) from training or supervising several people at one time. One commenter indicated that the level of supervision required in § 46.5(a) should be different from the level required in § 46.5(c) and suggested that ''appropriate supervision'' would be the more suitable term for purposes of the requirements in § 46.5(a). Another commenter stated that some of the work assignments appropriate for new miners to practice under § 46.5(c) may be relatively low-risk activities that do not warrant the undivided attention of a competent person.

Similarly, commenters expressed specific concern with proposed § 46.5(a) because of the impracticality of requiring an experienced miner to provide close supervision, as that term was described, of a miner who had not received the full 24 hours of new miner training. In some cases, commenters noted, for each miner trainee needing close supervision, the activities of one experienced miner could be restricted for up to 60 days under this provision. Several commenters pointed out that the greatest impact and burden of complying with these requirements would be on small operators, who have limited personnel and resources and cannot afford to dedicate personnel to supervise new miners in lieu of performing their normal work duties. One commenter indicated that operators' flexibility to provide quality training tailored to their needs would be weakened if they had to choose between providing 24 hours of new miner training quickly or assigning experienced miners to supervise the new miners for lengthy periods. Commenters also suggested more limited periods of time, ranging from 16 to 40 hours, for a new miner to be closely supervised by an experienced miner under § 46.5(a). One commenter maintained that continuous oversight of the new miner under § 46.5(a) was necessary for a limited period of time, but after that, new miners should be able to work, but not alone or in an area where an experienced miner cannot see or hear the new miner. A few commenters characterized a situation where the new miner could work under a ''loose buddy system'' until the miner received adequate training to function safely and independently. Still another stated that new miners should be ''under observation'' so that negative effects do not result.

A few commenters recommended that if the final rule adopts the term ''close supervision,'' the rule should define the term so that people understand what is required without having to refer to the preamble. Some urged that either the term ''close supervision'' be more flexible and redefined, or another term or standard be adopted instead. Many commenters stated that the decision on how closely the miner trainee should be supervised should be within the discretion of the operator and based on the level of perceived risk, evaluating the hazards involved in performing work duties and the employee's work experience. Some commenters recommended that the final rule define ''close supervision'' as ''appropriate attention commensurate with the risks of the supervised activity.'' Another commenter suggested that the experienced miner (or competent person) should be ''close enough to the trainee so that they can communicate in a normal conversational tone'' while the new miner is performing tasks that may expose the miner to mining hazards. Some commenters objected to the term ''supervision'' since it could be incorrectly interpreted to mean that the rank-and-file worker, who may be the designated competent person or experienced miner, was operating in a supervisory capacity or as an agent of the operator.

We carefully considered the comments received and admit that our characterization of the term ''close supervision'' in the proposal was too narrow and did not afford the flexibility that operators need to provide effective new miner training. We also recognize that the term caused considerable confusion and disagreement among commenters. We do not agree, however, with many of the commenters' suggested alternatives because many of the alternatives are themselves vague or subjective.

In § 46.5(a) of the final rule, we adopt the proposed approach of requiring an experienced miner to provide adequate oversight until the new miner has received all 24 hours of new miner training. However, we do not use the term ''close supervision,'' adopting instead performance-based language. Until the training is completed, an experienced miner designated by the operator will be required to observe the new miner's work practices to ensure the miner is not jeopardizing his or her health or safety or the health or safety of others. We do not mean that the experienced miner must abandon his or her normal duties or be assigned to oversee only one new miner. However, in some situations, that may be necessary to ensure that this performance-based standard is met. The relevant portion of final § 46.5(a) is revised to read as follows:

> Miners who have not received the full 24 hours of new miner training must work where an experienced miner can observe that the new miner is performing his or her work in a safe and healthful manner.

For reasons similar to those stated above, we do not adopt in the final rule the term ''close supervision'' used in proposed § 46.5(c), which we have redesignated § 46.5(e) in the final rule. Instead, the final rule requires that practice to fulfill the requirement for training under § 46.5(b)(4) on the health and safety aspects of an assigned task must be performed under the ''close observation'' of a competent person. We would like to emphasize that practice is only allowed to fulfill the § 46.5(b)(4) training requirement and not all pre-work training requirements. We recognize that having the miner practice the actual assigned task may be an appropriate method of training for the health and safety aspects of the task, provided that training, and not production, is the primary goal of performing the task. This interpretation is consistent with Congress' intent that training include a period conducted in circumstances that duplicate actual mining facilities. Conference Rep. No. 95–461, 95th Cong., 1st Sess., 63 (1977).

Proposed § 46.5(d), which has been redesignated § 46.5(c) in the final rule, listed the training subjects that new miners would be required to receive no later than 60 days after they begin work at the mine. As discussed earlier, proposed § 46.5(d) would have required ''review of first-aid methods'' within this 60-day time frame, and this requirement has been retained in § 46.5(c) of the final rule. For a variety of reasons, a requirement of comprehensive first-aid training for many miners is impracticable. A comprehensive first-aid course may last eight hours or longer, a significant portion of the required 24 hours of new miner training. There are a number of other areas that could be addressed during this time that will be of greater overall benefit to the health and safety of miners in the workplace. Additionally, one commenter was

concerned that some people are not physically, mentally, or emotionally equipped to perform first-aid procedures. Nevertheless, the commenter stated that a review of first-aid methods is valuable.

As noted in the proposed rule preamble, you would not be required to hire an approved first-aid instructor or obtain first-aid teaching equipment to provide this instruction. Typically there are miners and designated supervisors at the mine who have already been trained in first aid under the requirements of 30 CFR part 56. One of these individuals could serve as a competent person to provide the first-aid review for new miners.

A few commenters suggested that instruction on respiratory protection be required before a miner begins work at a mine. Although this is an important topic, the final rule does not require new miners to receive training in this subject before they start work. We have determined that allowing this training to take place after miners begin work is unlikely to adversely affect miners' health and safety. As a practical matter, part 48 allows operators to cover this subject after the miner begins work but within 60 days, in those cases where the district manager permits a production-operator or independent contractor to provide new miners with training after assignment of work duties. Additionally, if the miner must use respiratory protection while performing his or her duties, the operator must provide appropriate instruction in the use of the respirator under § 46.5(b)(4) of the final rule, which requires that instruction on the health and safety aspects of the tasks assigned be provided to a new miner before the miner begins work. For that reason, we do not believe that every new miner needs instruction on respiratory protection before their work commences and have not included language to that effect in the final rule.

As previously mentioned, § 46.5(d) of the proposed rule would have required that the balance of statutorily-mandated new miner training be given within 60 days after the new miner begins work. For practical reasons outlined in the preamble, we explained that the 60 days would be measured in calendar days, not working days, and we solicited comment on the proposed schedule and approach.

Only a handful of commenters agreed with the proposed 60-calendar day time limit; the majority of commenters did not support the time period in the proposed rule. A few commenters opposed the 60-day time frame or any suggestions to extend the time frame. Instead, these commenters urged the adoption of a shorter time period. They endorsed either the full 24 hours of new miner training being given before the miner begins work duties, or a 30-day time period after the miner begins work within which to complete the remainder of the 24 hours of new miner training. One of these commenters stated that some employers might exploit a longer time period and deprive short-term miners of valuable training. One commenter echoed general concerns that, if the time frames are promulgated as proposed, part 46 will provide less protection for new miners than existing part 48.

Most commenters who opposed the proposed 60 calendar-day period, however, suggested that either a 60 working-day or longer time period be allowed for completion of the mandated 24 hours of new miner training. One commenter who advocated a 60 working-day deadline appeared to believe, mistakenly, that we intended to require a production-operator or independent contractor to provide new miner training even when the proposed 60 calendar days occurred during a period that a miner was laid off and not working for the operator. This was not our intent. However, we want to make it clear that if this worker were rehired as a miner, an operator employing that miner would be required to provide new miner training in accordance with § 46.5, although certain new miner training taken previously could be credited towards the new miner training requirements. This is discussed in greater detail below.

A few commenters indicated their concern with recouping the substantial economic investment incurred for training if the balance of training were required to be provided within the proposed 60-day period. In justifying support for a 60- to 120-day time period, one commenter stated that the investment in training should be required closer to the time when the operator decides whether to permanently hire that miner. Another commenter, concerned with the employee turnover in the industry, made a similar argument and recommended increasing the 60-day time period to 6 months, or to stipulate that the training should be completed within six months or by the end of the new miner's probationary period, whichever comes first. Still others noted that a 60-day period would not be practical for miners who are employed intermittently. One of these commenters proposed a one-calendar-year time period for intermittent employees to complete the required 24 hours of new miner training.

For a number of reasons, the majority of commenters opposing the proposed 60-day period maintained that it was too short, especially for small operations. They either favored a 90 calendar-day time period to complete new miner training or stated that they would not object to such a requirement. Some asserted that it would be unduly burdensome for operators to schedule with outside training contractors within the proposed 60-day time period and then to provide such training several times within one year as new miners are hired. They argued that a 90 calendar-day period was preferable and that in most cases would add up to approximately 60 working days. One commenter endorsed the 90 calendar-day option since it seemed to balance the needs of employers to arrange for training and the needs of new miners to receive training in a timely manner.

Under § 46.5(c) of the final rule, you must provide training on the balance of the new miner subject areas required under the Mine Act (i.e., self-rescue and respiratory devices, and first aid review) no later than 60 days after a new miner begins work at the mine. In addition, after a miner has received the required minimum training in § 46.5(b) and (c), § 46.5(d) allows the operator up to 90 days to provide training on other subjects that promote occupational safety and health for their new miners and to count the amount of time spent on presenting that instruction towards fulfillment of the 24-hour new miner training requirement. Until the new miner receives the full 24 hours of new miner training, the miner must work where an experienced miner can observe that the new miner is working in a safe and healthful manner.

In this way, operators may select and present additional, appropriate instruction on subjects that will increase the knowledge and ability of each new miner to work safely, avoid injuries and illness, and respond to emergencies at the mine. Operators will also gain the added flexibility to spread the remainder of the 24 hours of new miner training over a longer period of time, if they wish, which should alleviate some of their concerns with scheduling training and meeting the 24-hour training requirement. At the same time, we believe this will provide necessary and meaningful training to new miners within a relatively short period after the worker accrues some work experience at the mine. We wish to reiterate that there are advantages to training new miners over a longer period of time. New miners, even if they have worked a short

period of time at the mine, will retain training information better because they will have some practical work experience and will recognize the relevance of the training material to their work duties.

As in the proposed rule, both the 60-day and 90-day periods prescribed by the final rule are calendar days and not working days. As stated in the preamble to the proposal, a deadline measured in working days would be impractical, particularly given the intermittent and seasonal work schedules of many operations. A deadline measured in working days would not only present an administrative burden to you, both for paperwork and for class scheduling, but would also make enforcement extremely difficult for us.

To minimize the likelihood that a miner would have to repeat new miner training unnecessarily, the final rule, like the proposal, allows training credit to be given where a new miner had not attained experienced miner status for training purposes but had previously completed new miner training under part 46 or 48. Under certain conditions, credit for relevant courses may be given towards the 24-hour new miner training requirement under § 46.5(a) and towards the mandatory subject requirements under § 46.5(b) and (c) for that miner. Although we solicited comment in the proposed preamble on whether the final rule should allow such crediting and how it should be addressed, only one commenter specifically responded to our solicitation and endorsed the proposed approach, without suggesting any modifications. Accordingly, we have adopted the provisions of proposed § 46.5(e) and (f) in the final rule, which we have redesignated paragraphs (f) and (g), respectively.

Under § 46.5(f) of the final rule, a miner who has completed new miner training under § 46.5 or § 48.25 within the previous 36 months but who does not have the 12 cumulative months of experience for ''experienced miner'' status is not required to repeat new miner training, with one exception. The operator is still required to provide this miner with pre-work training on the seven subjects specified in § 46.5(b) to ensure that the miner has site-specific familiarity with the mine's operations and practices before work duties commence.

Similarly, final § 46.5(g) permits an operator to credit a new miner training course completed by a miner under § 48.5 or § 48.25, provided that the course was completed within a 36-month period prior to the miner beginning work at the mine and is relevant to subject areas specified in § 46.5(b) and (c). For example, a new miner may have completed an hour of instruction at an underground mine on the statutory rights of miners and their representatives, and an hour on the use, care, and maintenance of self-rescuers or respiratory devices within the previous 36-month period. The final rule allows credit towards the 24-hour new miner training requirement, as well as toward the mandatory subject requirement, for the one hour spent on the miners' rights course. The final rule also allows credit for the one hour spent on the respiratory protective equipment course, but only if such equipment is used at the mine where the miner is currently employed.

A few commenters indicated that it was not clear when new miner training requirements would apply to a miner who is employed by an independent contractor and moves from mine to mine performing services, or to a miner employed by a production-operator who works at multiple mines operated by the same production-operator. Commenters raised this question because we defined a new miner in the proposal as ''a newly hired miner who is not an experienced miner'' (emphasis added) but did not explain what we meant by ''newly hired.'' It was our intent that new miner status and new miner training requirements would apply when two conditions were met: first, when the miner does not fit the definition of ''experienced miner;'' and second, when the miner begins employment with a new employer. We acknowledge that our use of the term ''newly hired'' in the proposed new miner definition did not expressly convey the second condition and, as explained elsewhere in this preamble, we have revised that definition. Under the final rule, the requirements of § 46.5 are triggered when a miner, who is not an experienced miner, begins employment with a new employer, not necessarily when the miner starts work at a different mine. In other words, the final rule does not require a miner to receive new miner training each time the miner moves from mine to mine, if the miner remains continuously employed by the same production-operator or independent contractor.

Section 46.6 Newly Hired Experienced Miner Training

Section 46.6 of the final rule, like the proposal, addresses training requirements for ''newly hired experienced miners'' as that term is now defined in § 46.2. Section 46.6 lists the subject areas that must be covered in training newly hired experienced miners before they begin work at the mine and no later than 60 days after they begin work. Final § 46.6 also contains less rigorous training requirements for newly hired experienced miners who are returning to the same mine after an absence of 12 months or less, and allows, under certain conditions, training credit to be given for practice of assigned tasks. As in final § 46.5, which addresses new miner training, we have used a table to set forth the final rule's requirement. This is intended to make it easier for you to determine the training you must provide to newly hired experienced miners and when the training must be provided.

We received numerous comments on proposed § 46.6, many of which addressed issues that were similar to those raised in the context of new miner training under § 46.5. One commenter raised a general issue concerning the term ''newly hired experienced miner.'' This commenter indicated that because the requirements for training under this section are triggered before and after an experienced miner begins work, the phrase ''newly hired'' is superfluous and should be deleted. The commenter also pointed out that recent amendments to part 48 eliminated use of the term ''newly employed'' in § 48.26 for similar reasons. We agree that it may be somewhat redundant to use the term ''newly hired.'' However, the final rule defines ''newly hired experienced miner'' in § 46.2 and retains the term in both the section heading for § 46.6 and the regulatory text. We have taken this approach to emphasize and make clear that this section applies only to experienced miners at the time they begin employment with a production-operator or independent contractor.

Proposed § 46.6(a) would have required you to train newly hired experienced miners in four subject areas before they begin work but did not specify a minimum amount of time to be spent on this pre-work training. One commenter who addressed this aspect of the proposal supported minimum courses of pre-work instruction as in § 48.26. Another commenter agreed that the final rule should not specify a minimum number of hours for training before the miner begins work, while another commenter recommended that emergency medical procedures be added to the list of pre-work training requirements. Several commenters strongly opposed any requirement for pre-work training for experienced miners, based on the commenters' concerns over the economic impact of such a requirement on small operations. Several commenters also maintained

that such training is not needed for workers who already have mining knowledge and experience. A few other commenters recommended that the final rule require only mine-specific hazard awareness training for experienced miners. Some of these commenters suggested that we should require only limited training on such subjects as company policies, safety and environmental response plans, hazard recognition and avoidance, and ''walkaround'' and task training.

Although section 115 of the Mine Act specifically requires that miner training regulations address training for new miners, there is no express statutory directive that we promulgate training regulations for newly hired experienced miners. However, we have concluded that experienced miners should receive orientation on the mining environment in general and be instructed in specific potential hazards at a mine before they begin work there, and the final rule reflects this conclusion.

For the same reasons outlined in today's preamble discussion on final § 46.5(b) for new miners, we are requiring training on seven subject areas before newly hired experienced miners begin work at a mine. We believe that all miners beginning employment with a production-operator or independent contractor, whether experienced or not, should receive instruction in these critical areas. Unlike final training requirements for new miners, however, final § 46.6 does not specify a minimum length of time that must be devoted to pre-work training for newly hired experienced miners. This conclusion is based primarily on the fact that experienced miners have far greater variability in their occupational experience, skills, and knowledge than untrained workers who are new to mining. The scope and amount of training needed by a newly hired experienced miner is more dependent on the occupational experience of the miner, the work duties that the miner will perform, and the methods of mining and workplace conditions at your mine. Clearly, if an experienced miner received training on a subject, such as the statutory rights of miners, within the last year, you would not need to spend as much time on that subject as you would for a new miner. Similarly, a newly hired experienced miner would not require much training on the health and safety aspects of an assigned task in which the miner has 15 years' prior experience. You are in the best position to assess the amount of training time needed to ensure the miner is adequately trained before he or she begins work at your mine, and the final rule is consistent with this. The final rule allows you to tailor the newly hired experienced miner training to the individual miners and concentrate the training on appropriate areas. For these reasons, it would be impractical and inappropriate for us to impose a minimum hour requirement for pre-work training for newly hired experienced miners.

For the same reasons as those stated in the preamble discussion of final § 46.5(b), the final rule includes instruction on emergency medical procedures as a required pre-work training subject under final § 46.6(b)(3). In addition, we have revised the final rule from the proposal so that the pre-work training subject language in final § 46.6(b)(1) and (2) for newly hired experienced miners is consistent with that in final § 46.5(b)(1) and (2) for new miners (e.g., clarified that the mine tour in paragraph (b)(1) is ''walkaround'' training, and provided examples of potentially hazardous conditions on which training may be given in paragraph (b)(2)).

The proposal would have required you to provide annual refresher training to newly hired experienced miners on an accelerated schedule—within 90 days after they begin their assigned work duties. The proposal would also have required that the refresher training cover four specified subjects.

A few commenters supported the proposed requirement that miners receive annual refresher training within the 90-day period after employment. One of these commenters stated that MSHA accident and injury data show that a significant number of deaths and injuries occur during miners' initial periods of employment. In contrast, a significant number of commenters objected to the inclusion of annual refresher training as part of the training requirements for newly hired experienced miners. Many of these commenters also opposed the 90-day deadline for the training.

One commenter who opposed the proposed requirements stated that experienced miners at mines covered by the rule should receive the same training within the same time periods as part 48 requires for experienced miners. Generally, § 48.26 requires operators to give pre-work instruction on specified subjects for all experienced miners, except miners returning to the same mine following an absence of 12 months or less. Part 48 also requires that experienced miners returning to mining after an absence of five years or more must receive this pre-work training in no less than eight hours.

One commenter recommended that the 90-day period in proposed part 46 be increased to 120 days in the final rule to provide a greater opportunity for operators to train miners during the normal cycle of refresher training and to credit the eight-hour refresher requirement with smaller training sessions. However, given the high employee turnover rate in the mines covered by the final rule, most commenters maintained that the refresher training requirement would create significant scheduling problems for small- to medium-sized mine operators, who would be forced to hold multiple refresher training sessions. Commenters stated that small operators do not have the resources to provide an eight-hour annual refresher training course to each newly hired experienced miner on a schedule that varies from the normal refresher training cycle. In addition, commenters asserted that refresher training was not necessary if the miner had received refresher training at another mine within the previous year or if miners receive initial pre-work training coupled with task training.

One commenter pointed out that it would not be efficient to require smaller and more frequent training sessions, which the commenter believed was the practical effect of the refresher training requirement. Another commenter noted that the proposed requirement would necessitate breaking up work crews on a frequent basis and assigning other workers to fill in for the absent miner being trained. This commenter believed this would have an adverse impact on safety at those workplaces.

We have carefully considered the comments submitted on proposed § 46.6(b) and agree that a requirement for eight hours of refresher training on an accelerated schedule for newly hired experienced miners would create unnecessary burdens for many operators, without providing a clear benefit to the health and safety of miners. For these reasons, the final rule does not adopt the proposed refresher training requirement for experienced miners. Instead, final § 46.6(c) provides that newly hired experienced miners must receive training on self-rescue and respiratory devices if they are used at the mine. This is in addition to the pre-work training requirements under final § 46.6(b), which must also address site-specific hazards at the mine.

We do not agree with the commenter who recommended that experienced miner training requirements in part 46 be made identical to § 48.26. As stated elsewhere in this preamble, the conditions and workforce at the mines

covered by part 46, as well as the resources available to small operations, are different from those at mines covered by part 48. The final rule requires initial training for these miners before they begin work, as well as training on additional subjects no later than 60 days after they begin work. This will ensure that these miners have the appropriate orientation and instruction before and shortly after they begin work, to prepare them to work in a safe and healthful manner at their new places of employment.

As mentioned above, the final rule requires that newly hired experienced miner training on the specified subjects be completed no later than 60 days after the miner begins work. The 60-day deadline is consistent with a similar deadline for completion of the training subjects for new miners under final § 46.5(c). This responds to some commenters who were concerned that it was confusing to have different deadlines for similar training for new miners and experienced miners. Additionally, under final § 46.4(e), operators may credit short training sessions towards experienced miner training as long as they are documented properly.

Some commenters recommended that the final rule include a provision for newly hired experienced miners similar to the proposed provision that would allow new miners to practice under the ''close supervision'' of a competent person to satisfy the requirement for training on the health and safety aspects of an assigned task. According to one commenter, there is no justification for requiring more of experienced miners if they can demonstrate through practice, to the satisfaction of a competent person, that they are familiar with the health and safety aspects of an assigned task. We agree with this commenter, and § 46.6(d) of the final rule specifically allows experienced miners to practice as part of the training on the health and safety aspects of a task, under the close observation of a competent person. As discussed in the preamble for final § 46.5(e), the final rule replaces the term ''close supervision'' with the term ''close observation.''

Final § 46.6(e) is new to the final rule and makes clear that the scope of training for newly hired experienced miners is not limited to the subjects listed in § 46.6 (b) and (c). The courses listed in these paragraphs are only minimum courses of instruction. Operators should tailor their newly hired experienced miner training program to their specific mining operations and the needs of the individual miners.

Final § 46.6(f) adopts language that was proposed in § 46.6(c). Under this provision, you are not required to provide the training specified under § 46.6 (b) and (c) if the newly hired experienced miner returns to your mine after an absence of 12 months or less. The final rule requires, that, before the miner begins work, a competent person inform the miner of changes at the mine that occurred during the miner's absence that could endanger his or her safety or health. This provision was adopted from recent revisions to § 48.26. A miner's absence of 12 months or less does not warrant requiring the miner to repeat experienced miner training at the same mine. Instead, the final rule treats the returning miner almost as though he or she never left. Consistent with this approach, the returning miner must receive any annual refresher training that was missed during his or her absence, no later than 90 days after the miner starts work. We received little comment on this aspect of the proposal. However, one commenter was concerned that miners who returned to a mine after an absence of more than 12 months would not be informed about changes at the mine that occurred during his or her absence. Although the final rule does not specifically require that a miner be informed of such changes, the final rule does require that any experienced miner returning to the same mine after an absence greater than 12 months receive newly hired experienced miner training under § 46.6. We expect that this training would cover any changes at the mine that would have an impact on the miner's health or safety.

Proposed § 46.6(d) would have allowed miners who are employees of independent contractors and who work at the mine on a short-term basis, such as drillers or blasters, to receive either newly hired experienced miner training or site-specific hazard training. We received considerable adverse comment on this aspect of the proposal. One commenter believed that operators, given the choice, would always opt to provide contractors with hazard training, not the more extensive experienced miner training under § 46.6. This commenter was concerned that contractors would receive little training under part 46. In fact, under the final rule, independent contractor employees who are ''miners'' must receive comprehensive training, either as ''new miners'' under § 46.5 or as ''newly hired experienced miners'' under § 46.6. These workers must also receive appropriate task training under § 46.7, annual refresher training under § 46.8, and site-specific hazard awareness training under § 46.11.

Several commenters correctly pointed out that these contractor employees are not ''newly hired'' because they are still employed by the same employer, in this case, the independent contractor. Commenters contended that these miners should receive only site-specific hazard awareness training for each mine where they work and not be required to repeat experienced miner training under § 46.6 each time they move from mine to mine. For the same reason, other commenters requested that we clarify that miners who move among mines operated by the same company are not ''newly hired experienced miners'' for training purposes. Commenters noted that the proposed rule was unclear on whether the event that triggers newly hired experienced miner training is the miner beginning work at a new mine or the miner beginning employment with a new employer.

We agree that it is unnecessary for miners to receive newly hired experienced miner training whenever they move from one mine to another, while remaining employed by the same employer, whether production-operator or independent contractor. In response to these comments, the final rule includes a definition of the term ''newly hired experienced miner,'' and provides that experienced miners who move from one mine to another, such as drillers and blasters, but who remain employed by the same production-operator or independent contractor are not considered newly hired experienced miners.

You should be aware that final § 46.11, which addresses site-specific hazard awareness training, requires you to provide miners who move from one mine to another mine while remaining employed by the same production-operator or independent contractor with site-specific hazard awareness training for each mine.

Section 46.7 New Task Training

Section 115(a)(4) of the Mine Act provides that:

> * * * any miner who is reassigned to a new task in which he has had no previous work experience shall receive training in accordance with a training plan approved by the Secretary . . . in the safety and health aspects specific to that task prior to performing that task.

This section of the final rule implements this statutory provision by requiring operators to provide miners with training for new tasks and new health and safety information concerning assigned tasks before the miners perform the tasks. This section

generally adopts the proposed provisions, but includes several changes from the proposal in response to comments.

In developing final § 46.7, we have attempted to address the comments received and to develop practical requirements for effective health and safety training programs at the mines covered by this rule. Although § 46.7 will allow you greater flexibility in the implementation of new task training to fit your specific mining operations and workforce, we have determined that the new requirements will not reduce protection afforded to surface nonmetal miners under similar standards in existing part 48. While the approach taken under part 46 may be less structured and more flexible than part 48, the ultimate result will be the effective health and safety training of surface nonmetal miners who are assigned new tasks or whose assigned tasks are modified and the modification has some impact on the health and safety risks encountered by the miner.

The task training requirements in the final rule are intended to reduce the likelihood of accidents resulting from a miner's lack of knowledge about the potential hazards of a task. This section requires operators to provide miners with important health and safety information before they perform a new or modified task. This will ensure that miners are prepared to protect themselves and to avoid endangering other workers at the mine.

Many commenters supported the task training requirements in the proposed rule. These commenters stated that employees need to be aware of the hazards and the risks associated with the jobs or tasks that they perform and be familiar with the systems, tools, equipment, and procedures required to control, reduce, or eliminate hazards. Several commenters noted that proper task training is the key to preventing injuries and fatalities.

Some commenters recommended that new task training requirements be patterned after the requirements in part 48. Under part 48, a program for training on certain enumerated tasks must include instruction, in an on-the-job environment, in the health and safety aspects and safe operating procedures of the task; supervised practice during nonproduction times is also required. Other commenters were supportive of the performance-oriented requirements in the proposed rule.

The final rule, like the proposal, does not include detailed requirements for task training. This is intended to allow you to design task training programs that are suitable for your workforce and your operation. We expect that effective new task training will include, at a minimum, instruction in the elements of the task, including hands-on training, and an explanation of the potential health or safety hazards associated with the task and ways of minimizing or avoiding exposure to these hazards.

Many commenters stated that effective task training includes a combination of different types of training, such as classroom instruction, demonstration by the competent person, practical hands-on training, and evaluation of the miner's ability to apply the training in the workplace. We agree with these commenters, and the flexibility provided in the final rule is intended to allow each operator to design and implement an effective task training program that is suitable for each miner.

Final § 46.7(a) and (b) adopt the requirements of proposed § 46.7(a). The requirements in these two paragraphs were included in the proposal in a single paragraph but have been separated into two paragraphs in the final rule for clarity.

Section 46.7(a) of the final rule requires you to provide any miner who is reassigned to a new task in which he or she has no previous work experience with training in the health and safety aspects and safe work procedures specific to that new task. This training must be provided before the miner performs the new task. This is adopted with a minor change from the proposed rule.

The final rule provides that task training must be provided to any miner who is ''reassigned to a new task.'' The proposal would have required task training for a miner who was ''assigned'' to a new task. This terminology is used in the final rule in response to commenters who indicated they were confused about the relationship between new task training requirements in this section and new miner training requirements in proposed § 46.5. This language is intended to clarify that task training requirements in this section supplement the new task training-referred to as ''instruction in the health and safety aspects of assigned tasks''—that miners must receive as part of new miner training and newly hired experienced miner training under §§ 46.5 and 46.6. This change is made in response to several commenters who pointed out that operators must provide miners with instruction in ''health and safety aspects of the task'' as part of the 24 hours of new miner training. These commenters questioned what the distinction was between that aspect of new miner training and task training under this section. Another commenter observed that the proposed rule seemed to suggest that new miner training must include training in the health and safety aspects of all tasks that he or she will perform in the first year of employment. This commenter emphasized that task training is an ongoing effort, conducted each time a miner will perform a task for the first time.

Task training should in fact be an ongoing process, and neither the proposed rule nor the final rule requires a new miner to receive instruction, as part of new miner or newly hired experienced miner training, in every task he or she will perform in the first year. We agree that the final rule should clarify the relationship between task instruction for new miners under § 46.5 and for newly hired experienced miners under § 46.6, and new task training under § 46.7. Training in the health and safety aspects of tasks for new miners under § 46.5 and for newly hired experienced miners under § 46.6 is the same type of training as new task training under this section. Newly hired miners must receive task training in the tasks they will perform, either as part of new miner training or newly hired experienced miner training, as appropriate. After miners have received this initial training and they are ''reassigned'' to a new task (from the task that they were initially assigned and for which they already received task training), final § 46.7(a) requires task training in that newly assigned task before the miner performs it.

Final § 46.7(b) requires you to provide task training if a change occurs in a miner's task that affects the health and safety risks encountered by the miner. This requirement has been adopted with some change from the proposed rule. The final rule clarifies that a requirement for task training is triggered by changes that affect the health and safety risks encountered by the miner, rather than by a change in the assigned task. This means that task training is required whenever any change in the task could impact the health and safety conditions under which the miner works.

Many commenters questioned what type of change in a task would trigger the requirement for task training. Although it would be impractical to compile a comprehensive list of such changes, we can provide a few examples. Task training is intended to ensure that miners receive new training before they are exposed to new health and safety hazards, so that they can avoid, control, or eliminate potential hazards as they perform their job. Such a change could involve a modification

to a piece of equipment that introduces new potential safety hazards for the miner that operates the equipment. For example, the controls on a loader may be modified, causing the loader to respond more quickly. The miners who operate this equipment must be informed of the modifications to the controls and must be given task training that allows them to become familiar and comfortable with the new controls before they begin to use the loader for work. Another example would be a change to a piece of equipment that increases the occupational noise or dust exposure levels for the miner who operates it. Before the miner is exposed to the increased noise or dust hazards, the operator must ensure that the miner is informed of the new health concerns and receives instruction in how to avoid, control or eliminate the new health concerns. In any case, if an operator is in doubt as to whether a change warrants additional task training, the operator should opt in favor of providing the training.

Final § 46.7(c) provides that you are not required to provide task training under paragraphs (a) and (b) to miners who have received training in a similar task or who have previous work experience in the task, and who can demonstrate the necessary skills to perform the task in a safe and healthful manner. The final rule, unlike the proposal, requires you to observe that the miner can perform the task in a safe and healthful manner to determine whether the miner needs task training. This is intended to prevent unnecessary or duplicative training, while ensuring that miners are adequately trained for unfamiliar tasks. For example, if an equipment operator is already trained in the health and safety aspects of loader operation, has been evaluated, and has demonstrated the ability to perform the duties of a loader operator, there is no reason to require the equipment operator to repeat task training.

In the preamble to the proposed rule, we indicated that we intended that task training would not be required for miners who have performed a task before and who are able to safely perform the task. We noted that you must first determine that task training is not necessary, typically by having the miner demonstrate that he or she is able to perform the task safely. A number of commenters questioned this statement in the preamble, believing that such a requirement would be too restrictive. These commenters were of the opinion that a miner's experience, references, or other information could provide a satisfactory basis for a conclusion that task training is not required. These commenters recommended that the final rule clarify that a demonstration is not required in all cases to determine whether task training is needed and that the basis of the determination is within the discretion of the operator.

We do not agree with these commenters. Although a miner may be able to document prior work experience, this does not ensure that the miner has retained sufficient expertise in the task to make task training unnecessary. Under part 48, task training is not required if the miner has either been trained in the task or has performed the task, and has demonstrated safe operating procedures for the task within the last 12 months. We agree with this approach, and the final rule reflects our conclusion that an actual demonstration of a miner's ability to perform a task safely and healthfully will guarantee that miners who need task training will receive it. A paper review would not adequately ensure that the miner has the current ability and knowledge to safely perform the task. Operators would also be able to evaluate whether training is needed on elements of the task that may be site-specific. For example, a miner who is reassigned to operate a particular piece of mobile equipment may have already operated the same type of equipment at another mine. However, the terrain of the area where the equipment will be operated at the current mine may warrant additional task training to ensure that the miner can safely operate the equipment in the new terrain. For these reasons, the final rule specifies that a miner must make such a demonstration before an operator can determine that task training is not needed. In making this determination, you must observe the miner performing the task to verify that the miner has the requisite knowledge and skills to perform the task safely.

The requirements of final § 46.7(d) have been adopted from the proposal with some changes and provide that practice under the close observation of a competent person may be used to satisfy task training requirements if hazard recognition training specific to the task is given before the miner performs the task. The proposal would have allowed practice under the ''close supervision'' of a competent person to be used to fulfill task training requirements. Commenters generally supported the concept of permitting hands-on practice to fulfill the requirement for task training. Commenters stated that very effective and safe training in a new or modified task can include the miner practicing the task while under the close observation of a competent person, who instructs the individual in how to perform the task in a safe manner. However, a number of commenters objected to the restrictive nature of the requirement that the practice had to be ''under the close supervision of a competent person.'' Some commenters were concerned that in cases where the competent person was a fellow miner, the competent person would not have the authority to supervise or direct the work of the miner receiving the training. These commenters suggested a term other than ''supervision'' be used to describe the monitoring of the performance of the task. Other commenters took issue with the term ''close supervision'' as well as with the explanation of the requirement in the preamble to the proposal. These commenters believed that ''close supervision'' was not practical, because it suggested that the undivided attention of the person providing the training was necessary. Some commenters recommended that the person providing the training be the judge of how closely the miner needs to be supervised, depending on the person's understanding of the miner's knowledge and experience and of the risks involved in the task.

The final rule, in response to commenters, allows practice under the ''close observation of a competent person'' to be used to fulfill some of the task training required by this section. This allows the miner to gain experience in the task and to learn how to avoid the hazards presented by the performance of the task in the surrounding environment. ''Close observation'' means that the competent person is in the immediate vicinity of the miner and is watching the actions of the miner being trained to make sure that the miner is performing the task in a safe and healthful manner. The nature of the task will determine the degree of attention that is needed, and the level of observation should be commensurate with the risks inherent in the task being performed. The competent person who is observing the miner should also be assessing the miner's proficiency in performing the task, as part of the training itself as well as the competent person's evaluation of whether the training is effective.

The final rule includes the additional requirement that the miner must be provided with hazard recognition training for the task before he or she begins to practice the task. This is similar to the provision for practice for new miners in final § 46.5(e). Without a requirement for the miner to receive this important information, the miner would learn by trial and error, an approach that

relies on mistakes (which can often involve accidents, injuries, and fatalities) for learning to occur. For example, if you assign a miner to operate a loader for the first time, you should explain that the loader can be tipped over much more easily than other vehicles the miner may have operated. The potential for the loader to tip over could be explained with the use of photographs, illustrations, or graphs. This tip-over potential cannot be safely taught through hands-on training, because it would require the miner to tip over the loader.

The most effective training program will include a combination of training methods and be flexible enough to apply in different work environments and for miners with varying levels of education and work experience. Classroom training is one way that preliminary instruction can be provided as a prelude to practical hands-on training exercises.

Final § 46.7(e), like the proposal, allows you to credit task training provided under this section toward new miner training, as appropriate. Many commenters supported this aspect of the proposal, and it has been adopted unchanged into the final rule. We envision that crediting would occur when a new miner's work assignment changes during the first 90 days of employment. The miner would have received training in the health and safety aspects of assigned tasks before he or she begins work under § 46.5(b)(4). If the miner is reassigned to a new task within the initial 90-day period, training in the new task given to comply with § 46.7 could be credited toward the 24 hours of new miner training.

Some commenters recommended that the final rule allow task training to be credited to newly hired experienced miner training. However, we have not included a specific provision for this in the final rule. Because the final rule does not specify a minimum number of hours for newly hired experienced miner training, there is no need to explicitly provide for task training to be credited toward newly hired experienced miner training.

We solicited comment in the preamble to the proposal on whether the final rule should allow task training to be credited toward annual refresher training requirements. Although some commenters supported credit for task training to satisfy annual refresher training, other commenters strongly opposed it. These commenters stated that miners who were trained on a number of different tasks during the course of a year could accumulate enough hours of task training to satisfy the annual refresher requirement, yet the miner would not have received refresher training on other hazards and important health and safety concerns.

We agree with those commenters who recommended against allowing task training to be credited towards annual refresher training. Task training is designed to ensure that the miner can perform a new or modified job in a safe manner and may only be relevant to a small portion of the miner's work at the mine. In contrast, refresher training is intended to reinforce previous training and enhance the miner's general knowledge and skills so that he or she can work in a safe and healthful manner at all times. For these reasons, the final rule does not allow crediting of task training toward the annual refresher training requirements.

Finally, one commenter recommended that the final rule specify that task training must be conducted by a person who is experienced in the task. The final rule does not adopt this specific recommendation, because the final rule requires that training must be given by a ''competent person,'' defined as a person with the ability, training, experience, or knowledge to provide training to miners in his or her area of expertise. We believe that this definition adequately addresses the necessary level of expertise, and, for these reasons, the requirement recommended by the commenter is not needed and has not been adopted in the final rule.

Section 46.8 Annual Refresher Training

This section of the final rule addresses requirements for refresher health and safety training for miners. Section 115(a)(3) of the Mine Act requires all miners to receive at least eight hours of refresher training no less frequently than once every 12 months. The Act does not specify the subject areas that must be covered as part of this training. In the **Federal Register** notice announcing the public hearings for the proposed rule, we requested comment on whether the final rule should require that specific subject areas be covered by refresher training, and if so, what subjects should be required.

Commenters generally supported the concept of annual refresher training. Commenters recognized that refresher training provides miners with an important review of information that helps them to minimize the health and safety risks at their workplaces. The annual refresher training requirements in the final rule are intended to reduce the likelihood of accidents and illnesses by reinforcing previous training and enhancing miners' ability to work in a safe and healthful manner.

The final rule takes a performance-oriented approach to annual refresher training to allow operators, particularly small operators, to direct their training resources to subjects that are relevant to their workforce and operations. The proposed rule would have required that you provide each miner with no less than eight hours of refresher training at least once every 12 months. A few commenters believed that eight hours of training every year was an excessive requirement for many small operations and that this requirement appears to assume that all mining operations are large and complex. Another commenter recommended that the final rule require refresher training every 24 months, not every 12 months.

The Mine Act is very specific in its requirement that miners receive no less than eight hours of refresher training at least every 12 months. We therefore have no discretion to adjust or reduce these minimum requirements.

Several commenters maintained that the language in the proposed rule suggested that miners must receive all of their refresher training in one eight-hour session. One commenter stated that eight hours of refresher training on one day a year, or even over several days within a short period of time leaves a lot to be desired. This commenter favored shorter training sessions over a longer period of time. A number of commenters recommended that the final rule make clear that miners may receive refresher training in shorter sessions over the 12-month period.

We agree that providing refresher training in shorter installments over 12 months is an appropriate way for operators to satisfy refresher training requirements under the final rule. We did not intend the language of the proposed rule to leave you with the impression that such an approach would be unacceptable. We have attempted to clarify this in the final rule. The final rule does not adopt the language of the proposed rule that requires refresher training to be completed ''once every 12 months.'' Instead, under final § 46.8(a)(1), you must provide each miner with no less than eight hours of annual refresher training no later than 12 months after the miner begins work at the mine, or no later than March 30, 2001, whichever is later. Thereafter, final § 46.8(a)(2) requires you to provide each miner with eight hours of training no later than 12 months after the previous annual refresher training was completed. Under the final rule, you must provide miners at your mine with annual refresher

training no later than 6 months after the rule has gone into effect, unless the miner is newly employed at the mine. In that case, the miner has 12 months from the date of employment to complete the first installment of refresher training.

The deadline of six months after the rule's effective date for completion of annual refresher training is intended to ensure that there is no question as to when miners must receive the first installment of annual refresher training under the final rule. We considered allowing one year after the effective date for annual refresher training to be completed, which would be two years after publication of the final rule in the **Federal Register**. We determined that a one-year deadline beyond the effective date would result in a significant delay in miners receiving this training. We believe that it is important for those miners who may not have been receiving regular refresher training to be provided with this training as soon as practicable. However, we recognize that many operators need time to prepare for compliance with the final rule. For these reasons, we have allowed six months beyond the effective date for completion of the first eight-hour installment of refresher training.

Under the final rule, you may provide annual refresher training in one eight-hour session once every 12 months. You may also satisfy the refresher training requirement by providing miners with smaller blocks of training over the entire year, so long as the total training time adds up to at least eight hours.

Some commenters stated that the 12-month deadline should begin to run only after a miner has completed 24 hours of new miner training or an experienced miner has completed newly hired experienced miner training. For example, if a new miner begins work on the first of January 2001 and completes new miner training on March 31, 2001, these commenters believe that the deadline for the miner to complete eight hours of annual refresher training should be March 2002 rather than January 2002. Other commenters pointed out that such an approach would unnecessarily delay the annual refresher training for a new miner. We agree with commenters who were concerned about a delay in miners receiving annual refresher training, and we are not persuaded by commenters recommending that the 12-month period be extended, particularly for new miners in their first year at the mine. Timely refresher training serves to reinforce the initial training received by new miners, who are more vulnerable to accidents and injuries than experienced miners. For these reasons, final § 46.8(a)(1) makes clear that all miners, whether new miners or newly hired experienced miners, must receive their first eight-hour installment of refresher training no later than 12 months after they begin work at the mine.

The proposed rule would have required refresher training to cover instruction on changes at the mine that could adversely affect the miner's health and safety. Under the proposal, mine operators would have discretion to select other training topics, although the proposal did include a list of suggested training topics.

Most commenters believed that the subjects covered in refresher training should not be mandated, but that operators should instead have the discretion to select subjects that are relevant to the health and safety needs of the miners at their particular mining operation. Several commenters indicated that they believed this flexibility could only enhance worker safety, not detract from it. Many of these commenters indicated that training subjects could vary from year to year, based on such factors as the mine's accident and injury experience.

Final § 46.8 (b) and (c) generally adopt the requirements of proposed § 46.8(b). Section 46.8(b) of the final rule requires you to provide annual refresher training on changes at the mine that affect the health and safety risks encountered by the miners in performing their work. Commenters generally supported this requirement in the proposed rule. However, some commenters were concerned that information on changes at the mine should be provided to the miners as soon as the operator becomes aware of the change or before the operator implements a planned change. These commenters stated that this information should not be communicated to miners on a 12-month rotation. We agree with these commenters that operators should convey such information to miners as soon as possible. However, this information must be reiterated during refresher training to ensure that miners are adequately informed of changes in conditions that could affect their health or safety.

Commenters generally recommended that we provide examples in the preamble to assist operators in understanding their compliance responsibilities. Some commenters questioned what type of changes would fall within the requirements § 46.8(b) and must be addressed as part of refresher training. One example would be if you plan to change the traffic patterns at your mine. Other examples include the introduction of new or retrofitted equipment into the work environment, or a new blasting schedule.

Final § 46.8(c) clarifies that refresher training must also address other health and safety subjects that are relevant to mining operations at the mine. The proposal would simply have provided that training may include instruction on certain subjects and listed several examples. The final rule also includes a list of possible subjects, indicating that training may address these subjects. The language in the final rule has been amended slightly to clarify that the additional subjects are recommended but are not mandatory.

In the preamble of the proposed rule, we stated that we expected that you would carefully select the subjects covered in refresher training at your mine, to ensure that your miners received practical and useful instruction that effectively addresses the health and safety conditions at your operation. We requested comments on whether the final rule should include more detailed requirements or guidance for refresher training programs. In addition, we specifically requested comments on whether the final rule should require instruction on particular topics, similar to part 48, and if so, which subjects should be included.

Several commenters stated that, although general guidelines for possible training subjects were a good idea, the final rule should allow operators flexibility in choosing subjects. By allowing operators to identify the subjects to be covered, the relevance of the training to the work environment will be increased. The commenters stated that refresher training should cover subject areas relevant to the safety problems at the mine. One commenter suggested that the subjects listed in the proposal, which were derived from topics listed in part 48, should be covered at least once every three years as part of refresher training. Other commenters stated that the final rule should take the approach of part 48 and include a list of required courses of instruction. Several commenters recommended that the final rule list the courses included in part 48 and indicate that the courses would be mandatory ''where applicable.'' These commenters stated that the additional language would allow operators to forgo course subjects that are not applicable to their operation, giving them more time for other relevant subjects. Other commenters stated that a review of health and safety standards should be included in annual refresher training.

We are persuaded by commenters' recommendations that the final rule afford operators flexibility in selecting subjects for refresher training. Refresher training that is tailored to address subjects relevant to the mine's methods of operation, equipment, accident and illness history, etc., can be extremely effective. The final rule reflects this determination and provides a performance-oriented approach that allows you to implement a refresher training program that will provide the most health and safety benefits to your miners.

The performance-oriented approach to annual refresher training in the final rule is designed to allow you to develop and implement the type of training that will be most beneficial for your miners. We believe this approach will enable all production-operators and independent contractors to design and implement an effective annual refresher training program that maximizes the impact of the required training for their miners.

The list of recommended subjects contained in final § 46.8(c) includes subjects that were not included in the proposed rule. The final rule references subjects that address specific types of equipment and work activities that have been involved in the most serious accidents in the mines covered by the final rule. This list is derived from our analysis of the fatal, disabling, and lost time injury data from 1991 to 1998 for the mines covered by this rule. For example, the final rule recommends that refresher training address the hazards of mobile equipment, such as haulage trucks, service trucks, tractors, and front-end loaders, because that type of equipment has been involved in the most number of accidents. Equipment that follows mobile equipment in the greatest number of accidents includes conveyor systems; cranes; crushers; excavators; and dredges. We recommend that annual refresher training address the safe operation of this equipment if you use it at your mine or, if you are an independent contractor, your employees operate the equipment or are exposed to its hazards.

The final rule includes other recommended training subjects that we identified based on our analysis of the injury data, including maintenance and repair; material handling; fall prevention and protection; and machine guarding. We intend to continue to analyze the accident and injury data to identify areas that should be covered as part of refresher training. In that way, we can develop relevant course materials that will be useful in the training given under the final rule.

One commenter stated that it takes at least eight hours to provide comprehensive first aid training. This commenter advocated a separate requirement for first aid for all miners and recommended that the eight hours for annual refresher training be focused on other subjects. We acknowledge that comprehensive first aid training can require a significant amount of time, often at least eight hours according to commenters. However, for purposes of annual refresher training, the final rule allows you to provide miners with a review of first aid subjects, rather than extensive comprehensive first aid training. Further, the requirements of the final rule are minimum requirements, and the final rule does not prevent you from providing miners with more than the mandated eight hours of health and safety refresher training each year. In fact, we encourage you to provide as much training as possible to miners to enhance their abilities to perform their assigned duties without endangering themselves or others.

A number of commenters raised the issue of whether the final rule should impose a minimum duration on refresher training sessions, such as 15 minutes or half an hour. This issue is also relevant to other types of training and is discussed in detail in the preamble discussion of final § 46.4(e).

Several commenters had general questions about the application of refresher training requirements. One commenter stated that he provides annual refresher training during a scheduled maintenance shutdown that occurs each year in April or May. He indicated that he would like to continue to provide training in this manner, even though miners could receive annual refresher training 13 months after the previous year's training. Our interpretation of the requirements of the Mine Act would not allow such a training schedule. Miners must receive annual refresher training no later than 12 months after the previous annual refresher training was completed, as required by final § 46.8(a)(2).

Another commenter stated that truck drivers that come to the mine to deliver or haul away materials should not be required to receive eight hours of refresher training every year. This commenter indicated that the drivers spend 10 minutes loading their trucks at the mine site, and one to two hours delivering the load, for a total of about one hour per day spent at the mine site.

Although we are unable to give a definitive answer on this scenario since we may not have all of the facts, we can provide a general response. Delivery and customer or haul truck drivers, such as those described by the commenter, are not included in the definition of a ''miner'' in the final rule. Because the annual refresher training requirements apply to miners, the drivers described by the commenter would not be considered miners, and you would not be required to provide them with eight hours of refresher training. However, you must provide the drivers with site-specific hazard awareness training under § 46.11 of the final rule.

Section 46.9 Records of Training

This section of the final rule requires you to record and certify that miners have received health and safety training under this part. The final rule adopts many of the proposed provisions, but includes several changes to address commenters' concerns.

Like the proposal, the final rule requires production-operators and independent contractors to record and certify the training provided to miners and to provide miners with a copy of their training certificates at the completion of the training. Copies of a miner's training records and certificates must be provided to the miner at the termination of employment, upon the miner's request. The final rule adopts the flexible approach of the proposal and does not require that these records and certificates be maintained on a prescribed form, but allows operators the option of using alternate forms or methods to MSHA Form 5000–23 for making and keeping these records. The final rule, like the proposal, also allows you to maintain training records and certificates away from the mine site, if you have the capability of producing them upon request. In response to comments, the final rule specifies when records of training must be made, certified, and provided to miners. Finally, the record retention period under the final rule has been changed from the proposal and responds partially to commenters who recommended that the final rule adopt the record retention requirements of part 48.

Section 46.9 of the final rule, unlike the proposal, references both ''training records'' and ''training certificates.'' This terminology recognizes that there is a distinction between a record and a certificate. Operators are required to make records of miner training at specified intervals, but the final rule does not require that certain records be signed and certified by the person responsible for training at the mine until some time after the record has been made. For example, an operator who provides miners with one hour of

annual refresher training every month must record the training after each session, but is not required to certify the record until miners have received the full eight hours of refresher training. A training ''record'' made under final § 46.9(c) becomes a training ''certificate'' after the training has been certified under § 46.9(b)(5). To make clear that the provisions of final § 46.9 apply to both ''records'' and ''certificates,'' the final rule includes both terms, where appropriate.

A number of commenters addressed the issue of recordkeeping. Many commenters supported the flexibility in recordkeeping allowed by the proposal, stating that recordkeeping requirements beyond those included in the proposal would be particularly excessive and onerous for small operators. Other commenters believed that the proposed recordkeeping requirements were too burdensome for small operators. One commenter recommended that recordkeeping requirements under the final rule be flexible and recognize that the offices of many small operators are their homes, and these operators typically do not maintain their records electronically.

Final § 46.9(a) requires you to record and certify that each miner has received training required under this part. Consistent with the Mine Act requirement that certifications be kept on a form approved by the Secretary of Labor, the final rule provides that training records and certificates may be kept on MSHA Form 5000–23, which is the approved form used by operators under part 48 regulations to certify that training has been completed. If you choose to use Form 5000–23, you should be aware that the form was not specifically designed for use under part 46. For that reason, you should take care to include on that form all the information required by part 46. However, under the final rule, as under the proposal, you may also use any other format that contains the minimum information listed in paragraph (b) of this section.

Commenters generally supported the proposal allowing operators the flexibility to choose the appropriate form for their training records. However, one commenter strongly opposed the use of MSHA Form 5000–23, stating that the form is confusing and fraught with ambiguity. This commenter recommended that Form 5000–23 be revised, and until that time it would not be technically feasible to use the form. Another commenter recommended revision of Form 5000–23 to make it more appropriate for the recordkeeping requirements of part 46 and also easier for small operators to use.

Although we do not agree that Form 5000–23 is so confusing as to be unusable, the final rule does not mandate the form's use. An operator may elect not to use that form, and instead may adopt or develop any other form, so long as the information required by final § 46.9(b) is included on the form.

The requirements of final § 46.9(a) allow those of you who may already be using MSHA Form 5000–23 for recording training to continue to use this form under the final rule. However, the final rule allows operators, particularly small operators who are less likely to have formal health and safety programs at their mines, the flexibility to use other formats that are compatible with the information requirements specified in paragraph (b). This provision has been adopted unchanged from the proposed rule. Under this paragraph, a form is approved by us if it contains the information listed in paragraphs (b)(1) through (b)(5), including—

(1) The printed full name of the person who received the training;

(2) The type of training that was received, the duration of the training, the date the training was received, and the name of the competent person who provided the training; and

(3) The name of the mine or independent contractor, MSHA mine identification number or independent contractor identification number, and the location where the training was given.

In response to comments, the final rule requires the ''printed full name'' of the person who received the training, but does not specifically require the first, middle, and last name, as the proposal would have required. One commenter was concerned that many miners used shortened forms of proper names or other nicknames to identify themselves and that some people never go by their first names and middle initials. Another commenter stated that the final rule should allow the use of the name on a miner's payroll record, even though it may not be the miner's full given name. These commenters believed that requiring that training records include all three given names was unnecessary and could result in confusion. In response, the final rule does not specifically require that the record include the trainee's first, middle, and last name. Instead, the miner's ''full name'' must be included. Our expectation is simply that the name indicated on the training form allows ready identification of the miner who received the training.

Final § 46.9(b)(3) requires, where appropriate, the training record to include the name of the independent contractor and MSHA independent contractor identification number. This requirement was not included in the proposal but has been added to the final rule to be consistent with the fact that independent contractors with employees who are miners as well as production-operators are responsible for training for their miner employees.

Section 46.9(b)(4) of the final rule, like the proposal, also incorporates the provisions of section 115(c) of the Mine Act and requires that the form include the statement, printed on the form in bold letters and in a conspicuous manner, that ''false certification is punishable under section 110(a) and (f) of the Federal Mine Safety and Health Act.'' Section 110(a) of the Mine Act provides that an operator who violates a mandatory standard or any other provision of the Act shall be assessed a civil penalty of up to $55,000. Section 110(f) of the Act provides that a person who makes a false statement, representation, or certification in records or other documents filed or maintained under the Act may be subject to criminal prosecution and fined up to $10,000 and imprisoned for up to 5 years.

Under § 46.9(b)(5), the form must also include the statement ''I certify that the above training has been completed,'' signed by the person designated in the MSHA-approved training plan as responsible for health and safety training. This has been adopted without change from the proposal.

In the proposed preamble, we solicited comment on whether miners should be required to sign their training certificates and whether other persons besides the person responsible for training at the mine should be allowed to sign the certificates. In response, one commenter stated that miners should not be required to sign certificates, but that operators or the operator's designee should be allowed to make the certification. Another commenter stated that the operator is ultimately responsible for providing training and should be responsible for certifying that training has been received.

The final rule adopts the proposed requirement that the person designated by the operator as responsible for health and safety training certify that the training has been received as indicated in the record. Although the competent person who provides the training would have the knowledge to certify that the training reflected on the certificate was

provided, we agree with commenters who recommended that the operator or the operator's designee be responsible for training certification. For these reasons, the final rule provides that the individual who oversees health and safety training at the mine must verify and certify that required training has been provided.

The final rule does not require our approval of your recordkeeping format. Your records must simply include the minimum information listed in the final rule. This allows operators to tailor their methods of recordkeeping to their particular operations. We expect that many operators will use a computer-based recordkeeping system. Others may choose to keep certifications on MSHA Form 5000–23. Still others whose records are not computerized may choose to use another paper-based form.

It should be noted that the information required under the final rule differs from the information called for on MSHA Form 5000–23. In some cases, the final rule requires more information than the form, in some cases, less. The required information will allow us to determine compliance with the training requirements. The information will also enable miners and their representatives to determine that necessary training has been provided for every miner.

We will be available to assist you in determining whether alternate record formats are suitable for use in complying with the final rule. We will also provide MSHA Form 5000–23 training certificate forms upon request, for those of you who choose to use them in complying with part 46. You may also obtain copies of Form 5000–23 from out Internet Home Page at www.msha.gov.

The requirements of final § 46.9(c)(1) through (5) have been added to the final rule in response to commenters who questioned when records and certificates of training must be made. One commenter observed that the proposed rule did not recognize the difference between a training record and a certificate of training and that requiring training certification and distribution of copies of the certificates for all attendees after a brief safety meeting would result in an unnecessary recordkeeping burden. This commenter stated that the time needed to issue the training certificates in such a situation could easily exceed the amount of time spent providing the training. Another commenter stated that the final rule should require operators to issue training certificates to miners only upon completion of the entire training program, and not each time incremental training is provided. Still another commenter recommended that the final rule should allow the maintenance of periodic training records in a form consistent with how the training records are kept and that certification should only be required for training programs that have been completed.

The proposed rule did not clearly indicate when operators must make records of miner training and when they must provide training certificates to miners. Some of the comments on the proposed recordkeeping requirements led us to conclude that the proposal was not sufficiently clear on the timing of these requirements and that the final rule must detail the deadlines for both recordkeeping and certification, so there is no question as to when operators must take these actions. The final rule's recordkeeping requirements are also designed to allow us to verify that training has been received by miners by the appropriate deadline. Although these provisions are relatively extensive, we believe that this level of detail is needed to avoid confusion and assist operators in complying with their training responsibilities.

Final § 46.9(c)(1) clarifies when operators must make a record of new miner training under the final rule. A record of new miner training must be made under § 46.9(b) no later than—

(1) When the miner begins work at the mine;

(2) 60 days after the miner begins work at the mine; and

(3) 90 days after the miner begins work at the mine, if applicable.

This means that you must make a record of new miner training that includes the information required in paragraphs (b)(1) through (b)(4) no later than these specified intervals. This will allow us to verify that a new miner has received required training before he or she begins work and also that training in all required subjects has been received by the 60-day deadline. Additionally, operators who provide training to new miners in other subjects to make up the 24 hours of required training must document this training no later than 90 days after the miner begins work. For example, if an MSHA inspector wants to verify that a new miner working at a mine has received all required pre-work training, the inspector will inspect the records required for new miner training under paragraph (c)(1)(i). However, the final rule does not require operators to certify these records and provide them to miners until a miner has completed new miner training. Specifically, final § 46.9(d)(1) requires operators to certify new miner training records when the full 24 hours of training has been completed and also to provide miners with copies of their certificates at that time.

The final rule takes a similar approach in § 46.9(c)(2) for records of newly hired experienced miner training under § 46.6 and requires operators to make records of training no later than—

(1) When the miner begins work at the mine; and

(2) 60 days after the miner begins work at the mine.

Final § 46.9(d) requires newly hired experienced miner records to be certified and provided to miners after the miners have completed all of the newly hired experienced miner training. This is similar to the requirement for certification of new miner training.

Final § 46.9(c)(3) requires operators to record new task training upon completion of the training, and final § 46.9(c)(4) requires operators to make a record of annual refresher training upon completion of each training session. Consistent with the other types of training already discussed, records of annual refresher training are not required to be certified and provided to miners until the miner has received all eight hours of annual refresher training. For example, if an operator satisfies refresher training requirements for miners by providing a one-hour health and safety talk once a month, the operator must document each one-hour session upon its completion under § 46.9(c)(4). However, operators are not required to ensure that these records are certified and copies provided to miners under § 46.9(d) until after miners have received the full eight hours of training.

Final § 46.9(c)(5) provides that a record must be made upon completion of site-specific hazard awareness training provided to miners under § 46.11. This clarifies the intent of the proposal, reflected in the preamble, that records of site-specific hazard awareness training would be required only for ''miners,'' not for those persons at the mine site who do not fall within this definition. Because it was obvious that this distinction was not clear to many commenters, we have included this provision in the final rule. Additionally, final § 46.9(i) further clarifies this issue, which the preamble addresses in greater detail below. You must make a record of training under paragraphs (c)(1) through (c)(5) as prescribed in the following table:

RECORDKEEPING DEADLINES FOR TRAINING PROVISIONS

Type of training	When the record of training must be made
New miner training	No later than when the miner begins to perform work at the mine; 60 calendar days after the miner begins work at the mine, if applicable; and 90 calendar days after the miner begins work at the mine, if applicable.
Newly-hired experienced miner training	No later than when the miner begins to perform work at the mine; and 60 calendar days after the miner begins work at the mine, if applicable.
New task training	Upon completion of new task training.
Annual refresher training	After each session of annual refresher training.
Site-specific hazard awareness training	Upon completion by miners of site-specific hazard awareness training.

Final § 46.9(d)(1) through (d)(5), as already discussed, require operators to ensure that all records of training under paragraphs (c)(1) through (c)(5) have been certified under paragraph (b)(5) and a copy provided to the miner at the completion of the training. Paragraphs (d)(1) through (d)(5) clarify when the different categories of training are considered completed under the final rule and must be certified. These provisions are consistent with § 115(c) of the Mine Act, which requires that operators give miners copies of their training certificates at the completion of each training program. The final rule specifies that certification and distribution of certificates to miners is required—

(1) Upon completion of the 24 hours of new miner training;

(2) Upon completion of newly hired experienced miner training;

(3) At least once every 12 months for new task training, or upon the miner's request, if applicable;

(4) Upon completion of 8 hours of annual refresher training; and

(5) Upon completion of site-specific hazard awareness training provided to miners.

The 12-month certification requirement for task training has been adopted into the final rule from our policy in this area under part 48. Under that policy, operators may provide miners with copies of their task training certificates at 12-month intervals. This is intended to reduce unnecessary paperwork. However, in the event that a miner wishes a copy of the certificate of the task training that he or she has received before the 12-month period has elapsed, the final rule provides that operators must provide a miner with a copy of the task training certificate upon request. You must certify records of training under paragraphs (d)(1) through (d)(5) and provide a copy to the miner as prescribed in the following table:

CERTIFICATION OF RECORDS AND COPY TO MINERS

Type of training	Record must be certified and copy provided to miner—
New miner training	Upon completion of the 24 hours of new miner training.
Newly hired experienced miner training	Upon completion of newly hired experienced miner training.
New task training	At least once every 12 months or upon request by the miner.
Annual refresher training	Upon completion of the 8 hours of annual refresher training.
Site-specific hazard awareness training	Upon completion by miners of site specific hazard awareness training.

Final § 46.9(e), like the proposal, adopts the statutory provision that false certification that training was completed is punishable under section 110(a) and (f) of the Mine Act. This aspect of the proposal received no comment and has been adopted without change into the final rule.

Several commenters were opposed to requiring operators to provide copies of training certificates to miners automatically upon completion of a training program, stating that it would impose an unnecessary, impractical, and burdensome paperwork requirement. These commenters strongly recommended that the final rule require training certificates to be provided to miners only ''upon request,'' similar to the approach taken in the proposal for miners who leave an operator's employ. Other commenters specifically questioned the need for this requirement for records of task training, stating that to require a certificate to be prepared and provided each time task training is given would be administratively difficult and would result in a proliferation of certificates that would not be helpful to employees. These commenters recommended that operators be permitted to maintain records of task training without having to provide copies of the certified records to miners.

The final rule does not adopt these recommendations. The Mine Act clearly requires operators to provide miners with copies of their training certificates upon completion of the training, and the requirements of the final rule are consistent with this statutory requirement. Additionally, the final rule clarifies that operators must provide miners with copies of their certificates only after all training of a particular type has been completed. This minimizes the recordkeeping and paperwork burden on operators, while fulfilling the statutory mandate.

Under final § 46.9(f), as under the proposed rule, you must give a miner a copy of his or her training records and certificates when the miner leaves your employ, upon the miner's request. This adopts the provision in § 115(c) of the Mine Act that miners are ''entitled'' to a copy of their certificates when they terminate their employment with an operator. We interpret the statutory language to mean that a miner must be provided a copy if he or she requests it, but that you do not have to provide copies to miners who do not make such a request. Those commenters who addressed this aspect of the proposal supported this interpretation, and this provision is adopted from the proposal unchanged.

As we indicated in the proposal, we anticipate that miners who are leaving for another job in the mining industry or who intend to return to the mining industry at some point in the future will request copies of their training records. This will enable miners to document their training status under part 46 at other mining operations. However, we also anticipate that some miners will

terminate their employment because they are retiring or otherwise have no expectation of returning to mining, and for these reasons the final rule does not require that you provide these records to the miner automatically.

Final § 46.9(g), like the proposal, requires you to make available at the mine site a copy of each miner's training records and certificates for inspection by us and for examination by miners and their representatives. Under this paragraph, you must also have the capability to produce the records and certificates upon request by us, miners, or their representatives, if you do not maintain these records at the mine site.

Commenters generally supported the flexibility that the proposal would give operators to maintain training records at a location other than the mine site. One commenter contended that it would be highly impractical for many small operators to maintain training records at the mine site, because many mines have no offices or other places to maintain records. Another commenter indicated that some aggregate operations are so small that there are no office facilities, computers, fax machines, or even conventional telephones. This commenter recommended that the final rule allow the retention of training records where the operation's other business records are maintained. If the records were requested by us for examination or by miners or their representative, the commenter suggested that the operator could fax or e-mail them to the person who made the request. However, one commenter expressed concern about allowing training certificates to be maintained away from the mine site, because it could delay MSHA inspectors from identifying untrained miners, who could continue to be exposed to hazards while attempts are made to produce the miners' training records.

Although the proposed rule would have allowed training certificates to be kept at a location away from the mine site, the proposal did not specify a time within which copies of the certificates must be produced after a request by us or by miners. We indicated in the preamble to the proposal that we expected that operators would be able to produce copies of training certificates within a reasonable time, which in most cases would be a relatively short period of time. We solicited comment on whether commenters supported imposing a deadline for operators to produce training certificates that are maintained away from the mine site. Many commenters who addressed this issue recommended that the final rule establish a deadline of one business day after the request for these certificates to be produced.

Section 115(c) of the Mine Act provides that miner training records be ''maintained by the operator'' and ''available for inspection at the mine site.'' The clear purpose of section 115 is to ensure that training records can be inspected by us and examined by miners and their representatives to determine whether miners have received required training at a specific operation.

The use of electronic information accessed by computers is an increasingly common business practice in general industry as well as in the mining industry. This type of technology can provide almost instantaneous communication and transfer of documents, even to remote locations. Electronic recordkeeping is typically more efficient and access to electronic records is often much faster than with traditional paper-based recordkeeping. As a result, we have concluded that if an operator's training records can be quickly accessed at the mine site by e-mail or fax machine, those records are ''available at the mine site'' for purposes of section 115(c) of the Mine Act. Allowing operators to maintain miner training records at a central location will promote the Mine Act's intent of flexibility in minimizing the paperwork burden and will further the objectives of the Paperwork Reduction Act of 1995.

However, we have determined that allowing a specific deadline, such as one business day, for operators to produce training records and certificates could unduly delay us in verifying that miners have received required training. Under section 104(g)(1) of the Mine Act, miners who have not received training required under section 115 must be immediately withdrawn from the mine. For those reasons, the final rule does not allow operators a specific period of time in which to produce training records and certificates. Instead, our expectation is that operators will produce these documents upon request. However, if an operator does not have the ability at the mine site to quickly access records and certificates maintained elsewhere, the operator must maintain the records and certificates at the mine site so that they can be produced in a short period of time for inspection and examination.

We do not believe that this requirement places an unreasonable burden on those operations where electronic access to records is not feasible. These are typically small operations with few employees and, as a result, a limited number of training records and certificates. Because of the small number of records, recordkeeping at the mine site is less problematic.

Final § 46.9(h) requires you to maintain copies of training records and certificates for each currently employed miner during his or her employment, except records and certificates of annual refresher training under § 46.8, which you must maintain for two years. You must also maintain copies of training certificates and training records for at least 60 days after a miner terminates employment.

Under the proposal, operators would have been required to maintain all of a miner's training records as long as the miner continued to be employed by the operator and for one year after the miner terminated his or her employment with that operator. A number of commenters questioned why the proposal would require such a long retention period for training records of currently employed miners. Commenters believed that this was quite burdensome in comparison to the two-year retention period of part 48 for currently employed miners and recommended that the part 48 retention periods be adopted in the part 46 final rule. Another commenter recommended that the final rule require that training records be kept a minimum of 12 months, regardless of whether the miner is still employed by the operator.

We acknowledge that the retention period for records of currently employed miners in the proposed rule could result in a significant recordkeeping burden for miners who remain employed with the same operator over a period of many years. However, we use these records to verify that miners have received required training. It makes sense to require retention of records of new miner training, newly hired experienced miner training, and task training as long as the miner remains employed with the operator, not just for two years. This will allow us to determine that miners have received the necessary initial training and training in new or modified tasks, even several years after the training has been given. On the other hand, retention of records of annual refresher training would not be necessary for more than two years, which is the retention period under part 48. Typically, examination of records over the last 24 months will provide us with a sufficient basis to verify that an operator has complied with refresher training requirements. For these reasons, the final rule does not require you to retain refresher training records and certificates longer than two years.

In response to comments, the final rule requires operators to maintain training records and certificates for at

least 60 days after the miner terminates his or her employment. This is consistent with existing part 48 requirements. As stated above, the proposal would have required operators to keep these records for one year after miners terminate their employment. We are persuaded by those commenters who advocated a 60-day retention period, which allows us to verify that required training has been given to all miners, including miners who recently terminated their employment, while minimizing the recordkeeping burden placed on operators.

Finally, one other commenter recommended that training records for miners be retained for at least 36 months after they terminate their employment with the operator, to be consistent with § 46.5, which allows new miner training courses to be credited towards the final rule's new miner training requirements for up to 36 months after the miner takes the courses. This commenter believed that a 36-month retention period would make it easier for miners to take advantage of this provision. Although this commenter makes a reasonable point, we do not believe it is necessary to impose a 36-month record retention period to address this situation. Instead of requiring a longer retention period in the final rule, we encourage miners to retain copies of their training records and certificates from previous employment. A miner who is terminating his or her employment with an operator and who wants evidence of prior training may obtain copies of his or her training records and certificates. The miner will then be able to document his or her prior training at the new mine.

Paragraph (i) has been added to final § 46.9 in response to comments that reflected commenters' confusion about the recordkeeping requirements for site-specific hazard awareness training. This provision states that you are not required to make a record of site-specific hazard awareness training under § 46.11 for persons who are not miners under § 46.2. However, you must be able to provide evidence to us, upon request, that the training was provided, such as by producing the training materials that are used, the written information distributed to persons upon their arrival at the mine, or a visitor log book that reflects that site-specific hazard awareness training has been given. Many operators already maintain log books where they track visitors to the mine and make entries in the book that indicate that visitors have received appropriate site-specific training. This would be an effective and acceptable method of demonstrating compliance with the requirements for site-specific hazard awareness training under the final rule.

Section 46.10 Compensation for Training

This section of the final rule addresses when training under this part must be conducted and how miners must be compensated when they receive training. This section, like the proposal, adopts the provisions of section 115 of the Mine Act that address compensation for miners who receive required training.

Section 115(b) of the Mine Act provides that health and safety training shall be provided during normal working hours and that miners shall be paid at their normal rate of compensation when they take such training. Section 115(b) also requires that if training is given at a location other than the normal place of work, miners shall be compensated for the additional costs incurred in attending such training.

Paragraph (a) of final § 46.10 incorporates this statutory requirement and provides that health and safety training must be conducted during normal working hours. As discussed earlier in this preamble, the part 48 definition of ''normal working hours'' has been included in the final rule in § 46.2 and provides that normal working hours means ''. . . a period of time during which a miner is otherwise scheduled to work.'' The definition also indicates that training may be conducted on the sixth or seventh working day provided that such work schedules have been established for a period of time to be accepted as the common practice. As discussed under the preamble for § 46.2, we intend that the schedule must have been in place long enough to provide reasonable assurance that the schedule change was not motivated by the desire to train miners on what had traditionally been a non-work day.

Final § 46.10(a), like the proposal, also provides that persons attending such training must be paid at a rate of pay that corresponds to the rate of pay they would have received had they been performing their normal work tasks. This provision has been adopted from part 48, received little comment, and has been adopted unchanged from the proposal.

Final § 46.10(b) requires that miners be compensated for the additional costs, such as mileage, meals, and lodging they may incur in attending training sessions at a location other than the normal place of work. Although we anticipate that much of the training provided under this part will be given at or near miners' normal workplaces, in those cases where miners must travel to receive required training, they are to be fully compensated for their expenses of travel.

Although commenters generally supported the proposed training compensation requirements, they requested clarification on a few issues. One commenter noted that training provided to miners after a long work day or on what would ordinarily be a day off would not be very effective. This commenter's concern reflects the rationale for the statutory requirement that training be conducted during normal working hours. Training provided to miners when they are tired after working an entire shift typically will be less effective than training provided when they are rested and alert.

Several commenters questioned whether travel time to training at locations away from the mine must occur during normal working hours. These commenters indicated that they may need to schedule miners to work longer than their normal shifts on days that the miners receive training. For example, if a miner's normal work shift is eight hours, would the final rule prohibit the miner traveling an hour each way to attend an eight-hour training session, for a total of ten hours?

We do not interpret the statute to mandate such a restrictive result. Under our interpretation, the final rule would not prohibit travel to an off-site training location outside of normal working hours, so long as the actual training occurs during normal working hours. However, a miner is entitled to compensation for travel to off-site training. As a practical matter, we expect that little, if any, off-site training will require extensive travel.

One commenter questioned whether mileage costs must be provided to miners who attend training at a site that is immediately adjacent to the mine site. This commenter stated that because the training location did not qualify as the normal place of work, a strict interpretation of this aspect of the proposal would require the miners to be compensated for mileage costs.

We agree that the statute and this aspect of the final rule can be interpreted in such a way as to produce unreasonable results. However, our intention is to interpret and enforce the final rule in a reasonable manner. In the case described by the commenter, we expect that the costs incurred by miners in traveling to a training location in the vicinity of the normal place of work would be the same as their ordinary

costs of getting to work. Because the statute requires that miners be compensated for additional costs of attending off-site training, we would not require reimbursement for travel costs in such a case. However, miners must be reimbursed for mileage costs in the more typical case where miners must drive a number of miles beyond their normal place of work to an off-site training location.

Finally, a few commenters noted that certain types of training may not be available during normal working hours. For example, miners who wish to take training from the Red Cross may need to take it at night. Although we are sympathetic to these commenters' concerns, the Mine Act specifically prohibits such a practice for training that is provided to satisfy part 46 requirements. We have no discretion to allow training to be provided outside of normal working hours if it is used to satisfy training requirements under this part. As a result, while we do not discourage the participation of miners in relevant safety and health training, such training must be conducted during normal working hours in order for it to be credited toward the minimum requirements of part 46.

Section 46.11 Site-Specific Hazard Awareness Training

This section of the final rule generally adopts the proposed provisions for site-specific hazard awareness training, but includes several changes from the proposal in response to comments. Under the final rule, like the proposal, persons who do not fall within the definition of ''miner'' under § 46.2 are required to receive site-specific hazard awareness training. The final rule also adopts, with some change, the proposed requirement that employees of independent contractors who are ''miners'' must also receive site-specific hazard awareness training at the mines where they work. Site-specific hazard awareness training must be given under the final rule before persons are exposed to mine hazards.

Several commenters stated that the title of proposed § 46.11 should be changed to more accurately describe the type of training that is required by the section. Commenters observed that the training under this section is intended to make persons aware of site-specific hazards before they enter the mine site and are exposed to these hazards. These commenters believed that the meaning of the term ''hazard training'' was unclear and could be confused with task training. We agree with these commenters, and the title of this section has been change to ''Site-Specific Hazard Awareness Training'' to more precisely identify the type of training that is required by this section of the final rule.

Commenters generally supported the concept of providing site-specific hazard awareness training to persons before they are exposed to mine hazards. Several commenters observed that the type of people who come to the mine site and the degree of their exposure to hazards varies tremendously. These commenters stated that the extent of hazard awareness training required by the final rule should vary greatly as well. Several commenters indicated that the type, duration, and delivery of this training should be commensurate with the hazards to which persons at the mine site are exposed.

Paragraph (a) of the final rule adopts the requirements of proposed § 46.11(c) and requires you to provide site-specific hazard awareness training before the affected person is exposed to mine hazards. We believe there is no reason to allow any delay in providing hazard awareness training. In fact, allowing persons to be exposed to mine hazards before they receive hazard awareness training would defeat the purpose of the training. We expect that hazard awareness training will not be overly burdensome and can be effectively provided to affected persons before they enter the mine site. We have moved this provision to the first paragraph of this section in the final rule to emphasize that site-specific hazard awareness training must be provided before the affected person is exposed to mine hazards.

A number of commenters questioned whether operators must provide hazard awareness training to persons who are on mine property but who are not exposed to mine hazards. One commenter used as examples soft drink delivery personnel or other visitors who go no further than the office to perform their work. These commenters recommended that the final rule clarify that hazard awareness training is not required for individuals who come onto mine property but who do not travel or perform work in the portion of the property upon which extraction or production is conducted. Some of these commenters also recommended that the final rule clarify what constitutes a ''mine site'' as that term is used in § 46.11.

As discussed in the preamble for final § 46.2, the final rule defines ''mine site'' as an area of the mine where mining operations occur. The final rule also defines ''mining operations'' to include activities such as mine development, drilling, blasting; maintenance and repair of mining equipment; and associated haulage of materials within the mine. For example, the mine site would include areas where mining operations take place, such as the pit, quarry, stockpiles, mine haul roads, or areas where customers travel or haul material. These definitions are intended to make clear that hazard awareness training is required for persons who are in the area of the mine property where mining-related activity takes place. Persons who are on mine property but who are never in the area of the property where mining operations occur are not required to receive hazard awareness training. For example, we do not intend that hazard awareness training be required for office or staff personnel whose offices are located some distance from the mine site and whose duties never require their presence at the mine site. However, office or staff personnel who travel occasionally about the mine site must receive hazard awareness training, unless they are accompanied by an experienced miner under final § 46.11(f).

Final § 46.11(b) requires that you provide site-specific hazard awareness training to any person who is not a miner as defined in § 46.2 but who is present at a mine site. This section also includes examples of such persons. Paragraphs (b)(1) through (b)(7) include examples of persons who are required to receive hazard awareness training, and the provisions of these paragraphs have been adopted with minor changes from the proposal. These persons include office or staff personnel; scientific workers; delivery workers; customers, including commercial over-the-road truck drivers; construction workers or employees of independent contractors who are not miners under § 46.2; maintenance or service workers who do not work at a mine site for frequent or extended periods; and vendors or visitors. This mirrors the list included in final § 46.2(g)(2) of persons who do not fall within the definition of ''miner'' and is discussed in greater detail in the preamble for that section. This list is intended to assist operators in determining the types of persons who must receive hazard awareness training, but is not meant to be all-inclusive.

The final rule requires hazard awareness training for vendors and visitors who are present at a mine site. Some commenters stated that these individuals are not usually exposed to mine hazards, and therefore they should not have to receive hazard awareness training. However, other commenters stated that this training should be

provided to visitors and vendors before they are exposed to mine hazards. We agree with commenters who believe that a vendor or visitor who will be in the vicinity of mine hazards, even for a limited period of time, should receive hazard awareness training.

We have added the provisions of § 46.11(b)(5) to the final rule to make clear that you must provide site-specific hazard awareness training to construction workers and employees of independent contractors who are not miners. This was the intent under the proposal, but language to that effect has been included in the final rule to ensure that there is no uncertainty about the requirements of final § 46.11. As discussed earlier, we stated in the preamble to the proposal that construction workers would be covered by part 46. However, the proposed rule itself made no specific mention of construction workers. We have addressed that omission in the final rule.

The provisions of final § 46.11(c) have been adopted with some change from proposed § 46.6(d) and take the place of provisions proposed under § 46.11(b). Under final § 46.11(c), you are required to provide miners, such as drillers or blasters, who move from one mine to another mine while remaining employed by the same production-operator or independent contractor with site-specific hazard awareness training for each mine. The provision of the final rule covers miners employed by both the independent contractor and the production-operator. The proposal would have required you to provide hazard training to each person who is an employee of an independent contractor and who is working at the mine as a miner, unless the miner has received newly hired experienced miner training at the mine. However, as explained in the preamble discussion of § 46.6 and in response to comments, we have concluded that miners who move from mine to mine are not ''newly hired'' when the begin work at a new mine if they remain employed by the same employers, whether production-operators or independent contractors. As a result, the final rule does not adopt the proposed option of newly hired experienced miner training for these miners.

Commenters generally supported a requirement for site-specific hazard awareness training for miners if they move from mine site to mine site. Contract drilling and blasting personnel are only two examples of these types of miners. Although these employees must receive comprehensive training because they are ''miners'' under the final rule, they must also receive site-specific hazard awareness training at each new mine before they begin work at the mine. As a practical matter, we expect that many, if not most, independent contractor employees will receive hazard awareness training under final § 46.11(b) because they do not meet the definition of ''miner'' under § 46.2. However, employees of independent contractors who do fall within the definition of ''miner'' also need effective orientation to their new work environments before they begin their job duties. This is consistent with the observations of commenters who stated that some miners move from mine to mine while remaining employed by the same production-operator and that these miners need to receive site-specific hazard awareness training as a minimum before they begin to work at each new mine. We agree with these commenters and § 46.11(c) specifically requires these miners to receive this training, whether employed by production-operators or independent contractors. This requirement recognizes that miners may encounter new or unfamiliar site-specific hazards as they travel from mine to mine.

Final § 46.11(d) has been adopted from the definition of ''hazard training'' that was included in proposed § 46.2. Commenters recommended that we move the definition of ''hazard training'' from § 46.2 to § 46.11, because § 46.11 specifically addresses hazard awareness training requirements. Commenters believed that this would make it easier for the mining community to understand the requirements of § 46.11. We agree with commenters that consolidation of this language in one place is more straightforward, and we have incorporated the language from the definition in proposed § 46.2 into § 46.11 of the final rule. Site-specific hazard awareness training is defined in this paragraph as information or instructions on the hazards a person may be exposed to while on mine property, as well as on applicable emergency procedures. Paragraph (d) further provides that the training must address site-specific health and safety risks, such as unique geologic or environmental conditions, recognition and avoidance of hazards such as electrical and powered-haulage hazards, traffic patterns and control, restricted areas, warning and evacuation signals, evacuation and emergency procedures, or other special safety procedures. The proposal would have provided that the hazards may include site-specific risks and included a similar list.

The final rule makes it mandatory that hazard awareness training cover site-specific risks. This is in response to commenters who pointed out that the purpose of the training is to ensure that persons who are unfamiliar with the mine and with the hazards of a particular operation have been provided with enough information to avoid exposure to hazards while they are at the mine. We recommend that you review the examples of hazards set forth in the final rule and ensure that the site-specific hazard awareness training addresses, at a minimum, all of the risks that are applicable at your mine.

Under final § 46.11(e), like proposed § 46.11(d), you may provide site-specific hazard awareness training through the use of written hazard warnings, oral instruction, signs and posted warnings, walkaround training, or other appropriate means that alert affected persons to site-specific hazards at the mine.

Commenters had varying opinions on how long hazard awareness training should last and what form it should take. Some commenters were concerned that the proposed rule allowed too much flexibility in how the site-specific hazard awareness information would be presented to affected persons. These commenters observed that, in some cases, operators could comply with the requirement for site-specific training exclusively through the use of warning signs, and that such training would be insufficient to protect persons who are unfamiliar with mining operations from the hazards that they may be exposed to at the mine. One commenter recommended that hazard awareness training include some form of personal instruction or interaction, such as walkaround training. Other commenters stated that the final rule should allow operators the flexibility to tailor their hazard awareness training to the specific conditions at their mine.

The final rule, like the proposal, affords operators the discretion to tailor site-specific hazard awareness training to the unique operations and conditions at their mines. However, the training must in all cases be sufficient to alert affected persons to site-specific hazards. Depending on the circumstances and the type and degree of the person's exposure to mine hazards, you may provide hazard awareness training through informal but informative conversations. In other cases, you may choose to provide some form of walkaround training by guiding the trainee around the mine site, pointing out particular hazards or indicating those areas that the person should avoid, or by some combination of these methods.

We also intend that hazard awareness training be appropriate for the individual who is receiving it and that the breadth and depth of training vary depending on the skills, background, and job duties of the recipient. For example, it may be appropriate for you to provide hazard awareness training to customer truck drivers by handing out a card to the drivers alerting them to the mine hazards or directing them away from certain areas of the mine site. More extensive hazard awareness training might be needed for an equipment manufacturer's representative who comes onto mine property to service or inspect a piece of mining equipment. Although this individual may not be on mine property for an extended period, the person's exposure to mine hazards may warrant more training. Appropriate hazard awareness training would typically be more comprehensive for contractor employees who fit the definition of ''miner'' because they are engaged in mining operations. These employees receive comprehensive training but also need orientation to the mine site and information on the mining operations and mine hazards.

The final rule allows you the flexibility to tailor your hazard awareness training to the specific conditions and practices at your mine. However, in most cases, an effective site-specific hazard awareness training program will include a combination of the different types of training listed in this paragraph. For example, you may want to provide oral instructions on the site-specific hazards and give the affected person the opportunity to ask questions about the mine in addition to the use of written handout materials and/or signs and posted warnings. The flexibility provided in the final rule is intended to allow operators to design and implement effective site-specific hazard awareness training programs that are suitable for their mine sites and the persons affected.

Under final § 46.11(f), like proposed § 46.11(e), you are not required to provide site-specific hazard awareness training to any person who is accompanied at all times by an experienced miner who is familiar with the hazards specific to the mine site. The experienced miner is not a ''competent person'' as defined in § 46.2, but the miner must be sufficiently familiar with the mine's operations and its hazards to ensure that the person the miner accompanies is protected from danger while at the mine site. This provision gives you the option of foregoing site-specific hazard awareness training, most likely for one-time visitors. We expect that, in many situations, it may be more expedient for the person to be accompanied, such as a visitor who is being taken on a mine tour.

Several commenters supported this provision and recommended that it be adopted in the final rule. Other commenters took issue with this provision, stating that an escort may not prevent a person unfamiliar with the mining environment from being inadvertently exposed to mine hazards. Other commenters stated that they believed that providing a visitor with an escort while the visitor is at the mine site is the most effective way to protect the visitor from mine hazards. We agree that people unfamiliar with mining can be protected if they are accompanied by an experienced miner at all times. However, although not required, there may be circumstances where it is advisable to provide individuals with some oral instructions before they enter the mine site, even though they will be accompanied by an experienced miner.

You should note that § 46.9(i) of the final rule specifically provides that you are not required to make a record of site-specific hazard awareness training for persons who are not ''miners.'' However, as indicated in § 46.9, you must be able to demonstrate to inspectors that you are in compliance with site-specific hazard awareness training requirements. This issue is addressed in greater detail under the preamble discussion for final § 46.9.

Finally, several commenters questioned whether government agents at the mine site would be covered by the site-specific hazard awareness training requirements in the final rule. The commenter pointed out that current MSHA policy for part 48 exempts government agents from hazard awareness training requirements. We intend that this issue be addressed in the same manner as it is under part 48. Although an argument could be made in favor of requiring government officials to receive hazard awareness training, we believe that these factors are outweighed by the need for these officials to be unimpeded in the exercise of their duties at the mine site. We expect that government agencies whose personnel visit mine sites will ensure that their employees receive adequate instruction and training so that the employees can carry out their duties in a safe and healthful manner.

Section 46.12 Responsibility for Independent Contractor Training

Section 46.12 of the final rule generally adopts the provisions proposed for the responsibility of training, which address the allocation of responsibility for training between production-operators and independent contractors with workers at the production-operators' mine sites. Under the final rule, independent contractors are responsible for ensuring that their employees who are ''miners'' receive comprehensive miner training. This is based on our determination that the contractor, not the production-operator, is in the best position to train his or her employees in the health and safety aspects of their particular tasks. Similarly, production-operators are primarily responsible for ensuring that independent contractor employees who work at the mine site receive required site-specific hazard awareness training. This is consistent with the fact that production-operators are in the best position to provide necessary information about hazards at their operations. Final § 46.12 also includes provisions that are intended to ensure that production-operators and independent contractors share information with one another about hazards at the mine, so that all employees can work safely.

Final § 46.12(a)(1) provides that each production-operator is primarily responsible for ensuring that site-specific hazard awareness training is given to employees of independent contractors. Under the proposal, production-operators would have been primarily responsible for ''providing'' site-specific hazard training to employees of independent contractors.

This aspect of the proposal was the subject of much comment. Many commenters objected to holding production-operators responsible for any aspect of training for independent contractor employees. These commenters maintained that it would be appropriate for the production-operator to provide the independent contractor with information about site-specific hazards, but that responsibility for providing the actual training should rest with the independent contractor. One commenter asserted that production-operators do not always have control of people who come on and off site. Another commenter stated that a requirement that production-operators train contractor employees would require the production-operators to accept responsibility for a very large number of individuals who may visit the mine only on occasion or for relatively low-risk activity. This commenter was concerned that production-operators would have to redirect their attention to contractor employees, away from their own employees who may be working at higher risk jobs.

Other commenters agreed with placing primary responsibility for site-specific hazard awareness training on production-operators. One commenter maintained that the production-operator is the only entity knowledgeable enough to ensure that independent contractor employees are aware of site-specific hazards at the mine site to which they may be exposed. Other commenters insisted that the proposal placed responsibility for training contractor employees where it belongs-on the production-operator for hazard awareness training and on the independent contractor for comprehensive training. Several commenters believed that the proposed requirements would enhance communication between production-operators and independent contractors.

We continue to believe, as indicated in the preamble to the proposed rule, that it is appropriate to place primary responsibility for site-specific hazard awareness training on production-operators. Production-operators have overall responsibility for health and safety conditions at their mine sites and are in the best position to convey information about site-specific hazards to workers who come onto mine property. However, as we explained in the preamble to the proposed rule, final § 46.12(a)(1) does not require production-operators to personally provide site-specific hazard awareness training to the employees of an independent contractor. For these reasons, the language of the final rule varies slightly from the language in the proposal. The final rule provides that production-operators are primarily responsible for ''ensuring'' that independent contractor employees receive required site-specific hazard awareness training. This is intended to clarify that production-operators do not need to provide the training themselves but must ensure that the training has been given. For example, one commenter recommended that the production-operator and the independent contractor coordinate whether the production-operator will provide site-specific hazard awareness training information to independent contractor management, who would then train the contractor employees, or whether the production-operator will provide the information directly to the contractor employees. This is an acceptable approach under the final rule. Consistent with final § 46.4, production-operators may provide independent contractors with site-specific hazard awareness information or training materials and arrange for the contractors to provide the training to the contractors' employees. However, production-operators retain the primary responsibility of ensuring that everyone who comes onto mine sites has received the necessary site-specific hazard awareness training.

A few commenters appeared to misunderstand the requirements of proposed § 46.12(a). For example, one commenter observed that production-operators often hire contractors because production-operators often do not have the equipment or knowledge to do the job. In that instance, the commenter maintained, it would be wrong to expect the production-operator to provide comprehensive training to contractor employees when the production-operator may not be familiar with their work and the associated hazards. In response to this comment, we would like to clarify that the final rule, like the proposal, places primary responsibility on production-operators to ensure training for contractor employees only with regard to site-specific hazard awareness training. Final § 46.12(b)(1), discussed below, explicitly provides that independent contractors are primarily responsible for providing their miner employees with any other training required under this part.

Final § 46.12(a)(2) adopts the proposed requirement that production-operators inform independent contractors of site-specific hazards associated with the mine and the obligation of the contractor to comply with our regulations, including part 46. This aspect of the proposal received little comment, and we have adopted it unchanged into the final rule.

Final § 46.12(b)(1) provides that independent contractors who employ ''miners'' are primarily responsible for providing comprehensive training to their employees (i.e., training under §§ 46.5 through 46.8). Virtually all commenters agreed with this aspect of the proposal. We would point out that this provision does not preclude independent contractors from arranging for the production-operator to provide comprehensive training to the contractors' employees. However, the primary responsibility for comprehensive training for contractor employees continues to rest on the independent contractor.

A few commenters suggested that the final rule require production-operators to verify that independent contractor employees have received all training required under part 46. As we indicated in the preamble to the proposal, the requirements of this section are consistent with our current policy on independent contractors, which provides that production-operators have overall compliance responsibility at their mines, which includes ensuring compliance by independent contractors with the Mine Act and regulations. Independent contractors are responsible for compliance with the Act and regulations with respect to their activities at a particular mine. We also cite independent contractors for violations committed by them and their employees. However, neither this policy nor the provisions of this section change the production-operators' basic responsibilities for compliance with the Act. Production-operators are subject to all provisions of the Act and to all standards and regulations applicable to their mining operations. One way for production-operators to address this responsibility is to confirm when contracting with independent contractors that the contractors' employees will receive health and safety training and to include this as a provision in the contract. It may also be prudent for them to request and maintain evidence of independent contractors' compliance with training requirements.

Under final § 46.12(b)(2), as under the proposal, an independent contractor must inform the production-operator of any hazards of which the contractor is aware that may be created by the performance of the contractor's work at the mine. We did not receive any comments specifically addressing the provisions of this paragraph, and we have adopted it without change into the final rule.

XIV. References

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List of Subjects

30 CFR Part 46

Mine safety and health, Reporting and recordkeeping requirements, Surface mining, Training programs.

30 CFR Part 48

Mine safety and health, Reporting and recordkeeping requirements, Training programs.

Dated: September 23, 1999.

J. Davitt McAteer,

Assistant Secretary for Mine Safety and Health.

Accordingly, under the authority of 30 U.S.C. 811 and for the reasons set out in the preamble, MSHA is amending chapter I, title 30 of the Code of Federal Regulations, as follows:

PART 48—[AMENDED]

1. The authority citation for part 48 continues to read as follows:

Authority: 30 U.S.C. 811, 825.

2. Section 48.21 is amended by adding a new sentence to read as follows:

§ 48.21 Scope.

* * * This part does not apply to training and retraining of miners at shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines, which are covered under 30 CFR Part 46.

3. A new part 46 is added to subchapter H of Title 30 of the Code of Federal Regulations to read as follows:

PART 46—TRAINING AND RETRAINING OF MINERS ENGAGED IN SHELL DREDGING OR EMPLOYED AT SAND, GRAVEL, SURFACE STONE, SURFACE CLAY, COLLOIDAL PHOSPHATE, OR SURFACE LIMESTONE MINES.

Sec.

46.1 Scope.
46.2 Definitions.
46.3 Training plans.
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46.6 Newly hired experienced miner training.
46.7 New task training.
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46.9 Records of training.
46.10 Compensation for training.
46.11 Site-specific hazard awareness training.
46.12 Responsibility for independent contractor training.

Authority: 30 U.S.C. 811, 825.

§ 46.1 Scope.

The provisions of this part set forth the mandatory requirements for training and retraining miners and other persons at shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, and surface limestone mines.

§ 46.2 Definitions.

The following definitions apply in this part:

(a) *Act* means the Federal Mine Safety and Health Act of 1977.

(b) *Competent person* means a person designated by the production-operator or independent contractor who has the ability, training, knowledge, or experience to provide training to miners in his or her area of expertise. The competent person must be able both to effectively communicate the training subject to miners and to evaluate whether the training given to miners is effective.

(c) *Equivalent experience* means work experience where the person performed duties similar to duties performed in mining operations at surface mines. Such experience may include, but is not limited to, work as a heavy equipment operator, truck driver, skilled craftsman, or plant operator.

(d)(1) *Experienced miner* means:

(i) A person who is employed as a miner on April 14, 1999;

(ii) A person who has at least 12 months of cumulative surface mining or equivalent experience on or before October 2, 2000;

(iii) A person who began employment as a miner after April 14, 1999, but before October 2, 2000 and who has received new miner training under § 48.25 of this title or under proposed requirements published April 14, 1999, which are available from the Office of Standards, Regulations and Variances, MSHA, 4015 Wilson Boulevard, Arlington, Virginia 22203; or

(iv) A person employed as a miner on or after October 2, 2000 who has completed 24 hours of new miner training under § 46.5 of this part or under § 48.25 of this title and who has at least 12 cumulative months of surface mining or equivalent experience.

(2) Once a miner is an experienced miner under this section, the miner will retain that status permanently.

(e) *Independent contractor* means any person, partnership, corporation, subsidiary of a corporation, firm, association, or other organization that contracts to perform services at a mine under this part.

(f) *Mine site* means an area of the mine where mining operations occur.

(g)(1) *Miner* means:

(i) Any person, including any operator or supervisor, who works at a mine and who is engaged in mining operations. This definition includes independent contractors and employees of independent contractors who are engaged in mining operations; and

(ii) Any construction worker who is exposed to hazards of mining operations.

(2) The definition of ''miner'' does not include scientific workers; delivery workers; customers (including commercial over-the-road truck drivers); vendors; or visitors. This definition also does not include maintenance or service workers who do not work at a mine site for frequent or extended periods.

(h) *Mining operations* means mine development, drilling, blasting, extraction, milling, crushing, screening, or sizing of minerals at a mine; maintenance and repair of mining equipment; and associated haulage of materials within the mine from these activities.

(i) *New miner* means a person who is beginning employment as a miner with a production-operator or independent contractor and who is not an experienced miner.

(j) *Newly hired experienced miner* means an experienced miner who is beginning employment with a production-operator or independent contractor. Experienced miners who move from one mine to another, such as drillers and blasters, but who remain employed by the same production-operator or independent contractor are not considered newly hired experienced miners.

(k) *Normal working hours* means a period of time during which a miner is otherwise scheduled to work, including the sixth or seventh working day if such a work schedule has been established for a sufficient period of time to be accepted as the common practice of the production-operator or independent contractor, as applicable.

(l) *Operator* means any production-operator, or any independent contractor whose employees perform services at a mine.

(m) *Production-operator* means any owner, lessee, or other person who operates, controls, or supervises a mine under this part.

(n) *Task* means a work assignment or component of a job that requires specific job knowledge or experience.

(o) *We* or *us* means the Mine Safety and Health Administration (MSHA).

(p) *You* means production-operators and independent contractors.

§ 46.3 Training plans.

(a) You must develop and implement a written plan, approved by us under either paragraph (b) or (c) of this section, that contains effective programs for training new miners and newly hired experienced miners, training miners for new tasks, annual refresher training, and site-specific hazard awareness training.

(b) A training plan is considered approved by us if it contains, at a minimum, the following information:

(1) The name of the production-operator or independent contractor, mine name(s), and MSHA mine identification number(s) or independent contractor identification number(s);

(2) The name and position of the person designated by you who is responsible for the health and safety training at the mine. This person may be the production-operator or independent contractor;

(3) A general description of the teaching methods and the course materials that are to be used in the training program, including the subject areas to be covered and the approximate time or range of time to be spent on each subject area.

(4) A list of the persons and/or organizations who will provide the training, and the subject areas in which each person and/or organization is competent to instruct; and

(5) The evaluation procedures used to determine the effectiveness of training.

(c) A plan that does not include the minimum information specified in paragraphs (b)(1) through (b)(5) of this section must be submitted to and approved by the Regional Manager, Educational Field Services Division, or designee, for the region in which the mine is located. You also may voluntarily submit a plan for Regional Manager approval. You must notify miners or their representatives when you submit a plan for Regional Manager approval. Within two weeks of receipt or posting of the plan, miners and their representatives may also request review and approval of the plan by the Regional Manager and must notify the production-operator or independent contractor of such request.

(d) You must provide the miners' representative, if any, with a copy of the plan at least 2 weeks before the plan is implemented or, if you request MSHA approval of your plan, at least two weeks before you submit the plan to the Regional Manager for approval. At mines where no miners' representative has been designated, you must post a copy of the plan at the mine or provide a copy to each miner at least 2 weeks before you implement the plan or submit it to the Regional Manager for approval.

(e) Within 2 weeks following the receipt or posting of the training plan under paragraph (d) of this section, miners or their representatives may submit written comments on the plan to you, or to the Regional Manager, as appropriate.

(f) The Regional Manager must notify you and miners or their representatives in writing of the approval, or status of the approval, of the training plan within 30 calendar days of the date we received the training plan for approval, or within 30 calendar days of the date we received the request by a miner or miners' representative that we approve your plan.

(g) You must provide the miners' representative, if any, with a copy of the approved plan within one week after approval. At mines where no miners' representative has been designated, you must post a copy of the plan at the mine or provide a copy to each miner within one week after approval.

(h) If you, miners, or miners' representatives wish to appeal a decision of the Regional Manager, you must send the appeal, in writing, to the Director for Educational Policy and Development, MSHA, 4015 Wilson Boulevard, Arlington, Virginia 22203, within 30 calendar days after notification of the Regional Manager's decision. The Director will issue a final decision of the Agency within 30 calendar days after receipt of the appeal.

(i) You must make available at the mine a copy of the current training plan for inspection by us and for examination by miners and their representatives. If the training plan is not maintained at the mine, you must have the capability to provide the plan within one business day upon request by us, miners, or their representatives.

(j) You must comply with the procedures for plan approval under this section whenever the plan undergoes revisions.

(k) The addresses for the EFS Regional Managers are as follows. Current information on the EFS organization is available on MSHA's Internet Home Page at http://www.msha.gov.

Eastern Regional Manager

Educational Field Services, National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813–9426, Telephone: (304) 256–3223, FAX: (304) 256–3319, E-mail: EFS__EAST@MSHA.GOV

Western Regional Manager

Educational Field Services, P.O. Box 25367, Denver, CO 80225–0367, Telephone: (303) 231–5434, FAX: (304) 231–5474, E-mail: EFS__WEST@MSHA.GOV

§ 46.4 Training plan implementation.

(a) You must ensure that each program, course of instruction, or training session is:

(1) Conducted in accordance with the written training plan;

(2) Presented by a competent person; and

(3) Presented in language understood by the miners who are receiving the training.

(b) You may conduct your own training programs or may arrange for training to be conducted by: state or federal agencies; associations of production-operators or independent contractors; miners' representatives; consultants; manufacturers' representatives; private associations; educational institutions; or other training providers.

(c) You may substitute, as applicable, health and safety training required by the Occupational Safety and Health Administration (OSHA), or other federal or state agencies to meet requirements under this part. This training must be relevant to training subjects required in this part. You must document the

training in accordance with § 46.9 of this part.

(d) Training methods may consist of classroom instruction, instruction at the mine, interactive computer-based instruction or other innovative training methods, alternative training technologies, or any combination of training methods.

(e) Employee health and safety meetings, including informal health and safety talks and instruction, may be credited under this part toward either new miner training, newly hired experienced miner training, or annual refresher training requirements, as appropriate, provided that you document each training session in accordance with § 46.9 of this part. In recording the duration of training, you must include only the portion of the session actually spent in training.

§ 46.5 New miner training.

(a) Except as provided in paragraphs (f) and (g) of this section, you must provide each new miner with no less than 24 hours of training as prescribed by paragraphs (b), (c), and (d). Miners who have not yet received the full 24 hours of new miner training must work where an experienced miner can observe that the new miner is performing his or her work in a safe and healthful manner.

(b) Before a new miner begins work at the mine—	You must provide the miner with no less than 4 hours of training in the following subjects, which must also address site-specific hazards: (1) An introduction to the work environment, including a visit and tour of the mine, or portions of the mine that are representative of the entire mine (walkaround training). The method of mining or operation utilized must be explained and observed; (2) Instruction on the recognition and avoidance of electrical hazards and other hazards present at the mine, such as traffic patterns and control, mobile equipment (e.g., haul trucks and front-end loaders), and loose or unstable ground conditions; (3) A review of the emergency medical procedures, escape and emergency evacuation plans, in effect at the mine, and instruction on the firewarning signals and firefighting procedures; (4) Instruction on the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, and the mandatory health and safety standards pertinent to such tasks; (5) Instruction on the statutory rights of miners and their representatives under the Act; (6) A review and description of the line of authority of supervisors and miners' representatives and the responsibilities of such supervisors and miners' representatives; and (7) An introduction to your rules and procedures for reporting hazards.
(c) No later than 60 calendar days after a new miner begins work at the mine—	You must provide the miner with training in the following subject: (1) Instruction and demonstration on the use, care, and maintenance of self-rescue and respiratory devices, if used at the mine; and (2) A review of first aid methods.
(d) No later than 90 calendar days after a new miner begins work at the mine—	You must provide the miner with the balance, if any, of the 24 hours of training on any other subjects that promote occupational health and safety for miners at the mine.

(e) Practice under the close observation of a competent person may be used to fulfill the requirement for training on the health and safety aspects of an assigned task in paragraph (b)(4) of this section, if hazard recognition training specific to the assigned task is given before the miner performs the task.

(f) A new miner who has less than 12 cumulative months of surface mining or equivalent experience and has completed new miner training under this section or under § 48.25 of this title within 36 months before beginning work at the mine does not have to repeat new miner training. However, you must provide the miner with training specified in paragraph (b) of this section before the miner begins work at the mine.

(g) A new miner training course completed under § 48.5 or § 48.25 of this title may be used to satisfy the requirements of paragraphs (a), (b), and (c) of this section, if the course was completed by the miner within 36 months before beginning work at the mine; and the course is relevant to the subjects specified in paragraphs (b) and (c) of this section.

§ 46.6 Newly hired experienced miner training.

(a) Except as provided in paragraph (f) of this section, you must provide each newly hired experienced miner with training as prescribed by paragraphs (b) and (c).

(b) Before a newly hired experienced miner begins work at the mine—	You must provide the miner with training in the following subjects, which must also address site-specific hazards: (1) An introduction to the work environment, including a visit and tour of the mine, or portions of the mine that are representative of the entire mine (walkaround training). The method of mining or operation utilized must be explained and observed; (2) Instruction on the recognition and avoidance of electrical hazards and other hazards present at the mine, such as traffic patterns and control, mobile equipment (e.g., haul trucks and front-end loaders), and loose or unstable ground conditions; (3) A review of the emergency medical procedures, escape and emergency evacuation plans, in effect at the mine, and instruction on the firewarning signals and firefighting procedures; (4) Instruction on the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, and the mandatory health and safety standards pertinent to such tasks; (5) Instruction on the statutory rights of miners and their representatives under the Act; (6) A review and description of the line of authority of supervisors and miners' representatives and the responsibilities of such supervisors and miners' representatives; and (7) An introduction to your rules and procedures for reporting hazards.

(c) No later than 60 calendar days after a newly hired experienced miner begins work at the mine—	You must provide the miner with an instruction and demonstration on the use, care, and maintenance of self-rescue and respiratory devices, if used at the mine.

(d) Practice under the close observation of a competent person may be used to fulfill the requirement for training on the health and safety aspects of an assigned task in paragraph (b)(4) of this section, if hazard recognition training specific to the assigned task is given before the miner performs the task.

(e) In addition to subjects specified in paragraphs (b) and (c) of this section, you may provide training on any other subjects that promote occupational health and safety for miners.

(f) You are not required to provide a newly hired experienced miner who returns to the same mine, following an absence of 12 months or less, with the training specified in paragraphs (b) and (c) of this section. Instead you must provide such miner with training on any changes at the mine that occurred during the miner's absence that could adversely affect the miner's health or safety. This training must be given before the miner begins work at the mine. If the miner missed any part of annual refresher training under § 46.8 of this part during the absence, you must provide the miner with the missed training no later than 90 calendar days after the miner begins work at the mine.

§ 46.7 New task training.

(a) You must provide any miner who is reassigned to a new task in which he or she has no previous work experience with training in the health and safety aspects and safe work procedures specific to that new task. This training must be provided before the miner performs the new task.

(b) If a change occurs in a miner's assigned task that affects the health and safety risks encountered by the miner, you must provide the miner with training under paragraph (a) of this section that addresses the change.

(c) You are not required to provide new task training under paragraphs (a) and (b) of this section to miners who have received training in a similar task or who have previous work experience in the task, and who can demonstrate the necessary skills to perform the task in a safe and healthful manner. To determine whether task training under this section is required, you must observe that the miner can perform the task in a safe and healthful manner.

(d) Practice under the close observation of a competent person may be used to fulfill the requirement for task training under this section, if hazard recognition training specific to the assigned task is given before the miner performs the task.

(e) Training provided under this section may be credited toward new miner training, as appropriate.

§ 46.8 Annual refresher training.

(a) You must provide each miner with no less than 8 hours of annual refresher training—

(1) No later than 12 months after the miner begins work at the mine, or no later than March 30, 2001, whichever is later; and

(2) Thereafter, no later than 12 months after the previous annual refresher training was completed.

(b) The refresher training must include instruction on changes at the mine that could adversely affect the miner's health or safety.

(c) Refresher training must also address other health and safety subjects that are relevant to mining operations at the mine. Recommended subjects include, but are not limited to: applicable health and safety requirements, including mandatory health and safety standards; transportation controls and communication systems; escape and emergency evacuation plans, firewarning and firefighting; ground conditions and control; traffic patterns and control; working in areas of highwalls; water hazards, pits, and spoil banks; illumination and night work; first aid; electrical hazards; prevention of accidents; health; explosives; and respiratory devices. Training is also recommended on the hazards associated with the equipment that has accounted for the most fatalities and serious injuries at the mines covered by this rule, including: mobile equipment (haulage and service trucks, front-end loaders and tractors); conveyor systems; cranes; crushers; excavators; and dredges. Other recommended subjects include: maintenance and repair (use of hand tools and welding equipment); material handling; fall prevention and protection; and working around moving objects (machine guarding).

§ 46.9 Records of training.

(a) You must record and certify on MSHA Form 5000–23, or on a form that contains the information listed in paragraph (b) of this section, that each miner has received training required under this part.

(b) The form must include:

(1) The printed full name of the person trained;

(2) The type of training, the duration of the training, the date the training was received, the name of the competent person who provided the training:

(3) The name of the mine or independent contractor, MSHA mine identification number or independent contractor identification number, and location of training (if an institution, the name and address of the institution).

(4) The statement, ''False certification is punishable under § 110(a) and (f) of the Federal Mine Safety and Health Act,'' printed in bold letters and in a conspicuous manner; and

(5) A statement signed by the person designated in the MSHA-approved training plan for the mine as responsible for health and safety training, that states ''I certify that the above training has been completed.''

(c) You must make a record of training under paragraphs (b)(1) through (b)(4) of this section—

(1) For new miner training under § 46.5, no later than—

(i) when the miner begins work at the mine as required under § 46.5(b);

(ii) 60 calendar days after the miner begins work at the mine as required under § 46.5(c); and

(iii) 90 calendar days after the miner begins work at the mine as required under § 46.5(d), if applicable.

(2) For newly hired experienced miner training under § 46.6, no later than—

(i) when the miner begins work at the mine; and

(ii) 60 calendar days after the miner begins work at the mine.

(3) Upon completion of new task training under § 46.7;

(4) After each session of annual refresher training under § 46.8; and

(5) Upon completion by miners of site-specific hazard awareness training under § 46.11.

(d) You must ensure that all records of training under paragraphs (c)(1) through (c)(5) of this section are certified under paragraph (b)(5) of this section and a copy provided to the miner—

(1) Upon completion of the 24 hours of new miner training;

(2) Upon completion of newly hired experienced miner training;

(3) At least once every 12 months for new task training, or upon request by the miner, if applicable;

(4) Upon completion of the 8 hours of annual refresher training; and

(5) Upon completion by miners of site-specific hazard awareness training.

(e) False certification that training was completed is punishable under § 110(a) and (f) of the Act.

(f) When a miner leaves your employ, you must provide each miner with a copy of his or her training records and certificates upon request.

(g) You must make available at the mine a copy of each miner's training records and certificates for inspection by us and for examination by miners and their representatives. If training certificates are not maintained at the mine, you must be able to provide the certificates upon request by us, miners, or their representatives.

(h) You must maintain copies of training certificates and training records for each currently employed miner during his or her employment, except records and certificates of annual refresher training under § 46.8, which you must maintain for only two years. You must maintain copies of training certificates and training records for at least 60 calendar days after a miner terminates employment.

(i) You are not required to make records under this section of site-specific hazard awareness training you provide under § 46.11 of this part to persons who are not miners under § 46.2. However, you must be able to provide evidence to us, upon request, that the training was provided, such as the training materials that are used; copies of written information distributed to persons upon their arrival at the mine; or visitor log books that indicate that training has been provided.

§ 46.10 Compensation for training.

(a) Training must be conducted during normal working hours. Persons required to receive training must be paid at a rate of pay that corresponds to the rate of pay they would have received had they been performing their normal work tasks.

(b) If training is given at a location other than the normal place of work, persons required to receive such training must be compensated for the additional costs, including mileage, meals, and lodging, they may incur in attending such training sessions.

§ 46.11 Site-specific hazard awareness training.

(a) You must provide site-specific hazard awareness training before any person specified under this section is exposed to mine hazards.

(b) You must provide site-specific hazard awareness training, as appropriate, to any person who is not a miner as defined by § 46.2 of this part but is present at a mine site, including:

(1) Office or staff personnel;

(2) Scientific workers;

(3) Delivery workers;

(4) Customers, including commercial over-the-road truck drivers;

(5) Construction workers or employees of independent contractors who are not miners under § 46.2 of this part;

(6) Maintenance or service workers who do not work at the mine site for frequent or extended periods; and

(7) Vendors or visitors.

(c) You must provide miners, such as drillers or blasters, who move from one mine to another mine while remaining employed by the same production-operator or independent contractor with site-specific hazard awareness training for each mine.

(d) Site-specific hazard awareness training is information or instructions on the hazards a person could be exposed to while at the mine, as well as applicable emergency procedures. The training must address site-specific health and safety risks, such as unique geologic or environmental conditions, recognition and avoidance of hazards such as electrical and powered-haulage hazards, traffic patterns and control, and restricted areas; and warning and evacuation signals, evacuation and emergency procedures, or other special safety procedures.

(e) You may provide site-specific hazard awareness training through the use of written hazard warnings, oral instruction, signs and posted warnings, walkaround training, or other appropriate means that alert persons to site-specific hazards at the mine.

(f) Site-specific hazard awareness training is not required for any person who is accompanied at all times by an experienced miner who is familiar with hazards specific to the mine site.

§ 46.12 Responsibility for independent contractor training.

(a)(1) Each production-operator has primary responsibility for ensuring that site-specific hazard awareness training is given to employees of independent contractors who are required to receive such training under § 46.11 of this part.

(2) Each production-operator must provide information to each independent contractor who employs a person at the mine on site-specific mine hazards and the obligation of the contractor to comply with our regulations, including the requirements of this part.

(b)(1) Each independent contractor who employs a miner, as defined in § 46.2, at the mine has primary responsibility for complying with §§ 46.3 through 46.10 of this part, including providing new miner training, newly hired experienced miner training, new task training, and annual refresher training.

(2) The independent contractor must inform the production-operator of any hazards of which the contractor is aware that may be created by the performance of the contractor's work at the mine.

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Part IV

Office of Management and Budget

1998 Standard Occupational Classification; Notice

OFFICE OF MANAGEMENT AND BUDGET

1998 Standard Occupational Classification

AGENCY: Office of Management and Budget, Executive Office of the President.

ACTION: Notice of final decisions.

SUMMARY: Under title 44 U.S.C. 3504, the Office of Management and Budget (OMB) is announcing final decisions for the 1998 Standard Occupational Classification (SOC). In consultation with the Standard Occupational Classification Revision Policy Committee (SOCRPC), OMB based its decisions on public comments received in response to the SOCRPC's final recommendations that were published in the **Federal Register** on August 5, 1998 (63 FR 41895–41923). The 1998 Standard Occupational Classification replaces the 1980 version. It covers all jobs in the national economy, including occupations in the public, private, and military sectors.

All Federal agencies that collect occupational data will use the 1998 SOC. Similarly, all State and local government agencies, as well as private sector organizations, are strongly encouraged to use this national system that provides a common language for categorizing occupations in the world of work. The new SOC system will be used by the Occupational Employment Statistics program of the Bureau of Labor Statistics for gathering occupational information. It will also replace the Bureau of the Census' 1990 occupational classification system and will be used for the 2000 Census. In addition, the new SOC will serve as the framework for information being gathered through the Department of Labor's Occupational Information Network (O*NET) which will replace the Dictionary of Occupational Titles (DOT).

In four prior **Federal Register** notices (February 28, 1995, 60 FR 10998–11002; October 5, 1995, 60 FR 52284–52286; July 7, 1997, 62 FR 36337–36409; and August 5, 1998 (63 FR 41895–41923)), OMB and the SOCRPC requested comment on the uses of occupational data; the existing 1980 SOC classification principles, purpose and scope, and conceptual options; the SOCRPC's proposed revision process; the composition of detailed occupations; the hierarchical structure and numbering system; and update procedures.

The hierarchical structure, numbering system, and occupational categories of the 1998 SOC are presented in Appendix A of this notice. Changes from the SOCRPC's final recommendations are outlined below in the **SUPPLEMENTARY INFORMATION** section. The SOCRPC is preparing the 1998 Standard Occupational Classification Manual for publication. Committee members have completed definitions and assigned associated titles; agencies with occupational classification systems are developing crosswalks from their existing systems to the 1998 SOC. To ensure that the successful efforts of the SOCRPC continue and that the 1998 SOC remains appropriate to the world of work, OMB plans to establish a new standing committee, the Standard Occupational Classification Policy Committee (SOCPC). The SOCPC will consult periodically to ensure that the implementation of the 1998 SOC is comparable across Federal agencies. This consultation will include regularly scheduled interagency communication to ensure a smooth transition to the 1998 SOC. The SOCPC will also perform SOC maintenance functions, such as recommending changes in the SOC occupational definitions and placement of new occupations. It is anticipated that the next major review and revision of the SOC will begin in 2005 in preparation for use in the 2010 Decennial Census.

DATES: Publication of the 1998 Standard Occupational Classification Manual is planned for the first half of 2000. Federal statistical agencies will begin using the 1998 SOC for occupational data they publish for reference years beginning on or after January 1, 2000. (The Bureau of Labor Statistics will begin using it for some data series for the last quarter of 1999.) Further information can be found in the **SUPPLEMENTARY INFORMATION** section below. Use of the SOC for nonstatistical purposes (*e.g.*, for administrative, regulatory, or taxation functions) will be determined by the agency or agencies that have chosen to use the SOC for nonstatistical purposes. Readers interested in the effective dates for the use of the 1998 SOC for nonstatistical purposes should contact the relevant agency to determine the agency's plans, if any, for a transition from the 1980 SOC to the 1998 SOC.

ADDRESSES: Correspondence about the adoption and implementation of the SOC as described in this **Federal Register** notice should be sent to: Katherine K. Wallman, Chief Statistician, Office of Management and Budget, 10201 New Executive Office Building, Washington, DC 20503, telephone number: (202) 395–3093, FAX number: (202) 395–7245 or E-mailed to <soc@omb.eop.gov≤.

Electronic Availability: This document is available on the Internet from the Bureau of Labor Statistics via WWW browser and E-mail. To obtain this document via WWW browser, connect to <http://stats.bls.gov/soc/soc__home.htm>. This WWW page contains links to the 1998 SOC major groups; the complete 1998 SOC hierarchical structure and detailed occupational definitions; a numerical index of detailed occupations; an SOC user's guide; and an SOC search capability, as well as previous SOC **Federal Register** notices and related documents. To obtain this document via E-mail, send a message to <socrevision@bls.gov>.

Inquiries about the definitions of particular occupations or requests for electronic copies of the SOC structure that cannot be satisfied by use of the web site should be addressed to Laurie Salmon, Standard Occupational Classification Revision Policy Committee, Bureau of Labor Statistics, Room 4840, Washington, DC 20212, telephone number: (202) 606–6511, FAX number: (202) 606–6645.

FOR FURTHER INFORMATION CONTACT: Paul Bugg, 10201 New Executive Office Bldg., Washington, DC 20503, E-mail address: soc@omb.eop.gov, telephone number: (202) 395–3093, FAX number: (202) 395–7245.

SUPPLEMENTARY INFORMATION:

Purpose

The 1998 SOC was developed in response to a concern that the 1980 SOC did not meet the need for a universal occupational classification system that all Federal Government agencies and other collectors of occupational information would adopt. Despite the existence of the 1980 SOC, a variety of Government agencies have continued to collect and use occupational data based on unique classification systems designed for their individual needs. The existence of different occupational data collection systems in the Federal Government presents a major problem. Comparisons across these systems are limited by the completeness and accuracy of crosswalks between them. For example, data on occupation by educational attainment collected through the Current Population Survey can only be used with data on employment from the Occupational Employment Statistics program for those occupations that are considered comparable in both data collections. Observing this problem, the Bureau of Labor Statistics hosted an International

Occupational Classification Conference in September 1992 to establish a new context for the SOC revision process. Many new ideas and approaches were presented that subsequently influenced the SOCRPC. Similarly, the Employment and Training Administration's Advisory Panel for the Dictionary of Occupational Titles had completed a review of the dictionary and in May 1993 had recommended substantial changes. It became increasingly clear that development of an occupational classification standard that garners universal adherence would aid analysis of demographic, economic, educational, and other factors that affect employment, wages, and other worker characteristics.

Revision Process

Persuaded that a reconciliation was in order, OMB invited all Federal agencies with occupational classification systems to join together to revise the SOC and chartered the SOC Revision Policy Committee (SOCRPC) in October 1994. The SOCRPC included representatives from the Bureau of Labor Statistics, the Bureau of the Census, the Defense Manpower Data Center, the Employment and Training Administration, and the Office of Personnel Management. In addition, *ex-officio* members included the National Occupational Information Coordinating Committee, the National Science Foundation, and OMB. Other Federal agencies, such as the Department of Education, the Department of Health and Human Services, and the Equal Employment Opportunity Commission, participated either in meetings of the SOCRPC or in the Federal Consultation Group, a group of Federal agency representatives with interests in the outcome of the SOC revision.

In February 1995, the Standard Occupational Classification Revision Policy Committee published a notice in the **Federal Register** (February 28, 1995, 60 FR 10998–11002) calling for comments specifically on the following: (1) the uses of occupational data, (2) the purpose and scope of occupational classification, (3) the principles underlying the 1980 SOC, (4) conceptual options for the new SOC, and (5) the SOC revision process. The SOCRPC chose the Occupational Employment Statistics system, an occupational classification currently used by the Bureau of Labor Statistics to gather occupational information, as the starting point for the new Standard Occupational Classification framework. The Committee also relied heavily on the Department of Labor's Occupational Information Network (O*NET), which is replacing the Dictionary of Occupational Titles. To carry out the bulk of the revision effort, the Committee created six work groups to examine occupations in the following areas:

Administrative and Clerical occupations;
Science, Engineering, Law, Health, Education, and Arts occupations;
Services and Sales occupations;
Agriculture, Construction, Extraction, and Transportation occupations;
Mechanical and Production occupations; and
Military Specific occupations.

The Committee charged the work groups with ensuring that the occupations under their consideration conformed to the criteria laid out in the October 5, 1995, **Federal Register** notice (60 FR 52284–52286):

The Classification should cover all occupations in which work is performed for pay or profit, including work performed in family-operated enterprises by family members who are not directly compensated. It should exclude occupations unique to volunteers.

The Classification should reflect the current occupational structure of the United States and have sufficient flexibility to assimilate new occupations into the structure as they become known.

While striving to reflect the current occupational structure, the Classification should maintain linkage with past systems. The importance of historical comparability should be weighed against the desire for incorporating substantive changes to occupations occurring in the work force.

Occupations should be classified based upon work performed, skills, education, training, licensing, and credentials.

Occupations should be classified in homogeneous groups that are defined so that the content of each group is clear.

Each occupation should be assigned to only one group at the lowest level of the Classification.

The employment size of an occupational group should not be the major reason for including or excluding it from separate identification.

Supervisors should be identified separately from the workers they supervise wherever possible in keeping with the real structure of the world of work. An exception should be made for professional and technical occupations where supervisors or lead workers should be classified in the appropriate group with the workers they supervise.

Apprentices and trainees should be classified with the occupations for which they are being trained, while helpers and aides should be classified separately since they are not in training for the occupation they are helping.

Comparability with the International Standard Classification of Occupations (ISCO–88) should be considered in the structure, but should not be an overriding factor.

In carrying out their reviews, the work groups carefully considered all proposals received in response to **Federal Register** notices issued by OMB and the SOCRPC. The work groups invited experts from many areas to testify and also requested written recommendations using the SOC revision guidelines. Their procedure was to develop a proposed structure plus a title, a definition, and a list of associated job titles. Each proposed occupation was reviewed by the SOCRPC.

General Characteristics of the Revised SOC

The 1998 SOC is designed to ensure comparable occupational classification across the spectrum of surveys of the world of work while mirroring the current occupational structure in the Nation. The new system should lead to the collection of meaningful data about the workforce and benefit various users of occupational data. These users include education and training planners; job seekers, students, and others seeking career guidance; various government programs, including occupational safety and health, welfare-to-work, and equal employment opportunity; and private companies wishing to relocate or to set salary scales.

Reflecting advances in factory and office automation and information technology, the shift to a services-oriented economy, and increasing concern for the environment, the new classification structure has more professional, technical, and service occupations and fewer production and administrative support occupations. Although the designation ''professional'' does not exist in the 1998 SOC, the new classification system reflects expanded coverage of major occupational groups, such as computer and mathematical occupations, community and social services occupations, healthcare practitioners and technical occupations, and legal occupations. Designers, systems analysts, drafters, counselors, dentists, physicians, artists, and social scientists are among the occupations that are covered in greater detail in the 1998 SOC. For example, the SOC breaks out a number of designer specialties '' commercial and industrial, fashion, floral, graphic, interior, and set and exhibit designers. Similarly, the new classification breaks out additional social science specialties '' market and survey researchers, sociologists, anthropologists and archeologists, geographers, historians, and political scientists.

Examples of new occupations include environmental engineers; environmental engineering technicians; environmental

scientists and specialists, including health; environmental science and protection technicians, including health; computer software engineers; multimedia artists and animators; and forensic science technicians. In the services groups, gaming occupations, such as gaming and sports book writers and runners, have been added as a result of growth among these occupations in several States. Other relatively new service occupations include skin care specialists, concierges, massage therapists, and fitness trainers and aerobics instructors.

Production occupations, on the other hand, have undergone significant consolidation. For example, various printing machine operators have been combined into one occupation in the 1998 SOC. Because many factories now employ one person to perform the tasks of setting up and operating machines, both tasks have been combined into one occupation. In addition, many factories now employ teams in which each team member is able to perform all or most of the team assembly activities; these people are included in the occupation, team assemblers. The SOC also includes relatively new production occupations such as semiconductor processors and fiberglass laminators and fabricators.

Office and administrative support occupations ‘‘ for example, office machine operators ‘‘ also have been consolidated. Relatively new office and administrative support occupations include customer service representatives and executive secretaries and administrative assistants.

To accommodate the needs of different data collection agencies, the SOC enables data collection at more detailed or less detailed levels, while still allowing data comparability at given levels of the hierarchy. In response to comments received in reference to the July 7, 1997, **Federal Register** notice (62 FR 36337–36409), the SOCRPC significantly modified the hierarchical structure and numbering system of the revised SOC to ensure that all detailed occupations are placed within a broad occupation. In the 1998 SOC, there are four levels of aggregation: (1) Major group; (2) minor group; (3) broad occupation; and (4) detailed occupation. All occupations are clustered into 23 major groups (listed below), such as Management Occupations or Healthcare Practitioners and Technical Occupations. These major groups are broken down into occupationally-specific minor groups, such as Operations Specialties Managers in the Management Occupations major group or Health Diagnosing and Treating Practitioners in the Healthcare Practitioners and Technical Occupations major group. Minor groups, in turn, are divided into broad occupations, such as Human Resources Managers or Therapists, which are further divided into detailed occupations, such as Compensation and Benefits Managers, or Physical Therapists.

The 1998 SOC contains 822 detailed occupations, aggregated into 452 broad occupations. These broad occupations are grouped into 98 minor groups, that are, in turn, grouped into the 23 major groups. For comparison purposes, the 1980 SOC included 664 unit groups (comparable to detailed occupations in the 1998 SOC), 223 minor groups (comparable to broad occupations in the 1998 SOC), 60 major groups (comparable to minor groups in the 1998 SOC), and 22 divisions (comparable to major groups in the 1998 SOC).

Each item in the hierarchy is designated by a six-digit code. The first two digits of the 1998 SOC code represent the major group; the third digit represents the minor group; the fourth and fifth digits represent the broad occupation; and the sixth digit represents the detailed occupation. Major group codes end with 0000 (*e.g.*, 29–0000, Healthcare Practitioners and Technical Occupations), minor groups end with 000 (*e.g.*, 29–1000, Health Diagnosing and Treating Practitioners), broad occupations end with 0 (*e.g.*, 29–1120, Therapists), and detailed occupations end with a nonzero digit (*e.g.*, 29–1123, Physical Therapists). The hyphen between the second and third digit is used only for presentation clarity.

All residuals (‘‘Other,’’ ‘‘Miscellaneous,’’ or ‘‘All Other’’), whether at the minor group, broad occupation, or detailed occupation level, will contain a 9 at the level of the residual. Minor groups that are major group residuals will end in 9000 (*e.g.*, 11–9000, Other Management Occupations); broad occupations that are minor group residuals will end in 90 (*e.g.*, 11–9190, Miscellaneous Managers); and residual detailed occupations will end in 9 (*e.g.*, 11–9199, Managers, All Other):

11–0000 Management Occupations
  11–9000 Other Management Occupations
    11–9190 Miscellaneous Managers
      11–9199 Managers, All Other

In cases where there are more than 9 broad occupations in a minor group (or more than eight, if there is no residual), the xx-x090 will be skipped (reserved for residuals), the xx-x000 will be skipped (reserved for minor groups), and the numbering system will go to xx-x110. The residual broad occupation will then be xx-x190 or xx-x290 (*e.g.*, 51–9190, Miscellaneous Production Workers).

The 1998 SOC occupational groups and detailed occupations presented in Appendix A are not always consecutively numbered, both to accommodate these coding conventions and to allow for the insertion of additional occupational groups in future revisions of the SOC. In addition, data collection agencies wanting more detail to measure additional worker characteristics can split a defined occupation into more detailed occupations by adding a decimal point and more digits to the SOC code. For example, Secondary School Teachers, Except Special and Vocational Education (25–2031) is a detailed occupation. Agencies wishing to collect more particular information on teachers by subject matter might use 25–2031.1 for secondary school science teachers or 25–2031.12 for secondary school biology teachers. Additional levels of detail also may be used to distinguish workers who have different training, demographic characteristics, or years of experience. It is recommended that users needing extra detail use the structure currently being implemented for the Employment and Training Administration’s O*NET.

Each occupation in the revised SOC will be placed within one of the following 23 major groups:

11–0000 Management Occupations
13–0000 Business and Financial Operations Occupations
15–0000 Computer and Mathematical Occupations
17–0000 Architecture and Engineering Occupations
19–0000 Life, Physical, and Social Science Occupations
21–0000 Community and Social Services Occupations
23–0000 Legal Occupations
25–0000 Education, Training, and Library Occupations
27–0000 Arts, Design, Entertainment, Sports, and Media Occupations
29–0000 Healthcare Practitioners and Technical Occupations
31–0000 Healthcare Support Occupations
33–0000 Protective Service Occupations
35–0000 Food Preparation and Serving Related Occupations
37–0000 Building and Grounds Cleaning and Maintenance Occupations
39–0000 Personal Care and Service Occupations
41–0000 Sales and Related Occupations
43–0000 Office and Administrative Support Occupations

45–0000 Farming, Fishing, and Forestry Occupations
47–0000 Construction and Extraction Occupations
49–0000 Installation, Maintenance, and Repair Occupations
51–0000 Production Occupations
53–0000 Transportation and Material Moving Occupations
55–0000 Military Specific Occupations

For users wanting less detail in data tabulations, the SOCRPC suggests combining the 23 major groups into 11, or even 6, groups as presented below.

Intermediate Level Aggregation (11 groups)

11–0000–13–0000 Management, Business, and Financial Occupations
15–0000–29–0000 Professional and Related Occupations
31–0000–39–0000 Service Occupations
41–0000 Sales and Related Occupations
43–0000 Office and Administrative Support Occupations
45–0000 Farming, Fishing, and Forestry Occupations
47–0000 Construction and Extraction Occupations
49–0000 Installation, Maintenance, and Repair Occupations
51–0000 Production Occupations
53–0000 Transportation and Material Moving Occupations
55–0000 Military Specific Occupations

High Level Aggregation (6 groups)

11–0000–29–0000 Management, Professional, and Related Occupations
31–0000–39–0000 Service Occupations
41–0000–43–0000 Sales and Office Occupations
45–0000–49–0000 Natural Resources, Construction, and Maintenance Occupations
51–0000–53–0000 Production, Transportation, and Material Moving Occupations
55–0000 Military Specific Occupations

Significant Changes and Responses to Comments

In response to public comments received on the August 5, 1998, **Federal Register** notice (63 FR 41895–41923), OMB, in consultation with the SOCRPC, revised the SOCRPC's final recommendations by adding a few occupations, mostly in the gaming occupations (to reflect their growth) and the primary and secondary teaching occupations (to distinguish further special and vocational education teachers); changing some occupational titles; and making necessary renumbering changes. These changes are reflected in the listing of the 1998 SOC presented in Appendix A. New broad occupations added include the following:

11–9070 Gaming Managers
25–2010 Preschool and Kindergarten Teachers
25–2020 Elementary and Middle School Teachers
25–2030 Secondary School Teachers
33–9030 Security Guards and Gaming Surveillance Officers

New detailed occupations added include the following:

11–9071 Gaming Managers
25–1194 Vocational Education Teachers, Postsecondary
25–2011 Preschool Teachers, Except Special Education
25–2012 Kindergarten Teachers, Except Special Education
25–2021 Elementary School Teachers, Except Special Education
25–2022 Middle School Teachers, Except Special and Vocational Education
25–2023 Vocational Education Teachers, Middle School
25–2031 Secondary School Teachers, Except Special and Vocational Education
25–2032 Vocational Education Teachers, Secondary School
25–2041 Special Education Teachers, Preschool, Kindergarten, and Elementary School
25–2042 Special Education Teachers, Middle School
25–2043 Special Education Teachers, Secondary School
27–4011 Audio and Video Equipment Technicians
33–9031 Gaming Surveillance Officers and Gaming Investigators
39–1011 Gaming Supervisors
39–1012 Slot Key Persons
39–3011 Gaming Dealers
39–3012 Gaming and Sports Book Writers and Runners
39–3019 Gaming Service Workers, All Other
41–2012 Gaming Change Persons and Booth Cashiers
43–3041 Gaming Cage Cashiers
47–4091 Segmental Pavers

Next Steps in Process

Implementation of the 1998 SOC

The SOCRPC is preparing the 1998 Standard Occupational Classification Manual for publication. Committee members have completed definitions and assigned associated titles, while agencies with occupational classification systems are developing crosswalks from their existing systems to the 1998 SOC. The SOCRPC will consult periodically to ensure that the implementation of the 1998 SOC is comparable across Federal agencies. This consultation will include regularly scheduled interagency communication to ensure that there is a smooth Federal transition to the 1998 SOC. It is anticipated that the next major review and revision of the SOC will begin in 2005 in preparation for use in the 2010 Decennial Census.

All Federal Government agencies that collect occupational data are expected to adopt the 1998 SOC over the next few years. The following implementation schedule will be used by the Bureau of Labor Statistics and the Bureau of the Census—the agencies with the most comprehensive occupational data collection systems.

Bureau of Labor Statistics

The annual Occupational Employment Statistics survey will first reflect the 1998 SOC in 1999; national, State, and Metropolitan Statistical Area data are expected to be available in early 2001. The Bureau of Labor Statistics' Office of Employment Projections develops new national employment projections every 2 years, reflected in its ''industry-occupation matrix.'' This matrix presents estimates of current and projected employment—covering a 10-year period—by detailed industry and occupation. The occupational staffing pattern, or detailed occupational makeup, of each industry in the matrix reflects Occupational Employment Statistics survey data. The 1998 SOC will first be reflected in the industry-occupation matrix covering the 2002–12 period, which is expected to be released in late 2003.

The Office of Employment Projections also produces the Occupational Outlook Handbook, which is among the most widely used career guidance resources in the Nation, and related publications based on the Bureau's biennial employment projections. Occupational definitions and data completely based on the 1998 SOC will be incorporated for the first time in the 2004–05 edition of the Handbook, which is expected to be published in early 2004.

Bureau of the Census

Data collected by the 2000 Census of Population will be coded to the 1998 SOC and published in 2002. Data from the Current Population Survey will be based on the new classification for the first time in 2003.

Where To Find More Information

The complete occupational structure of the 1998 SOC will be contained in Bureau of Labor Statistics Report 929, forthcoming. The final 1998 SOC ultimately will be published in a two-volume 1998 Standard Occupational Classification Manual. Volume I will contain the hierarchical structure, a complete list of occupational titles and their definitions, a description of the SOC revision process, and a section on frequently asked questions. Volume II will contain a list of some 30,000 job titles that are commonly used by

individuals and establishments when reporting employment by occupation with their corresponding SOC codes. The second volume also will include an alphabetical index of all associated titles and industries and will reference them to the occupations in which they are found. Volumes I and II of the 1998 SOC also will be available at the following Internet address: http://stats.bls.gov/soc/soc__home.htm

O*NET, the Occupational Information Network of the Employment and Training Administration, adheres to the 1998 SOC. Information on this occupational classification system appears in ''Replace with a Database: O*NET Replaces the Dictionary of Occupational Titles,'' Occupational Outlook Quarterly (Bureau of Labor Statistics, Spring 1999). O*NET also may be accessed at the following Internet address: http://www.doleta.gov/programs/onet

The 1998 SOC will be incorporated into the Occupational Outlook Handbook and the Bureau of Labor Statistics industry-occupation matrix. Both the Handbook and matrix can be accessed at the following Internet address: http://stats.bls.gov/emphome.htm

To facilitate historical comparisons, the Bureau of Labor Statistics will develop a crosswalk showing the relationship between occupations in the 1998 SOC and the 1997 Occupational Employment Statistics survey. The Bureau of the Census also is developing a crosswalk showing the relationship between the occupations in the 1998 SOC and those of the 1990 and 2000 Censuses. This crosswalk will be available at the following Bureau of the Census Internet address: http://www.census.gov/hhes/www/occupation.html.

Standard Occupational Classification Policy Committee

It has been eighteen years since the last revision of the SOC. OMB plans to establish a new standing committee, the Standard Occupational Classification Policy Committee (SOCPC), to ensure that the successful efforts of the SOCRPC continue and that the 1998 SOC remains appropriate to the world of work. The new committee will meet twice per year to perform SOC maintenance functions, such as recommending changes in the SOC occupational definitions and placement of new occupations. In addition, it will provide timely advice to the Bureau of the Census during its 2000 Census occupation coding operation, particularly with respect to the proper classification of unfamiliar job descriptions and job titles. The committee will also undertake a thorough review of the entire SOC once per decade, in conjunction with preparations for the decennial census. The next major review and revision of the SOC is expected to begin in 2005 in preparation for use in the 2010 Decennial Census.

It is anticipated that the SOCPC will consist of representatives of the following agencies:

Department of Commerce, Bureau of the Census
Department of Defense, Defense Manpower Data Center
Department of Education
Department of Health and Human Services, Bureau of Health Professions
Department of Labor, Bureau of Labor Statistics
Department of Labor, Employment and Training Administration
Equal Employment Opportunity Commission
National Occupational Information Coordinating Committee
National Science Foundation
Office of Management and Budget (*ex-officio*)
Office of Personnel Management

The Bureau of Labor Statistics will chair the committee and staff its secretariat which will carry out the day-to-day work of the SOCPC, such as organizing working groups to make recommendations for changes.

Nonstatistical Uses of the SOC

The 1998 SOC was designed, as was the 1980 SOC, solely for statistical purposes. Although it is likely that the 1998 SOC, like the 1980 SOC, will also be used for various nonstatistical purposes (*e.g.*, for administrative, regulatory, or taxation functions), the requirements of government agencies that choose to use the 1998 SOC for nonstatistical purposes have played no role in its development, nor will OMB modify the classification to meet the requirements of any nonstatistical program.

Consequently, as has been the case with the 1980 SOC (Statistical Policy Directive No. 10, Standard Occupational Classification), the 1998 SOC is not to be used in any administrative, regulatory, or tax program unless the head of the agency administering that program has first determined that the use of such occupational definitions is appropriate to the implementation of the program's objectives. If the terms, ''Standard Occupational Classification'' or ''SOC'' are to be used in the operative text of any law or regulation to define an occupation or group of occupations, language similar to the following should be used to ensure sufficient flexibility: ''An occupation or grouping of occupations shall mean a Standard Occupational Classification detailed occupation or grouping of occupations as defined by the Office of Management and Budget, subject to such modifications with respect to individual occupations or groupings of occupations as the Secretary (Administrator) may determine to be appropriate for the purpose of this Act (regulation).''

In addition, if an agency decides to require its respondents to provide an SOC code for a nonstatistical purpose, the agency needs to have trained personnel available to answer the respondent's questions and otherwise assist them in providing the appropriate SOC codes.

John T. Spotila,

Administrator, Office of Information and Regulatory Affairs.

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APPENDIX A: 1998 SOC Occupations and Structure

11-0000 Management Occupations
- 11-1000 Top Executives
  - 11-1010 Chief Executives
    - 11-1011 Chief Executives
  - 11-1020 General and Operations Managers
    - 11-1021 General and Operations Managers
  - 11-1030 Legislators
    - 11-1031 Legislators
- 11-2000 Advertising, Marketing, Promotions, Public Relations, and Sales Managers
  - 11-2010 Advertising and Promotions Managers
    - 11-2011 Advertising and Promotions Managers
  - 11-2020 Marketing and Sales Managers
    - 11-2021 Marketing Managers
    - 11-2022 Sales Managers
  - 11-2030 Public Relations Managers
    - 11-2031 Public Relations Managers
- 11-3000 Operations Specialties Managers
  - 11-3010 Administrative Services Managers
    - 11-3011 Administrative Services Managers
  - 11-3020 Computer and Information Systems Managers
    - 11-3021 Computer and Information Systems Managers
  - 11-3030 Financial Managers
    - 11-3031 Financial Managers
  - 11-3040 Human Resources Managers
    - 11-3041 Compensation and Benefits Managers
    - 11-3042 Training and Development Managers
    - 11-3049 Human Resources Managers, All Other
  - 11-3050 Industrial Production Managers
    - 11-3051 Industrial Production Managers
  - 11-3060 Purchasing Managers
    - 11-3061 Purchasing Managers
  - 11-3070 Transportation, Storage, and Distribution Managers
    - 11-3071 Transportation, Storage, and Distribution Managers
- 11-9000 Other Management Occupations
  - 11-9010 Agricultural Managers
    - 11-9011 Farm, Ranch, and Other Agricultural Managers
    - 11-9012 Farmers and Ranchers
  - 11-9020 Construction Managers
    - 11-9021 Construction Managers
  - 11-9030 Education Administrators
    - 11-9031 Education Administrators, Preschool and Child Care Center/Program
    - 11-9032 Education Administrators, Elementary and Secondary School
    - 11-9033 Education Administrators, Postsecondary
    - 11-9039 Education Administrators, All Other
  - 11-9040 Engineering Managers
    - 11-9041 Engineering Managers
  - 11-9050 Food Service Managers
    - 11-9051 Food Service Managers
  - 11-9060 Funeral Directors
    - 11-9061 Funeral Directors
  - 11-9070 Gaming Managers
    - 11-9071 Gaming Managers
  - 11-9080 Lodging Managers
    - 11-9081 Lodging Managers
  - 11-9110 Medical and Health Services Managers
    - 11-9111 Medical and Health Services Managers
  - 11-9120 Natural Sciences Managers
    - 11-9121 Natural Sciences Managers
  - 11-9130 Postmasters and Mail Superintendents
    - 11-9131 Postmasters and Mail Superintendents
  - 11-9140 Property, Real Estate, and Community Association Managers
    - 11-9141 Property, Real Estate, and Community Association Managers
  - 11-9150 Social and Community Service Managers
    - 11-9151 Social and Community Service Managers

11-9190 Miscellaneous Managers
11-9199 Managers, All Other

13-0000 Business and Financial Operations Occupations
13-1000 Business Operations Specialists
13-1010 Agents and Business Managers of Artists, Performers, and Athletes
13-1011 Agents and Business Managers of Artists, Performers, and Athletes

13-1020 Buyers and Purchasing Agents
13-1021 Purchasing Agents and Buyers, Farm Products

13-1022 Wholesale and Retail Buyers, Except Farm Products

13-1023 Purchasing Agents, Except Wholesale, Retail, and Farm Products

13-1030 Claims Adjusters, Appraisers, Examiners, and Investigators
13-1031 Claims Adjusters, Examiners, and Investigators

13-1032 Insurance Appraisers, Auto Damage

13-1040 Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
13-1041 Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
13-1050 Cost Estimators
13-1051 Cost Estimators

13-1060 Emergency Management Specialists
13-1061 Emergency Management Specialists

13-1070 Human Resources, Training, and Labor Relations Specialists
13-1071 Employment, Recruitment, and Placement Specialists

13-1072 Compensation, Benefits, and Job Analysis Specialists

13-1073 Training and Development Specialists

13-1079 Human Resources, Training, and Labor Relations Specialists, All Other

13-1080 Logisticians
13-1081 Logisticians

13-1110 Management Analysts
13-1111 Management Analysts

13-1120 Meeting and Convention Planners
13-1121 Meeting and Convention Planners

13-1190 Miscellaneous Business Operations Specialists

13-1199 Business Operations Specialists, All Other

13-2000 Financial Specialists
13-2010 Accountants and Auditors
13-2011 Accountants and Auditors

13-2020 Appraisers and Assessors of Real Estate
13-2021 Appraisers and Assessors of Real Estate

13-2030 Budget Analysts
13-2031 Budget Analysts

13-2040 Credit Analysts
13-2041 Credit Analysts

13-2050 Financial Analysts and Advisors
13-2051 Financial Analysts

13-2052 Personal Financial Advisors

13-2053 Insurance Underwriters

13-2060 Financial Examiners
13-2061 Financial Examiners

13-2070 Loan Counselors and Officers
13-2071 Loan Counselors

13-2072 Loan Officers

13-2080 Tax Examiners, Collectors, Preparers, and Revenue Agents
13-2081 Tax Examiners, Collectors, and Revenue Agents

13-2082 Tax Preparers

13-2090 Miscellaneous Financial Specialists
13-2099 Financial Specialists, All Other

15-0000 Computer and Mathematical Occupations
15-1000 Computer Specialists
15-1010 Computer and Information Scientists, Research
15-1011 Computer and Information Scientists, Research

15-1020 Computer Programmers
15-1021 Computer Programmers

15-1030 Computer Software Engineers
15-1031 Computer Software Engineers, Applications

15-1032 Computer Software Engineers, Systems Software

15-1040 Computer Support Specialists
15-1041 Computer Support Specialists

15-1050 Computer Systems Analysts
15-1051 Computer Systems Analysts

15-1060 Database Administrators
15-1061 Database Administrators

15-1070 Network and Computer Systems Administrators
15-1071 Network and Computer Systems Administrators

15-1080 Network Systems and Data Communications Analysts
15-1081 Network Systems and Data Communications Analysts

15-1090 Miscellaneous Computer Specialists
15-1099 Computer Specialists, All Other

15-2000 Mathematical Scientists
15-2010 Actuaries
15-2011 Actuaries

15-2020 Mathematicians
15-2021 Mathematicians

15-2030 Operations Research Analysts
15-2031 Operations Research Analysts

15-2040 Statisticians
15-2041 Statisticians

15-2090 Miscellaneous Mathematical Scientists
15-2099 Mathematical Scientists, All Other

15-3000 Mathematical Technicians
15-3010 Mathematical Technicians
15-3011 Mathematical Technicians

17-0000 Architecture and Engineering Occupations
17-1000 Architects, Surveyors, and Cartographers
17-1010 Architects, Except Naval
17-1011 Architects, Except Landscape and Naval

17-1012 Landscape Architects

17-1020 Surveyors, Cartographers, and Photogrammetrists
17-1021 Cartographers and Photogrammetrists

17-1022 Surveyors

17-2000 Engineers
17-2010 Aerospace Engineers
17-2011 Aerospace Engineers

17-2020 Agricultural Engineers
17-2021 Agricultural Engineers

17-2030 Biomedical Engineers
17-2031 Biomedical Engineers

17-2040 Chemical Engineers
17-2041 Chemical Engineers

17-2050 Civil Engineers
17-2051 Civil Engineers

17-2060 Computer Hardware Engineers
17-2061 Computer Hardware Engineers

17-2070 Electrical and Electronics Engineers
17-2071 Electrical Engineers

17-2072 Electronics Engineers, Except Computer

17-2080 Environmental Engineers
17-2081 Environmental Engineers

17-2110 Industrial Engineers, Including Health and Safety
17-2111 Health and Safety Engineers, Except Mining Safety Engineers and Inspectors

17-2112 Industrial Engineers

17-2120 Marine Engineers and Naval Architects
17-2121 Marine Engineers and Naval Architects

17-2130 Materials Engineers
17-2131 Materials Engineers

17-2140 Mechanical Engineers
17-2141 Mechanical Engineers

17-2150 Mining and Geological Engineers, Including Mining Safety Engineers
17-2151 Mining and Geological Engineers, Including Mining Safety Engineers

17-2160 Nuclear Engineers
17-2161 Nuclear Engineers

17-2170 Petroleum Engineers
17-2171 Petroleum Engineers

17-2190 Miscellaneous Engineers
17-2199 Engineers, All Other

17-3000 Drafters, Engineering, and Mapping Technicians
17-3010 Drafters
17-3011 Architectural and Civil Drafters

17-3012 Electrical and Electronics Drafters

17-3013 Mechanical Drafters

17-3019 Drafters, All Other

17-3020 Engineering Technicians, Except Drafters
17-3021 Aerospace Engineering and Operations Technicians

17-3022 Civil Engineering Technicians

17-3023 Electrical and Electronic Engineering Technicians

17-3024 Electro-Mechanical Technicians

17-3025 Environmental Engineering Technicians

17-3026 Industrial Engineering Technicians

17-3027 Mechanical Engineering Technicians

17-3029 Engineering Technicians, Except Drafters, All Other

17-3030 Surveying and Mapping Technicians
17-3031 Surveying and Mapping Technicians

19-0000 Life, Physical, and Social Science Occupations
19-1000 Life Scientists
19-1010 Agricultural and Food Scientists
19-1011 Animal Scientists

19-1012 Food Scientists and Technologists

19-1013 Soil and Plant Scientists

19-1020 Biological Scientists
19-1021 Biochemists and Biophysicists

19-1022 Microbiologists

19-1023 Zoologists and Wildlife Biologists

19-1029 Biological Scientists, All Other

19-1030 Conservation Scientists and Foresters
19-1031 Conservation Scientists

19-1032 Foresters

19-1040 Medical Scientists
19-1041 Epidemiologists

19-1042 Medical Scientists, Except Epidemiologists

19-1090 Miscellaneous Life Scientists
19-1099 Life Scientists, All Other

19-2000 Physical Scientists
19-2010 Astronomers and Physicists
19-2011 Astronomers

19-2012 Physicists

19-2020 Atmospheric and Space Scientists
19-2021 Atmospheric and Space Scientists

19-2030 Chemists and Materials Scientists
19-2031 Chemists

19-2032 Materials Scientists

19-2040 Environmental Scientists and Geoscientists
19-2041 Environmental Scientists and Specialists, Including Health

19-2042 Geoscientists, Except Hydrologists and Geographers

19-2043 Hydrologists

19-2090 Miscellaneous Physical Scientists
19-2099 Physical Scientists, All Other

19-3000 Social Scientists and Related Workers
19-3010 Economists
19-3011 Economists

19-3020 Market and Survey Researchers
19-3021 Market Research Analysts

19-3022 Survey Researchers

19-3030 Psychologists
19-3031 Clinical, Counseling, and School Psychologists

19-3032 Industrial-Organizational Psychologists

19-3039 Psychologists, All Other

19-3040 Sociologists
19-3041 Sociologists

19-3050 Urban and Regional Planners
19-3051 Urban and Regional Planners

19-3090 Miscellaneous Social Scientists and Related Workers
19-3091 Anthropologists and Archeologists

19-3092 Geographers

19-3093 Historians

19-3094 Political Scientists

19-3099 Social Scientists and Related Workers, All Other

19-4000 Life, Physical, and Social Science Technicians
19-4010 Agricultural and Food Science Technicians
19-4011 Agricultural and Food Science Technicians

19-4020 Biological Technicians
19-4021 Biological Technicians

19-4030 Chemical Technicians
19-4031 Chemical Technicians

19-4040 Geological and Petroleum Technicians
19-4041 Geological and Petroleum Technicians

19-4050 Nuclear Technicians
19-4051 Nuclear Technicians

19-4060 Social Science Research Assistants
19-4061 Social Science Research Assistants

19-4090 Miscellaneous Life, Physical, and Social Science Technicians
19-4091 Environmental Science and Protection Technicians, Including Health

19-4092 Forensic Science Technicians

19-4093 Forest and Conservation Technicians

19-4099 Life, Physical, and Social Science Technicians, All Other

21-0000 Community and Social Services Occupations
21-1000 Counselors, Social Workers, and Other Community and Social Service Specialists
21-1010 Counselors
21-1011 Substance Abuse and Behavioral Disorder Counselors

21-1012 Educational, Vocational, and School Counselors

21-1013 Marriage and Family Therapists

21-1014 Mental Health Counselors

21-1015 Rehabilitation Counselors

21-1019 Counselors, All Other

21-1020 Social Workers
21-1021 Child, Family, and School Social Workers

21-1022 Medical and Public Health Social Workers

21-1023 Mental Health and Substance Abuse Social Workers

21-1029 Social Workers, All Other

21-1090 Miscellaneous Community and Social Service Specialists
21-1091 Health Educators

21-1092 Probation Officers and Correctional Treatment Specialists

21-1093 Social and Human Service Assistants

21-1099 Community and Social Service Specialists, All Other

21-2000 Religious Workers
21-2010 Clergy
21-2011 Clergy

21-2020 Directors, Religious Activities and Education
21-2021 Directors, Religious Activities and Education

21-2090 Miscellaneous Religious Workers
21-2099 Religious Workers, All Other

23-0000 Legal Occupations
23-1000 Lawyers, Judges, and Related Workers
23-1010 Lawyers
23-1011 Lawyers

23-1020 Judges, Magistrates, and Other Judicial Workers
23-1021 Administrative Law Judges, Adjudicators, and Hearing Officers

23-1022 Arbitrators, Mediators, and Conciliators

23-1023 Judges, Magistrate Judges, and Magistrates

23-2000 Legal Support Workers
23-2010 Paralegals and Legal Assistants
23-2011 Paralegals and Legal Assistants

23-2090 Miscellaneous Legal Support Workers
23-2091 Court Reporters

23-2092 Law Clerks

23-2093 Title Examiners, Abstractors, and Searchers

23-2099 Legal Support Workers, All Other

25-0000 Education, Training, and Library Occupations
25-1000 Postsecondary Teachers
25-1010 Business Teachers, Postsecondary
25-1011 Business Teachers, Postsecondary

25-1020 Math and Computer Teachers, Postsecondary
25-1021 Computer Science Teachers, Postsecondary

25-1022 Mathematical Science Teachers, Postsecondary

25-1030 Engineering and Architecture Teachers, Postsecondary
25-1031 Architecture Teachers, Postsecondary

25-1032 Engineering Teachers, Postsecondary

25-1040 Life Sciences Teachers, Postsecondary
25-1041 Agricultural Sciences Teachers, Postsecondary

25-1042 Biological Science Teachers, Postsecondary

25-1043 Forestry and Conservation Science Teachers, Postsecondary

25-1050 Physical Sciences Teachers, Postsecondary
25-1051 Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary

25-1052 Chemistry Teachers, Postsecondary

25-1053 Environmental Science Teachers, Postsecondary

25-1054 Physics Teachers, Postsecondary

25-1060 Social Sciences Teachers, Postsecondary
25-1061 Anthropology and Archeology Teachers, Postsecondary

25-1062 Area, Ethnic, and Cultural Studies Teachers, Postsecondary

25-1063 Economics Teachers, Postsecondary

25-1064 Geography Teachers, Postsecondary

25-1065 Political Science Teachers, Postsecondary

25-1066 Psychology Teachers, Postsecondary

25-1067 Sociology Teachers, Postsecondary

25-1069 Social Sciences Teachers, Postsecondary, All Other

25-1070 Health Teachers, Postsecondary
25-1071 Health Specialties Teachers, Postsecondary

25-1072 Nursing Instructors and Teachers, Postsecondary

25-1080 Education and Library Science Teachers, Postsecondary
25-1081 Education Teachers, Postsecondary

25-1082 Library Science Teachers, Postsecondary

25-1110 Law, Criminal Justice, and Social Work Teachers, Postsecondary
25-1111 Criminal Justice and Law Enforcement Teachers, Postsecondary

25-1112 Law Teachers, Postsecondary

25-1113 Social Work Teachers, Postsecondary

25-1120 Arts, Communications, and Humanities Teachers, Postsecondary
25-1121 Art, Drama, and Music Teachers, Postsecondary

25-1122 Communications Teachers, Postsecondary

25-1123 English Language and Literature Teachers, Postsecondary

25-1124 Foreign Language and Literature Teachers, Postsecondary

25-1125 History Teachers, Postsecondary

25-1126 Philosophy and Religion Teachers, Postsecondary

25-1191 Graduate Teaching Assistants

25-1192 Home Economics Teachers, Postsecondary

25-1193 Recreation and Fitness Studies Teachers, Postsecondary

25-1194 Vocational Education Teachers Postsecondary

25-1199 Postsecondary Teachers, All Other

25-2000 Teachers, Primary, Secondary, and Special Education
25-2010 Preschool and Kindergarten Teachers
25-2011 Preschool Teachers, Except Special Education

25-2012 Kindergarten Teachers, Except Special Education

25-2020 Elementary and Middle School Teachers
25-2021 Elementary School Teachers, Except Special Education

25-2022 Middle School Teachers, Except Special and Vocational Education

25-2023 Middle School Vocational Education Teachers

25-2030 Secondary School Teachers
25-2031 Secondary School Teachers, Except Special and Vocational Education

25-2032 Secondary School ,Vocational Education Teachers

25-2040 Special Education Teachers
25-2041 Special Education Teachers, Preschool, Kindergarten, and Elementary School

25-2042 Special Education Teachers, Middle School

25-2043 Special Education Teachers, Secondary School

25-3000 Other Teachers and Instructors
25-3010 Adult Literacy, Remedial Education, and GED Teachers and Instructors
25-3011 Adult Literacy, Remedial Education, and GED Teachers and Instructors

25-3020 Self-Enrichment Education Teachers
25-3021 Self-Enrichment Education Teachers

25-3090 Miscellaneous Teachers and Instructors
25-3099 Teachers and Instructors, All Other

25-4000 Librarians, Curators, and Archivists
25-4010 Archivists, Curators, and Museum Technicians
25-4011 Archivists

25-4012 Curators

25-4013 Museum Technicians and Conservators

25-4020 Librarians
25-4021 Librarians

25-4030 Library Technicians
25-4031 Library Technicians

25-9000 Other Education, Training, and Library Occupations
25-9010 Audio-Visual Collections Specialists
25-9011 Audio-Visual Collections Specialists

25-9020 Farm and Home Management Advisors
25-9021 Farm and Home Management Advisors

25-9030 Instructional Coordinators
25-9031 Instructional Coordinators

25-9040 Teacher Assistants
25-9041 Teacher Assistants

25-9090 Miscellaneous Education, Training, and Library Workers
25-9099 Education, Training, and Library Workers, All Other

27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
27-1000 Art and Design Workers
27-1010 Artists and Related Workers
27-1011 Art Directors

27-1012 Craft Artists

27-1013 Fine Artists, Including Painters, Sculptors, and Illustrators

27-1014 Multi-Media Artists and Animators

27-1019 Artists and Related Workers, All Other

27-1020 Designers
27-1021 Commercial and Industrial Designers

27-1022 Fashion Designers

27-1023 Floral Designers

27-1024 Graphic Designers

27-1025 Interior Designers

27-1026 Merchandise Displayers and Window Trimmers

27-1027 Set and Exhibit Designers

27-1029 Designers, All Other

27-2000 Entertainers and Performers, Sports and Related Workers
27-2010 Actors, Producers, and Directors
27-2011 Actors

27-2012 Producers and Directors

27-2020 Athletes, Coaches, Umpires, and Related Workers
27-2021 Athletes and Sports Competitors

27-2022 Coaches and Scouts

27-2023 Umpires, Referees, and Other Sports Officials

27-2030 Dancers and Choreographers
27-2031 Dancers

27-2032 Choreographers

27-2040 Musicians, Singers, and Related Workers
27-2041 Music Directors and Composers

27-2042 Musicians and Singers

27-2090 Miscellaneous Entertainers and Performers, Sports and Related Workers
27-2099 Entertainers and Performers, Sports and Related Workers, All Other

27-3000 Media and Communication Workers
27-3010 Announcers
27-3011 Radio and Television Announcers

27-3012 Public Address System and Other Announcers

27-3020 News Analysts, Reporters and Correspondents
27-3021 Broadcast News Analysts

27-3022 Reporters and Correspondents

27-3030 Public Relations Specialists
27-3031 Public Relations Specialists

27-3040 Writers and Editors
27-3041 Editors

27-3042 Technical Writers

27-3043 Writers and Authors

27-3090 Miscellaneous Media and Communication Workers
27-3091 Interpreters and Translators

27-3099 Media and Communication Workers, All Other

27-4000 Media and Communication Equipment Workers
27-4010 Broadcast and Sound Engineering Technicians and Radio Operators
27-4011 Audio and Video Equipment Technicians

27-4012 Broadcast Technicians

27-4013 Radio Operators

27-4014 Sound Engineering Technicians

27-4020 Photographers
27-4021 Photographers

27-4030 Television, Video, and Motion Picture Camera Operators and Editors
27-4031 Camera Operators, Television, Video, and Motion Picture

27-4032 Film and Video Editors

27-4090 Miscellaneous Media and Communication Equipment Workers
27-4099 Media and Communication Equipment Workers, All Other

29-0000 Healthcare Practitioners and Technical Occupations
29-1000 Health Diagnosing and Treating Practitioners
29-1010 Chiropractors
29-1011 Chiropractors

29-1020 Dentists
29-1021 Dentists, General

29-1022 Oral and Maxillofacial Surgeons

29-1023 Orthodontists

29-1024 Prosthodontists

29-1029 Dentists, All Other Specialists

29-1030 Dietitians and Nutritionists
29-1031 Dietitians and Nutritionists

29-1040 Optometrists

29-1041 Optometrists

29-1050 Pharmacists
29-1051 Pharmacists

29-1060 Physicians and Surgeons
29-1061 Anesthesiologists

29-1062 Family and General Practitioners

29-1063 Internists, General

29-1064 Obstetricians and Gynecologists

29-1065 Pediatricians, General

29-1066 Psychiatrists

29-1067 Surgeons

29-1069 Physicians and Surgeons, All Other

29-1070 Physician Assistants
29-1071 Physician Assistants

29-1080 Podiatrists
29-1081 Podiatrists

29-1110 Registered Nurses
29-1111 Registered Nurses

29-1120 Therapists
29-1121 Audiologists

29-1122 Occupational Therapists

29-1123 Physical Therapists

29-1124 Radiation Therapists

29-1125 Recreational Therapists

29-1126 Respiratory Therapists

29-1127 Speech-Language Pathologists

29-1129 Therapists, All Other

29-1130 Veterinarians

29-1131 Veterinarians

29-1190 Miscellaneous Health Diagnosing and Treating Practitioners
29-1199 Health Diagnosing and Treating Practitioners, All Other

29-2000 Health Technologists and Technicians
29-2010 Clinical Laboratory Technologists and Technicians
29-2011 Medical and Clinical Laboratory Technologists

29-2012 Medical and Clinical Laboratory Technicians

29-2020 Dental Hygienists
29-2021 Dental Hygienists

29-2030 Diagnostic Related Technologists and Technicians
29-2031 Cardiovascular Technologists and Technicians

29-2032 Diagnostic Medical Sonographers

29-2033 Nuclear Medicine Technologists

29-2034 Radiologic Technologists and Technicians

29-2040 Emergency Medical Technicians and Paramedics
29-2041 Emergency Medical Technicians and Paramedics

29-2050 Health Diagnosing and Treating Practitioner Support Technicians
29-2051 Dietetic Technicians

29-2052 Pharmacy Technicians

29-2053 Psychiatric Technicians

29-2054 Respiratory Therapy Technicians

29-2055 Surgical Technologists

29-2056 Veterinary Technologists and Technicians

29-2060 Licensed Practical and Licensed Vocational Nurses
29-2061 Licensed Practical and Licensed Vocational Nurses

29-2070 Medical Records and Health Information Technicians
29-2071 Medical Records and Health Information Technicians

29-2080 Opticians, Dispensing
29-2081 Opticians, Dispensing

29-2090 Miscellaneous Health Technologists and Technicians

29-2091 Orthotists and Prosthetists

29-2099 Health Technologists and Technicians, All Other

29-9000 Other Healthcare Practitioners and Technical Occupations
29-9010 Occupational Health and Safety Specialists and Technicians
29-9011 Occupational Health and Safety Specialists

29-9012 Occupational Health and Safety Technicians

29-9090 Miscellaneous Health Practitioners and Technical Workers
29-9091 Athletic Trainers

29-9099 Healthcare Practitioners and Technical Workers, All Other

31-0000 Healthcare Support Occupations
31-1000 Nursing, Psychiatric, and Home Health Aides
31-1010 Nursing, Psychiatric, and Home Health Aides
31-1011 Home Health Aides

31-1012 Nursing Aides, Orderlies, and Attendants

31-1013 Psychiatric Aides

31-2000 Occupational and Physical Therapist Assistants and Aides
31-2010 Occupational Therapist Assistants and Aides
31-2011 Occupational Therapist Assistants

31-2012 Occupational Therapist Aides

31-2020 Physical Therapist Assistants and Aides
31-2021 Physical Therapist Assistants

31-2022 Physical Therapist Aides

31-9000 Other Healthcare Support Occupations
31-9010 Massage Therapists
31-9011 Massage Therapists

31-9090 Miscellaneous Healthcare Support Occupations
31-9091 Dental Assistants

31-9092 Medical Assistants

31-9093 Medical Equipment Preparers

31-9094 Medical Transcriptionists

31-9095 Pharmacy Aides

31-9096 Veterinary Assistants and Laboratory Animal Caretakers

31-9099 Healthcare Support Workers, All Other

33-0000 Protective Service Occupations
33-1000 Supervisors, Protective Service Workers
33-1010 First-Line Supervisors/Managers, Law Enforcement Workers
33-1011 First-Line Supervisors/Managers of Correctional Officers

33-1012 First-Line Supervisors/Managers of Police and Detectives

33-1020 First-Line Supervisors/Managers, Fire Fighting and Prevention Workers
33-1021 First-Line Supervisors/Managers of Fire Fighting and Prevention Workers

33-1090 Miscellaneous Supervisors, Protective Service Workers
33-1099 Supervisors, Protective Service Workers, All Other

33-2000 Fire Fighting and Prevention Workers
33-2010 Fire Fighters
33-2011 Fire Fighters

33-2020 Fire Inspectors
33-2021 Fire Inspectors and Investigators

33-2022 Forest Fire Inspectors and Prevention Specialists

33-3000 Law Enforcement Workers
33-3010 Bailiffs, Correctional Officers, and Jailers
33-3011 Bailiffs

33-3012 Correctional Officers and Jailers

33-3020 Detectives and Criminal Investigators
33-3021 Detectives and Criminal Investigators

33-3030 Fish and Game Wardens
33-3031 Fish and Game Wardens

33-3040 Parking Enforcement Workers
33-3041 Parking Enforcement Workers

33-3050 Police Officers
33-3051 Police and Sheriff's Patrol Officers

33-3052 Transit and Railroad Police

33-9000 Other Protective Service Workers
33-9010 Animal Control Workers
33-9011 Animal Control Workers

33-9020 Private Detectives and Investigators
33-9021 Private Detectives and Investigators

33-9030 Security Guards and Gaming Surveillance Officers
33-9031 Gaming Surveillance Officers and Gaming Investigators

33-9032 Security Guards

33-9090 Miscellaneous Protective Service Workers
33-9091 Crossing Guards

33-9092 Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers

33-9099 Protective Service Workers, All Other

35-0000 Food Preparation and Serving Related Occupations
35-1000 Supervisors, Food Preparation and Serving Workers
35-1010 First-Line Supervisors/Managers, Food Preparation and Serving Workers
35-1011 Chefs and Head Cooks

35-1012 First-Line Supervisors/Managers of Food Preparation and Serving Workers

35-2000 Cooks and Food Preparation Workers
35-2010 Cooks
35-2011 Cooks, Fast Food

35-2012 Cooks, Institution and Cafeteria

35-2013 Cooks, Private Household

35-2014 Cooks, Restaurant

35-2015 Cooks, Short Order

35-2019 Cooks, All Other

35-2020 Food Preparation Workers
35-2021 Food Preparation Workers

35-3000 Food and Beverage Serving Workers
35-3010 Bartenders
35-3011 Bartenders

35-3020 Fast Food and Counter Workers
35-3021 Combined Food Preparation and Serving Workers, Including Fast Food

35-3022 Counter Attendants, Cafeteria, Food Concession, and Coffee Shop

35-3030 Waiters and Waitresses

35-3031 Waiters and Waitresses

35-3040 Food Servers, Nonrestaurant
35-3041 Food Servers, Nonrestaurant

35-9000 Other Food Preparation and Serving Related Workers
35-9010 Dining Room and Cafeteria Attendants and Bartender Helpers
35-9011 Dining Room and Cafeteria Attendants and Bartender Helpers

35-9020 Dishwashers
35-9021 Dishwashers

35-9030 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
35-9031 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop

35-9090 Miscellaneous Food Preparation and Serving Related Workers
35-9099 Food Preparation and Serving Related Workers, All Other

37-0000 Building and Grounds Cleaning and Maintenance Occupations
37-1000 Supervisors, Building and Grounds Cleaning and Maintenance Workers
37-1010 First-Line Supervisors/Managers, Building and Grounds Cleaning and Maintenance Workers

37-1011 First-Line Supervisors/Managers of Housekeeping and Janitorial Workers

37-1012 First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers

37-2000 Building Cleaning and Pest Control Workers
37-2010 Building Cleaning Workers
37-2011 Janitors and Cleaners, Except Maids and Housekeeping Cleaners

37-2012 Maids and Housekeeping Cleaners

37-2019 Building Cleaning Workers, All Other

37-2020 Pest Control Workers
37-2021 Pest Control Workers

37-3000 Grounds Maintenance Workers
37-3010 Grounds Maintenance Workers
37-3011 Landscaping and Groundskeeping Workers

37-3012 Pesticide Handlers, Sprayers, and Applicators, Vegetation

37-3013 Tree Trimmers and Pruners

37-3019 Grounds Maintenance Workers, All Other

39-0000 Personal Care and Service Occupations

39-1000 Supervisors, Personal Care and Service Workers
39-1010 First-Line Supervisors/Managers of Gaming Workers
39-1011 Gaming Supervisors

39-1012 Slot Key Persons

39-1020 First-Line Supervisors/Managers of Personal Service Workers
39-1021 First-Line Supervisors/Managers of Personal Service Workers

39-2000 Animal Care and Service Workers
39-2010 Animal Trainers
39-2011 Animal Trainers

39-2020 Nonfarm Animal Caretakers
39-2021 Nonfarm Animal Caretakers

39-3000 Entertainment Attendants and Related Workers
39-3010 Gaming Services Workers
39-3011 Gaming Dealers

39-3012 Gaming and Sports Book Writers and Runners

39-3019 Gaming Service Workers, All Other

39-3020 Motion Picture Projectionists
39-3021 Motion Picture Projectionists

39-3030 Ushers, Lobby Attendants, and Ticket Takers
39-3031 Ushers, Lobby Attendants, and Ticket Takers

39-3090 Miscellaneous Entertainment Attendants and Related Workers
39-3091 Amusement and Recreation Attendants

39-3092 Costume Attendants

39-3093 Locker Room, Coatroom, and Dressing Room Attendants

39-3099 Entertainment Attendants and Related Workers, All Other

39-4000 Funeral Service Workers
39-4010 Embalmers
39-4011 Embalmers

39-4020 Funeral Attendants
39-4021 Funeral Attendants

39-5000 Personal Appearance Workers
39-5010 Barbers and Cosmetologists
39-5011 Barbers

39-5012 Hairdressers, Hairstylists, and Cosmetologists

39-5090 Miscellaneous Personal Appearance Workers
39-5091 Makeup Artists, Theatrical and Performance

39-5092 Manicurists and Pedicurists

39-5093 Shampooers

39-5094 Skin Care Specialists

39-6000 Transportation, Tourism, and Lodging Attendants
39-6010 Baggage Porters, Bellhops, and Concierges
39-6011 Baggage Porters and Bellhops

39-6012 Concierges

39-6020 Tour and Travel Guides
39-6021 Tour Guides and Escorts

39-6022 Travel Guides

39-6030 Transportation Attendants
39-6031 Flight Attendants

39-6032 Transportation Attendants, Except Flight Attendants and Baggage Porters

39-9000 Other Personal Care and Service Workers
39-9010 Child Care Workers
39-9011 Child Care Workers

39-9020 Personal and Home Care Aides
39-9021 Personal and Home Care Aides

39-9030 Recreation and Fitness Workers
39-9031 Fitness Trainers and Aerobics Instructors

39-9032 Recreation Workers

39-9040 Residential Advisors
39-9041 Residential Advisors

39-9090 Miscellaneous Personal Care and Service Workers
39-9099 Personal Care and Service Workers, All Other

41-0000 Sales and Related Occupations
41-1000 Supervisors, Sales Workers
41-1010 First-Line Supervisors/Managers, Sales Workers
41-1011 First-Line Supervisors/Managers of Retail Sales Workers

41-1012 First-Line Supervisors/Managers of Non-Retail Sales Workers

41-2000 Retail Sales Workers
41-2010 Cashiers
41-2011 Cashiers

41-2012 Gaming Change Persons and Booth Cashiers

41-2020 Counter and Rental Clerks and Parts Salespersons
41-2021 Counter and Rental Clerks

41-2022 Parts Salespersons

41-2030 Retail Salespersons
41-2031 Retail Salespersons

41-3000 Sales Representatives, Services
41-3010 Advertising Sales Agents
41-3011 Advertising Sales Agents

41-3020 Insurance Sales Agents
41-3021 Insurance Sales Agents

41-3030 Securities, Commodities, and Financial Services Sales Agents
41-3031 Securities, Commodities, and Financial Services Sales Agents

41-3040 Travel Agents
41-3041 Travel Agents

41-3090 Miscellaneous Sales Representatives, Services
41-3099 Sales Representatives, Services, All Other

41-4000 Sales Representatives, Wholesale and Manufacturing
41-4010 Sales Representatives, Wholesale and Manufacturing
41-4011 Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products

41-4012 Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products

41-9000 Other Sales and Related Workers
41-9010 Models, Demonstrators, and Product Promoters
41-9011 Demonstrators and Product Promoters

41-9012 Models

41-9020 Real Estate Brokers and Sales Agents
41-9021 Real Estate Brokers

41-9022 Real Estate Sales Agents

41-9030 Sales Engineers
41-9031 Sales Engineers

41-9040 Telemarketers
41-9041 Telemarketers

41-9090 Miscellaneous Sales and Related Workers
41-9091 Door-To-Door Sales Workers, News and Street Vendors, and Related Workers

41-9099 Sales and Related Workers, All Other

43-0000 Office and Administrative Support Occupations
43-1000 Supervisors, Office and Administrative Support Workers
43-1010 First-Line Supervisors/Managers of Office and Administrative Support Workers
43-1011 First-Line Supervisors/Managers of Office and Administrative Support Workers
43-2000 Communications Equipment Operators
43-2010 Switchboard Operators, Including Answering Service
43-2011 Switchboard Operators, Including Answering Service

43-2020 Telephone Operators
43-2021 Telephone Operators

43-2090 Miscellaneous Communications Equipment Operators
43-2099 Communications Equipment Operators, All Other

43-3000 Financial Clerks
43-3010 Bill and Account Collectors
43-3011 Bill and Account Collectors

43-3020 Billing and Posting Clerks and Machine Operators
43-3021 Billing and Posting Clerks and Machine Operators

43-3030 Bookkeeping, Accounting, and Auditing Clerks
43-3031 Bookkeeping, Accounting, and Auditing Clerks

43-3040 Gaming Cage Workers
43-3041 Gaming Cage Workers

43-3050 Payroll and Timekeeping Clerks
43-3051 Payroll and Timekeeping Clerks

43-3060 Procurement Clerks
43-3061 Procurement Clerks

43-3070 Tellers

43-3071 Tellers

43-4000 Information and Record Clerks
43-4010 Brokerage Clerks
43-4011 Brokerage Clerks

43-4020 Correspondence Clerks
43-4021 Correspondence Clerks

43-4030 Court, Municipal, and License Clerks
43-4031 Court, Municipal, and License Clerks

43-4040 Credit Authorizers, Checkers, and Clerks
43-4041 Credit Authorizers, Checkers, and Clerks

43-4050 Customer Service Representatives
43-4051 Customer Service Representatives

43-4060 Eligibility Interviewers, Government Programs
43-4061 Eligibility Interviewers, Government Programs

43-4070 File Clerks
43-4071 File Clerks

43-4080 Hotel, Motel, and Resort Desk Clerks
43-4081 Hotel, Motel, and Resort Desk Clerks

43-4110 Interviewers, Except Eligibility and Loan
43-4111 Interviewers, Except Eligibility and Loan

43-4120 Library Assistants, Clerical
43-4121 Library Assistants, Clerical

43-4130 Loan Interviewers and Clerks
43-4131 Loan Interviewers and Clerks

43-4140 New Accounts Clerks
43-4141 New Accounts Clerks

43-4150 Order Clerks
43-4151 Order Clerks

43-4160 Human Resources Assistants, Except Payroll and Timekeeping
43-4161 Human Resources Assistants, Except Payroll and Timekeeping

43-4170 Receptionists and Information Clerks
43-4171 Receptionists and Information Clerks

43-4180 Reservation and Transportation Ticket Agents and Travel Clerks
43-4181 Reservation and Transportation Ticket Agents and Travel Clerks

43-4190 Miscellaneous Information and Record Clerks
43-4199 Information and Record Clerks, All Other

43-5000 Material Recording, Scheduling, Dispatching, and Distributing Workers
43-5010 Cargo and Freight Agents
43-5011 Cargo and Freight Agents

43-5020 Couriers and Messengers
43-5021 Couriers and Messengers

43-5030 Dispatchers
43-5031 Police, Fire, and Ambulance Dispatchers

43-5032 Dispatchers, Except Police, Fire, and Ambulance

43-5040 Meter Readers, Utilities
43-5041 Meter Readers, Utilities

43-5050 Postal Service Workers
43-5051 Postal Service Clerks

43-5052 Postal Service Mail Carriers

43-5053 Postal Service Mail Sorters, Processors, and Processing Machine Operators

43-5060 Production, Planning, and Expediting Clerks
43-5061 Production, Planning, and Expediting Clerks

43-5070 Shipping, Receiving, and Traffic Clerks
43-5071 Shipping, Receiving, and Traffic Clerks

43-5080 Stock Clerks and Order Fillers
43-5081 Stock Clerks and Order Fillers

43-5110 Weighers, Measurers, Checkers, and Samplers, Recordkeeping
43-5111 Weighers, Measurers, Checkers, and Samplers, Recordkeeping

43-6000 Secretaries and Administrative Assistants
43-6010 Secretaries and Administrative Assistants
43-6011 Executive Secretaries and Administrative Assistants

43-6012 Legal Secretaries

43-6013 Medical Secretaries

43-6014 Secretaries, Except Legal, Medical, and Executive

43-9000 Other Office and Administrative Support Workers

43-9010 Computer Operators
43-9011 Computer Operators

43-9020 Data Entry and Information Processing Workers
43-9021 Data Entry Keyers

43-9022 Word Processors and Typists

43-9030 Desktop Publishers
43-9031 Desktop Publishers

43-9040 Insurance Claims and Policy Processing Clerks
43-9041 Insurance Claims and Policy Processing Clerks

43-9050 Mail Clerks and Mail Machine Operators, Except Postal Service
43-9051 Mail Clerks and Mail Machine Operators, Except Postal Service

43-9060 Office Clerks, General
43-9061 Office Clerks, General

43-9070 Office Machine Operators, Except Computer
43-9071 Office Machine Operators, Except Computer

43-9080 Proofreaders and Copy Markers
43-9081 Proofreaders and Copy Markers

43-9110 Statistical Assistants
43-9111 Statistical Assistants

43-9190 Miscellaneous Office and Administrative Support Workers
43-9199 Office and Administrative Support Workers, All Other

45-0000 Farming, Fishing, and Forestry Occupations
45-1000 Supervisors, Farming, Fishing, and Forestry Workers
45-1010 First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers
45-1011 First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers

45-2000 Agricultural Workers
45-2010 Agricultural Inspectors
45-2011 Agricultural Inspectors

45-2020 Animal Breeders
45-2021 Animal Breeders

45-2030 Farm Labor Contractors
45-2031 Farm Labor Contractors

45-2040 Graders and Sorters, Agricultural Products
45-2041 Graders and Sorters, Agricultural Products

45-2090 Miscellaneous Agricultural Workers
45-2091 Agricultural Equipment Operators

45-2092 Farmworkers and Laborers, Crop, Nursery, and Greenhouse

45-2093 Farmworkers, Farm and Ranch Animals

45-2099 Agricultural Workers, All Other

45-3000 Fishing and Hunting Workers
45-3010 Fishers and Related Fishing Workers
45-3011 Fishers and Related Fishing Workers

45-3020 Hunters and Trappers
45-3021 Hunters and Trappers

45-4000 Forest, Conservation, and Logging Workers
45-4010 Forest and Conservation Workers
45-4011 Forest and Conservation Workers

45-4020 Logging Workers
45-4021 Fallers

45-4022 Logging Equipment Operators

45-4023 Log Graders and Scalers

45-4029 Logging Workers, All Other

45-9000 Other Farming, Fishing, and Forestry Workers
45-9090 Miscellaneous Farming, Fishing, and Forestry Workers
45-9099 Farming, Fishing, and Forestry Workers, All Other

47-0000 Construction and Extraction Occupations
47-1000 Supervisors, Construction and Extraction Workers
47-1010 First-Line Supervisors/Managers of Construction Trades and Extraction Workers
47-1011 First-Line Supervisors/Managers of Construction Trades and Extraction Workers

47-2000 Construction Trades Workers
47-2010 Boilermakers
47-2011 Boilermakers

47-2020 Brickmasons, Blockmasons, and Stonemasons
47-2021 Brickmasons and Blockmasons

47-2022 Stonemasons

47-2030 Carpenters

47-2031 Carpenters

47-2040 Carpet, Floor, and Tile Installers and Finishers
47-2041 Carpet Installers

47-2042 Floor Layers, Except Carpet, Wood, and Hard Tiles

47-2043 Floor Sanders and Finishers

47-2044 Tile and Marble Setters

47-2050 Cement Masons, Concrete Finishers, and Terrazzo Workers
47-2051 Cement Masons and Concrete Finishers

47-2053 Terrazzo Workers and Finishers

47-2060 Construction Laborers
47-2061 Construction Laborers

47-2070 Construction Equipment Operators
47-2071 Paving, Surfacing, and Tamping Equipment Operators

47-2072 Pile-Driver Operators

47-2073 Operating Engineers and Other Construction Equipment Operators

47-2080 Drywall Installers, Ceiling Tile Installers, and Tapers
47-2081 Drywall and Ceiling Tile Installers

47-2082 Tapers

47-2110 Electricians
47-2111 Electricians

47-2120 Glaziers
47-2121 Glaziers

47-2130 Insulation Workers
47-2131 Insulation Workers, Floor, Ceiling, and Wall

47-2132 Insulation Workers, Mechanical

47-2140 Painters and Paperhangers
47-2141 Painters, Construction and Maintenance

47-2142 Paperhangers

47-2150 Pipelayers, Plumbers, Pipefitters, and Steamfitters
47-2151 Pipelayers

47-2152 Plumbers, Pipefitters, and Steamfitters

47-2160 Plasterers and Stucco Masons
47-2161 Plasterers and Stucco Masons

47-2170 Reinforcing Iron and Rebar Workers
47-2171 Reinforcing Iron and Rebar Workers

47-2180 Roofers
47-2181 Roofers

47-2210 Sheet Metal Workers
47-2211 Sheet Metal Workers

47-2220 Structural Iron and Steel Workers
47-2221 Structural Iron and Steel Workers

47-3000 Helpers, Construction Trades
47-3010 Helpers, Construction Trades
47-3011 Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters

47-3012 Helpers--Carpenters

47-3013 Helpers--Electricians

47-3014 Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons

47-3015 Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

47-3016 Helpers--Roofers

47-3019 Helpers, Construction Trades, All Other

47-4000 Other Construction and Related Workers
47-4010 Construction and Building Inspectors
47-4011 Construction and Building Inspectors

47-4020 Elevator Installers and Repairers
47-4021 Elevator Installers and Repairers

47-4030 Fence Erectors
47-4031 Fence Erectors

47-4040 Hazardous Materials Removal Workers
47-4041 Hazardous Materials Removal Workers

47-4050 Highway Maintenance Workers
47-4051 Highway Maintenance Workers

47-4060 Rail-Track Laying and Maintenance Equipment Operators
47-4061 Rail-Track Laying and Maintenance Equipment Operators

47-4070 Septic Tank Servicers and Sewer Pipe Cleaners
47-4071 Septic Tank Servicers and Sewer Pipe Cleaners

47-4090 Miscellaneous Construction and Related Workers
47-4091 Segmental Pavers

47-4099 Construction and Related Workers, All Other

47-5000 Extraction Workers
47-5010 Derrick, Rotary Drill, and Service Unit Operators, Oil, Gas, and Mining
47-5011 Derrick Operators, Oil and Gas

47-5012 Rotary Drill Operators, Oil and Gas

47-5013 Service Unit Operators, Oil, Gas, and Mining

47-5020 Earth Drillers, Except Oil and Gas
47-5021 Earth Drillers, Except Oil and Gas

47-5030 Explosives Workers, Ordnance Handling Experts, and Blasters
47-5031 Explosives Workers, Ordnance Handling Experts, and Blasters

47-5040 Mining Machine Operators
47-5041 Continuous Mining Machine Operators

47-5042 Mine Cutting and Channeling Machine Operators

47-5049 Mining Machine Operators, All Other

47-5050 Rock Splitters, Quarry
47-5051 Rock Splitters, Quarry

47-5060 Roof Bolters, Mining
47-5061 Roof Bolters, Mining

47-5070 Roustabouts, Oil and Gas
47-5071 Roustabouts, Oil and Gas

47-5080 Helpers--Extraction Workers
47-5081 Helpers--Extraction Workers

47-5090 Miscellaneous Extraction Workers
47-5099 Extraction Workers, All Other

49-0000 Installation, Maintenance, and Repair Occupations
49-1000 Supervisors of Installation, Maintenance, and Repair Workers
49-1010 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers

49-1011 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers

49-2000 Electrical and Electronic Equipment Mechanics, Installers, and Repairers
49-2010 Computer, Automated Teller, and Office Machine Repairers
49-2011 Computer, Automated Teller, and Office Machine Repairers

49-2020 Radio and Telecommunications Equipment Installers and Repairers
49-2021 Radio Mechanics

49-2022 Telecommunications Equipment Installers and Repairers, Except Line Installers

49-2090 Miscellaneous Electrical and Electronic Equipment Mechanics, Installers, and Repairers

49-2091 Avionics Technicians

49-2092 Electric Motor, Power Tool, and Related Repairers

49-2093 Electrical and Electronics Installers and Repairers, Transportation Equipment

49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment

49-2095 Electrical and Electronics Repairers, Powerhouse, Substation, and Relay

49-2096 Electronic Equipment Installers and Repairers, Motor Vehicles

49-2097 Electronic Home Entertainment Equipment Installers and Repairers

49-2098 Security and Fire Alarm Systems Installers

49-3000 Vehicle and Mobile Equipment Mechanics, Installers, and Repairers
49-3010 Aircraft Mechanics and Service Technicians
49-3011 Aircraft Mechanics and Service Technicians

49-3020 Automotive Technicians and Repairers
49-3021 Automotive Body and Related Repairers

49-3022 Automotive Glass Installers and Repairers

49-3023 Automotive Service Technicians and Mechanics

49-3030 Bus and Truck Mechanics and Diesel Engine Specialists
49-3031 Bus and Truck Mechanics and Diesel Engine Specialists

49-3040 Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics
49-3041 Farm Equipment Mechanics

49-3042 Mobile Heavy Equipment Mechanics, Except Engines

49-3043 Rail Car Repairers

49-3050 Small Engine Mechanics
49-3051 Motorboat Mechanics

49-3052 Motorcycle Mechanics

49-3053 Outdoor Power Equipment and Other Small Engine Mechanics

49-3090 Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers

49-3091 Bicycle Repairers

49-3092 Recreational Vehicle Service Technicians

49-3093 Tire Repairers and Changers

49-9000 Other Installation, Maintenance, and Repair Occupations
49-9010 Control and Valve Installers and Repairers
49-9011 Mechanical Door Repairers

49-9012 Control and Valve Installers and Repairers, Except Mechanical Door

49-9020 Heating, Air Conditioning, and Refrigeration Mechanics and Installers
49-9021 Heating, Air Conditioning, and Refrigeration Mechanics and Installers

49-9030 Home Appliance Repairers
49-9031 Home Appliance Repairers

49-9040 Industrial Machinery Installation, Repair, and Maintenance Workers
49-9041 Industrial Machinery Mechanics

49-9042 Maintenance and Repair Workers, General

49-9043 Maintenance Workers, Machinery

49-9044 Millwrights

49-9045 Refractory Materials Repairers, Except Brickmasons

49-9050 Line Installers and Repairers
49-9051 Electrical Power-Line Installers and Repairers

49-9052 Telecommunications Line Installers and Repairers

49-9060 Precision Instrument and Equipment Repairers

49-9061 Camera and Photographic Equipment Repairers

49-9062 Medical Equipment Repairers

49-9063 Musical Instrument Repairers and Tuners

49-9064 Watch Repairers

49-9069 Precision Instrument and Equipment Repairers, All Other

49-9090 Miscellaneous Installation, Maintenance, and Repair Workers
49-9091 Coin, Vending, and Amusement Machine Servicers and Repairers

49-9092 Commercial Divers

49-9093 Fabric Menders, Except Garment

49-9094 Locksmiths and Safe Repairers

49-9095 Manufactured Building and Mobile Home Installers

49-9096 Riggers

49-9097 Signal and Track Switch Repairers

49-9098 Helpers--Installation, Maintenance, and Repair Workers

49-9099 Installation, Maintenance, and Repair Workers, All Other

51-0000 Production Occupations
51-1000 Supervisors, Production Workers
51-1010 First-Line Supervisors/Managers of Production and Operating Workers
51-1011 First-Line Supervisors/Managers of Production and Operating Workers

51-2000 Assemblers and Fabricators
51-2010 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
51-2011 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers

51-2020 Electrical, Electronics, and Electromechanical Assemblers
51-2021 Coil Winders, Tapers, and Finishers

51-2022 Electrical and Electronic Equipment Assemblers

51-2023 Electromechanical Equipment Assemblers

51-2030 Engine and Other Machine Assemblers
51-2031 Engine and Other Machine Assemblers

51-2040 Structural Metal Fabricators and Fitters

51-2041 Structural Metal Fabricators and Fitters

51-2090 Miscellaneous Assemblers and Fabricators
51-2091 Fiberglass Laminators and Fabricators

51-2092 Team Assemblers

51-2093 Timing Device Assemblers, Adjusters, and Calibrators

51-2099 Assemblers and Fabricators, All Other

51-3000 Food Processing Workers
51-3010 Bakers
51-3011 Bakers

51-3020 Butchers and Other Meat, Poultry, and Fish Processing Workers
51-3021 Butchers and Meat Cutters

51-3022 Meat, Poultry, and Fish Cutters and Trimmers

51-3023 Slaughterers and Meat Packers

51-3090 Miscellaneous Food Processing Workers
51-3091 Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders

51-3092 Food Batchmakers

51-3093 Food Cooking Machine Operators and Tenders

51-4000 Metal Workers and Plastic Workers
51-4010 Computer Control Programmers and Operators
51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic

51-4012 Numerical Tool and Process Control Programmers

51-4020 Forming Machine Setters, Operators, and Tenders, Metal and Plastic
51-4021 Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic

51-4022 Forging Machine Setters, Operators, and Tenders, Metal and Plastic

51-4023 Rolling Machine Setters, Operators, and Tenders, Metal and Plastic

51-4030 Machine Tool Cutting Setters, Operators, and Tenders, Metal and Plastic
51-4031 Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

51-4032 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic

51-4033 Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic

51-4034 Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic

51-4035 Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic

51-4040 Machinists
51-4041 Machinists

51-4050 Metal Furnace and Kiln Operators and Tenders
51-4051 Metal-Refining Furnace Operators and Tenders

51-4052 Pourers and Casters, Metal

51-4060 Model Makers and Patternmakers, Metal and Plastic
51-4061 Model Makers, Metal and Plastic

51-4062 Patternmakers, Metal and Plastic

51-4070 Molders and Molding Machine Setters, Operators, and Tenders, Metal and Plastic

51-4071 Foundry Mold and Coremakers

51-4072 Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic

51-4080 Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
51-4081 Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic

51-4110 Tool and Die Makers
51-4111 Tool and Die Makers

51-4120 Welding, Soldering, and Brazing Workers
51-4121 Welders, Cutters, Solderers, and Brazers

51-4122 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

51-4190 Miscellaneous Metalworkers and Plastic Workers
51-4191 Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic

51-4192 Lay-Out Workers, Metal and Plastic

51-4193 Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

51-4194 Tool Grinders, Filers, and Sharpeners

51-4199 Metalworkers and Plastic Workers, All Other

51-5000 Printing Workers
51-5010 Bookbinders and Bindery Workers
51-5011 Bindery Workers

51-5012 Bookbinders

51-5020 Printers
51-5021 Job Printers

51-5022 Prepress Technicians and Workers

51-5023 Printing Machine Operators

51-6000 Textile, Apparel, and Furnishings Workers
51-6010 Laundry and Dry-Cleaning Workers
51-6011 Laundry and Dry-Cleaning Workers

51-6020 Pressers, Textile, Garment, and Related Materials
51-6021 Pressers, Textile, Garment, and Related Materials

51-6030 Sewing Machine Operators
51-6031 Sewing Machine Operators

51-6040 Shoe Workers
51-6041 Shoe and Leather Workers and Repairers

51-6042 Shoe Machine Operators and Tenders

51-6050 Tailors, Dressmakers, and Sewers
51-6051 Sewers, Hand

51-6052 Tailors, Dressmakers, and Custom Sewers

51-6060 Textile Machine Setters, Operators, and Tenders
51-6061 Textile Bleaching and Dyeing Machine Operators and Tenders

51-6062 Textile Cutting Machine Setters, Operators, and Tenders

51-6063 Textile Knitting and Weaving Machine Setters, Operators, and Tenders

51-6064 Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders

51-6090 Miscellaneous Textile, Apparel, and Furnishings Workers
51-6091 Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers

51-6092 Fabric and Apparel Patternmakers

51-6093 Upholsterers

51-6099 Textile, Apparel, and Furnishings Workers, All Other

51-7000 Woodworkers
51-7010 Cabinetmakers and Bench Carpenters
51-7011 Cabinetmakers and Bench Carpenters

51-7020 Furniture Finishers
51-7021 Furniture Finishers

51-7030 Model Makers and Patternmakers, Wood
51-7031 Model Makers, Wood

51-7032 Patternmakers, Wood

51-7040 Woodworking Machine Setters, Operators, and Tenders
51-7041 Sawing Machine Setters, Operators, and Tenders, Wood

51-7042 Woodworking Machine Setters, Operators, and Tenders, Except Sawing

51-7090 Miscellaneous Woodworkers
51-7099 Woodworkers, All Other

51-8000 Plant and System Operators
51-8010 Power Plant Operators, Distributors, and Dispatchers
51-8011 Nuclear Power Reactor Operators

51-8012 Power Distributors and Dispatchers

51-8013 Power Plant Operators

51-8020 Stationary Engineers and Boiler Operators
51-8021 Stationary Engineers and Boiler Operators

51-8030 Water and Liquid Waste Treatment Plant and System Operators
51-8031 Water and Liquid Waste Treatment Plant and System Operators

51-8090 Miscellaneous Plant and System Operators
51-8091 Chemical Plant and System Operators

51-8092 Gas Plant Operators

51-8093 Petroleum Pump System Operators, Refinery Operators, and Gaugers

51-8099 Plant and System Operators, All Other

51-9000 Other Production Occupations
51-9010 Chemical Processing Machine Setters, Operators, and Tenders
51-9011 Chemical Equipment Operators and Tenders

51-9012 Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders

51-9020 Crushing, Grinding, Polishing, Mixing, and Blending Workers
51-9021 Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders

51-9022 Grinding and Polishing Workers, Hand

51-9023 Mixing and Blending Machine Setters, Operators, and Tenders

51-9030 Cutting Workers
51-9031 Cutters and Trimmers, Hand

51-9032 Cutting and Slicing Machine Setters, Operators, and Tenders

51-9040 Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders

51-9041 Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders

51-9050 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
51-9051 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders

51-9060 Inspectors, Testers, Sorters, Samplers, and Weighers
51-9061 Inspectors, Testers, Sorters, Samplers, and Weighers

51-9070 Jewelers and Precious Stone and Metal Workers
51-9071 Jewelers and Precious Stone and Metal Workers

51-9080 Medical, Dental, and Ophthalmic Laboratory Technicians
51-9081 Dental Laboratory Technicians

51-9082 Medical Appliance Technicians

51-9083 Ophthalmic Laboratory Technicians

51-9110 Packaging and Filling Machine Operators and Tenders
51-9111 Packaging and Filling Machine Operators and Tenders

51-9120 Painting Workers
51-9121 Coating, Painting, and Spraying Machine Setters, Operators, and Tenders

51-9122 Painters, Transportation Equipment

51-9123 Painting, Coating, and Decorating Workers

51-9130 Photographic Process Workers and Processing Machine Operators
51-9131 Photographic Process Workers

51-9132 Photographic Processing Machine Operators

51-9140 Semiconductor Processors
51-9141 Semiconductor Processors

51-9190 Miscellaneous Production Workers
51-9191 Cementing and Gluing Machine Operators and Tenders

51-9192 Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders

51-9193 Cooling and Freezing Equipment Operators and Tenders

51-9194 Etchers and Engravers

51-9195 Molders, Shapers, and Casters, Except Metal and Plastic

51-9196 Paper Goods Machine Setters, Operators, and Tenders

51-9197 Tire Builders

51-9198 Helpers--Production Workers

51-9199 Production Workers, All Other

53-0000 Transportation and Material Moving Occupations
53-1000 Supervisors, Transportation and Material Moving Workers
53-1010 Aircraft Cargo Handling Supervisors
53-1011 Aircraft Cargo Handling Supervisors

53-1020 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand

53-1021 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand

53-1030 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators

53-1031 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators

53-2000 Air Transportation Workers
53-2010 Aircraft Pilots and Flight Engineers
53-2011 Airline Pilots, Copilots, and Flight Engineers

53-2012 Commercial Pilots

53-2020 Air Traffic Controllers and Airfield Operations Specialists
53-2021 Air Traffic Controllers

53-2022 Airfield Operations Specialists

53-3000 Motor Vehicle Operators
53-3010 Ambulance Drivers and Attendants, Except Emergency Medical Technicians
53-3011 Ambulance Drivers and Attendants, Except Emergency Medical Technicians

53-3020 Bus Drivers
53-3021 Bus Drivers, Transit and Intercity

53-3022 Bus Drivers, School

53-3030 Driver/Sales Workers and Truck Drivers
53-3031 Driver/Sales Workers

53-3032 Truck Drivers, Heavy and Tractor-Trailer

53-3033 Truck Drivers, Light or Delivery Services

53-3040 Taxi Drivers and Chauffeurs
53-3041 Taxi Drivers and Chauffeurs

53-3090 Miscellaneous Motor Vehicle Operators
53-3099 Motor Vehicle Operators, All Other

53-4000 Rail Transportation Workers
53-4010 Locomotive Engineers and Operators
53-4011 Locomotive Engineers

53-4012 Locomotive Firers

53-4013 Rail Yard Engineers, Dinkey Operators, and Hostlers

53-4020 Railroad Brake, Signal, and Switch Operators
53-4021 Railroad Brake, Signal, and Switch Operators

53-4030 Railroad Conductors and Yardmasters
53-4031 Railroad Conductors and Yardmasters

53-4040 Subway and Streetcar Operators
53-4041 Subway and Streetcar Operators

53-4090 Miscellaneous Rail Transportation Workers
53-4099 Rail Transportation Workers, All Other

53-5000 Water Transportation Workers
53-5010 Sailors and Marine Oilers
53-5011 Sailors and Marine Oilers

53-5020 Ship and Boat Captains and Operators
53-5021 Captains, Mates, and Pilots of Water Vessels

53-5022 Motorboat Operators

53-5030 Ship Engineers
53-5031 Ship Engineers

53-6000 Other Transportation Workers
53-6010 Bridge and Lock Tenders
53-6011 Bridge and Lock Tenders

53-6020 Parking Lot Attendants
53-6021 Parking Lot Attendants

53-6030 Service Station Attendants
53-6031 Service Station Attendants

53-6040 Traffic Technicians
53-6041 Traffic Technicians

53-6050 Transportation Inspectors
53-6051 Transportation Inspectors

53-6090 Miscellaneous Transportation Workers
53-6099 Transportation Workers, All Other

53-7000 Material Moving Workers
53-7010 Conveyor Operators and Tenders
53-7011 Conveyor Operators and Tenders

53-7020 Crane and Tower Operators
53-7021 Crane and Tower Operators

53-7030 Dredge, Excavating, and Loading Machine Operators
53-7031 Dredge Operators

53-7032 Excavating and Loading Machine and Dragline Operators

53-7033 Loading Machine Operators, Underground Mining

53-7040 Hoist and Winch Operators
53-7041 Hoist and Winch Operators

53-7050 Industrial Truck and Tractor Operators

53-7051 Industrial Truck and Tractor Operators

53-7060 Laborers and Material Movers, Hand
53-7061 Cleaners of Vehicles and Equipment

53-7062 Laborers and Freight, Stock, and Material Movers, Hand

53-7063 Machine Feeders and Offbearers

53-7064 Packers and Packagers, Hand

53-7070 Pumping Station Operators
53-7071 Gas Compressor and Gas Pumping Station Operators

53-7072 Pump Operators, Except Wellhead Pumpers

53-7073 Wellhead Pumpers

53-7080 Refuse and Recyclable Material Collectors
53-7081 Refuse and Recyclable Material Collectors

53-7110 Shuttle Car Operators
53-7111 Shuttle Car Operators

53-7120 Tank Car, Truck, and Ship Loaders
53-7121 Tank Car, Truck, and Ship Loaders

53-7190 Miscellaneous Material Moving Workers
53-7199 Material Moving Workers, All Other

55-0000 Military Specific Occupations
55-1000 Military Officer Special and Tactical Operations Leaders/Managers
55-1010 Military Officer Special and Tactical Operations Leaders/Managers
55-1011 Air Crew Officers

55-1012 Aircraft Launch and Recovery Officers

55-1013 Armored Assault Vehicle Officers

55-1014 Artillery and Missile Officers

55-1015 Command and Control Center Officers

55-1016 Infantry Officers

55-1017 Special Forces Officers

55-1019 Military Officer Special and Tactical Operations Leaders/Managers, All Other

55-2000 First-Line Enlisted Military Supervisor/Managers
55-2010 First-Line Enlisted Military Supervisors/Managers
55-2011 First-Line Supervisors/Managers of Air Crew Members

55-2012 First-Line Supervisors/Managers of Weapons Specialists/Crew Members

55-2013 First-Line Supervisors/Managers of All Other Tactical Operations Specialists

55-3000 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members

55-3010 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members

55-3011 Air Crew Members

55-3012 Aircraft Launch and Recovery Specialists

55-3013 Armored Assault Vehicle Crew Members

55-3014 Artillery and Missile Crew Members

55-3015 Command and Control Center Specialists

55-3016 Infantry

55-3017 Radar and Sonar Technicians

55-3018 Special Forces

55-3019 Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members, All Other

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Part V

Department of Transportation

Research and Special Programs Administration

49 CFR Parts 171, et al.

Hazardous Materials; Miscellaneous Amendments; Proposed Rule

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 172, 173, 174, 175, 177, 178, 179 and 180

[Docket No. RSPA–99–6213 (HM–218)]

RIN 2137–AD16

Hazardous Materials; Miscellaneous Amendments

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: RSPA proposes to make miscellaneous amendments to the Hazardous Materials Regulations (HMR) based on petitions for rulemaking and RSPA initiative. These proposed amendments are intended to update, clarify or provide relief from certain regulatory requirements.

DATES: Comments must be received by November 29, 1999.

ADDRESSES: Submit written comments to the Dockets Management System, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590–0001. Comments should identify Docket Number RSPA–99–6213 and be submitted in two copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed stamped postcard. Comments may also be submitted to the docket electronically by logging onto the Dockets Management System website at *http://dms.dot.gov*. Click on ''Help & Information'' to obtain instructions for filing the document electronically. In every case, the comment should refer to the Docket number ''RSPA–99–6213''.

The Dockets Management System is located on the Plaza Level of the Nassif Building, at the above address. Public dockets may be reviewed at the address above between the hours of 9:00 a.m. to 5:00 p.m., Monday through Friday, excluding Federal holidays. In addition, the NPRM and all comments can be reviewed on the Internet by accessing the Hazmat Safety Homepage at ''http://hazmat.dot.gov.''

FOR FURTHER INFORMATION CONTACT: Charles Betts or Diane LaValle, Office of Hazardous Materials Standards, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590–0001, telephone (202) 366–8553.

SUPPLEMENTARY INFORMATION:

Background

This NPRM is designed primarily to reduce regulatory burden on industry by incorporating changes into the HMR based on RSPA's own initiative and petitions for rulemaking submitted in accordance with 49 CFR 106.31. This NPRM also is consistent with the goals of the President's Regulatory Reinvention Initiative. On March 4, 1995, the President directed Federal agencies to perform an extensive review of all agency regulations and eliminate or revise those requirements that are outdated or in need of reform. In a continuing effort to review the HMR for necessary revisions, RSPA is also proposing to eliminate, revise, clarify and relax certain other regulatory requirements.

The following is a section-by-section summary of the proposed changes.

Section-by-Section Review

Part 171

Section 171.7

RSPA proposes to update the incorporation by reference of the American Society of Mechanical Engineers (ASME) Code to the 1998 Edition. Currently, the 1992 Edition and the Addenda through December 31, 1993 are incorporated by reference. After a review, RSPA believes that the 1998 Edition should be incorporated by reference. However, at this time RSPA is not proposing to adopt any Addenda to the 1998 Edition of the ASME Code because we have not fully reviewed them.

Section 171.8

The definition for ''Aerosol'' would be revised to remove reference to a ''metal'' receptacle to align the HMR with the UN Recommendations.

RSPA proposes to revise the definition for ''EX number.'' Currently, the definition states that an EX number is assigned by the Associate Administrator for Hazardous Materials Safety (AAHMS) to identify an explosive which has been approved. However, RSPA presently assigns EX numbers to track materials evaluated by the AAHMS under the provisions of § 173.56, regardless of whether or not they are approved under a different hazard class.

The definition for ''Placarded car'' would be revised to remove reference to a ''FUMIGATION placard.'' As used in the HMR, a railcar containing lading which has been fumigated or is undergoing fumigation is required to display the ''FUMIGANT marking'' shown in § 173.9.

Section 171.11

RSPA is proposing to remove paragraph (d)(5), which requires the identification of a poison material on the shipping paper. The International Civil Aviation Organization (ICAO) Technical Instruction already requires the shipping paper to identify subrisks and RSPA believes paragraph (d)(5) is unnecessary. RSPA is proposing to add a new paragraph (d)(5) to require that the original approval (EX) number or traceable product code issued to an air bag inflator or seat-belt pretensioner be entered on the shipping paper in association with the basic description, as specified in § 173.166 (c). Currently, shipping papers for devices offered under the ICAO Technical Instruction are not required to contain the EX number or product code for an approved inflator or pretensioner. RSPA believes this shipping paper provision should include air bags or seat-belt pretensioners when offered and transported in the United States under the authority of international regulations. Devices containing a pressure vessel and transported as Division 2.2 (UN3353) would be excluded from this shipping paper notation requirement. In addition, paragraph (d)(14) would be revised to clarify that ''Aerosols'' transported in the U.S. under the provisions of the ICAO Technical Instructions must be in metal packagings if the packaging exceeds 7.22 cubic inches.

Section 171.12

RSPA is proposing to revise paragraph (a) to clarify that the shipping paper documentation required under the International Maritime Dangerous Goods Code (IMDG) or International Atomic Energy Agency (IAEA) must be written in English as currently required by § 172.201(a)(2). Similar to the proposed change to § 171.11 above, RSPA proposes to add paragraph (b)(5) to require that the approval (EX) number or traceable product code be entered on shipping papers for airbag inflators and seat belt pretensioners offered under the International Maritime Dangerous Goods (IMDG) Code.

Part 172

Section 172.101

Paragraphs (b)(2) and (b)(6) would be revised to clarify that proper shipping names denoted with an ''A'' or ''W'' in Column (1), in the HMT, may be used to describe hazardous materials transported by all modes when all applicable requirements are met.

RSPA proposes to remove paragraph (c)(8), which is specific to determining

a proper shipping description for hazardous substances as it is redundant with § 172.101(c).

Paragraph (c)(8) would be replaced to allow the words ''liquid'' or ''solid'' to be added to a proper shipping name when a hazardous material specifically listed by name may due to differing physical states be a liquid or solid. This is consistent with existing provisions in the UN Recommendations, the ICAO TI and the IMDG Code.

The entry ''Chemical kits *or* First aid kits *(containing hazardous materials)*'' would be separated into two individual entries for easier reference. In addition, the wording *''(containing hazardous materials)''* is unnecessary and would be removed.

The entry '' 1-chloro-3-bromopropane'' would be changed to read ''1-bromo-3-chloropropane'' to be in accordance with the UN Recommendations.

A new entry *''Fumigated transport vehicle or freight container, see § 173.9''* would be added to reference § 173.9 which contains requirements for transporting fumigated lading. This change would facilitate the location of these requirements by readers.

For the entries, ''Polychlorinated biphenyls, liquid'' and ''Polychlorinated biphenyls, solid,'' UN2315, in Column 1, the symbols ''A, W'' would be removed and a new Special Provision 140 would be added in Column 7. Special Provision 140 would state that the material is only regulated when it meets the defining criteria for a hazardous substance or a marine pollutant.

For the entry ''Air, compressed,'' Special Provision 78 would be added in Column 7 to specify that only mixtures with not more than 23.5 percent oxygen may be transported under this entry. An OXIDIZER label is not required for mixtures containing not more than 23.5 percent oxygen. This change will align the HMR with a recent amendment adopted in the eleventh revised edition of the UN Recommendations. In addition, for the entry ''Rare gases and oxygen mixtures, compressed,'' Special Provision 79 would be added to state that this entry may not be used for mixtures meeting the criteria for oxidizing gas in § 171.8. RSPA believes that it is more appropriate to use a generic oxidizing gas entry (i.e., Compressed gas, oxidizing, n.o.s.) when such mixtures meet the criteria of an oxidizing gas.

For the entry, ''Sodium chlorate, aqueous solution,'' PG II, Special Provision ''B6'' would be removed. It was pointed out to RSPA that similar entries (Potassium chlorate, aqueous solution and Chlorates, inorganic, aqueous solution) are not assigned this Special Provision. RSPA agrees that the Special Provision was mistakenly assigned.

In response to comments submitted by the Vessel Operators Hazardous Materials Association (VOHMA), in response to the NPRM of HM–215C, RSPA is proposing to revise a number of HMT entries with inconsistently applied Codes 34 and 95 in column 10B. These codes pertain to segregation of Division 2.3 and 6.1 and Class 8 hazardous materials with foodstuffs. These changes will align the HMR with the IMDG Code. In total, there are twenty (20) deletions of Code 95, nine (9) additions of Code 95, three (3) changes from Code 34 to 95, and three (3) deletions of Code 34 from Column 10B.

Section 172.102

In paragraph (c)(1), a new Special Provision 78 would be added to specify that the entry ''Air, compressed'' may not be used to describe compressed air which contains more than 23.5% of oxygen. This change would align the HMR with a recent amendment adopted in the eleventh revised edition of the UN Recommendations. In addition, a new Special Provision 79 would be added to specify that the entry ''Rare gases and oxygen mixtures, compressed'' may not be used for gas mixtures which meet the criteria for an oxidizing gas. This change would ensure that the correct emergency response information is provided for mixtures which meet the criteria for oxidizing gas. We are also proposing to add a new Special Provision 140 to the entries ''Polychlorinated biphenyls, liquid'' and ''Polychorinated biphenyl, solid,'' UN 2315 to state that the material is only regulated when it meets the defining criteria for a hazardous substance or marine pollutant. This change would be consistent with international regulations.

We propose, in paragraph (c)(5), to revise Special Provision N10 regarding lighters. Currently, approvals for lighters require the approval number to be marked on the package and on the shipping papers. We believe that this requirement should be contained in the regulations.

Section 172.201

Paragraph (a)(1)(ii) would be revised to clarify that when a reproduced shipping paper identifies hazardous materials entries by highlighting the basic description in a contrasting color, the packing group must be highlighted. The packing group is identified as a basic description element by § 172.202(a)(4) and (b).

Section 172.204

For consistency with paragraphs (a)(1), (a)(2) and the ICAO Technical Instructions, paragraph (c)(1) would be revised to change the word ''packed'' to read ''packaged.'' A transition period of 10 years would be provided for depletion of preprinted shipping papers showing the word ''packed'' to reduce costs.

Sections 172.332 and 172.336

In response to a petition for rulemaking from the American Trucking Association (ATA) [P–1364], RSPA proposes to amend §§ 172.332(a) and 172.336(b) to authorize the use of white square-on-point configurations for display of identification number markings regardless of whether a placard is required for that material. RSPA agrees with ATA that it is unnecessarily restrictive to prevent the use of identification number markings displayed on square-on-point configurations in conjunction with placards.

Section 172.504

RSPA proposes to revise the Class 9 table entry to reference § 172.504(f)(9), which provides an exception from displaying a Class 9 placard for domestic transportation. In addition, paragraph (f)(8), regarding the placarding of a material classed as a combustible liquid that also meets the definition of a Class 9, would be removed. A new paragraph (f)(8) would be added to provide an exception, in domestic transportation, for placarding a transport vehicle displaying a POISON INHALATION placard if it is already placarded with a POISON GAS placard.

Section 172.516

Paragraph (a) would be revised by changing the wording ''motor vehicle'' to ''transport vehicle'' the second time it appears in the first sentence, to correct an inaccurate usage of the term ''motor vehicle''. This change clarifies that each placard on a motor vehicle must be clearly visible from the direction it faces, except from the direction of another transport vehicle to which the motor vehicle is coupled.

Section 172.519

Paragraph (b)(3) would be revised to clarify that text is required on the DANGEROUS placard. In addition, the provision would be revised to clarify that text is not required on an OXYGEN placard when the specific identification number is displayed.

Section 172.604

Paragraph (c)(2) would be revised to clarify that hazardous materials transported under the proper shipping name ''Consumer commodity'' do not require emergency response information, regardless of whether the hazard class is ''ORM–D'' as provided by the HMR, or ''9'' as provided by the ICAO Technical Instructions.

Section 172.704

In § 172.704, paragraph (b) would be revised to add the reference, ''29 CFR 1910.1200,'' in addition to 29 CFR 1910.120 of the Department of Labor's Occupational Safety and Health Administration (OSHA). This change is needed to clarify that any training received due to OSHA's requirements need not be repeated to meet DOT training requirements.

Part 173

Section 173.4

RSPA proposed to revise paragraphs (a)(1)(i) (ii) and (iii) to clarify that the limit of one gram for Division 6.1 material per inner receptacle applies only to materials that are poisonous by inhalation. In addition, RSPA proposes to add a note to § 173.4(a)(6)(ii) to clarify that one package need not be subjected to all of the tests specified in § 173.4; a separate, but identical, packaging may be used for each test.

Section 173.5

In § 173.5, paragraph (a) would be revised to grant an exception from the emergency response and training requirements in subparts G and H of Part 172 respectively to Class 2 agricultural products that are transported over local roads between fields of the same farm. Currently, agricultural products other than Class 2 materials are completely excepted from the HMR when transported between fields of the same farm. RSPA believes that similar relief is warranted for Class 2 materials.

Section 173.7

We are proposing to add a new paragraph (e) which would incorporate and expand the existing exception in § 173.62, paragraph (d) for Class 1 explosives owned by the Department of Defense (DOD). Section 173.62, paragraph (d) would be deleted. Currently DOD is authorized to ship their Class 1 materials that were packaged prior to January 1, 1990, without regard to the current packaging requirements in Part 178. In addition to the existing exception, we are proposing to also except these packagings from the marking and labeling requirements. This would alleviate the need to remark and re-label DOD stockpiled hazardous materials. Considering that the revised exception applies to marking and labeling of DOD packagings in addition to packaging requirements, RSPA believes it is more appropriate that the exceptions appear in § 173.7.

Section 173.12

In § 173.12, paragraph (b)(3) would be revised to clarify that materials poisonous by inhalation are not authorized for the lab pack provisions.

Section 173.13

In § 173.13, paragraph (a) would be revised to clarify that use of the CARGO AIRCRAFT ONLY label is required. As discussed in the preamble to Docket HM–222 [May 30,1996; 61 FR 27169], it was RSPA's intention to except use of primary and subsidiary hazard labels only. Hazardous materials transported under the provisions of § 173.13 are not authorized for transportation by passenger carrying aircraft. When transported without the CARGO AIRCRAFT ONLY label, RSPA believes that some packagings offered for transportation under § 173.13 may inadvertently be placed on a passenger carrying aircraft in violation of the HMR. This change would be consistent with § 172.402(c) regarding display of the CARGO AIRCRAFT ONLY label.

Section 173.32

In § 173.32, we propose to amend paragraph (e)(3) to authorize smaller markings on specification portable tanks that were originally authorized to be marked with letters and numerals as small as 1/8 of an inch in height. The specification plates originally attached to these packagings do not have sufficient space to accommodate larger size markings after retesting.

Section 173.60

In § 173.60, a new paragraph (b)(14) would be added consistent with the UN Recommendations to allow large explosive articles normally intended for military use, to be transported unpackaged under specific conditions. This provision is currently found in § 173.62 Packing Instruction (PI) 130; however, the provision only applies to those explosives assigned to PI 130. Inclusion of this new paragraph would allow any large explosive article normally intended for military use to be transported unpackaged under the specified conditions.

Section 173.61

In § 173.61, paragraph (a) would be revised to clarify that explosives may be packed with non hazardous materials that will not adversely affect the explosive. RSPA believes that relaxation of this provision will avoid the need for exemptions.

Section 173.62

In § 173.62, paragraph (d) would be removed. Reference the preamble discussion under § 173.7.

Section 173.150

RSPA proposes to remove the wording ''and combustible liquids'' in the first sentence of § 173.150(b). Referring to combustible liquids is unnecessary because there is no requirement for labeling or specification packaging. In addition, paragraph (f)(3)(iv) would be revised to clarify that placards are not required for a combustible liquid that is a hazardous substance, hazardous waste or marine pollutant in a non-bulk packaging.

We propose to revise paragraph (f)(3)(viii) by changing a reference from § 177.834 to § 177.834(j). Paragraph (j) requires that manholes and valves be closed during transportation. This proposed change would clarify that combustible liquids are not subject to other provisions of § 177.834, such as those pertaining to attendance, and is responsive to a petition for rulemaking (P–1386) from the Petroleum Marketers Association of America.

Section 173.166

We propose to revise the introductory text in paragraph (e) to clarify that all airbag modules and inflators and seat belt pretensioners including those in Division 2.2 that are transported under UN 3353 must be packaged in UN packagings meeting the Packing Group III performance level. At present, since no packing group is provided in § 172.101 for UN 3353, the required level of testing for UN packagings authorized for use in paragraph (e) for devices transported under UN 3353 is not stated in the HMR. The proposal to require a Packing Group III performance level is consistent with the provisions in the eleventh revised edition of the UN Recommendations.

We also propose to authorize an air bag module or a seat belt pretensioner that has been removed from a motor vehicle that was manufactured as required for use in the United States to be offered for transportation in commerce without marking the EX number or product code on the shipping paper, as required by current paragraph (c). Instead, the word ''Recycled'' would

be entered immediately after the basic description prescribed in § 172.202. This proposed change will facilitate transportation of these devices for recycling and eliminate the need for exemption, DOT–E 12189 granted to the Automotive Recyclers Association and several other grantees.

Section 173.242

In paragraph (c)(1), a reference to obsolete § 178.253–4 would be removed and replaced with the specific portable tank venting requirements that were contained in that section.

Section 173.247

Paragraph (g)(1)(iii)(C) would be revised to clarify the pressure relief device requirements for bulk packagings transported by rail. The current regulatory text may be misunderstood as requiring the use of a combination pressure relief device, such as a reclosing pressure relief device (a safety valve) incorporating a rupture disc on the upstream side. The paragraph would be revised to clarify the requirement for a nonreclosing pressure relief device that incorporates a rupture disc conforming to the requirements of § 179.15.

Section 173.306

Paragraph (h)(2) would be revised to clarify that shipping papers are required for a Class 2 material that has been reclassed as a consumer commodity if it also meets the definition for ''marine pollutant.'' This change would provide consistency with corresponding HMR limited quantity provisions.

Section 173.307

Paragraph (a)(4) would be revised to except from the HMR, refrigerating machines, including dehumidifiers and air conditioners and components thereof, containing up to 12 kg (25 pounds) or less of a non-flammable, non-toxic gas; 12 L (3 gallons) or less of ammonia solution (UN2672) and except for air transportation, 12 kg (25 pounds) of flammable non-toxic gas, and 20 kg (44 pounds) or less of a Group A1 refrigerant specified in ANSI/ASHRAE Standard 15. In addition, for air transportation consistent with Special Provision A103 of the ICAO Technical Instructions an exception would be provided for refrigerating machines containing 100 g (4 ounces) or less of a flammable, non-toxic liquified gas. This paragraph is also revised for clarity and to reference both International System of Units (SI) and customary units.

Part 174

Section 174.26

The section heading would be revised by removing the phrase ''of placarded cars.'' This change clarifies that the prescribed shipping paper requirements apply to any person who accepts hazardous materials for transportation by rail.

Section 174.50

As set forth in § 174.50, the Federal Railroad Administration (FRA) has authority to approve for movement a tank car not conforming to the HMR. Since the adoption of the provision, FRA has issued approximately 400 movement approvals for tank cars that no longer conform to the regulations, for reasons such as leaking fittings, accident damage and exceeding the gross rail load. RSPA proposes to expand FRA's approval authority from tank cars to all rail cars. This would allow FRA to grant approval for the movement of covered hopper cars, gondola cars, and other types of railroad equipment when they no longer conform to Federal law, but may safely be moved to a repair location and eliminate the need for exemption for such movements.

Part 175

Section 175.25

Paragraph (a)(2)(ii) would be revised to authorize lettering of at least 4 mm (.16 inch) in height, based on RSPA initiative. Currently, the height requirement is 6mm (0.2 inch) minimum for some of the information required on the notification to air passengers of hazardous materials restrictions. The smaller lettering does not significantly impact readability and encourages use of space on signs for other information such as graphics.

Section 175.30

An exception in paragraph (d)(1) for inspecting packages of consumer commodities packaged in a freight container would be expanded to include consumer commodities that are palletized or overpacked. RSPA believes that it is impracticable for consumer commodities that are palletized or overpacked to be broken down and inspected by the operator of the aircraft. This amendment would allow consumer commodities that are overpacked or palletized to be handled in the same manner as consumer commodities in freight containers.

Part 177

Section 177.848

Paragraph (c) would be revised to clarify that the prohibition against loading or storing cyanides or cyanide mixtures with acids applies only if hydrogen cyanide would be generated when the materials come into contact with each other.

Part 178

Section 178.3

RSPA proposes to amend the introductory text to paragraph (a) to clarify that the specification markings on a UN standard packaging may not be marked on a removable component of a packaging.

Section 178.345–13

In paragraph (a), a reference to obsolete §§ 178.346–13(a), 178.347–13(a), and 178.348–13(a) would be removed.

Section 178.603

RSPA proposes to revise paragraph (f)(5) to allow a slight discharge from a closure if it ceases immediately after impact with no further leakage. Currently this allowance applied only to drums, jerricans or bags. This proposed change would align the criteria for passing the drop test with international regulations.

Section 178.605

RSPA proposes to revise the last sentence in paragraph (d)(1) to correctly reference the maximum filling limits in § 173.24a(d).

Section 178.703

RSPA proposes to revise § 178.703(a)(1)(ii) to correctly reference all of paragraph (a) of § 178.702, and not merely paragraphs (a)(1) and (2), for the code number used to designate an IBC design type.

Section 178.815

Paragraph (c)(4)(iii) would be added to authorize dynamic compression testing for IBCs in the same manner as is currently authorized for non-bulk packagings. RSPA considers the dynamic compression test to be an equivalent test method and that by allowing more flexibility in the stacking test requirements will provide a cost saving to the regulated industry.

Part 179

Section 179.100–20

RSPA proposes to remove the water capacity entry in the table that requires each DOT–105A100W tank car to be

stamped with the water capacity in pounds because it is redundant. Section 179.22 requires a tank car to be marked in accordance with Appendix C of the Association of American Railroads (AAR) Tank Car Manual. Section C3.03 of the AAR manual already requires marking the water capacity, in gallons and liters, on the side of the tank car. Consequently, the requirement proposed for deletion is redundant and conflicting with other requirements. Therefore, as a result, its removal will have no effect on safety.

Part 180

Section 180.417

RSPA proposes to revise paragraph (a)(2) to allow a cargo tank owner to retain the vehicle certification report and related papers at a company's principal place of business or at the location where the vehicle is housed or maintained, without obtaining prior approval from the Regional Director, Office of Motor Carrier Safety, Federal Highway Administration. This change offers motor carriers greater flexibility in the location where these documents are retained.

Regulatory Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This proposed rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and, therefore, was not reviewed by the Office of Management and Budget. This rule is not significant under the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034).

The costs and benefits associated with this proposed rule are considered to be so minimal as to not warrant preparation of a regulatory impact analysis or regulatory evaluation. This determination may be revised as a result of public comment.

B. Executive Order 12612

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 (''Federalism''). Federal law expressly preempts State, local, and Indian tribe requirements, applicable to the transportation of hazardous materials, that cover certain subjects and are not substantively the same as the Federal requirements. 49 U.S.C. 5125(b)(1). These subjects are:

(i) The designation, description, and classification of hazardous materials;

(ii) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;

(iii) The preparation, execution, and use of shipping documents pertaining to hazardous materials and requirements respecting the number, content, and placement of those documents;

(iv) The written notification, recording, and reporting of the unintentional release in transportation of hazardous materials; or

(v) The design, manufacturing, fabrication, marking, maintenance, reconditioning, repairing, or testing of a package or container which is represented, marked, certified, or sold as qualified for use in the transportation of hazardous materials.

This proposed rule concerns the classification, packaging, marking, labeling, and handling of hazardous materials, among other covered subjects.

If adopted as final, this rule would preempt any State, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are ''substantively the same'' (see 49 CFR 107.202(d)) as the Federal requirements.

Federal law (49 U.S.C. 5125(b)(2)) provides that if DOT issues a regulation concerning any of the covered subjects after November 16, 1990, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. That effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. RSPA requests comments on what the effective date of Federal preemption should be for the requirements in this proposed rule that concern covered subjects.

C. Executive Order 13084

This propose rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13084 (''Consultation and Coordination with Indian Tribal Governments''). Because this proposed rule would not significantly or uniquely affect the communities, the funding and consultation requirements of the Executive Order do not apply.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities. This proposed rule would amend miscellaneous provisions in the HMR, generally to clarify those provisions and to relax requirements that are overly burdensome. The proposed changes in this rule are generally intended to provide relief to shippers, carriers, and packaging manufacturers, some of whom are small entities (*e.g.*, governmental jurisdictions and not-for-profit organizations). The costs and benefits associated with this proposed rule are considered to be so minimal as to not warrant preparation of a regulatory impact analysis or regulatory evaluation. Therefore, I certify that this proposal will not, if promulgated, have a significant economic impact on a substantial number of small entities.

E. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid Office of Management and Budget (OMB) control number. This NPRM does not propose any new information collection burdens. The information collection associated with the proposal to provide for nonconforming railcars under § 174.50 is currently being reported under the information collection for exemption applications under § 107.105. Information collection requirements contained in § 174.50 have been approved by the OMB under control number 2137–0559.

F. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

G. Unfunded Mandates Reform Act

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $100 million or more to either State, local, or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

H. Impact on Business Processes and Computer Systems

Many computers that use two digits to keep track of dates will, on January 1, 2000, recognize ''double zero'' not as 2000 but as 1900. This glitch, the year 2000 problem, could cause computers to stop running or to start generating erroneous data. The Year 2000 problem poses a threat to the global economy in which Americans live and work. With the help of the President's Council on Year 2000 Conversion, Federal agencies are reaching out to increase awareness

of the problem and to offer support. We do not want to impose new requirements that would mandate business process changes when the resources necessary to implement those requirements would otherwise be applied to the Year 2000 problem. This proposed rule does not mandate business process changes or require modifications to computer systems. Because this proposed rule does not affect organizations' ability to respond to the Year 2000 problem, we do not intend to delay the effectiveness of the requirements.

List of Subjects

49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 174

Hazardous materials transportation, Radioactive materials, Railroad safety.

49 CFR Part 175

Air Carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 177

Hazardous materials transportation, Motor carriers, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 178

Hazardous materials transportation, Motor vehicle safety, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 179

Hazardous materials transportation, Railroad safety, Reporting and recordkeeping requirements.

49 CFR Part 180

Hazardous materials transportation, Motor carriers, Motor vehicle safety, Packaging and containers, Railroad safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, 49 CFR chapter I is proposed to be amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. The authority citation for part 171 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127, 49 CFR 1.53.

§ 171.7 [Amended]

2. In § 171.7, in paragraph (a)(3), in the table of material incorporated by reference, the entry ''ASME Code, Sections II (Parts A and B), V, VIII (Division 1), and IX of 1992 Edition of American Society of Mechanical Engineers Boiler and Pressure Vessel Code and Addenda through December 31, 1993'' would be removed and the wording ''ASME Code, Sections II (Parts A and B), V, VIII (Division 1), and IX of 1998 Edition of American Society of Mechanical Engineers Boiler and Pressure Vessel Code'' would be added in its place.

3. In § 171.8, the definitions of ''Aerosol,'' ''EX number'' and ''Placarded car'' would be revised to read as follows:

§ 171.8 Definitions and abbreviations.

* * * * *

Aerosol means any non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, the sole purpose of which is to expel a nonpoisonous (other than an Division 6.1 Packing Group III material) liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas.

* * * * *

EX number means a number preceded by the prefix ''EX'', assigned by the Associated Administrator for Hazardous Materials Safety, to an item that has been evaluated under the provisions of § 173.56 of this subchapter pertaining to explosives.

* * * * *

Placarded car means a rail car which is placarded in accordance with the requirements of part 172 of this subchapter.

* * * * *

4. In § 171.11, paragraph (d)(5) would be revised and a sentence would be added at the end of paragraph (d)(14) to read as follows:

§ 171.11 Use of ICAO Technical Instructions.

* * * * *

(d) * * *

(5) Except for a Division 2.2 air bag, air bag module, or seat-belt pretensioner, the shipping paper description must conform to the requirements of § 173.166(c) of this subchapter.

* * * * *

(14) * * * In addition, an aerosol must be in a metal packaging if the packaging exceeds 7.22 cubic inches.

* * * * *

5. In § 171.12, a sentence would be added at the end of paragraph (a) and a new paragraph (b)(19) would be added to read as follows:

§ 171.12 Imports and export shipments.

(a) * * * All shipping paper information required under paragraph (b) or (d) of this section must be in English.

(b) * * *

(19) Except for Division 2.2, the shipping paper description for an air bag, air bag module, or seat-belt pretensioner must conform to the requirements of § 173.166(c) of this subchapter.

* * * * *

PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

6. The authority citation for part 172 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

7. In § 172.101, paragraphs (b)(2), (b)(6), as redesignated at 64 FR 10753 effective October 1, 1999, and (c)(8) would be revised to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

(b) * * *

(2) The letter ''A'' denotes a material that is subject to the requirements of this subchapter only when offered or intended for transportation by aircraft, unless the material is a hazardous substance or a hazardous waste. A shipping description entry preceded by an ''A'' may be used to describe a material for other modes of transportation provided all applicable requirements for the entry are met.

* * * * *

(6) The letter ''W'' denotes a material that is subject to the requirements of this subchapter only when offered or intended for transportation by vessel, unless the material is a hazardous substance or a hazardous waste. A shipping description entry preceded by

a ''W'' may be used to describe a material for other modes of transportation provided all applicable requirements for the entry are met.

(c) * * *

(8) Use of the words ''*liquid*'' or ''*solid*''. The words ''liquid'' or ''solid'' may be added to a proper shipping name when a hazardous material specifically listed by name may due to differing physical states be a liquid or solid. When the packaging specified in Column 8 is inappropriate for the physical state of the material the table provided in paragraph (i)(4) of this section should be used to determine the appropriate packaging section.

* * * * *

§ 172.101 [Amended]

8. In addition, in § 172.101, in the Hazardous Materials Table, the following changes would be made:

a. For the entry ''Air, compressed'', Special Provision ''78'' would be added in column 7.

b. For the entry, ''Polychlorinated biphenyls, liquid, UN2315'' in Column (1) Symbols, ''A, W'' would be removed and Special Provision ''140'' would be added in column 7 in numerical order.

c. For the entry, ''Polychlorinated biphenyls, solid, UN2315'' in Column (1) Symbols ''A, W'' would be removed and Special Provision ''140'' would be added in column 7 in numerical order.

d. For the entry, ''Sodium chlorate, aqueous solution'', PG II, Special Provision ''B6,'' would be removed in column 7.

9. In § 172.101, the Hazardous Materials Table would be amended by removing and adding, in appropriate alphabetical sequence, the following entries to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

§ 172.101 HAZARDOUS MATERIALS TABLE

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging authorizations (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage requirements	
							Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	[REMOVE:]												
			*	*	*	*		*	*				
	Chemical kits *or* First aid kits (*containing hazardous materials*).	9	UN3316		9	15	None	None	None	10 kg	10 kg	A	
			*	*	*	*		*	*				
	1-Chloro-3-bromopropane.	6.1	UN2688	III	6.1	T2	153	203	241	60 L	220 L	A	
			*	*	*	*		*	*				
	[ADD:]												
			*	*	*	*		*	*				
	1-bromo-3-chloropropane.	6.1	UN2688	III	6.1	T2	153	203	241	60 L	220 L	A	
			*	*	*	*		*	*				
	Chemical kits	9	UN3316		9	15	None	None	None	10 kg	10 kg	A	
			*	*	*	*		*	*				
	First aid kits	9	UN3316		9	15	None	None	None	10 kg	10 kg	A	
			*	*	*	*		*	*				
	Fumigated transport vehicle or freight container see § 173.9.												
			*	*	*	*		*	*				

9a. In addition, in § 172.101, in the Hazardous Materials Table, for the following entries, Column 10B would be revised to read as follows:

Column (2) entry	Column (4) entry	PG	Old column (10B) entry	Revised to read:
Chloroacetone, stabilized	UN1695	I	20, 40, 95	20, 40.
Compressed gases, toxic, flammable, n.o.s. Inhalation hazard Zone A.	UN1953		40, 95	40.
Cupriethylenediamine solution	UN1761	II	95	
Cyclohexyl isocyanate	UN2488	I	20, 40, 95	20, 40.
3,5-Dichloro-2,4,6-trifluoropyridine	NA9264	I	40, 95	40.
Ethyl phosphonothioic dichloride, anhydrous.	NA2927	I	20, 40, 95	20, 40.
Ethyl phosphorodichloridate	NA2927	I	20, 40, 95	20, 40.
Hydrofluoric acid and Sulfuric acid mixtures.	UN1786	I	40, 95	40.
Lead dioxide	UN1872	III	34	
Methyldichloroarsine	NA1556	I	40, 95	40.
Oxidizing liquid, corrosive, n.o.s.	UN3098	I/II/III	34, 56, 58, 69, 106	56, 58, 69, 106.
Oxidizing liquid, toxic, n.o.s.	UN3099	I/II/III	56, 58, 95, 106	56, 58, 106.
Oxidizing solid, corrosive, n.o.s.	UN3085	I/II/III	13, 34, 56, 58, 69, 106	13, 56, 58, 69, 106.
Oxidizing solid, toxic, n.o.s.	UN3087	I/II/III	56, 58, 69, 95, 106	56, 58, 69, 106.
Phenyl isocyanate	UN2487	I	20, 40, 95	20, 40.
Polychlorinated biphenyls	UN2315	II	34	95.
Polyhalogenated biphenyls, liquid or Polyhalogenated terphenyls liquid.	UN3151	II	34	95.
Polyhalogenated biphenyls, solid or Polyhalogenated terphenyls, solid.	UN3152	II	34	95.
Potassium hydrogendifluoride, [solution].	UN1811	II	26, 40, 95	20, 40.
Radioactive material, low specific activity, n.o.s. or Radioactive material, LSA, n.o.s.	UN2912			95.
Radioactive material, special form, n.o.s.	UN2974			95.
Radioactive material, surface contaminated object, n.o.s. or Radioactive material, SCO, n.o.s.	UN2913			95.
Sodium hydrosulfide, solution	NA2922	II	40, 95	40.
Thorium metal, pyrophoric	UN2975			95.
Thorium nitrate, solid	UN2976			95.
Toxic liquids, corrosive, organic, n.o.s., inhalation hazard, Packing Group I, Zone A.	UN2927	I	20, 40, 95	20, 40.
Toxic liquids, corrosive, organic, n.o.s., inhalation hazard, Packing Group I, Zone B.	UN2927	I	20, 40, 95	20, 40.
Toxic liquids, flammable, organic, n.o.s., inhalation hazard, Packing Group I, Zone A.	UN2929	I	20, 40, 95	20, 40.
Toxic liquids, flammable, organic, n.o.s., inhalation hazard, Packing Group I, Zone B.	UN2929	I	20, 40, 95	20, 40.
Toxic, liquids, organic, n.o.s. Inhalation hazard, Packing Group I, Zone B.	UN2810	I	20, 40, 95	20, 40.
Toxic, liquids, organic, n.o.s. Inhalation hazard, Packing Group I, Zone A.	UN2810	I	20, 40, 95	20, 40.
Uranium hexafluoride, fissile (with more than 1 percent U-235).	UN2977			95.
Uranium metal, pyrophoric	UN2979			95.
Uranyl nitrate hexahydrate solution	UN2980			95.
Uranyl nitrate, solid	UN2981			95.

10. In § 172.102, in paragraph (c)(1), Special Provisions 78, 79 and 140 would be added and in paragraph (c)(5) Special Provision N10 would be amended by adding a sentence at the end to read as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

Code/Special Provisions

* * * * *

78 This entry may not be used to describe compressed air which contains more than 23.5 percent oxygen. An oxidizer label is not required for any oxygen concentration less than or equal to 23.5 percent.

79 This entry may not be used for mixtures that meet the definition for oxidizing gas.

* * * * *

140 This material is regulated only when it meets the defining criteria for a hazardous substance or a marine pollutant.

* * * * *

(5) * * *

Code/Special Provisions

* * * * *

N10 * * * The approval number (*i.e.*, T–* * *) must be marked on each outer package and on the shipping paper.

* * * * *

§ 172.201 [Amended]

11. In § 172.201, paragraph (a)(1)(ii) would be amended by revising the reference ''§ 172.202(a)(1) and (2), and (3)), or'' to read ''§ 172.202(a)(1), (2), (3), and (4)), or''.

12. In § 172.204, in paragraph (c)(1), in the certification the word ''packed'' would be removed and the word ''packaged'' would be added in its place and a note would be added following the certification to read as follows:

§ 172.204 Shipper's certification.

* * * * *

(c) * * *

(1) * * *

Note to paragraph (c)(1): In the certification, the word ''packed'' may be substituted for the word ''package'' until [10 YEARS AFTER THE EFFECTIVE DATE OF THE FINAL RULE].

* * * * *

13. In § 172.332, paragraph (a) would be revised to read as follows:

§ 172.332 Identification number markings.

(a) *General.* When required by §§ 172.302, 172.336, 172.328, 172.330, or § 172.331, identification number markings must be displayed on orange panels or placards as specified in this section, or on white square-on-point configurations as prescribed in § 172.336(b).

* * * * *

§ 172.336 [Amended]

14. In § 172.336, in paragraph (b), the first sentence would be amended by removing the wording ''in hazard classes for which hazard warning placards are not specified,''.

15. In § 172.504, in paragraph (e), Table 2 would be amended by revising the entry for category 9, and paragraph (f)(8) would be revised to read as follows:

§ 172.504 General placarding requirements.

* * * * *

(e) * * *

TABLE 2

Category of material (Hazard class or division number and additional description, as appropriate)	Placard name	Placard design section reference (§)
* * * *	* *	*
9	Class 9 (see § 172.504(f)(9))	172.560
* * * *	* *	*

(f) * * *

(8) For domestic transportation, a POISON INHALATION HAZARD placard is not required on a transport vehicle or freight container that is already placarded with the POISON GAS placard.

* * * * *

16. In § 172.516, the first sentence of paragraph (a) would be revised to read as follows:

§ 172.516 Visibility and display of placards.

(a) Each placard on a motor vehicle and each placard on a rail car must be clearly visible from the direction it faces, except from the direction of another transport vehicle or rail car to which the motor vehicle or rail car is coupled. * * *

* * * * *

17. In § 172.519, paragraph (b)(3) would be revised to read as follows:

§ 172.519 General specifications for placards.

* * * * *

(b) * * *

(3) For other than Class 7 or the DANGEROUS placard, text indicating a hazard (for example, ''FLAMMABLE'') is not required. In addition, text is not required on the OXYGEN placard provided that the specific identification number is displayed.

* * * * *

18. In § 172.604, paragraph (c)(2) would be revised to read as follows:

§ 172.604 Emergency response telephone number.

* * * * *

(c) * * *

(2) Materials properly described under the shipping names:

Battery powered equipment
Battery powered vehicle
Carbon dioxide, solid
Castor bean
Castor pomace
Castor flake
Castor meal
Consumer commodity
Dry ice
Engines, internal combustion
Fish meal, stabilized
Refrigerating machine
Wheelchair, electric

§ 172.704 [Amended]

19. In § 172.704, the second parenthetical notation in paragraph (b) would be amended by adding the wording ''or 1910.1200'' immediately after the wording ''1910.120''.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

20. The authority citation for part 173 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 44701; 49 CFR 1.45, 1.53.

§ 173.4 [Amended]

21. In § 173.4 the following changes would be made:

a. In paragraph (a)(1)(i), the wording ''Division 6.1, Packing Group I materials'' would be removed and ''materials poisonous by inhalation'' added in its place.

b. In paragraph (a)(1)(ii), the wording ''Division 6.1, Packing Group I materials'' would be removed and ''materials poisonous by inhalation'' added in its place.

c. In paragraph (a)(1)(iii), the wording ''Division 6.1, Packing Group I'' would be removed and ''materials poisonous by inhalation'' added in its place.

22. In addition, in § 173.4, a note would be added following paragraph (a)(6)(ii) to read as follows:

§ 173.4 Small quantity exceptions

(a) * * *

(6) * * *

(ii) * * *

Note to paragraph (a)(6): Each of the tests in paragraph (a)(6) of this section may be performed on a different but identical package; i.e., all tests need not be performed on the same package.

* * * * *

23. In § 173. 5, paragraph (a) introductory text would be revised to read as follows:

§ 173.5 Agricultural operations.

(a) For other than a Class 2 material, the transportation of an agricultural product over local roads between fields of the same farm is excepted from the requirements of this subchapter. A Class 2 material transported over local roads between fields of the same farm is excepted from subparts G and H of part 172 of this subchapter. In either case, transportation of the hazardous material is subject to the following conditions:

* * * * *

24. In § 173.7, a new paragraph (e) would be added to read as follows:

§ 173.7 U.S. Government material.

* * * * *

(e) Class 1 (explosive) materials owned by the Department of Defense and packaged prior to January 1, 1990, in accordance with the requirements of this subchapter in effect at that time, are excepted from the marking and labeling requirements of part 172 of this subchapter and the packaging and package marking requirements of part 178 of this subchapter provided the packagings have maintained their integrity and the explosive material is declared as ''government-owned goods packaged prior to January 1, 1990'' on the shipping papers.

25. In § 173.12, paragraph (b)(3) would be revised to read as follows:

§ 173.12 Exceptions for shipment of waste materials

* * * * *

(b) * * *

(3) *Prohibited materials.* Materials meeting the definition of Division 6.1 Packing Group I, or Division 4.2 Packing Group I, and bromine pentafluoride; bromine trifluoride; chloric acid; and oleum (fuming sulfuric acid) may not be packaged or described under the provisions of this paragraph (b). In addition, a material that meets the definition of a material poisonous by inhalation may not be offered for transportation or transported under the provisions of this paragraph (b).

* * * * *

§ 173.13 [Amended]

26. In § 173.13, paragraph (a) would be amended by adding the parenthetical phrase ''(except for the CARGO AIRCRAFT ONLY label)'' after the word ''labeling'' in the first sentence.

27. In § 173.32, paragraph (e)(3) is revised to read as follows:

§ 173.32 Qualification, maintenance and use of portable tanks other than Specification IM portable tanks.

* * * * *

(e) * * *

(3) *Marking.* The date of the most recent periodic retest must be marked on the tank, on or near the metal certification plate. Marking must be in accordance with § 178.3 of this subchapter, except that a container manufactured under previously authorized specifications may continue to be marked with smaller markings if originally authorized under that specification (e.g., DOT Specification 57 portable tanks).

* * * * *

28. In § 173.60, a new paragraph (b)(14) would be added, to read as follows:

§ 173.60 General packaging requirements for explosives.

* * * * *

(b) * * *

(14) Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems shall be protected against stimuli encountered during normal conditions of transport. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for transport unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling, storage or launching devices in such a way that they will not become loose during normal conditions of transport and are in accordance with established and approved DOD procedures.

29. In § 173.61, paragraph (a) would be revised to read as follows:

§ 173.61 Mixed packaging requirements.

(a) An explosive may not be packed in the same outside packaging with any material that will adversely affect the explosive. This provision does not apply to an explosive packaged by the DOD or DOE in accordance with § 173.7(a).

* * * * *

§ 173.62 [Amended]

30. In § 173.62, paragraph (d) would be removed.

§ 173.150 [Amended]

31. In § 173.150, the following changes would be made:

a. In paragraph (b) introductory text, the first sentence would be amended by removing the wording ''and combustible liquids''.

b. In paragraph (f)(3)(iv), the wording ''Placarding'' would be removed and the wording ''For bulk packagings only, placarding'' added in its place.

c. In paragraph (f)(3)(viii) the wording ''177.834'' would be removed and the wording ''177.834(j)'' added in its place.

32. In § 173.166, paragraph (e) introductory text would be revised, paragraph (f) would be redesignated as paragraph (g) and a new paragraph (f) would be added to read as follows:

§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.

* * * * *

(e) *Packagings.* The following packagings at the Packing Group III performance level are authorized:

* * * * *

(f) *Shipments for recycling.* When offered for domestic transportation by highway or cargo aircraft only, a serviceable air bag module or seat-belt pretensioner that has been removed from a motor vehicle manufactured as required for use in the United States may be offered for transportation and transported without compliance with the shipping paper requirement prescribed in paragraph (c) of this section. However, the word ''Recycled'' must be entered on the shipping paper immediately after the basic description prescribed in § 172.202 of this subchapter. No more than one device is authorized in the packaging prescribed in paragraph (e)(1), (2) or (3) of this section. The device must be cushioned and secured within the package to prevent movement during transportation.

* * * * *

33. In § 173.242, paragraph (c)(1) would be revised to read as follows:

§ 173.242 Bulk packaging for certain medium hazard liquids and solids, including solids with dual hazards.

* * * * *

(c) * * *

(1) Each tank must have a minimum design pressure of 62 kPa (9 psig) and be equipped in accordance with the following, except that frangible devices are not authorized:

(i) Each tank must be equipped with at least one pressure relief device such as a spring-loaded valve or fusible plug.

(ii) Each pressure relief device must communicate with the vapor space of the tank when the tank is in a normal transportation attitude. Shutoff valves may not be installed between the tank opening and any pressure relief device. Pressure relief devices must be mounted, shielded, or drained to prevent the accumulation of any material that could impair the operation or discharge capability of the device.

(iii) The total emergency venting capacity (cu. ft./hr.) of each portable tank must be at least that determined from the following table:

Total surface area square feet [1] [2]	Cubic feet free air per hour
20	15,800
30	23,700
40	31,600
50	39,500
60	47,400
70	55,300
80	63,300
90	71,200
100	79,100
120	94,900
140	110,700
160	126,500

[1] Interpolate for intermediate sizes.
[2] Surface area excludes area of logs.

(A) The pressure operated relief device must open at not less than 3 psig and at not more than the design test pressure of the tank. The minimum venting capacity for pressure activated vents must be 6,000 cubic feet of free air per hour (measured at 14.7 psia and 60° F.) at not more than 5 psig.

(B) If a fusible device is used for relieving pressure, the device must have a minimum area of 1.25 square inches. The device must function at a temperature between 220° F. and 300° F. and at a pressure less than the design test pressure of the tank, unless this latter function is accomplished by a separate device.

(iv) No relief device may be used which would release flammable vapors under normal conditions of transportation (temperature up to and including 130° F.).

* * * * *

34. In § 173.247, paragraph (g)(1)(iii)(C) would be revised to read as follows:

§ 173.247 Bulk packaging for certain elevated temperature materials (Class 9) and certain flammable elevated temperature materials (Class 3).

* * * * *

(g) * * *

(1) * * *

(iii) * * *

(C) For transportation by rail, a nonreclosing pressure relief device incorporating a rupture disc conforming to the requirements of § 179.15 of this subchapter.

* * * * *

§ 173.306 [Amended]

35. In § 173.306, in paragraph (h)(2), the wording ''hazardous substance or hazardous waste'' would be removed and the wording ''hazardous substance, a hazardous waste, or a marine pollutant'' would be added in its place.

36. In § 173.307, paragraph (a)(4) would be revised to read as follows:

§ 173.307 Exceptions for compressed gases.

(a) * * *

(4) Refrigerating machines, including dehumidifiers and air conditioners, and components thereof such as precharged tubing containing:

(i) 12 kg (25 pounds) or less of a non-flammable, non-toxic gas;

(ii) 12 L (3 gallons) or less of ammonia solution (UN2672);

(iii) Except when offered or transported by air, 12 kg of a flammable, non-toxic gas;

(iv) Except when offered or transported by air or vessel, 20 kg (44 pounds) or less of a Group A1 refrigerant specified in ANSI/ASHRAE Standard 15; or

(v) 100 g (4 ounces) of a flammable, non-toxic liquified gas.

* * * * *

PART 174—CARRIAGE BY RAIL

37. The authority citation for part 174 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

§ 174.26 [Amended]

38. In § 174.26, the section heading is revised to read as follows:

§ 174.26 Notice to train crews.

* * * * *

39. Section 174.50 would be revised to read as follows:

§ 174.50 Nonconforming or leaking packages.

Leaking non-bulk packages may not be forwarded until repaired, reconditioned, or overpacked in accordance with § 173.3 of this subchapter. Except as otherwise provided in this section, a bulk packaging that no longer conforms to this subchapter may not be forwarded by rail unless repaired or approved for movement by the Associate Administrator for Safety, Federal Railroad Administration. Notification and approval must be in writing, or through telephonic or electronic means, with subsequent written confirmation provided within two weeks. For the applicable address and telephone number, see § 107.117(d)(4) of this chapter. A leaking bulk package containing a hazardous material may be moved without repair or approval only so far as necessary to reduce or eliminate an immediate threat or harm to human health or the environment when it is determined its movement would provide greater safety than allowing the car to remain in place. In the case of a liquid leak, measures must be taken to prevent the spread of liquid.

PART 175—CARRIAGE BY AIRCRAFT

40. The authority citation for part 175 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

§ 175.25 [Amended]

41. In § 175.25, in paragraph (a)(2)(ii), the wording ''6.0 mm (0.2 inch)'' would be removed and the wording ''4.0 mm (0.16 inch)'' would be added in its place.

§ 175.30 [Amended]

42. In § 175.30, paragraph (d)(1) would be amended by adding the wording '', on a pallet or in an overpack'' after the words ''freight container''.

PART 177—CARRIAGE BY PUBLIC HIGHWAY

43. The authority citation for part 177 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

44. In § 177.848, paragraph (c) would be revised to read as follows:

§ 177.848 Segregation of hazardous materials.

* * * * *

(c) In addition to the provisions of paragraph (d) of this section, cyanides or cyanide mixtures may not be loaded or stored with acids if the cyanide

material or mixture, when placed in an acid solution, would generate hydrogen cyanide.

* * * * *

PART 178—SPECIFICATIONS FOR PACKAGINGS

45. The authority citation for part 178 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

§ 178.3 [Amended]

46. In § 178.3, in paragraph (a) introductory text, the wording ''on a non-removable component of the packaging'' would be added immediately following the word ''marked''.

§ 178.345–13 [Amended]

47. In § 178.345–13, in paragraph (a), the wording ''and §§ 178–346–13(a), 178–347–13(a) or 178.348–13(a), as applicable'' would be removed.

48. In § 178.603, paragraph (f)(5) is revised to read as follows:

§ 178.603 Drop test.

* * * * *

(f) * * *

(5) Any discharge from a closure is slight and ceases immediately after impact with no further leakage; and

* * * * *

§ 178.605 [Amended]

49. In § 178.605, in paragraph (d)(1), in the last sentence, the reference ''§ 173.24a (b)(3)'' would be revised to read ''§ 173.24a (d)''.

§ 178.703 [Amended]

50. In § 178.703, in paragraph (a)(1)(ii), the wording ''(1) and (2)'' would be removed.

51. In § 178.815, a new paragraph (c)(4)(iii) would be added to read as follows:

§ 178.815 Stacking test.

* * * * *

(c) * * *

(4) * * *

(iii) The packaging may be tested using a dynamic compression testing machine. The test must be conducted at room temperature on an empty, unsealed packaging. The test sample must be centered on the bottom platen of the testing machine. The top platen must be lowered until it comes in contact with the test sample. Compression must be applied end to end. The speed of the compression tester must be one-half inch plus or minus one-fourth inch per minute. An initial preload of 50 pounds must be applied to ensure a definite contact between the test sample and the platens. The distance between the platens at this time must be recorded as zero deformation. The force ''A'' to then be applied must be calculated using the applicable formula:

Liquids: $A=(n-1)[w+(s\times v\times 8.3\times .98)]\times 1.5$; or

Solids: $A=(n-1)[w+(s\times v\times 8.3\times .95)]\times 1.5$

Where:

A=applied load in pounds.

n=minimum number of containers that, when stacked, reach a height of 3 m.

s=specific gravity of lading.

w=maximum weight of one empty container in pounds.

v=actual capacity of container (rated capacity + outage) in gallons.

And:

8.3 corresponds to the weight in pounds of 1.0 gallon of water.

1.5 is a compensation factor that converts the static load of the stacking test into a load suitable for dynamic compression testing.

* * * * *

PART 179—SPECIFICATIONS FOR TANK CARS

52. The authority citation for part 179 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

§ 179.100–20 [Amended]

53. In the table to § 179.100–20, the last entry for ''Water capacity'' would be removed.

PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS

54. The authority citation for part 180 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

55. In § 180.417, paragraph (a)(2) would be revised to read as follows:

§ 180.417 Reporting and record retention requirements.

(a) * * *

(2) Each motor carrier who uses a specification cargo tank motor vehicle must obtain a copy of the manufacturer's certificate and related papers or the alternative report authorized by paragraph (a)(3)(i) or (ii) of this section and retain the documents as specified in this paragraph. A motor carrier who is not the owner of a cargo tank motor vehicle must also retain a copy of the vehicle certification report for as long as the cargo tank motor vehicle is used by that carrier and for one year thereafter. The vehicle certification report and related papers must be maintained at the company's principal place of business or at the location where the vehicle is housed or maintained. The provisions of this section do not apply to a motor carrier who leases a cargo tank for less than 30 days.

* * * * *

Issued in Washington, DC on September 24, 1999 under authority delegated in 49 CFR part 106.

Alan I. Roberts,

Associate Administrator for Hazardous Materials Safety.

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The items in this list were editorially compiled as an aid to Federal Register users. Inclusion or exclusion from this list has no legal significance.

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- Veterans education—
  - Educational assistance; advance payments and lump-sum payments; published 9-30-99

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- Contracting by negotiation; published 8-31-99

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  - Educational assistance; advance payments and lump-sum payments; published 9-30-99

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- California; comments due by 10-4-99; published 8-5-99

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- Dairy tariff-rate quota licensing; comments due by 10-4-99; published 8-4-99

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  - Pollock; comments due by 10-8-99; published 9-29-99
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  - Connecticut, Massachusetts, and Rhode Island; nitrogen oxides budget trading program; significant contribution and rulemaking findings; comments due by 10-5-99; published 9-15-99
  - Connecticut, Massachusetts, and Rhode Island; nitrogen oxides budget trading program; significant contribution and rulemaking findings; comments due by 10-5-99; published 9-15-99

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- Technical Assistance Program; comments due by 10-8-99; published 8-24-99

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LIST OF PUBLIC LAWS

This is a continuing list of public bills from the current session of Congress which have become Federal laws. It may be used in conjunction with ''P L U S'' (Public Laws Update Service) on 202–523–6641. This list is also available online at http://www.nara.gov/fedreg.

The text of laws is not published in the **Federal Register** but may be ordered in ''slip law'' (individual pamphlet) form from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 (phone, 202–512–1808). The text will also be made available on the Internet from GPO Access at http://www.access.gpo.gov/nara/index.html. Some laws may not yet be available.

H.R. 457/P.L. 106–56

Organ Donor Leave Act (Sept. 24, 1999; 113 Stat. 407)

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