ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[FRL–5267–3]

RIN 2060–AE92

Protection of Stratospheric Ozone: Supplemental Rule to Amend Leak Repair Provisions Under Section 608 of the Clean Air Act

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Through this action EPA is amending the Refrigerant Recycling Regulations promulgated under section 608 of the Clean Air Act Amendments of 1990. This action is being undertaken to address specific concerns regarding the leak repair requirements for industrial process refrigeration systems, pursuant to a settlement agreement with the Chemical Manufacturers Association (CMA). This action will affect the owners and operators of industrial process refrigeration with regard to leak repair provisions. Certain aspects of this action will also affect federal owners and operators of commercial and comfort-cooling refrigeration with charges of 50 pounds of refrigerant or greater. This action provides greater flexibility to owners and operators of industrial process sources and to some federally-owned commercial and comfort-cooling refrigerant sources with regard to leak repair provisions. EPA is providing this flexibility without compromising the goals of protecting public health and the environment.

EFFECTIVE DATE: September 7, 1995.

ADDRESSES: Comments on this action are contained in the Air Docket Office, Public Docket No. A–92–01 VIIID, Waterside Mall (Ground Floor) Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 in room M–1500. Additional comments and materials supporting this rulemaking are contained in Public Docket No. A–92–01. Dockets may be inspected from 8 a.m. until 5:30 p.m., Monday through Friday. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: Cindy Newberg, Regulatory Development Section, Program Implementation Branch, Stratospheric Protection Division, Office of Atmospheric Programs, Office of Air and Radiation (6205–J), 401 M Street, SW., Washington, DC 20460, (202) 233–9729. The Stratospheric Ozone Information Hotline at 1–800–296–1996 can also be contacted for further information.

SUPPLEMENTARY INFORMATION: The contents of this preamble are listed in the following outline:

I. Refrigerant Recycling Regulations
II. This Rule
III. Notice of Proposed Rulemaking
IV. Summary of Major Comments Received
V. Response to Comments
A. Legal Authority
B. Contracted Employees
C. Nuclear Power
D. Definition of Industrial Process Refrigeration Equipment and the Need for Separate Leak Repair Requirements
E. Repairing Appliances
1. Repair Attempts
2. Timeframes for Repairing Leaks
3. Determining the Full Charge of Refrigerant
4. Best Efforts
5. Static and Dynamic Tests
6. Fixing Other Leaks
F. Industrial Process Shutdown
G. Retrofitting or Replacing Equipment
H. Recordkeeping and Reporting Requirements
I. Purged Refrigerants
J. Federally-Owned Chillers
K. Mothballing
L. Grandfathering
M. Terminology
N. Regulatory Impact Analysis
O. Allowing Appliances To Be Pressurized To Slightly Above O PSIG
VI. Judicial Review
VII. Administrative Requirements
A. Executive Order 12866
B. Unfunded Mandates Act
C. Paperwork Reduction Act
D. Regulatory Flexibility Act

I. Refrigerant Recycling Regulations

Final regulations promulgated by the U.S. Environmental Protection Agency (EPA) under section 608 of the Clean Air Act Amendments of 1990 (the Act), published on May 14, 1993 (58 FR 28660), establish a recycling program for ozone-depleting refrigerants recovered during the servicing and disposal of air-conditioning and refrigeration equipment. Together with the prohibition on venting during the maintenance, service, repair and disposal of class I and class II substances (see the listing notice January 22, 1991; 56 FR 2420) that took effect on July 1, 1992, these regulations are intended to substantially reduce the emissions of ozone-depleting refrigerants. These regulations were subsequently revised in the final regulations published August 19, 1994 (59 FR 42950), November 9, 1994 (59 FR 55912), and March 17, 1995 (60 FR 14607).

The current regulations require that persons servicing air-conditioning and refrigeration equipment observe certain service practices to reduce emissions, establish equipment and reclamation certification requirements, and comply with a technician certification requirement. The regulations also require that ozone-depleting compounds contained in appliances be removed prior to disposal of the appliances, and that all air-conditioning and refrigeration equipment, except for small appliances, be provided with a servicing aperture that will facilitate recovery of refrigerant.

The May 14, 1993 regulations establish leak repair requirements to further minimize emissions of class I and class II substances. The rule states that appliances that normally hold a refrigerant charge of fifty pounds or more are subject to the leak repair requirements. An annual leak rate of 35 percent was established for industrial process sources and commercial chillers, while an annual leak rate of 15 percent was established for comfort-cooling. Where the leak rate is exceeded, the appliance must be repaired within 30 days. An alternative is to develop a retrofit or replacement plan within 30 days, outlining action to retrofit or replace the appliance within one year from the exceedance.

The NPRM proposed revisions to the leak repair provisions in response to a settlement agreement reached by the Agency and the Chemical Manufacturers Association (CMA) specifically for industrial process refrigerant equipment. In that settlement, EPA agreed to propose changes to the leak repair requirements that would provide additional time to repair and/or retrofit industrial process refrigeration equipment based on the uniqueness of the industrial process sector and on new information provided by CMA. EPA also agreed to propose revising the evacuation requirements for oil changes to permit for slight positive pressure, not to exceed 5 PSIG. Finally, EPA agreed to clarify that purged emissions that have been captured and destroyed should be excluded from the leak rate calculations.

The information received from CMA after the completion of the initial rulemaking indicated that under certain circumstances the timelines for repairing leaky industrial process refrigeration equipment or to retrofit such equipment are not achievable. The proposed rulemaking was developed to respond to those circumstances by proposing the shortest timeframes achievable for this sector and to relax the requirements for oil changes as well as to permit for the exclusion of destroyed purged refrigerants.

The NPRM also proposed several other changes to the regulations, including an exemption for federally-owned chillers under certain circumstances. The NPRM is discussed in further detail in the following section.

The recycling rule, 40 CFR, part 82, subpart F, was only re-opened for purposes of reconsidering the specific provisions outlined in the NPRM and discussed in this final action. EPA did not invite comments on any other provisions of the recycling rule. However, in separate actions EPA has recently addressed a stay on the sales restriction for split systems (60 FR 24676), and an extension of the reclamation requirements (60 FR 14607). In addition, EPA plans in the future to consider additional changes to the requirements under 40 CFR, part 82, subpart F, including:

- Reconsideration of the sales restriction for split systems and pre-charged parts;
- The adoption of an industry off-site recycling standard; and
- Requirements for recovering alternative substances to class I and class II refrigerants unless the Administrator determines that venting, releasing or disposing of the substitute refrigerants do not pose a threat to the environment.

These issues will be addressed in separate rulemakings that will follow appropriate notice and comment procedures.

II. This Rule

This final rule affects the owners and operators of industrial process refrigeration equipment that normally contain a charge of 50 pounds or more of a class I or class II refrigerant. Today's action will provide the owners and operators with greater flexibility in repairing leaks and retrofitting leaky appliances. EPA will permit the owner or operator to have more than 30 days to complete repairs and more than one year to retrofit appliances where the conditions described in this final rule apply.

Through this final action EPA is also clarifying that the owners and operators of all appliances subject to the leak repair provisions must only reduce leak rates to below the allowable leaks.

In addition, this action will permit additional time beyond the 30-day leak repair period for federally-owned chillers where the chillers are located in areas subject to radiological contamination. EPA will also permit additional time beyond the one-year retrofit period if appropriations and procurement requirements limit the feasibility of completing the retrofit activities within one year.

Finally, this rule will permit the owners or operators to evacuate appliances to slightly above atmospheric pressure, specifically to a pressure not exceeding 5 psig, to perform oil changes. Alternatively, EPA will permit the owner or operator to recover the oil to a system receiver where the receiver will be evacuated to atmospheric pressure.

This statement in conjunction with the NPRM, serves as the statement of basis and purpose under § 307 of the Act.

III. Notice of Proposed Rulemaking

On January 19, 1995, EPA published a notice of proposed rulemaking (NPRM) (60 FR 3992) concerning proposed revisions to the leak repair requirements promulgated under section 608. Below is a summary of the NPRM.

EPA proposed to permit the owners and operators of industrial process refrigeration equipment more than 30 days to repair leaks when the necessary parts are unavailable, or if requirements of other federal, state or local regulations make a repair within 30 days impossible. Only the time necessary to receive delivery of any necessary parts or comply with any applicable regulations would be permitted. The NPRM specified that the owner or operator of the industrial process refrigeration equipment would have to exert best efforts to repair leaks within the 30-day time period. If the equipment could not be repaired within the 30-day requirement, the owner or operator would have to document repair efforts, notify EPA of the inability to comply, provide appropriate information concerning the reason for the inability to complete the repairs and develop to EPA a one-year retrofit, replacement, or retirement plan for the leaky appliance. The NPRM stated that the owners or operators of the industrial process refrigeration equipment would be required to maintain records concerning their actions and submit specific information to EPA that details the need for additional time to complete the repair work. These records are discussed in further detail in the NPRM (60 FR 3994).

In order to complete many types of repairs, industrial process refrigeration equipment may need to be shut down. EPA proposed a 120-day repair period, rather than a 30-day repair period, where an industrial process shutdown is necessary to repair a leak or leaks from industrial process refrigeration equipment.

EPA proposed three methods for owners and operators of industrial process refrigeration equipment to determine the full charge of refrigerant in the appliance and therefore, be able to calculate the leak rate. Two additional methods for these calculations were also discussed but were not proposed. The methods EPA proposed were: (1) To rely on the manufacturers' determinations, (2) to require the owner or operator to do calculations based on component sizes, flow rates, pressures, and other considerations, and/or (3) to rely on actual measurements of the amount of refrigerant added or evacuated from industrial process refrigeration equipment. These and other methods are discussed in greater detail in the NPRM (60 FR 3995).

EPA proposed that the repair efforts required for industrial process refrigeration equipment be those that sound engineering judgment indicates will be sufficient to bring the leak rate below a 35 percent annual rate, that a static test be conducted at the conclusion of the repairs to determine whether the repairs undertaken were successfully completed, and that a dynamic test be conducted within 30 days of bringing the system back on-line (if taken off-line) or within 30 days of completing the actual repairs, but no sooner than when the system has achieved steady-state operating characteristics. If the dynamic test indicates that the repairs have not been successfully completed, EPA proposed that the owner would be subject to a requirement to retrofit or replace the appliance within one year of the failure to verify that the repairs had been successfully completed or such longer time period as may be granted. Furthermore, EPA proposed that the owner or operator notify EPA of the failure within 30 days of the failed dynamic verification test. Proposed definitions of static and dynamic tests and examples of these tests are discussed in the NPRM (60 FR 3996).

Industrial process refrigeration systems have many potential sources of leaks. The NPRM stated that if a sufficient number of other leaks can be repaired creating a situation where the originally identified leak or leaks remain, but the overall leak rate has been successfully reduced to below 35 percent per year, the owner or operator has still in effect met its obligation under the rule. Therefore, EPA proposed that the owner or operator of an industrial process refrigeration unit be relieved of the obligation to retrofit or replace the appliance if, within 180 days of the failed dynamic verification

test, the owner or operator establishes that the appliance's annual leak rate does not exceed 35 percent. If the equipment owner or operator establishes that the appliance's annual leak rate does not exceed 35 percent, the owner or operator would be required to notify EPA within 30 days of that determination and the owner or operator would no longer be subject to the obligation to retrofit or replace the appliance that arose as a consequence of the initial failure to repair the leak or leaks successfully. The determination of whether the appliance's annual leak rate exceeds 35 percent would be determined in accordance with parameters identified by the owner or operator in its notice to EPA regarding the failure of the initial dynamic verification test.

EPA proposed to clarify that for industrial process and commercial sources, leaks need to be repaired such that the leak rate is brought back to a level below the 35 percent annual rate. A parallel clarification for comfort-cooling and commercial sources also was proposed. Therefore, rather than requiring that ''all'' leaks be repaired, EPA proposed revising the requirements to reduce leaks to a rate below the acceptable thresholds. EPA would permit leaky appliances to operate as long as the leak rate does not exceed that amount.

In the NPRM, EPA stated that it may be reasonable to permit additional time beyond the one-year established by the current regulations for the retrofitting of certain industrial process refrigeration equipment. EPA believes there are specific concerns relating to the need for special design, engineering, ordering and installation difficulties for some industrial process refrigeration equipment. EPA proposed to allow more than one year to complete the retrofit of industrial process refrigeration equipment in certain circumstances. The NPRM describes scenarios that may justify more than one year to retrofit an appliance; however, EPA does not believe additional time is always necessary. Therefore, EPA intended to permit additional time only when the owners or operators of the industrial process refrigeration equipment can provide information detailing the need for additional time in accordance with the proposed requirements described below.

EPA proposed that additional time, to the extent reasonably necessary, would be allowed due to delays occasioned by the requirements of other applicable federal, state, or local regulations, or due to the unavailability of a suitable replacement refrigerant with a lower ozone depletion potential. The suitability of a replacement refrigerant is discussed in the NPRM (60 FR 4000). The owner or operator of the facility would have to notify EPA within six months after the 30-day period following the discovery of an exceedance of the 35 percent leak rate. Records that would provide evidence that other regulations or the unavailability of a suitable alternative refrigerant prevent retrofit or replacement within one year must be submitted to EPA to allow EPA to determine that these provisions apply and assess the length of time necessary to complete the work. EPA proposed that it notify the owner or operator of its determination within 60 days of submittal. The limited recordkeeping requirements are discussed in the NPRM (60 FR 4000). EPA proposed that such records be maintained by the owner or operator and kept on-site.

EPA proposed that an additional one-year period beyond the initial one-year retrofit period be allowed for industrial process refrigeration equipment if four criteria are met: (1) The new or retrofitted refrigeration system is custom-built (meaning if it or any of its critical components cannot be purchased and/or installed without being specifically designed), fabricated and/or assembled to satisfy a specific set of industrial process conditions; (2) the supplier of the system of one or more of its critical components has quoted a delivery time of more than 30 weeks from when the order is placed; (3) the owner or operator notifies EPA within six months of the expiration of the 30-day period following the discovery of an exceedance of the 35 percent leak rate to identify the owner or operator, describe the appliance involved, explain why more than one year is needed, and demonstrate that the first two criteria are met; and (4) the owner or operator maintains records adequate to allow a determination that the criteria are met. The criteria are further discussed in the NPRM (60 FR 4000).

EPA proposed that if more than one additional year is needed, the owner may request to extend the deadline for completing all retrofit or replacement action. EPA proposed that such a request be submitted to EPA before the end of the ninth month of the additional year that was granted to retrofit, replace, or retire the appliance. The request would be required to include revisions to that information submitted for the first additional year as proposed under § 82.166(o). Unless EPA objects to the request within 30 days of receipt, it would be deemed approved. EPA stated that this extension would be granted only in cases where the actual nature of the retrofit or replacement activities is such that the additional time beyond the one year is crucial. The submittal of revised information is discussed in the NPRM (60 FR 4002).

EPA proposed to allow owners or operators to evacuate the appliance to slightly above atmospheric pressure, specifically to a pressure not exceeding 5 psig, to perform oil changes. Reasons for this approach are described in the NPRM (60 FR 4002).

The NPRM stated that EPA would like to clarify that the Agency interprets the 35 percent leak rate in the regulations as not including emissions of purged refrigerant that are destroyed, if their destruction is accounted for and can be verified by records maintained by the owners or operators of the industrial process refrigeration equipment. If purged refrigerant is destroyed using one of the five destruction technologies approved by the Parties to the Montreal Protocol, EPA can consider that refrigerant to have been destroyed and therefore, not part of the leak rate for the system. A description of the methods for destroying refrigerant and the how industrial process refrigeration systems could measure purged refrigerants is contained in the NPRM (60 FR 4003).

In the NPRM (60 FR 4003), EPA described temporarily mothballing equipment. If a facility is temporarily mothballed, EPA believes it is appropriate to suspend the time-relevant repair and/or retrofit requirements while the facility is effectively inoperative. In the same subsection, EPA described how temporarily mothballing is not equivalent to having an appliance taken off-line or to an industrial process shutdown. EPA proposed that while temporarily mothballed, the time-relevant repair and/or retrofit requirements would be suspended.

EPA proposed that owners or operators of a federally-owned refrigerant appliance be able to submit a request for extensions parallel to those outlined for industrial process refrigeration equipment, based on the hindrance of federal procurement requirements. If additional time is granted, EPA proposed that testing and documentation should occur, parallel to those for industrial process refrigeration equipment. The reasons for this proposed extension are discussed in detail in the NPRM (60 FR 4004).

IV. Summary of Major Comments Received

During the public comment period EPA received fourteen sets of comments that are addressed in this action. In

addition, EPA received and considered additional comments submitted to the Agency after the 30-day public comment period ended. All comments considered in this final action are contained in Air Docket A–92–01 VIIID.

All the commenters agreed that EPA should revise the leak repair requirements. Most of the commenters agreed with the general paradigm EPA proposed for repairing leaks in industrial process refrigeration equipment. Commenters raised specific concerns regarding various aspects of the proposed rule.

EPA received comments concerning the inclusion of specific types of appliances in the definition of industrial process refrigeration equipment. One commenter was concerned with whether the economic impact of an industrial process shutdown of a nuclear power reactor used in the generation of electricity was considered by the Agency.

Many commenters were concerned with the use and definitions of static and dynamic tests. In particular, several commenters suggested that the tests should be described as ''first verification test'' and ''follow-up verification test,'' thus avoiding any confusion stemming from the common associations of static and dynamic with a state of motion. Some commenters stated that dynamic tests in certain circumstances should be performed before the affected appliance is operating at steady-state.

A few commenters were concerned with the methods EPA proposed to determine the full charge of an appliance. These commenters believe that the fourth option described in the NPRM (60 FR 3996) should be considered an acceptable methodology.

Several commenters believe that EPA should broaden the proposed conditions under which mothballing an appliance would suspend the time-relevant leak repair requirements.

A few commenters suggested changes to the recordkeeping and reporting requirements.

EPA received several comments regarding the proposed requirements for federally-owned chillers. Some commenters supported EPA's proposal, some opposed it, and one commenter suggested that EPA re-propose the changes under a separate rulemaking.

EPA received comments on the requirement to exert best efforts to repair leaks. Commenters were concerned that since the settlement agreement between EPA and CMA was reached, the interpretation of best efforts and sound engineering judgment has changed.

All the comments received by EPA are discussed in greater detail below.

V. Response to Comments

EPA received fourteen sets of comments during the comment period on the proposed changes to the leak repair requirements published January 19, 1995 (60 FR 3992). Individual comments are specifically addressed in this section.

A. Legal Authority

EPA requested comment on the legal authority under which EPA was proposing and today is promulgating revisions to the leak repair requirements. A few commenters addressed this issue and agreed with EPA's legal basis for proposing these changes.

B. Contracted Employees

Two commenters requested that EPA clarify that actual work to be performed on affected appliances may be provided by contracted personnel. One commenter stated that although the owner or operator remains responsible for compliance, the work need not be performed by the owner or operator. EPA agrees with these commenters. The Agency recognizes that often repair and maintenance services are performed under contractual arrangements. Moreover, contracted personnel will be acting as agents of the owner or operator with respect to performance of service and maintenance of the appliances. Therefore, the owner or operator remains responsible to ensure that compliance with the requirements promulgated under section 608 occurs.

C. Nuclear Power

One comment received by EPA discusses the consideration of the leak repair requirements specifically for generation of electricity by a nuclear power reactor. The commenter does not believe the NPRM takes into account the technological and economic factors specific to the operation of these facilities in the context of the statutory standard in section 608(a)(3)(A) of the Act. For example, the commenter states that the shutdown of a nuclear power reactor within 120 days of discovering that the leak rate exceeds 35 percent is costly. The commenter stated that planned outages are typically scheduled on an 18-month cycle.

EPA understands under this rule, that an industrial process shutdown will often occur without regard to the planned outages for nuclear power stations, as well as for other industrial process refrigeration equipment in order to repair leaks. During the settlement agreement negotiations, discussions were held considering the possibility of waiting for the next scheduled shutdown. However, since these scheduled shutdowns often do not occur frequently, it was determined that undertaking a separate industrial process shutdown would be necessary to limit the emissions of refrigerant. EPA does not believe that the owners or operators of nuclear power stations incur costs that are dissimilar to those incurred by the chemical, pharmaceutical, petrochemical, and manufacturing industries when an industrial process shutdown occurs. Other commenters from these fields expressed concerns about the costs associated with an industrial process shutdown, but agreed with EPA that such an undertaking would be necessary to limit releases of ozone-depleting substances.

Prior to this rulemaking it was unclear whether the use of chillers in the generation of electricity actually met the definition of industrial process refrigeration equipment. Therefore, it is true that EPA did not base the NPRM on any specific consideration of the nuclear power industry. However, EPA does not believe that the commenter has demonstrated how the generation of electricity from a nuclear power reactor would face technological or economic factors not experienced by other owners or operators of industrial process refrigeration equipment. Furthermore, today's action lessens the burden for all industrial process refrigeration equipment, regardless of its use. If significant distinctions exist between refrigeration appliances used in the generation of electricity and other refrigeration appliances, EPA may need to reconsider whether the use of appliances in the generation of electricity is truly consistent with industrial process refrigeration equipment. If not, these appliances would be subject to the 15 percent leak rate and all associated requirements.

D. Definition of Industrial Process Refrigeration Equipment and the Need for Separate Leak Repair Requirements

The NPRM stated that three main refrigeration sectors are affected by the leak repair provisions promulgated under section 608 of the Act: commercial refrigeration, comfort-cooling, and industrial process refrigeration. While many different commercial refrigeration and comfort-cooling appliances are similar in design and function, EPA received information from CMA illustrating the uniqueness of industrial process refrigeration equipment. Industrial process

refrigeration equipment is custom-designed and assembled in-place at a process location. Thus, each of these industrial units has unique operating characteristics. Industrial process refrigeration has been defined in § 82.152 as:

* * * complex customized appliances used in the chemical, pharmaceutical, petrochemical and manufacturing industries. This sector also includes industrial ice machines and ice rinks.

EPA requested comment on the appropriateness of establishing separate repair provisions for industrial process refrigeration. EPA received several comments concerning the need for separate provisions. These comments agreed with the NPRM. Specifically, commenters referred to the uniqueness of industrial process refrigeration equipment used in pharmaceutical, petrochemical, and manufacturing industries. Commenters stated that there are several apparent differences between industrial process refrigeration equipment and other types of equipment affected by the leak repair provisions. Industrial process refrigeration equipment is larger and more complex than hermetically-sealed consumer units. Most comfort-cooling appliances have hermetically-sealed or semi-hermetically-sealed refrigerant loops. Complexity of the industrial process refrigeration equipment makes leak detection and leak rate calculations more difficult than for other sectors affected by the leak repair provisions. Commenters agreed with EPA's assessment that the replacement parts for this sector often must be specifically fabricated for the leaking equipment. Commenters believe that shutting down industrial process refrigeration equipment often takes several days and that the owners and operators of this equipment must avoid any unwanted chemical reactions that could lead to fires, explosions, or other immediate hazards. Based on the discussion in the NPRM and the comments received, EPA is establishing separate leak repair requirements for industrial process refrigeration equipment.

One commenter suggested EPA clarify the definition of industrial process refrigeration equipment with respect to the appliance's relationship to the manufacturing process. The commenter stated that the terms: ''complex;'' ''used in the manufacturing industry;'' ''custom designed;'' and ''assembled in place'' are subjective and could be applied to many of the appliances used for cooling large buildings or processes. Industrial process refrigeration equipment in the manufacturing sector is used to cool processes directly related to a broad range of manufacturing activities. The commenter suggests that the differentiating factor between industrial process and commercial refrigeration is that industrial process refrigeration equipment tends to be directly linked to a manufacturing activity. EPA agrees with this commenter's concerns. EPA distinguishes between commercial refrigeration and industrial process refrigeration equipment for the purposes of § 608 in part by considering how the appliance is used. EPA did not intend to include in the definition of industrial process refrigeration equipment appliances not involved in the industrial process. Therefore, through this action EPA will amend the definition of industrial process refrigeration to clarify that use is a factor in determining if an appliance is industrial process refrigeration equipment.

EPA received comments concerning whether the generation of electricity, particularly where a nuclear reactor is used, is included in the definition of industrial process refrigeration equipment. One commenter stated that EPA does not specifically identify electric generating stations as industrial processes, as the rule does for the chemical and pharmaceutical industries. The commenter states that large, custom refrigeration appliances to cool the production process are essential to the manufacturing of electricity and are prevalent at nuclear generating stations.

Fundamental to the classification of these appliances is whether or not the system is used directly in the production of electricity. The commenter states that shutting down the refrigeration appliances could result in the shutdown of the generating station, where the two are integrally linked. Another commenter stated that chillers used in safety-related equipment are critical to the safe shutdown of nuclear power stations in the event of an accident. EPA believes that current definition of industrial process refrigeration equipment needs to be clarified to specifically state that the generation of electricity is included. EPA believes that under the current definition it is not apparent that the generation of electricity is considered manufacturing. Therefore, through this action, EPA will add the generation of electricity to the definition of industrial process refrigeration. EPA would like to clarify that the definition will only include appliances directly linked to the generation of electricity. Appliances used to cool control rooms or offices are not considered industrial process refrigeration equipment.

The amended definition will be:

* * * complex customized appliances used in the chemical, pharmaceutical, petrochemical and manufacturing industries. These appliances are directly linked to the process. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks * * *

EPA received one comment concerned with the potential for ambiguities in the definition of industrial process refrigeration equipment and commercial refrigeration. The commenter notes that by default, all appliances with more than 50 pounds of refrigerant that do not come under the definition of commercial or industrial process refrigeration equipment must have leaks repaired when the leak rate exceeds 15 percent leak rate. EPA agrees that all appliances with 50 pounds of refrigerant or more, that do not meet these definitions are subject to the 15 percent leak rate.

Three comments asserted that other types of appliances should also be included in the leak repair requirements for industrial process refrigeration equipment. These commenters proposed expanding the definition of industrial process refrigeration equipment to incorporate specialized comfort cooling appliances and specialized commercial refrigeration. One commenter stated that since industrial comfort-cooling equipment such as the air conditioners mounted on cranes in a smelter are ''custom built,'' EPA should allow additional time for repairs to be made. While EPA understands that these appliances are customized to be located on cranes, often above molten metal, EPA does not believe these appliances are consistent with either the original or amended definition of industrial process refrigeration equipment. EPA believes that the parts used in these types of comfort-cooling appliances are not unique and are therefore relatively easy to replace. Furthermore, the appliances do not function as part of the process. Customizing the appliances in this scenario refers predominantly to modifying the system to fit in its intended location. Therefore, EPA does not consider industrial comfort-cooling appliances to be industrial process refrigeration equipment.

Another commenter stated that the definition of industrial process refrigeration should be expanded. The commenter uses specialized refrigeration equipment in confined spaces and other industrial-setting applications, refrigeration as cooling equipment in laboratories for meeting

specific testing requirements, and cooling areas containing a bank of computers to ensure a controlled environment. Another commenter stated that the definition should specify that appliances used for regulating temperatures in the control panel buildings should also be considered industrial process. The commenter believes that this is an integral part of the process and that since these appliances are vital to the proper functioning of the instruments in the control panel they do not constitute ''comfort-cooling.'' While EPA understands that these cooling appliances are designed to meet specific cooling needs and fit in specific settings, these appliances do not meet the definition of industrial process refrigeration. EPA does not believe it is appropriate to expand the definition of industrial process refrigeration equipment to include specialized comfort-cooling appliances. If appropriate in the future, EPA could consider creating a separate category of specialized comfort-cooling appliances and/or specialized commercial appliances and permitting additional time to repair leaks. However, at this time EPA does not believe this is necessary. If EPA receives compelling information, then EPA would consider proceeding with appropriate notice and comment.

Amending the requirements to create new sub-sectors for appliances not considered in the NPRM, particularly where such determinations would likely have wide-ranging consequences where proper notice has not been given, would be inappropriate as part of today's final action. Therefore, EPA will not expand the definition of industrial process refrigeration equipment to include specialized comfort-cooling or specialized commercial appliances. EPA may reconsider this issue through proper notice and comment procedures, at a later date.

EPA received several comments regarding the amount of refrigerant contained in appliances subject to the leak repair requirements. Commenters asked that EPA clarify that leak repair is required only for appliances that normally contain more than 50 pounds of refrigerant. On August 19, 1994 (59 FR 42953), EPA addressed this concern. The notice states that ''although EPA did not explicitly restrict the scope of its leak repair requirement for commercial and industrial process refrigeration to equipment containing more than 50 pounds of refrigerant, EPA intended this requirement (§ 82.156(i)) to cover only equipment containing at least 50 pounds'' (59 FR 42953). Accordingly, EPA amended § 82.156(i) to specify the 50-pound cut-off (59 FR 42957). Inadvertently, EPA neglected to carry over that amended language in the January 19, 1995 NPRM. Therefore, through this action, EPA will amend the proposed requirements of § 82.156(i) to specify the 50-pound cut-off.

One commenter requests that EPA clarify that 50 pounds refers to the refrigerant in one refrigerant circuit. The commenter states that where two separate, wholly independent refrigeration circuits that are not interconnected, each having a normal refrigerant capacity of no more than 50 pounds, the leak repair provisions should not apply. EPA agrees with this commenter. Through this action, EPA would like to clarify that if the refrigerant circuits do not interconnect, and if each wholly independent circuit has a capacity of no more than 50 pounds of refrigerant, the leak repair provisions promulgated under § 82.156(i) do not apply. However, if the refrigerant circuits are connected, and the combined circuits have a normal capacity of more than 50 pounds of refrigerant, the leak repair provisions do apply.

EPA received several comments regarding appliances used as both industrial process refrigeration equipment and comfort-cooling. The commenters were concerned with whether they need to use the 15 percent leak rate or the 35 percent leak rate under these circumstances. One example would be a chiller used directly in the generation of electricity and used to cool the control room. EPA believes that where 50 percent or more of an appliance's capacity is being used as industrial process refrigeration equipment, that appliance should be treated as industrial process refrigeration equipment and therefore subject to the 35 leak rate. Where less than 50 percent of an appliance's capacity is being used as industrial process refrigeration equipment, then the appliance will not be considered industrial process refrigeration equipment and will therefore be subject to the 15 percent leak rate. EPA believes this demonstrates an equitable approach and is consistent with determinations made by the Agency's Office of Compliance.[1]

EPA received one comment regarding the definition of on-site. The commenter believes EPA should specify that on-site means within a contiguous geographic area, under common ownership or control, that includes the location of the appliance. For the purposes of these regulations, EPA agrees with this interpretation of the term on-site.

E. Repairing Appliances

1. Repair Attempts

EPA received several comments seeking clarification concerning how EPA will interpret the first repair attempt. Commenters stated that EPA should clarify that repairs can be iterative and therefore an owner or operator should be allowed to make as many repair attempts within the initial 30-day or 120-day timeframe as possible, as long as the results of conducting the verification tests indicate that the repairs were successful. One commenter explained that repairs may be checked several times before being considered complete. The commenter feared that there may be confusion that one unsuccessful attempt to tighten a bolt or replace a gasket might trigger the requirements as when a dynamic test fails.

EPA agrees with these concerns. EPA believes that during the initial 30-day or 120-day repair time, all attempts should be made to repair the leaks. Therefore, through this action EPA will replace the proposed language ''first attempt'' with ''initial repair efforts,'' thus including all the efforts made during the initial 30 or 120 days.

EPA also received comments concerning the interpretation of ''second attempt'' to repair leaks. The commenters are concerned that second attempt implies a singular event rather than a series of events to repair a leak within a finite period of time. One commenter suggested that ''efforts'' be used instead. The commenter believes a limited timeframe instead of a limited event should be acceptable. EPA received comments indicating that the Agency should modify the rule to include a timeframe for completing the second attempt to repair leaks, particularly since a timeframe was included in the settlement agreement.

EPA agrees with the comments. A timeframe of 30 days (or 120 days in the case of an industrial process shutdown) was specified in the settlement agreement and inadvertently not included in the NPRM under § 82.156(i)(3)(iv). As discussed above in reference to a first repair attempt, EPA understands that repairs may be iterative and that a singular effort should not be described. Another comment suggested EPA use the language, ''any subsequent repair attempt.'' EPA does not believe that this language is appropriate because it is too open-ended and could potentially cause

[1] Applicability Determination #51 made under the § 608 rulemakings.

confusion. Therefore, through this action EPA will modify the proposed § 82.156(i)(3)(iv) to include a reference to 30 days and 120 days for completing ''second repair efforts.''

2. Timeframes for Repairing Leaks

EPA received many comments supporting the proposed timeframes for repairing leaks in industrial process equipment. These commenters recognized that while many types of leaks can be repaired within 30 days, in particular circumstances, such as when an industrial process shutdown is required, additional time is necessary. EPA received one comment stating that in all cases 120 days should be provided to repair all leaks. The commenter further stated that if the leaks could not be repaired within 120 days, additional time should be provided if the parts are unavailable, there are complications due to other regulations, or the potential need for the system to be taken off line to effect the repair exists. The commenter believes that this will reduce the amount of delays experienced by waiting for approvals from the Agency and it would decrease the burden placed upon the industry by reducing the number of submittals. The commenter further believes that by reducing wasted time spent in performing bureaucratic functions, and waiting for approvals, the repairs may be more quickly and efficiently made.

EPA does not believe it is necessary to always permit 120 days to repair leaks. In negotiating the settlement agreement with CMA and in subsequent discussions with industry representatives, numerous examples of routine repairs that can easily be made within 30 days have been identified. These types of repairs include leaks caused by a ruptured tube and a leaking gasket between the flanges. These and other types of repairs normally completed in less than 30 days are discussed in the NPRM (60 FR 3994). Limiting repair times to the most reasonable amount of time ensures that the repairs are completed responsibly and consistent with the spirit and intent of section 608 and the initial regulations promulgated in May 1993. EPA sees no reason to provide additional time to repair leaks that many commenters agree can easily be repaired within 30 days. Part of EPA's rationale for proposing changes to the leak repair provisions is based on the need to provide flexibility where the leaks are such that repairs cannot be made within 30 days. Allowing 120 days for repairs where an industrial process shutdown is necessary recognizes the need to first complete the actual shutdown before attempting to fix the leaks. Since under most circumstances, owners or operators are expected to proceed with their repair or retrofit operations without receipt of prior approval, EPA does not believe waiting for approval constitutes a reason for the owners or operators to delay action. Thus extending the leak repair timeframe to 120 days to ensure adequate time to receive EPA approval is not necessary. Therefore, EPA is requiring that where appropriate, leaks are to be repaired within 30 days.

EPA received one comment regarding the course of action when the 30-day repair requirement cannot be met. The commenter notes that the NPRM's preamble states that when the 30-day repair requirement cannot be met, the owner or operator must notify EPA and include ''a one-year retrofit, replacement or retirement plan for the leaky equipment'' (60 FR 3994). However, the regulatory language does not state that requirement. Instead, the regulatory language states that the owners or operators must provide the reason(s) why more than 30 days are needed and an estimate of when the repair work will be completed. The commenter believes the regulatory text is correct. EPA agrees that the regulatory language properly reflects the notification requirement. Provisions proposed under § 82.156(i) allows for other alternatives besides automatically retrofitting or replacing the equipment.

3. Determining the Full Charge of Refrigerant

EPA received several comments concerning establishment of the amount of refrigerant contained in industrial process refrigeration equipment and therefore determining the leak rate for the affected appliance. One commenter suggested that EPA should specify a methodology for determining the percentage of refrigerant lost during a 12-month period. Another commenter stated that large facilities that have in-house staff for servicing refrigeration equipment may not have had any regulatory requirement or internal justification for maintaining records of refrigerant charges prior to June 14, 1993 (the effective date of the initial regulations promulgated under section 608). The commenter requests that EPA clarify that leak rate calculations are required to be performed by taking into consideration the additions of refrigerant that occur after the original promulgation of section 608. Furthermore, the commenter requests clarification about prorating refrigerant added over more than a 12-month period. For example, if 20% is added every 24 months, does that constitute a 10% per year leak rate? The commenter believes that since there were no regulatory requirements prior to May 1993, owners or operators should not be subject to enforcement based on imprecise calculations. Alternatively, the commenter believes that EPA should permit the first recharge to occur without regard to the leak rate in order to establish a full charge baseline.

EPA understands that prior to June 1993, records regarding the addition of refrigerant may not have been maintained. However, at this point such information should have been maintained for over two years. Therefore, EPA believes it is reasonable to assume a baseline can be established. EPA agrees that refrigerant recharges should be appropriately prorated to establish a yearly leak rate; however, EPA does not believe it is necessary or appropriate to permit the first recharge to occur without making an effort to assess the leak rate.

Several commenters requested that EPA permit the use of the fourth option discussed in the NPRM (60 FR 3996) for determining the full charge of refrigerant. This method allows one to choose a number from within an established range based on the best data currently available. Once a number is selected, it would be considered the full charge; however, over time the owner or operator of the appliance may adjust the number based on new or revised information concerning the performance of the system. EPA expressed concerns that there is no clarity regarding circumstances under which a change in the number could be justified. In the NPRM, EPA stated that an everchanging estimate of the full charge defeats the purpose of creating a baseline.

Several commenters stated that EPA's concerns can be overcome. One commenter stated that in its experience it is difficult to accurately estimate the full charge of particular appliances. The commenter believes that often only trial and error will derive an accurate number. The commenter believes it is essential to allow an owner or operator to be able to draw from experience and use a range in estimating the full charge. The commenter believes that as long as the method used is documented, an inspector can determine if the approach was reasonable. Another commenter stated that EPA should not reject any legitimate technique for calculating the full charge. Several commenters stated that every method for determining the full charge has its strengths and weaknesses. Moreover, expressed or not, all methods will develop a range. The commenters believed that EPA's

concerns are that the owners or operators might frequently change the determination of full charge and that EPA would lack the criteria to evaluate whether the changes were justified. The commenters suggested a way to address these concerns:

- Any downward revision of the full charge should be acceptable without a need for EPA to challenge it;
- EPA could specify that the midpoint of the established range constitutes the full charge for determining a leak rate;
- EPA could require the owners or operators to maintain records of the basis for their original determinations of the full charges and any data behind any changes to those determinations; and
- EPA could require the owners or operators to submit a report to EPA when a number is revised after discovering refrigerant losses, when a number is revised resulting in a leak rate below 35 percent, and when the owners or operators do not intend to fix the leaks.

Another commenter stated that if EPA does not revise the proposed regulations to permit this method for determining the full charge, the Agency should provide at least six months for the owners or operators to determine the full charge of affected appliances using acceptable methods.

EPA has considered these comments very carefully. EPA's concerns relate to the accuracy of the fourth method for determining the full charge of a system and the potential to adjust the estimate to reduce leak rates below the applicable thresholds. However, EPA believes that the commenters have suggested ways to alleviate EPA's concerns. EPA understands that while ranges may need to be adjusted several times for a new appliance, over time the frequency of such adjustments would likely decrease, unless substantial modifications were made to the appliance. Moreover, in most cases, ranges would not need to be adjusted more than once every few years after an appliance has been in operation long enough for the owner or operator to become comfortable with the range. Furthermore, EPA understands that a range may actually represent seasonal variations.

EPA agrees with the commenters that any downward revision of the full charge should be acceptable without any need for EPA to challenge the revision. EPA further agrees that the midpoint of the established range shall represent the full charge for determining a leak rate. This mitigates the possibility of receiving any unfair advantage by adjusting the range, since the midpoint would not vary as much.

EPA agrees with the comments that records should be maintained concerning the determination of the range and any adjustments to it. If the owners or operators of an appliance choose to establish a range, it is critical to understand the methodology for the establishment of the range and the methodology for any adjustments that would result in a larger number for the midpoint. EPA believes that such records would be beneficial in any compliance determinations. Moreover, EPA believes that while ranges many need to be adjusted several times during the first year, the ranges will soon become stabilized. It will not be necessary to adjust the ranges unless a major change was made to the industrial process refrigeration equipment. Therefore, the records would not need to be modified often. Commenters suggested data elements to be contained in the records, including the original full charge and any revisions. EPA agrees with these commenters. Therefore, the records required for using the fourth option will include: the identification of the owner or operator of the appliance; the location of the appliance; the original full charge of the appliance and how it was determined; any revision of the full charge number and how it was determined; and the date such revisions occurred. Since the owner or operator need not use the fourth methodology, EPA does not believe this recordkeeping provision constitutes an unreasonable burden for the owners or operators.

While commenters suggested limited reporting requirements to accompany this recordkeeping provision, EPA does not believe it is necessary or appropriate to require reports to be submitted detailing the methodology for establishing or changing the full charge determination. EPA believes maintaining records is necessary for the Agency to understand the methodologies used if an issue of compliance arises. EPA also believes that in all likelihood, such records will benefit the owner or operator of the appliance by providing a historic record of how the current leak rate was developed. However, routinely providing that information to EPA, particularly where no potential violation is suspected, is not necessary or appropriate. Therefore, EPA will require that records be maintained if the fourth method for establishing the full charge is used; however, EPA will not require any periodic reporting.

Commenters stated that if the Agency adopts any recordkeeping or reporting options for the fourth methodology, such provisions should not be extended for use with the other three methodologies. EPA agrees with these commenters. EPA did not propose and today is not adopting any recordkeeping options for these three methodologies.

Through this action EPA will allow any one of the three proposed methods and the fourth method discussed in the NPRM, or a combination of these methods to be used for determining the full charge of appliances. If the fourth method is chosen or used in combination with any of the other acceptable methods, the midpoint of the range will constitute the full charge for purposes of determining the leak rate. The owners and operators of the affected industrial process refrigeration equipment must keep records in accordance with § 82.166(q), detailing the methodology used for determining and adjusting the range.

Two commenters stated that the calculations required for determining the normal charge of industrial process refrigeration equipment should apply to the commercial and comfort-cooling sectors as well. One commenter believes that these other appliances have field-installed interconnecting piping and there may not be any information available from the manufacturer indicating the normal refrigerant charge. Furthermore, the commenter requests that EPA publish guidance, including formulas, tables and sample calculations with enough detail that most owners affected by the leak repair provisions will be able to perform the necessary calculations. EPA does not agree with this commenter. In cases where a comfort-cooling or commercial refrigeration appliance is ''customized,'' EPA believes it is still relatively easy to derive the charge of the system. Field-installed piping can be measured and the refrigerant charge can, therefore, be calculated. Moreover, the owners or operators of such systems often hire contractors to service and maintain their appliances. These contractors should be able either to determine the full charge or to provide guidance on establishing leak rates. EPA believes that in most instances, these contractors will be better able to advise the owners or operators. Therefore, EPA does not believe it is necessary to specify how the full charge will be established for these sectors, nor to publish specific guidance.

One commenter believes that EPA should exclude from any calculation of refrigerant leak rates the loss of refrigerant through a one-time accidental release, such as breaking pipes, a ruptured disc, or operator error.

EPA disagrees with this commenter. While EPA understands that accidents do occur, EPA believes that if the events are such that the leak rate surpasses the 15 percent or 35 percent thresholds, the necessary repairs should be made to ensure that the owners or operators of the appliances are in compliance. Such repairs would include replacement of the broken pipe or rupture disk that led to the accidental release. Such repairs would also include correcting any condition that repeatedly led to an accidental release (e.g. over pressurization). Moreover, since many leaks occur because of one-time events, such as ruptured pipe, it would be impossible to draw clear distinctions of what would be included in leak repair calculations.

One commenter stated that EPA should clarify that the owners or operators may hire contractors to determine the full charge. The commenter further believes that throughout the rule EPA should recognize the role of contractors who service refrigeration appliances. As stated earlier in this preamble, EPA recognizes that the owners or operators may have contractual arrangements with contractors or technicians who actually perform maintenance and repair work on the appliances subject to the leak repair provisions. While the work may be performed under such arrangements, the personnel are in effect acting as an agent of the owners or operators.

One commenter stated that EPA should clarify how to determine the full charge for appliances with multiple independent compressors and refrigerant loops. As EPA has stated elsewhere in this notice, the charge of an appliance is based on the charge of an individual refrigerant loop/circuit where that loop/circuit is not interconnected and that contains a normal charge of 50 pounds of refrigerant or more. EPA distinguishes between those that are independent and those that are interconnected, perhaps employing multiple compressors (e.g. parallel systems).

4. Best Efforts

EPA received several comments concerning the term ''best efforts,'' as used in § 82.156(i)(2). Several commenters agreed with the Agency's interpretations. These commenters stated that it was appropriate to exclude formal protocols from the interpretation of best efforts because of wide variations in the regulated community. One commenter stated that each leak is unique and best efforts to repair a small leak will differ from those taken to repair larger leaks. A formal definition would either be too complex or ineffective at capturing all the scenarios.

One commenter requested that EPA include a formal definition of best efforts in the final rule. The commenter stated that the lack of a formal definition could create uncertainty as to what the rule requires. The commenter recognized that the description of best efforts discussed in the NPRM originated with industry. The commenter provided two possible ways to better characterize a best efforts approach. The approach includes providing more description in § 82.156(i)(2) and/or creating a specific definition in § 82.152. The commenter suggested the following definitions:

> best efforts means a repair method is used that is reasonably expected to be effective on the particular type of leak, based on past experience;

or

> best efforts means that, during an extension of the 30-day period for repairs, the owner or operator repairs significant leaks to the extent practical during the 30 days, by using a repair method that is reasonably expected to be effective based on past experience, on those leaks that do not require an extension of time.

While EPA understands the benefits of having a formal definition for any term used in regulations, EPA does not believe these definitions solve the problem discussed in the NPRM. In the NPRM, EPA states that its concerns are the lack of formal protocols in the best efforts approach described by EPA. EPA characterizes a best efforts approach in the NPRM as implying that a methodology for repair that is reasonably expected to be effective based on past experience and potentially may include consultation (60 FR 3994). EPA does not believe the commenter's suggested language incorporates all of the concepts described in the NPRM. Adopting an inadequate definition does not benefit EPA or the regulated community. EPA requested comments on a definition hoping that perhaps an industry standard could be cited. Throughout the regulations promulgated under section 608, EPA refers to industry standards. Without the existence of such standards, EPA believes that a formal definition is not the best approach.

Several commenters stated that EPA should modify the proposed regulatory language in § 82.156 (i)(2) and (i)(2)(ii) to distinguish best efforts from sound engineering/professional judgment. The commenters are concerned that EPA erroneously included sound engineering/professional judgment in the definition of best efforts. The commenters stated that the intention behind best efforts was that the owners or operators should do what is necessary within reason to repair leaks within 30 days in situations where longer extensions beyond 30 days are necessary to conduct repairs due to the unavailability of spare parts or compliance with other federal, state, or local regulations. In further discussions with the commenters, it appears that over time any initial distinction that EPA and CMA made in the settlement agreement between best efforts and sound engineering/professional judgment has become convoluted. EPA believes that the rationale for using the term best efforts for repairing leaks that required an extension beyond the initial 30 days was to ensure that where there are multiple leaks or where a leak can be partially repaired, the owners or operators will complete all reasonable actions during the initial 30 days. The result will be to reduce the leak rate as much as possible during the initial 30 days where additional time is necessary to complete all repair activities. Additional comments submitted by CMA confirm this interpretation. Therefore, EPA is amending § 82.156(i)(2) to remove the references to best efforts. Instead, EPA will state that the owners or operators must conduct all necessary leak repairs that do not require additional time beyond the initial 30 or 120 days. EPA believes that this change in language more adequately conveys the intent of this provision, which is to allow additional time, while ensuring that all that can be done has been done.

5. Static and Dynamic Tests

EPA received many comments supporting the use of static and dynamic tests. While these commenters agreed with the need for these tests, several suggestions for when the tests should be used and alternative terminologies were suggested. These comments will be discussed in greater detail later in this subsection. EPA received one comment opposing the use of static and dynamic tests. The commenter stated that static and dynamic tests are not precisely reliable methods on which to base a requirement to retrofit a piece of equipment. The commenter stated that it had documented cases where the results of such tests have been inconclusive. The commenter further believes that the tests are overly burdensome and unnecessary. The commenter believes that the tax and cost of refrigerants should provide the necessary incentives.

EPA agrees that the expense of ozone-depleting refrigerants will influence the decisions made by many organizations. However, considering the size of the refrigerant charges for some of the appliances subject to the leak repair provisions, ensuring that appliances brought back on-line are no longer leaking above the threshold, is important. Also, often appliances may use an HCFC, which is not subject to federal tax. In the settlement agreement, EPA and CMA agreed to propose this verification approach. Since these tests are regularly performed to ensure that a leak has been repaired, EPA believes these requirements are not overly burdensome. Furthermore, EPA believes that performing such tests provides the owners or operators with a strong measure of insurance. Moreover, since EPA has proposed options other than retrofitting or retiring the leaky equipment, such as reducing other leak sources, EPA does not believe a retrofit or replacement decision would be based solely on one failed static or dynamic test. Therefore, EPA will require that the tests be performed.

EPA received several comments regarding the use of the terms ''static'' and ''dynamic.'' Commenters stated that uses of the terms ''first verification test'' or ''initial verification test'' and ''follow-up verification test'' would be more appropriate. Among the reasons suggested for this change is a concern that the terms static and dynamic have commonly understood meanings. Static generally means a system is at rest and dynamic generally means a system is operating. One commenter stated that during the settlement discussions the terms were crafted to discuss repairs, using the widely understood meaning. However, later it was realized that industrial process refrigeration equipment that was not shut down during repairs was neglected. The terms were then broadened to mean a first verification and a second verification test. After discussions with employees, the commenter now believes that the broadened definitions would likely cause confusion. Another commenter agreed that while the broadened definition captures the situations faced by the owners or operators, the language would be confusing. Several commenters suggested that the terms ''first'' or ''initial verification test'' and ''follow-up verification test'' would be more accurate.

EPA agrees with these commenters. The definitions of static and dynamic were broadened to capture real world situations. Since the settlement agreement bound the Agency to a proposal that included those terms, EPA did not consider the use of other language to describe the tests. However, EPA agrees that ''initial verification test'' and ''follow-up verification test'' more accurately describe the tests, particularly since often the same types of tests qualify as both static and dynamic, depending on when they are performed. EPA believes changing the language would further clarify that the state of motion is not necessarily a criterion. Therefore, through this action, EPA will replace the proposed terms ''static'' and ''dynamic'' with the terms ''initial verification test'' and ''follow-up verification.''

Commenters suggested that EPA streamline the definition of initial verification test (static verification test) by removing illogical or redundant statements. The commenters state that there is no need to say that the test will be performed before the appliance or portion of the appliance has reached operation at normal working conditions of temperature and pressure because it would not be possible for an appliance or portion of an appliance to do so without a full refrigerant charge. EPA understands the commenters' concerns. Clearly, without a full charge of refrigerant, normal working conditions of temperature and pressure cannot be reached. However, to limit the potential for misinterpretations, EPA would rather be overly explicit.

One commenter requested that EPA distinguish between the terms steady-state operating conditions, steady-state operating characteristics, normal working conditions and normal operating conditions. The commenter stated that in engineering terms, these terms are not always equivalent. For example, if the values of all the variables in a process (e.g. all temperatures, pressures, volumes, flow rates, etc.) do not change with time, except for possibly minor fluctuations, the process is said to be operating at steady state. However, if any of the process variables change with time, transient or unsteady-state operating is said to exist. Depending upon the industrial process that the industrial process refrigeration equipment is supporting, its normal operation in strict engineering terms may be characterized as steady-state or unsteady-state. The commenter therefore believes it is more appropriate when referencing the operation state of the refrigeration equipment, for purposes of indicating when either verification test should be conducted, for the Agency to adopt the terminology ''normal operating characteristics and conditions.'' Furthermore, the commenter believes that normal operating characteristics and conditions has an understood definition equivalent to how the NPRM defines and refers to steady-state operations.

While EPA received other comments supporting the use of the term steady-state, EPA agrees with the concerns regarding the potential for confusion. The use of the term steady-state in this context originated with the settlement agreement. While the proposed definition for steady-state appears acceptable to most of the affected industry, EPA is concerned that someone familiar with the engineering distinctions between steady-state and unsteady-state would be confused. Therefore, EPA believes it is appropriate to replace ''steady-state'' with ''normal operating characteristics and conditions.'' EPA will not be revising the definition in any substantive manner; therefore, the definition itself will be consistent with the spirit of the settlement agreement.

Several commenters raised concerns on when a follow-up verification test is performed. The commenters are concerned that the NPRM does not properly consider occasions where a verification test at normal operating characteristics and conditions is impractical or less meaningful. Commenters stated that there are repair situations where the repair sites will not be accessible to perform a meaningful verification test after the industrial process refrigeration equipment is returned to normal operating characteristics and conditions. One example would be a verification test for leaks inside a heat exchanger. The tests can be performed while the exchanger is open. A test performed after the exchanger is reassembled would not be as meaningful. Other examples provided by the commenters include: compressor internals, locations that must be re-insulated prior to start-up, and locations in close proximity to dangerous hot equipment or moving parts where access is not possible after reassembly. EPA did discuss whether it would be appropriate to permit follow-up verification tests prior to returning to normal operating characteristics and conditions; however, EPA did not propose to allow these alternative tests. Commenters stated that since there are situations where the tests prior to a return to normal operating characteristics and conditions will be more meaningful and reliable, EPA should permit sound engineering/professional judgment to be used to determine what the appropriate operational state of industrial process refrigeration equipment should be when the follow-up verification tests are

conducted. One commenter stated that EPA should take confidence in the fact that leak detection and repair of appliances did not originate with section 608; it has been an integral part of maintenance practice for many years.

EPA agrees that in certain circumstances, performing a follow-up verification test prior to normal operating characteristics and conditions may be more meaningful and reliable. Performing multiple verification tests may be appropriate under many conditions. One of the Agency's concerns, however, was that until normal operating characteristics and conditions are achieved, it may be unclear if the leak repair work was truly successful. EPA was concerned that at less than true operational state, a particular fix may not hold. The Agency understands that leak detection and repair has been part of this sector's practices before the development of these regulations. Furthermore, EPA believes that as class I and class II refrigerants become less readily available, leak detection and repair efforts may increase. Moreover, EPA believes that in most cases the owners or operators rely on personnel with appropriate professional judgment in determining the best way to repair and verify the repair of a leak source. Therefore, through this action EPA will amend the proposed requirements for performing follow-up verification tests. EPA will require that the test be performed at normal operating characteristics and conditions unless sound professional judgment determines that a follow-up test should be performed prior to returning to normal operating characteristics and conditions.

EPA received several comments requesting that the Agency clarify that initial and follow-up verification tests are to be performed even when repairs are made within 30 days. One commenter stated that the NPRM was unclear. The commenter believes that as a practical matter, and to minimize confusing plant operations, it would be preferable to treat all repairs equally, and to require documentation that tests should be done to verify a successful repair. Another commenter stated that these tests are a measure of compliance. Another commenter stated that the settlement agreement makes no mention that these requirements must be met only in cases where the owners or operators are granted additional time. Furthermore, the settlement agreement does not limit these tests to situations where an industrial process shutdown has occurred, or where the repairs were made while an appliance was mothballed. This commenter believes that, with regards, to the performance of these tests, the regulatory language should be in full agreement with the settlement agreement.

EPA agrees that the tests demonstrate whether a leak repair effort was successful or not, though the tests do not necessarily mean that the leak rate has been sufficiently reduced. In addition, EPA understands that often these tests have been routinely performed regardless of any regulatory requirement. EPA believes that many organizations have internal policies requiring that verification tests be performed. EPA agrees that having a consistent requirement that can easily be paraphrased for technicians is useful. Moreover, EPA does not believe requiring these tests in all circumstances equates to any substantial burden to industry. Therefore, EPA will require that initial and follow-up verification tests be performed when repairing leaks on industrial process refrigeration equipment where such leakage has surpassed the 35 percent annual leak rate.

One commenter requested that EPA clarify that the verification tests demonstrate the success of a leak repair, not that the leak rate has been reduced below the threshold. EPA agrees with this commenter. It was not EPA's intention to imply that the verification test shows what the leak rate is. However, EPA believes that where the verification test shows that the repairs have been successful, in most cases this will mean that there has been a reduction in the leak rate. If more than one leak exists, it is possible that the leak rate could remain above acceptable levels. In such cases the owners or operators would be expected to take reasonable actions.

Two commenters stated that where an industrial process shutdown is not required, the initial and follow-up verification tests will be identical; therefore, a follow-up verification test is unnecessary. EPA disagrees with these commenters. While the same test might be performed, the fact that the tests are performed at different times is important. If a repair consists of tightening flange bolts, for example, it may appear that a repair is successful during an initial verification test. However, it may not be immediately obvious that the repair was unsuccessful. A bolt may appear to have been tightened sufficiently; however, if the threading is damaged, it may loosen in a short period of time. Performing a follow-up verification test will demonstrate that a problem still exists. EPA believes that even when an industrial process shutdown is not necessary, initial and follow-up verification tests will play vital roles. Therefore, EPA is requiring that both initial and follow-up verification tests be performed when repairs are made even if an industrial process shutdown is not required.

EPA received one comment requesting that more than one follow-up verification test be permitted before an owner or operator must notify EPA of a failure. The commenter is concerned that situations could arise in which a follow-up verification test may indicate a failure even though in reality the leak has been fixed. The commenter suggested that it would be more reliable in the event that the test was inconsistent with the expected results, that subsequent tests be permitted to be performed during the 30-day period. EPA understands this commenter's concerns. Since repairs are often interrelated, tests may demonstrate a need to continue repair efforts. EPA proposed to permit the follow-up verification test to occur within 30 days. However, since the Agency is revising the terminology used in the NPRM to first repair efforts and second repair efforts, EPA believes the issue has been resolved. Tests will be completed after the repair efforts are complete.

EPA received comments concerning the interpretation and use of sound engineering/professional judgment. Commenters stated that EPA should not incorporate sound engineering/professional judgment into the interpretation of best efforts. Sound engineering/professional judgment should only be discussed in relation to verification tests. EPA has already addressed the commenters' concerns about the NPRM's incorporation of sound engineering/professional judgment with the use of best efforts.

A few commenters stated that since the decision-making process may not be performed by an engineer, the use of the term engineering is inappropriate. In the NPRM, EPA states that sound engineering or professional judgment means a ''combination of the use of logic and operational experience, with methods of calculation that are practical, based on training, experience and education'' (60 FR 3997). EPA agrees that in many cases the professional making the decision may not be an engineer. Therefore, EPA will use the term, ''sound professional judgement.''

One commenter stated that sound professional judgement should be employed to determine where and which initial and follow-up verification tests should be performed, whenever

leaks that are subject to the leak repair requirements for industrial process refrigeration equipment must be repaired. EPA agrees with this commenter.

Another commenter stated that fluorescent dye combined with a leak monitoring UV light source should be considered an acceptable initial or follow-up verification test. In the NPRM, EPA discussed three types of verification tests. EPA states that the three discussed represent examples that EPA believes would be considered acceptable forms of verification tests. EPA states that other types of tests may exist (60 FR 3997). EPA believes that sound professional judgement should be employed when determining the type of verification test that is appropriate for the particular leak. Therefore, it is not necessary for EPA to state which tests are acceptable. However, EPA would like to clarify that any verification test must be acceptable under all other regulatory requirements. For example, if fluorescent dye was combined with an ozone-depleting substance, where that ozone-depleting substance is used to propel the dye from a pressurized dispenser into the appliance, that application would be banned under the nonessential products ban promulgated under section 610 of the Act.

EPA received one comment regarding the need to perform verification tests if the owner or operator determines that the industrial process refrigeration equipment should be retrofitted. For example, if the leaky equipment is shut down to perform repairs on the heat exchanger, and as the repair work begins, it is determined that the compressor is about worn out, the owner or operator may choose to retrofit or replace the system rather than complete repairs. The commenter believes that under these circumstances the obligation to perform the verification tests should be lifted. EPA agrees with this commenter. If the owner or operator is switching to a retrofit, replace, or retire mode, the obligation to bring the leak rate below 35 percent is suspended. Therefore, it is not necessary to perform tests to verify the success of individual leak repair efforts.

EPA received an additional comment concerning the use of verification tests when the owners and operators are retrofitting or replacing the appliance. The commenter was concerned that the proposed language would obligate owners or operators to perform verification tests on replaced or retrofitted equipment. EPA agrees that these tests are not necessary for replaced or retrofitted equipment.

6. Fixing Other Leaks

EPA received one comment regarding what happens if EPA disapproves the parameters for fixing leaks. In § 82.156(i)(4), EPA stated that if repairs fail a follow-up verification test, the owner or operator could choose the option of doing whatever it takes to get the rate below the threshold within 180 days. It is anticipated that the owner or operator will follow parameters from earlier notifications. EPA may disapprove of those parameters; however, the parameters are deemed approved if EPA does not object within 30 days after receiving notice. The commenter supports this approach, but is concerned about what happens if EPA disapproves. In such cases the commenter suggests that the owner or operator and EPA should reach agreement on what parameters will be used. EPA agrees with the need to specify what will occur if the EPA objects to the parameters. If this situation occurs, in all likelihood, EPA will consult with the owner or operator. However, EPA and the owner or operator may not necessarily ''reach agreement.'' Through this action, EPA will specify that where EPA objects to the submitted parameters for bringing the overall leak rate below the applicable threshold, EPA will select appropriate parameters. In all likelihood, this selection will be made expeditiously since the applicable timelines will remain in effect. If such disapproval significantly limits the ability of the owners or operators to comply with appropriate timelines, EPA may consider granting an extension. If no agreement can be reached, it is anticipated that the course of action may be to retrofit or replace the affected industrial process refrigeration equipment. Under such circumstances, EPA may need to consider providing additional time for the owners or operators of the affected industrial process refrigeration equipment to complete retrofit or replacement activities.

EPA received several comments supporting the provision relieving the owner or operator of the obligation to retrofit or retire industrial process refrigeration equipment where, within 180 days, the owner or operator has reduced the leak rate to below 35 percent by completing other repairs and tightening the operation of the appliance. These commenters believe that by reducing the amount of refrigerant being released, the owner or operator has met the goals of the leak repair provisions although the original leak remains.

EPA received one comment suggesting that the Agency should permit one year instead of 180 days. The commenter believes that providing additional time will not detract from the requirement to retrofit or replace the appliance. EPA disagrees with this commenter. EPA believes that to complete retrofit or replacement activities within one year, it would be necessary to perform preparatory work on the same appliance. The lack of clear direction between retrofitting and repairing the appliance that late in the year may influence the ability of the owner or operator to complete retrofit activities. Furthermore, EPA believes that where the leak rate can be reduced to below the applicable threshold, 180 days should be sufficient time. The leak repair provisions being promulgated through this action are designed to provide greater flexibility without compromising the goals of reducing emissions. To achieve this goal EPA proposed the shortest amount of additional time necessary to complete repairs. Therefore, EPA does not believe it is necessary to further extend this provision.

EPA received one comment requesting that the Agency specify that § 82.156(i)(3)(v) only apply where repairs have failed a follow-up verification test and the owners or operators have chosen to do whatever it takes to bring the leak rate below the applicable threshold. EPA agrees that there are other options available to the owners or operators. Therefore, through this action, EPA will clarify that the owner or operator may choose this option, but that other options, such as retrofitting the appliance, also exist.

EPA received several comments supporting the need to switch to the retrofit or replacement mode after discovering that successful leak repairs cannot be made in accordance with the necessary timelines. EPA received one comment suggesting that when a switch is made from a repair mode to a retrofit/replacement mode, the owner or operator of that industrial process refrigeration equipment should be held to the normal deadlines for retrofitting or retiring the appliance. The commenter stated that if the owner or operator has spent a month trying to fix the leaks, the owner or operator would have eleven months left for retrofitting, replacing, or retiring the equipment. EPA agrees with this commenter.

EPA received several comments supporting the need for additional time to complete the retrofit or retirement of industrial process refrigeration equipment beyond one year. One commenter stated that EPA should

clarify however, that additional time should be permitted under § 82.156(i)(7)(i), not one additional year. In some cases, more or less than one year is appropriate. One commenter stated that additional time, up to one additional year, should be permitted under § 82.156(i)(7)(ii). The commenter also stated that where additional time beyond the initial additional ''year'' is permitted in § 82.156(i)(7)(iii), EPA should explicitly state that additional time beyond the one year is permitted, not an additional year. EPA agrees with these commenters.

F. Industrial Process Shutdown

EPA received several comments supporting the extension to complete repairs when an industrial process shutdown is required. One commenter suggested that the term process shutdown should not be used interchangeably with the term industrial process shutdown. To provide clarity and consistency, the commenter believes the Agency should use and define the term industrial process shutdown exclusively. EPA agrees with this commenter. Therefore, EPA will define and use the term industrial process shutdown, instead of process shutdown.

EPA received one comment stating that the need for additional time beyond the 120 days permitted for an industrial process shutdown may not be evident within the initial 30-day repair period. The commenter is concerned that an initial determination that no other federal, state, or local regulations apply may be made by the owners or operators. It is also possible that within the initial 30 days the owners or operators may not realize that the appliance requires parts that are unavailable. After the industrial process shutdown is complete, possibly as late as day 115, such a determination may be made. Under those circumstances, the commenter is concerned that additional time beyond the 120 days would no longer be available. EPA understands these concerns. While the Agency believes that in most cases the owner or operator will know that other regulations will delay repairs or that the parts are not readily available within 30 days, it is possible that such a determination will not be known in advance of completing the industrial process shutdown. Therefore, through this action, EPA will specify that additional time is available beyond the 30-day or 120-day repair period where other federal, state or local regulations are applicable or where the necessary parts are unavailable. Only the additional time needed to receive delivery of the necessary parts or comply with the pertinent regulations will be permitted.

G. Retrofitting or Replacing Equipment

EPA received several comments concerning retrofitting or replacing equipment. Commenters supported the proposal to permit additional time where specific circumstances exist. Comments about specific aspects of the proposal are discussed below.

EPA received one comment asking for clarification regarding the process of notification to EPA if repairs done in good faith are not successful and retrofitting must be pursued. The concern is that there may be cases where a repair requires an industrial process shutdown. If the ''clock'' for notifying EPA begins the date the leak rates are discovered, there may be cases where six months has passed. Therefore, the commenter suggested that EPA permit six months from the date the decision to retrofit is made. EPA disagrees with this commenter. EPA believes six months provides enough time both when the 30-day timeline and 120-day timeline apply. The owners or operators would have acceptable time to make repairs, to determine that retrofitting is appropriate, and to submit any required information.

EPA received a few comments concerning returning equipment to operation after the decision to retrofit, replace, or retire the appliance has been made. One commenter stated that EPA should allow an owner or operator to start up and operate appliances that the owner or operator determines, after attempting to repair leaks, cannot pass an initial verification test, if the owner or operator plans to retrofit or replace the appliance in accordance with § 82.156(i)(6) or such longer time as may apply in accordance with § 82.156(i)(7) (i), (ii) and (iii) or § 82.156(i)(8) (i) and (ii). EPA agrees with these commenters. If the owners or operators of affected industrial process refrigeration equipment attempt to repair leaks, but determine the need to retrofit or replace the equipment in accordance with the provisions promulgated through this action, the affected industrial process refrigeration equipment may be brought back on line without an initial or follow-up verification test.

EPA received related comments concerning the ability of the owners or operators to switch from the repair to the retrofit mode, and from the retrofit to the repair mode. One commenter stated that as long as all applicable deadlines are met, the owners or operators should have the flexibility to change their initial determination of retrofitting or repairing the industrial process refrigeration equipment. EPA agrees that as long as all applicable deadlines are met, the owners or operators may change their initial decision to retrofit, replace, or repair leaky industrial process refrigeration equipment.

One commenter stated that the proposed requirement to develop retrofit plans within 30 days would be difficult for large industrial process refrigeration equipment. It may take time for the owners or operators to determine the cause of the leak and whether the best course of action is to repair or retrofit the appliance. The commenter requests that EPA permit 90 days for the owner or operator to obtain all the appropriate information to complete a valid retrofit or retirement plan. The commenter believes this is consistent with EPA's recognition that it may take time for the owners or operators to evaluate the available options. EPA agrees that it may take time to evaluate the available options; however, EPA does not believe it is necessary to permit 90 days to develop retrofit or retirement plans. EPA believes that system mothballing and the ability to switch from a repair mode to a retrofit mode provide the owner or operator of the affected appliance with sufficient time to develop such plans. EPA believes that particularly where the type of leak is unknown, most owners or operators will attempt to identify and repair the leak first. Therefore, EPA does not believe it is necessary to require additional time to develop retrofit or retirement plans.

EPA received one comment regarding when the clock starts for retrofitting a system. The commenter is concerned that § 82.156(i)(3)(ii) permits the owner or operator of industrial process refrigeration equipment to determine the need to retrofit industrial process refrigeration equipment after a failed follow-up verification test; however, § 82.156(i)(6) states that all work under the plan must be completed within one year of the plan's date and the plan must be developed within 30 days of discovering the leak. The commenter is concerned with this apparent inconsistency. EPA agrees with this commenter's concern. While in general, plans are to be developed within 30 days of discovering the leak, this final action provides opportunities for the owners or operators to switch to a retrofit mode. EPA will modify the language in § 82.156(i)(6) to reflect these scenarios.

EPA received one comment requesting, that if the owner or operator intended to retrofit or replace an

appliance, and developed an appropriate plan, and if the owner or operator later determines that the normal charge of the appliance was not correctly calculated, the owner or operator should be relieved of the obligation to retrofit or replace the appliance and therefore, be able to withdraw the plan. The commenter states that if the appliance was overcharged, the calculations would be incorrect. EPA understands these commenters concerns. As discussed above, EPA realizes that owners or operators may not have kept records of refrigerant charges prior to the promulgation of regulations under section 608. Therefore, EPA will permit the owner or operator to withdraw a retrofit or retirement plan if the calculations of the full charge used to determine the leak rate were incorrect. However, the owner or operator retracting such a plan will need to demonstrate clearly that the original determination was incorrect and why. EPA will be particularly concerned where the fourth methodology for determining the full charge was used. Where a range is used to establish the full charge and that range is altered, EPA is requiring that records be maintained and be made available to EPA upon request.

H. Recordkeeping and Reporting Requirements

EPA received several favorable comments regarding the proposed recordkeeping and reporting requirements. One commenter stated that although the recordkeeping and reporting requirements are more detailed than those promulgated in May 1993 and that they do constitute an additional burden, the commenter supports the requirements. The commenter believes the requirements are necessary to allow EPA the opportunity to verify that best efforts were expended to find and repair leaks. Another commenter stated that the provisions mostly appear necessary and appropriate, in order to assure compliance. This commenter did offer minor suggestions for the requirements that are discussed below. EPA received two negative comments on recordkeeping and reporting comments. One commenter stated that the provisions appear to be extremely burdensome and time consuming. This commenter feels that more flexibility should be provided and that incentives to expeditiously fix leaks and even retrofit will be derived from the cost of refrigerant. The commenter further stated that the NPRM contains 12 separate reporting items subject to noncompliance enforcement actions and strict deadlines while providing no environmental benefit. The second commenter stated while most of the requirements for recordkeeping and reporting seem justified, § 82.166(n) should not include recordkeeping or reporting requirements for § 82.156(i) (3) (iii), (iv), and (iv) because they are too burdensome. EPA disagrees with these commenters. This rulemaking, in its entirety, is designed to provide greater flexibility to the industry. The rule will alleviate stringent repair and retrofitting timelines and allows for more flexible approaches for lowering the overall leak rate of affected appliances. EPA has proposed and today is adopting reporting and recordkeeping requirements in conjunction with the more flexible approach to ensure compliance with this less stringent scheme. EPA recognizes that the reports themselves do not constitute an environmental benefit. However, ensuring compliance with this new leak repair scheme does provide a benefit. The three specific provisions cited by the second commenter are pertinent to EPA. One provision reports the results of a failed follow-up verification test. This failure is a trigger for the owner or operator to choose a new course of action. Notification to EPA of the failure is important and would accompany other required information. The other two provisions communicate the results of either successful second repair efforts or tightening other aspects of the appliance to reduce the leak rate below the threshold. Since these events result in relieving the owner or operator of having to retrofit or replace the appliance, it is essential for the owner or operator to notify EPA. These recordkeeping and reporting requirements are not always required. If the owner or operator of the industrial process refrigeration equipment can complete repairs successfully during the initial 30 days, there are no applicable recordkeeping or reporting requirements.

One commenter suggested that EPA clarify that only the information listed in § 82.166 (n),(o) and (p) must be maintained. The commenter suggested several other language changes to ensure an understanding of the terminology used. Particularly, the commenter suggested and EPA clarified through the terms, ''fix all other outstanding leaks,'' ''on-site,'' ''refrigeration facility,'' and ''time changes.'' Another commenter suggested that EPA clarify under what circumstances specific data elements should be included. EPA has changed the language in § 82.166 (n), (o), (p), and in the newly added (q) so that these sections clearly reflects EPA's intent.

EPA received comments regarding notification to EPA of changes from the original estimates concerning repair work. One commenter stated that it was unclear and confusing in both the preamble and the regulatory language regarding time changes for completion of work from the original estimates. The commenter believes that EPA should require notification only if the estimated date of completion of work changes and results in moving the completion date forward. Other commenters noted that if EPA reviewed every adjustment in the affected repair schedules, EPA would receive many unnecessary notices and companies would face additional compliance burdens. EPA agrees with these commenters. EPA is only concerned when the estimated date of completing work results in extending the date of completion, thus increasing the potential for refrigerant releases. Through this action EPA will change the proposed regulatory language to state that when the repair schedule results in extending the date of completion, the reasons for these changes must be documented and submitted to EPA within 30 days of discovery of the change in timing.

EPA received comments concerning the potential for the owners or operators of industrial process refrigeration equipment to be placed in a situation where they will not be able to comply with their original schedules because the vendor is unable to meet the delivery schedule previously supplied to the owner or operator. For example, if a vendor quotes 20 weeks for delivery and in week 18 changes that estimate to 36 weeks, the owners or operators of the affected appliances will be forced to reconfigure their installation schedules. EPA understands the concerns raised by these commenters. If a critical component is delayed, this might influence whether the owner or operator can meet their schedule. EPA is aware that often a retrofit will involve several vendors. In some cases non-critical components may be delayed. It may be possible to rearrange the schedules to install delayed parts later. Where these parts must be on hand for work to proceed, delays in delivery by the vendors could result in missed deadlines by the owners or operators. Therefore, through this action, EPA will permit an extension of the original deadlines where delays by vendors limit the ability of the owners and operators to proceed with their retrofit or replacement activities. Extensions will be based on the delivery date for the necessary components.

EPA received one comment requesting that instead of filing for additional time beyond the initial one-year period six months after the expiration of the 30-day period following the exceedance of the 35 percent leak rate, the owner or operator of the industrial process refrigeration equipment should submit information requesting additional time 10 months from the expiration of the 30-day period. The commenter argues that since the materials involved in construction of custom-built equipment may not normally be used by a refrigeration vendor, it is common for delivery dates to slip. The commenter believes that an owner or operator may request additional time even where it is unclear that such time is actually necessary. However, if the owner or operator must make the decision to request additional time at 10 months instead of six months, the owner or operator may be more realistic in his/her evaluation. While EPA understands these concerns EPA does not believe it is appropriate to postpone the date. EPA believes that in most cases it will be clear at six months if additional time will be necessary. Furthermore, EPA would prefer that those who are unsure if an extension will be necessary still notify the Agency. If EPA believes the request is unjustified, EPA can notify the owner or operator of such a determination. It would be inappropriate for the owners or operators to make such requests at the 10-month mark where EPA has 60 days to notify the owner or operator if the request was rejected.

EPA received comments concerning the need to clarify that in particular circumstances, all the information listed in § 82.166(n) would not need to be included in a report submitted to EPA. EPA agrees with this commenter. In the NPRM (60 FR 3995) EPA indicates that under certain circumstances particular items listed in § 82.166(n) would not be expected. However, EPA did not include this information in the regulatory text. Moreover, EPA understands that while combining the recordkeeping information list appears to simplify the provisions, misinterpretations could arise. Therefore, EPA has clarified the recordkeeping provisions in this final action by stating under what circumstances specific data elements are or are not required.

EPA received one comment regarding the need to modify the language in § 82.166(n) and (o). In the NPRM these provisions used the language, ''industrial process refrigeration equipment,'' while the requirements are also applicable to the federally-owned commercial and comfort-cooling appliances. EPA agrees with these comments and has made the necessary changes.

One commenter stated that EPA should revise § 82.156(i)(7)(i). The NPRM states that information, in accordance with § 82.166(o), will be submitted to EPA and within 60 days EPA will notify the owner or operator of its determination. The commenter suggests that instead, the request for additional time should be deemed acceptable unless the Agency notifies the commenter within 60 days. EPA disagrees with this commenter. EPA has permitted for an automatic process of granting up to one year where the conditions of § 82.156(i)(7)(ii) apply. EPA distinguished between these two provisions because if the conditions of § 82.156(i)(7)(i) apply, the Agency can grant as much time as necessary. This provision is far more open-ended than § 82.156(i)(7)(ii). Therefore, EPA continues to believe it is necessary for the Agency to review the request for additional time, agree that time to the extent reasonably necessary can be granted, and notify the owner or operator of EPA's decision.

EPA received one comment requesting notification of the proper address for submitting reports to the Agency. EPA will cross reference the address listed in § 82.160: Section 608 Recycling Program Manager, Stratospheric Protection Division, 6205J, 401 M Street, SW., Washington, DC 20460.

I. Purged Refrigerants

EPA received several comments regarding the treatment of purged refrigerants that are destroyed. The commenters agreed that if the refrigerant is not vented to the atmosphere, but is instead destroyed, the material did not leak and should not be included in any leak rate calculations. Several commenters suggested that records be kept on-site by the owners or operators and be made available to EPA upon request. One commenter stated that a requirement to notify EPA will prove to be a resource drain for EPA and will only provide a minimum environmental benefit. EPA agrees with these commenters and will require that records indicating the amount of purged and destroyed refrigerant be maintained and made available to EPA upon request.

One commenter requested that EPA exempt from leak detection determinations any refrigerant purged and destroyed where the destruction can be verified, regardless of the technology utilized. The commenter stated that refrigerant that is leaked into a system, then converted to elemental compounds or other non-ozone-depleting substances, by a process reactor or a hydrochloric acid burner should qualify for this exemption. In discussions with the Agency, commenters indicated that where an owner or operator decides to take credit for destroying purged refrigerant, it will be possible to find an appropriate method for verifying how and how much refrigerant was destroyed, if the refrigerant is ''completely destroyed'' for purposes of the phaseout regulations promulgated under sections 604 and 606 of the Act. EPA agrees with these commenters. While effective destruction of purged refrigerants can take place in a number of technologies, EPA does wish to ensure high efficiency. Therefore, so that purged refrigerant is not counted as part of the leak rate, today's rule will require purged refrigerant to be destroyed at a destruction efficiency of 98 percent or greater, consistent with both the phaseout and the labeling rules. Any destruction technology may be used for the purposes of destroying purged refrigerants under this rule, as long as the destruction efficiency is at least 98 percent.

J. Federally-Owned Chillers

EPA received several comments regarding the proposed requirements for federally-owned chillers. Several commenters supported the proposed language with only minor changes. A few commenters stated that EPA should broaden the requirements to allow additional time for non-federally-owned appliances to repair leaks. The commenters were concerned with manufacturing backlogs. One commenter stated that the Federal government should abide by the same rules as industry, noting that if federal entities are having trouble meeting timelines, large private companies may also be having the same problems. One commenter stated that if federal facilities cannot meet the time frames, then state and local governments may have similar difficulties. The commenter believes that giving an extension of time only to federal facilities could be viewed by the states and local governments as a mandate to them and an excuse for the federal government. One commenter stated that since the federal procurement process is governed by federal regulations a specific exemption was not necessary.

Several commenters stated that they are troubled that EPA has proposed to extend the sound professional judgment

and verification testing requirements to the owners and operators of federally-owned commercial refrigeration appliances for three reasons. First, because the owners or operators were not part of the settlement agreement between EPA and CMA. Second, because the commenters believe that EPA incorrectly stated that minor aspects of this rulemaking affect federally-owned chillers. Finally, because the commenters believe that this rulemaking constitutes an additional burden and that further legal action may be taken by the owners or operators of federally-owned chillers.

EPA understands all the concerns submitted by the commenters. In the NPRM, EPA states that the Agency received information from the Department of Energy (DOE) indicating a need for the proposed extension. EPA discussed with DOE the proposed language, including the use of verification tests. DOE understood and agreed with the requirements. Comments received during the public comment period from DOE suggest clarifications to the proposed regulatory language. DOE is the only federal entity to submit comments specific to this requirement.[2] EPA believes that in most cases federal entities should be able to repair appliances within 30 days or retrofit/replace equipment within one year, and that only under limited circumstances will this extension apply to federally-owned appliances.

EPA did not receive any comments during the public comment period from state or local governments regarding this proposal. Also, EPA received no information regarding the need for extensions for state and local governments prior to issuing the NPRM. Since EPA often receives formal and informal comments from state and local entities, EPA can only conclude that state and local entities do not believe an extension is necessary. The only comments regarding such an extension for state and local entities came from private-sector organizations.

One commenter stated that since the federal procurement process is governed by federal regulations, a de facto exemption exists without EPA specifying an exemption. EPA disagrees with this commenter. EPA is today providing additional time based on compliance with other federal, state, and local regulations for industrial process refrigeration equipment. This provision is applicable for both private and publicly owned or operated industrial process refrigeration equipment. However, it is not applicable to for comfort-cooling or commercial appliances. An additional exemption for federally-owned chillers not used for industrial process refrigeration equipment is necessary. Without such a provision, additional time based on federal, state, and local regulations would not apply.

EPA understands that often large private-sector organizations may have complicated procurement requirements. However, private-sector organizations do not need to go through public notice and comment to amend procurement practices.

Private-sector organizations can effect changes in order to ensure compliance. EPA proposed this extension because federal government officials are bound to follow federal regulations regarding the purchasing. There are only limited circumstances for expediting a specific purchase or changing the procedures quickly. EPA recognizes that the federal government is addressing the needs to provide more flexibility for contract and procurement officers to expedite the purchasing of the most cost-effective services and supplies. These changes, however, have not yet alleviated all the hurdles faced by those procuring appliances subject to this rulemaking.

In the NPRM, EPA focused on the procurement side of the issue. Based on additional comments from DOE, EPA understands that, in reality, the concerns raised by DOE also address how funding is appropriated, as well as environmental and health concerns associated with specific appliances owned or operated by DOE.

EPA recognizes that most of the appliances DOE is concerned with are unique, even amongst the appliances owned or operated by the federal government. DOE believes that in most cases it will be able to comply with the 30-day and one-year requirement. However, appliances used in the production of nuclear weapons and appliances located in areas subject to radiological contamination must comply with a unique set of environmental and public safety activities. It may be necessary to confront specific radiological concerns prior to beginning the process of locating and repairing leaks.

In the NPRM, EPA stated that the Agency intended for this exception to only be used in limited cases. EPA continues to believe that an extension for federally-owned appliances is appropriate; however, EPA recognizes that the proposed extension was overly broad. For example, DOE uses hot cells at a number of its facilities to process radioactive and radioactively-contaminated materials for research laboratories and medical isotope production. Refrigeration appliances serving hot cells may be standard chillers that are used for safe operation by the maintenance of specific temperatures. Hot cells use shielding windows for viewing manipulator operations. These windows are filled with mineral oil or zinc bromide fluids, that also act as radiation shields. If temperatures rise, the window gaskets could leak, the shielding fluid levels could fall, and the hot cell contaminants might be released, thus, posing a potentially serious safety hazard to the operators. If a refrigeration appliance serving a hot cell fails or leaks excessively, it may take several weeks for the radioactive materials in the cell to be placed in a stable condition, such that the materials can be handled safely. The use of temporary cooling appliances in these circumstances is not a viable option due to nuclear safety requirements. Thus, similar to industrial process equipment, the hot cell operations must be shut down to minimize safety hazards, and such a shutdown may take several weeks to be accomplished. In these situations, repair work may not be able to be completed within 30 days, since that work must be performed under safe conditions. EPA believes that there are a limited number of appliances that are confronted with this or similar situations. Therefore, the extension of the 30-day repair requirement would be limited. In most cases, similar to where an industrial process shutdown is required, 120 days will permit for the safe shutdown of the hot cells and for repair work to occur.

EPA estimates that even where radiological contamination exists, extensions will be used only to a limited degree. Moreover, EPA does not believe it is appropriate to broaden this extension to appliances owned by state and local governments since EPA is not aware of any state or local government faced with an analogous scenario. Therefore, federally-owned commercial and comfort-cooling refrigeration appliances will be permitted 120 days for repairs to be completed if the appliance is operating in, or sustaining activities and located in, radiologically contaminated areas.

EPA continues to believe that federal procurement and appropriations requirements influence the ability of the federal government to retrofit/replace/retire an appliance within one year. As stated above, while the federal government is attempting to streamline many procurement practices, the types

[2] Additional comments were received by the Tennessee Valley Authority concerning electricity generated by a nuclear power reactor, not the exemption for federally-owned chillers.

of appliances and their associated costs currently limits the ability of the federal government to comply with a one-year timeframe. In particular, securing funds to retrofit an appliance subject to radiological contamination may require a lengthy process. In most cases, the owners or operators would wait for notification that the funds have been allocated before requesting proposals. Therefore, EPA will provide additional time beyond the initial one year, to the extent necessary, where procurement or appropriations requirements interfere with the ability of a federal entity to retrofit/retire/replace an appliance within one year.

K. Mothballing

EPA proposed suspending the time-relevant leak repair requirements promulgated under § 82.156(i) for appliances that are temporarily or permanently mothballed. In the NPRM, EPA states that it may be possible for the owner or operator of the appliance to discontinue use temporarily, perhaps on a seasonal basis. For example, it may be reasonable to shut down or mothball a comfort-cooling appliance for a period of time.

The NPRM further states that this type of system mothballing would not be the same as an industrial process shutdown undertaken to repair particular leaks found in industrial process refrigeration equipment or perform other maintenance activities. Also, this type of shutdown or mothballing would not be the same as being taken off-line due to a power outage or event. The NPRM defines system mothballing as an intentional shutting down of the refrigerant appliance undertaken for an extended period of time by the owners or operators of that facility—not for the purposes of servicing or repairing the appliance—where the refrigerant has been evacuated. The NPRM further states that if the appliance is temporarily mothballed, EPA believes it is appropriate to suspend the time-relevant repair and/or retrofit requirements while the appliance is effectively inoperative. For example, if a comfort-cooling appliance with over 50 pounds of refrigerant has a leak rate of more than 15 percent per year, the leak or leaks must be repaired or the appliance must be retrofitted within one year. However, if after discovery of the exceedance of the leak rate, the owner or operator voluntarily mothballs the appliance for a period of several months or years, EPA believes it would be appropriate to suspend the need to repair leaks or retrofit the appliance during the same time period. Therefore, if the appliance operated for five days after discovery of the exceedance of the leak rate, then shut down for 2 months, when the appliance returned to operating, the owner or operator will still have 25 days to repair the leaks. The applicable verification tests would need to be employed.

EPA received several comments supporting the suspension of time-relevant repair or retrofit requirements if the owner or operator temporarily mothballs the affected appliance. However, several commenters suggested that the time-relevant requirements should also be suspended while repair or retrofit work is occurring. One commenter stated that refrigeration systems are designed to provide maximum cooling; however, if the weather cools or the processes needing refrigeration are not operating at full production, or if there are several refrigeration systems supporting a facility, it may be possible to mothball a leaky appliance. This commenter and several others recommend that EPA suspend the ''clock'' whether the appliance is mothballed for the purposes of repair or not. The commenters stated that the basis for their concern is that if the appliance or an isolated section of an appliance has been evacuated to at least atmospheric pressure, only a limited amount of refrigerant is likely to be released. The commenters further stated that the intent of the rulemaking is to reduce the emissions of ozone-depleting refrigerants. The commenters believe that while mothballed, there would essentially be no emission of ozone-depleting refrigerants. Another commenter stated that EPA should focus on the amount of time that an appliance actually operates at an excessive leak rate and not the amount of time that a repair takes. Another commenter stated that it may take some time to determine that the leak rate is above the threshold. After that determination is made, it may take time for a part to be ordered. The commenter is concerned that if the system mothballing definition excludes appliances shut down for the purposes of completing repairs, the owner or operator facing the above scenario would be forced into a retrofit/replacement mode. One commenter suggested that recordkeeping and reporting requirements could be used to monitor the appropriateness of using this provision.

EPA understands the concerns raised by these commenters. The intention of Section 608 is to limit refrigerant emissions, not to determine how long it should take to repair an appliance.

EPA intended to permit system mothballing because the risk of releases from evacuated appliances is minimal. EPA did not intend to preclude repair work from occurring while an appliance has been mothballed. Instead, EPA was attempting to distinguish between system mothballing and other types of shutdowns, for different purposes, particularly industrial process shutdowns. In most cases, EPA believes that system mothballing may constitute extensive shutdowns. In many cases, the appliance could be mothballed for a season.

EPA received comments describing scenarios where mothballing appliances and simultaneously completing repairs would be a practical solution. Examples include manufacturing processes that produce material that have only a seasonal demand, where a spare or backup appliance can be brought on line, and where there is excess capacity in another refrigerant appliance that can be used to replace the capacity lost by mothballing an appliance. Commenters believe that evacuating the appliance to at least atmospheric pressure, and allowing the repair activities to occur, will limit emissions. Commenters further recognize the need to complete verification tests regardless of the conditions under which the repair work was conducted.

EPA agrees that completing repairs while the appliance is evacuated equates to almost no risk of emissions. Therefore, through this action, EPA is modifying the proposed definition of system mothballing. EPA will delete the language ''not for purposes of servicing or repairing the appliance'' from the definition of system mothballing. However, to ensure that for industrial process refrigeration equipment, verification tests still occur, EPA will include language stating that an initial verification test be completed prior to returning these appliances to normal operating conditions and that a follow-up verification test will be required within 30 days.

L. Grandfathering

EPA received one comment regarding the treatment of industrial process refrigeration equipment that began retrofit or replacement activities prior to the promulgation of this rulemaking. A company that discovered a leak in early 1994 that exceeded 35 percent developed a retrofit plan under the existing requirements. It now has become apparent that the company will require additional time beyond the one year and if these regulations were already promulgated, the company most likely would have qualified for additional time. Since today's action was not already effective, and therefore

no extensions could be applied for, the commenter is concerned with how this appliance will be treated. EPA believes that in this case good faith efforts were made by the owner or operator of industrial process refrigeration equipment to meet the existing requirements prior to the stay. In cases where the owners or operators have developed plans and made good faith efforts to retrofit or retire appliances prior to the promulgation of today's action, and where these efforts are not yet complete, the owners or operators must develop a plan and complete all retrofit or retirement actions by August 8, 1996. The owners or operators are permitted to provide for extensions beyond August 8, 1996, in accordance with § 82.156 (i)(7) and (i)(8).

M. Terminology

EPA received comments asking the Agency to clarify, modify, and/or ensure consistency with EPA's use of certain terms, including but not limited to ''facility,'' ''system,'' and ''appliance.'' EPA has reviewed the regulatory text and the preamble to incorporate appropriate changes. EPA anticipates that these changes should lessen any confusion in distinguishing between a facility, a system, and an appliance. EPA also has considered all other comments concerning grammar and language and believes they have been appropriately addressed in the preamble and regulatory text.

EPA received one comment suggesting that where the regulatory text states that a leak rate should be reduced to 35 or 15 percent, the language should be amended to state 35 or 15 percent and below in order to include all universe of allowable leak rates. EPA agreed with this commenter and has made the necessary changes.

EPA received comments requesting additional cross-referencing in the regulatory text. One commenter suggested that particular cross-references should be added, deleted, or modified to more accurately indicate the Agency's intent. EPA believes it has addressed all these concerns.

N. Regulatory Impact Analysis

It has been determined by OMB and EPA that the proposed amendment to the final rule is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review under the Executive Order. EPA received one comment disagreeing with this determination. The commenter stated that though the rule provides for extensions for leak repair, the recordkeeping burdens make this option essentially useless. The commenter further states that if other leaks cannot be located within 180 days, the rule has a net effect of mandating retrofits. The commenter believes retrofitting one plant alone could exceed $10 million. That multiplied over an entire group of affected industries would deem the rule significant.

EPA strongly disagrees with this commenter's view that this rule is significant. EPA did perform a Regulatory Impact Analysis (RIA) when the original regulations regarding section 608 were promulgated in May 1993. This RIA is contained in Air Docket A–92–01. At that time, the costs associated with repairing and retrofitting appliances were considered. Today's action only lessens the impact of the original requirements by providing flexibility. The owners or operators of affected equipment have many options. One failed verification test does not immediately mean that retrofitting or replacing the appliance is the only option available as the only avenue. Furthermore, the provision permitting 180 days to decrease the overall leak rate of the industrial process refrigeration equipment was not contained in the original rulemaking. The owners or operators of a leaky appliance would have had to repair the leaks within 30 days or develop a retrofit or retirement plan. Any new recordkeeping or reporting requirements are necessary as a result of the more flexible approach. Most commenters agreed that these provisions were necessary. Moreover, as comments in the docket suggest, many of the data elements contained in the recordkeeping and reporting requirements were suggested by CMA and its members.

EPA does not believe that this rulemaking substantially increases the burden on the regulated community. Moreover, EPA believes that is the impact of this rulemaking a more flexible less costly means for handling leaks.

O. Allowing Appliances To Be Pressurized To Slightly Above O PSIG

EPA proposed to allow appliances to be pressurized up to 5 psig in order to change oil in industrial process refrigeration equipment. The NPRM (60 FR 4002) states that a small positive pressure is needed during oil changes to force the oil from its reservoir. Oil will not flow from a reservoir that is under vacuum. EPA stated that this approach will reduce emissions and thus will have an overall positive impact on the environment.

EPA received comments regarding this issue. One commenter asked for EPA to reopen and extend the comment period. Since this provision is part of a settlement agreement with a court-ordered final signature date of July 31, 1995, EPA is unable to reopen the comment period at this time. Furthermore, EPA did provide a thirty-day comment period with the option of holding a public hearing if one had been requested, in accordance with the Administrative Procedures Act. Moreover, to the extent practicable, EPA has responded to all comments including those received after the close of the comment period.[3]

Several commenters agreed with EPA's proposed approach, stating that permitting evacuation or pressurization to slightly above 0 psig would facilitate the removal of oil. One commenter stated that only a small amount of positive pressure is necessary because technicians would not let oil out at full system pressure since the oil would immediately turn into a large volume of froth.

EPA also received comments disagreeing with the need to reduce pressure. One commenter stated that § 82.156 and § 82.158 should not apply to oil changes. The commenter stated that any unit that requires that the oil be changed is provided with proper valves for oil change. The only refrigerant that is vented is the refrigerant contained in the oil. The commenter believes that the oil will be heated using the system oil heaters to bring the oil up to the manufacturer's design temperature. The hot oil will contain the least amount of refrigerant possible for the system stand-by pressure. The commenter believes that any requirement to reduce the pressure of the system to 5 psig would add major costs to the preventive maintenance of the unit. A job that may take a few hours would become a two-day job in cases where the unit does not have a system receiver. A refrigerant recovery unit and tanks would have to be brought to and removed from the job site. The commenter believes that the rules as written allow for oil removal without changing the system pressure since no evacuation is necessary after the oil change and results in only a ''de minimis'' release of refrigerant. Another commenter stated that refrigerant entrained in oil is not subject to the regulations.

EPA disagrees with these commenters' interpretations of the

[3] This particular comment was received the evening of June 15, 1995. The comment period closed February 21, 1995.

regulations. Under the initial regulations promulgated under section 608 and published May 14, 1993 (58 FR 28660), oil removal is considered a minor repair. Consistent with the requirements for all minor repairs the appliance must be brought to at least atmospheric pressure for oil removal.

The settlement agreement between EPA and CMA was based on the need to provide greater flexibility to the regulated community. The inclusion of a proposed provision to allow a slight positive pressure was viewed as a relaxation of the current regulations. This implies that a significant part of the regulated community agreed with EPA's interpretation that under the May 14 rule, oil removal required evacuation to atmospheric pressure.

Two commenters stated that EPA should not consider removing oil to be opening the appliance. One commenter stated that when the oil has been removed the valve is closed and the oil container is removed. The second commenter stated that the oil remaining in the sump is a barrier that will keep the refrigerant in the appliance. The impeller is a labyrinth seal with only .002–.003 inch clearance, and the valve through which the oil is drained is a small orifice. This commenter believes that if extreme precautionary measures are taken the appliance is not truly opened.

EPA disagrees with these commenters. EPA believes that changing oil does constitute opening the appliance. Opening an appliance is defined as ''any service, maintenance, or repair on an appliance that would release class I or class II refrigerant from the appliance to the atmosphere unless the refrigerant were recovered previously from the appliance * * *'' (59 FR 55926). EPA believes that refrigerant would be released during an oil change, unless the refrigerant were recovered previously. One commenter recognized that such a risk exists by stating that there is a need for ''extreme precautionary measures * * * during oil changes'' and that only under those circumstances is the ''system not truly 'opened' and there is little risk that refrigerant in the system will be vented to the atmosphere.'' EPA believes that the need to take ''extreme precautionary measures'' to prevent a release demonstrates that without such precautions a release is likely. Furthermore, EPA believes there is no way to assure that refrigerant is not released except to evacuate the appliance to 5 psig or below. Therefore, EPA continues to believe that removing oil constitutes opening the appliance.

EPA is concerned not only with the bulk of the refrigerant charge, but also with the refrigerant entrained in the oil. EPA has stated in applicability determination #23 and in the preamble to the initial regulations (58 FR 28677) that *after an appliance is reduced to atmospheric pressure,* the refrigerant entrained in the oil is not subject to those regulations. EPA would like to clarify that where the refrigerant and oil have not been drawn to at least atmospheric pressure, section 608(c), the venting provision, would apply. Therefore, recovery of the refrigerant from that oil would still be required.

During the settlement negotiations with CMA, CMA supplied information stating that the percentage of refrigerant entrained in oil for an appliance at 80 degrees fahrenheit could be 50 percent of the total volume of oil for HCFC–22. If the pressure is reduced to 5 psig the percentage of refrigerant is less than 5 percent for HCFC–22. EPA believes that this demonstrates that without a requirement to reduce the pressure or to recover that refrigerant in some other way, significant quantities of refrigerant will be released.

One commenter suggested an approach that would recover the refrigerant in the oil through a less time-consuming method. The commenter suggested that instead of evacuating the refrigerant EPA should permit the oil to be drained into a secondary vessel that can be isolated from the chiller and evacuated to recover the refrigerant in the oil. EPA received another comment stating that this method would still be time-consuming and costly. After reviewing the comments, EPA believes that this method actually will be less time-consuming and costly than the current requirements. Those concerned with the time and cost involved with this procedure should consider whether their current practices are actually in violation of the regulations.

EPA is concerned with preventing the release of the refrigerant through the opening of the appliance. Therefore, EPA believes that if the oil can be drained into a system receiver, where the system receiver can be isolated and evacuated to a pressure no greater than 5 psig, the goal would be achieved. EPA believes this a reasonable alternative to the requirements currently in effect. Therefore, through this action, EPA will revise the regulations to permit appliances to be pressurized to slightly above 0 psig (but not to exceed 5 psig) during oil changes and/or to permit the oil to be drained into a system receiver where the technician will then recover the oil entrained in the refrigerant to 0 psig.

VI. Judicial Review

Under Section 307(b)(1) of the Act, EPA finds that these regulations are of national applicability. Accordingly, judicial review of this action is available only by the filing of a petition for review in the United States Court of Appeals for the District of Columbia Circuit within sixty days of publication of this action in the **Federal Register**. Under Section 307(b)(2), the requirements of this rule may not be challenged later in judicial proceedings brought to enforce those requirements.

VII. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether this 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 lead to a rule that may:

(1) Have an annual effect on the economy of $100 million or more, or adversely and materially affect 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 the Executive Order.

It has been determined by OMB and EPA that this final action to amendment to the final rule is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review under the Executive Order.

B. Unfunded Mandates Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act'') (signed into law on March 22, 1995) requires that the Agency prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditure by State, local, and tribal governments, in aggregate, or by the private sector, of $100 million or more in any one year. Section 203 requires the Agency to establish a plan for obtaining input from and informing, educating, and advising any small governments that may be

significantly or uniquely affected by the rule.

Under section 205 of the Unfunded Mandates Act, the Agency must identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which a budgetary impact statement must be prepared. The Agency must select from those alternatives the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule, unless the Agency explains why this alternative is not selected or the selection of this alternative is inconsistent with law.

Because this final rule is estimated to result in the expenditure by State, local, and tribal governments or private sector of less than $100 million in any one year, the Agency has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. Because small governments will not be significantly or uniquely affected by this rule, the Agency is not required to develop a plan with regard to small governments. As discussed in this preamble, this rulemaking has the net effect of reducing the burden of part 82 subpart F of the Stratospheric Protection regulations on regulated entities, including State, local, and tribal governments or private sector entities by providing greater flexibility.

C. Paperwork Reduction Act

The information collection requirements in this rule have been submitted to by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq* and will be assigned control number 2060–0256.

The current collection of information has an estimated reporting and recordkeeping burden averaging 564,807 hours per respondent; however, this final action will decrease that burden by 108 hours. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Director, Regulatory Information Division; EPA; 401 M Street SW., (Mail Code 2136); Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.''

D. Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. 601–602, requires that Federal agencies examine the impacts of their regulations on small entities. Under 5 U.S.C. 604(a), whenever an agency is required to publish a general notice of proposed rulemaking, it must prepare and make available for public comment an initial regulatory flexibility analysis (RFA). Such an analysis is not required if the head of an agency certifies that a rule will not have a significant economic impact on a substantial number of small entities, pursuant to 5 U.S.C. 605(b).

EPA believes that any impact that this amendment will have on the regulated community will serve only to provide relief from otherwise applicable regulations, and will therefore limit the negative economic impact associated with the regulations previously promulgated under section 608. An examination of the impacts on small entities was discussed in the final rule (58 FR 28660). That final rule assessed the impact the rule may have on small entities. A separate regulatory impact analysis was developed. That impact analysis accompanied the final rule and is contained in Docket A–92–01.

I certify that this amendment to the refrigerant recycling rule will not have any additional negative economic impacts on any small entities.

Dated: July 25, 1995.

Carol M. Browner,

Administrator.

List of Subjects in 40 CFR Part 82

Environmental protection, Chemical Manufacturers Association, Industrial process refrigeration, Leak repair, Mothballing, Radiological contamination, Reporting and recordkeeping requirements, Retrofit, Verification test.

Part 82, chapter I, title 40, of the Code of Federal Regulations, is amended to read as follows:

PART 82—PROTECTION OF STRATOSPHERIC OZONE

1. The authority citation for part 82 continues to read as follows:

Authority: 42 U.S.C. 7414, 7601, 7671–7671q.

2. Section 82.152 is amended by removing the paragraph designations and placing the definitions in alphabetical order; by revising the definition for ''Industrial process refrigeration''; and by adding new definitions in alphabetical order to read as follows:

§ 82.152 Definitions.

* * * * *

Critical component means, for the purposes of § 82.156(i), a component without which industrial process refrigeration equipment will not function, will be unsafe in its intended environment, and/or will be subject to failures that would cause the industrial process served by the refrigeration appliance to be unsafe.

Custom-built means, for the purposes of § 82.156(i), that the equipment or any of its critical components cannot be purchased and/or installed without being uniquely designed, fabricated and/or assembled to satisfy a specific set of industrial process conditions.

Follow-up verification test means, for the purposes of § 82.156(i), those tests that involve checking the repairs within 30 days of the appliance's returning to normal operating characteristics and conditions. Follow-up verification tests for appliances from which the refrigerant charge has been evacuated means a test conducted after the appliance or portion of the appliance has resumed operation at normal operating characteristics and conditions of temperature and pressure, except in cases where sound professional judgment dictates that these tests will be more meaningful if performed prior to the return to normal operating characteristics and conditions. A follow-up verification test with respect to repairs conducted without evacuation of the refrigerant charge means a reverification test conducted after the initial verification test and usually within 30 days of normal operating conditions. Where an appliance is not evacuated, it is only necessary to conclude any required changes in pressure, temperature or other conditions to return the appliance to normal operating characteristics and conditions.

Full charge means, for the purposes of § 82.156(i), the amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one of the following four methods or a combination of one of the following four methods:

(1) The equipment manufacturers' determination of the correct full charge for the equipment;

(2) Determining the full charge by appropriate calculations based on component sizes, density of refrigerant, volume of piping, and all other relevant considerations;

(3) The use of actual measurements of the amount of refrigerant added or evacuated from the appliance; and/or

(4) The use of an established range based on the best available data, regarding the normal operating characteristics and conditions for the appliance, where the mid-point of the range will serve as the full charge, and where records are maintained in accordance with § 82.166(q).

* * * * *

Industrial process refrigeration means, for the purposes of § 82.156(i), complex customized appliances used in the chemical, pharmaceutical, petrochemical and manufacturing industries. These appliances are directly linked to the industrial process. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration.

Industrial process shutdown means, for the purposes of § 82.156(i), that an industrial process or facility temporarily ceases to operate or manufacture whatever is being produced at that facility.

Initial verification test means, for the purposes of § 82.156(i), those leak tests that are conducted as soon as practicable after the repair is completed. An initial verification test, with regard to the leak repairs that require the evacuation of the appliance or portion of the appliance, means a test conducted prior to the replacement of the full refrigerant charge and before the appliance or portion of the appliance has reached operation at normal operating characteristics and conditions of temperature and pressure. An initial verification test with regard to repairs conducted without the evacuation of the refrigerant charge means a test conducted as soon as practicable after the conclusion of the repair work.

* * * * *

Normal operating characteristics or conditions means, for the purposes of § 82.156(i), temperatures, pressures, fluid flows, speeds and other characteristics that would normally be expected for a given process load and ambient condition during operation. Normal operating characteristics and conditions are marked by the absence of atypical conditions affecting the operation of the refrigeration appliance.

* * * * *

Suitable replacement refrigerant means, for the purposes of § 82.156(i)(7)(i), a refrigerant that is acceptable under section 612(c) of the Clean Air Act Amendments of 1990 and all regulations promulgated under that section, compatible with other materials with which it may come into contact, and able to achieve the temperatures required for the affected industrial process in a technically feasible manner.

* * * * *

System mothballing means the intentional shutting down of a refrigeration appliance undertaken for an extended period of time by the owners or operators of that facility, where the refrigerant has been evacuated from the appliance or the affected isolated section of the appliance, at least to atmospheric pressure.

* * * * *

3. Section 82.156 is amended by revising paragraphs (a)(2)(i)(A) and (a)(2)(i)(B), adding a new paragraph (a)(2)(i)(C), and revising paragraph (i) to read as follows:

§ 82.156 Required practices.

* * * * *

(a) * * *

(2)(i) * * *

(A) Be evacuated to a pressure no higher than 0 psig before it is opened if it is a high- or very high-pressure appliance;

(B) Be pressurized to 0 psig before it is opened if it is a low-pressure appliance. Persons pressurizing low-pressure appliances that use refrigerants with boiling points at or below 85 degrees Fahrenheit at 29.9 inches of mercury (standard atmospheric pressure), (e.g., CFC–11 and HCFC–123), must not use methods such as nitrogen, that require subsequent purging. Persons pressurizing low-pressure appliances that use refrigerants with boiling points above 85 degrees Fahrenheit at 29.9 inches of mercury, e.g., CFC–113, must use heat to raise the internal pressure of the appliance as much as possible, but may use nitrogen to raise the internal pressure of the appliance from the level attainable through use of heat to atmospheric pressure; or

(C) For the purposes of oil changes, be evacuated or pressurized to a pressure no higher than 5 psig, before it is opened; or drain the oil into a system receiver to be evacuated or pressurized to a pressure no higher than 5 psig.

* * * * *

(i)(1) Owners or operators of commercial refrigeration equipment normally containing more than 50 pounds of refrigerant must have leaks repaired in accordance with paragraph (i)(9) of this section, if the appliance is leaking at a rate such that the loss of refrigerant will exceed 35 percent of the total charge during a 12-month period, except as described in paragraphs (i)(6), (i)(8), and (i)(10) of this section and paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this section. Repairs must bring the annual leak rate to below 35 percent.

(i) If the owners or operators of the federally-owned commercial refrigerant appliances determine that the leaks cannot be repaired in accordance with paragraph (i)(9) of this section and that an extension in accordance with the requirements discussed in this paragraph (i)(1)(i) of this section apply, they must document all repair efforts, and notify EPA of their inability to comply within the 30-day repair requirement, and the reason for the inability must be submitted to EPA in accordance with § 82.166(n). Such notification must be made within 30 days of discovering the leaks. EPA will determine if the extension requested in accordance with the requirements discussed in paragraph (i)(1)(i) of this section is justified. If the extension is not justified, EPA will notify the owner/operator within 30 days of receipt of the notification.

(ii) Owners or operators of federally-owned commercial refrigeration equipment may have more than 30 days to repair leaks if the refrigeration appliance is located in an area subject to radiological contamination or where the shutting down of the appliance will directly lead to radiological contamination. Only the additional time needed to conduct and complete repairs in a safe working environment will be permitted.

(iii) Owners or operators of federally-owned commercial refrigeration equipment requesting or who are granted time extensions under this paragraph must comply with paragraphs (i)(3) and (i)(4) of this section.

(2) The owners or operators of industrial process refrigeration equipment normally containing more than 50 pounds of refrigerant must have leaks repaired if the appliance is leaking at a rate such that the loss of refrigerant will exceed 35 percent of the total charge during a 12-month period in accordance with paragraph (i)(9) of this section, except as described in paragraphs (i)(6), (i)(7) and (i)(10) of this section, and paragraphs (i)(2)(i) and (i)(2)(ii) of this section. Repairs must bring annual leak rates to below 35 percent during a 12-month period. If the owners or operators of the industrial process refrigeration equipment determine that the leak rate cannot be brought to below 35 percent during a 12-month period within 30 days (or 120

days, where an industrial process shutdown in accordance with paragraph (i)(2)(ii) of this section is required,) and in accordance with paragraph (i)(9) of this section, and that an extension in accordance with the requirements discussed in this paragraph apply, the owners or operators of the appliance must document all repair efforts, and notify EPA of the reason for the inability in accordance with § 82.166(n) within 30 days of making this determination. Owners or operators who obtain an extension pursuant to this section or elect to utilize the additional time provided in paragraph (i)(2)(i) of this section, must conduct all necessary leak repairs, if any, that do not require any additional time beyond the initial 30 or 120 days.

(i) The owners or operators of industrial process refrigeration equipment are permitted more than 30 days (or 120 days where an industrial process shutdown in accordance with paragraph (i)(2)(ii) of this section is required) to repair leaks, if the necessary parts are unavailable or if requirements of other applicable federal, state, or local regulations make a repair within 30 or 120 days impossible. Only the additional time needed to receive delivery of the necessary parts or to comply with the pertinent regulations will be permitted.

(ii) Owners or operators of industrial process refrigeration equipment will have a 120-day repair period, rather than a 30-day repair period, to repair leaks in instances where an industrial process shutdown is needed to repair a leak or leaks from industrial process refrigeration equipment.

(3) The owners or operators of industrial process refrigeration equipment who are granted additional time under paragraphs (i)(1), (i)(2), and (i)(5) of this section must ensure that the repair efforts performed be those that sound professional judgment indicate will be sufficient to bring the leak rates below the applicable allowable annual rate. When an industrial process shutdown has occurred or when repairs have been made while an appliance is mothballed, an initial verification test shall be conducted at the conclusion of the repairs and a follow-up verification test shall be conducted within 30 days of completing the repairs or within 30 days of bringing the appliance back on-line, if taken off-line, but no sooner than when the system has achieved normal operating characteristics and conditions. When repairs have been conducted without an industrial process shutdown or system mothballing, an initial verification test shall be conducted at the conclusion of the repair efforts and a follow-up verification test shall be conducted within 30 days after the initial follow-up verification test. In all cases, the follow-up verification test shall be conducted at normal operating characteristics and conditions unless sound professional judgment indicates that tests performed at normal operating characteristics and conditions will produce less reliable results, in which case the follow-up verification test shall be conducted at or near the normal operating pressure where practicable, and at or near the normal operating temperature if practicable, and within 30 days of completing the repair efforts.

(i) If industrial process refrigeration equipment is taken off line, it can not be brought back on-line until an initial verification test indicates that the repairs undertaken in accordance with paragraphs (i)(1) (i), (ii), and (iii), or (i)(2) (i) and (ii), or (5) (i), (ii) and (iii) of this section, have been successfully completed, demonstrating the leak or leaks are repaired or where the owners or operators of the industrial process refrigeration equipment will retrofit/replace/retire the industrial process refrigeration equipment in accordance with paragraph (i)(6) of this section.

(ii) If the follow-up verification test indicates that the repairs to industrial process refrigeration equipment have not been successfully completed, the owner must retrofit or replace the equipment in accordance with paragraph (i)(6) of this section within one year after the failure to verify that the repairs had been successfully completed or such longer time period as may apply in accordance with paragraphs (i)(7) (i), (ii) and (iii) or (i)(8)(i) and (ii) of this section. The owners and operators of industrial process refrigeration equipment are relieved of this requirement if the conditions of paragraphs (i)(3)(iv) and/or (i)(3)(v) of this section are met.

(iii) The owner or operator of industrial process refrigeration equipment that fails a follow-up verification test must notify EPA within 30 days of the failed follow-up verification test in accordance with § 82.166(n).

(iv) The owner or operator is relieved of the obligation to retrofit or replace the industrial process refrigeration equipment as discussed in paragraph (i)(6) of this section if second repair efforts to fix the same leaks that were the subject of the first repair efforts are successfully completed within 30 days or 120 days where an industrial process shutdown is required, after the initial failed follow-up verification test. The second repair efforts are subject to the same verification requirements of paragraphs (i)(3), (i)(3) (i) and (ii) of this section. The owner or operator is required to notify EPA within 30 days of the successful follow-up verification test in accordance with § 82.166(n) and the owner or operator is no longer subject to the obligation to retrofit or replace the appliance that arose as a consequence of the initial failure to verify that the leak repair efforts were successful.

(v) The owner or operator of industrial process refrigeration equipment is relieved of the obligation to retrofit or replace the equipment in accordance with paragraph (i)(6) of this section if within 180 days of the initial failed follow-up verification test, the owner or operator establishes that the appliance's annual leak rate does not exceed the applicable allowable annual leak rate, in accordance with paragraph (i)(4) of this section. If the appliance's owner or operator establishes that the appliance's annual leak rate does not exceed the applicable allowable annual leak rate, the owner or operator is required to notify EPA within 30 days of that determination in accordance with § 82.166(n) and the owner or operator would no longer be subject to the obligation to retrofit or replace the equipment that arose as a consequence of the initial failure to verify that the leak repair efforts were successful.

(4) In the case of a failed follow-up verification test subject to paragraph (i)(3)(v) of this section, the determination of whether industrial process refrigeration equipment has an annual leak rate that exceeds the applicable allowable annual leak rate will be made in accordance with parameters identified by the owner or operator in its notice to EPA regarding the failure of the initial follow-up verification test, if those parameters are acceptable to EPA; otherwise by parameters selected by EPA. The determination must be based on the full charge for the affected industrial process refrigeration equipment. The leak rate determination parameters in the owner's or operator's notice will be considered acceptable unless EPA notifies the owners or operators within 30 days of receipt of the notice. Where EPA does not accept the parameters identified by the owner or operator in its notice, EPA will not provide additional time beyond the additional time permitted in paragraph (i)(3)(v) of this section unless specifically stated in the parameters selected by EPA.

(5) Owners or operators of appliances normally containing more than 50 pounds of refrigerant and not covered by paragraph (i)(1) or (i)(2) of this section must have leaks repaired in

accordance with paragraph (i)(9) of this section if the appliance is leaking at a rate such that the loss of refrigerant will exceed 15 percent of the total charge during a 12-month period, except as described in paragraphs (i)(6), (i)(8) and (i)(10) of this section and paragraphs (i)(5)(i), (i)(5)(ii) and (i)(5)(iii) of this section. Repairs must bring the annual leak rate to below 15 percent.

(i) If the owners or operators of federally-owned comfort-cooling appliances determine that the leaks cannot be repaired in accordance with paragraph (i)(9) of this section and that an extension in accordance with the requirements discussed in paragraph (i)(5) of this section apply, they must document all repair efforts, and notify EPA of their inability to comply within the 30-day repair requirement, and the reason for the inability must be submitted to EPA in accordance with § 82.166(n). Such notification must be made within 30 days of discovering that leak repair efforts cannot be completed within 30 days.

(ii) Owners or operators of federally-owned comfort-cooling appliances may have more than 30 days to repair leaks where the refrigeration appliance is located in an area subject to radiological contamination or where the shutting down of the appliance will directly lead to radiological contamination. Only the additional time needed to conduct and complete work in a safe environment will be permitted.

(iii) Owners or operators of federally-owned comfort-cooling appliances requesting, or who are granted, time extensions under this paragraph must comply with paragraphs (i)(3) and (i)(4) of this section.

(6) Owners or operators are not required to repair the leaks defined in paragraphs (i)(1), (i)(2) and (i)(5) of this section if, within 30 days of discovering the exceedance of the applicable leak rate or within 30 days of a failed follow-up verification test in accordance with paragraph (i)(3)(ii) of this section, they develop a one-year retrofit or retirement plan for the leaking appliance. This plan (or a legible copy) must be kept at the site of the appliance. The original must be made available for EPA inspection upon request. The plan must be dated and all work under the plan must be completed within one year of the plan's date, except as described in paragraphs (i)(7) and (i)(8) of this section. Owners are temporarily relieved of this obligation if the appliance has undergone system mothballing as defined in § 82.152.

(i) If the owner or operator has made good faith efforts to repair leaks in accordance with paragraphs (i)(1), (i)(2), or (i)(5) of this section, and has determined to proceed with a plan to retrofit or retire the appliance in accordance with paragraph (i)(6) of this section, the owner or operator must develop a retrofit or retirement plan within 30 days of the determination to retrofit or retire the appliance, to be completed within one year of when the owner or operator discovered that the leak rate exceeded the applicable allowable leak rate, except as provided in paragraphs (i)(7) and (i)(8) of this section.

(ii) In all cases, subject to paragraph (i)(6)(i) of this section, the written plan shall be prepared no later than 30 days after the owner or operator has determined to proceed with retrofitting or retiring the appliance. All reports required under § 82.166(o) shall be due at the time specified in the paragraph imposing the specific reporting requirement, or no later than 30 days after the decision to retrofit or retire the appliance, whichever is later.

(iii) In cases where the owner or operator of industrial process refrigeration equipment has made good faith efforts to retrofit or retire industrial process refrigeration equipment prior to August 8, 1995, and where these efforts are not complete, the owner or operator must develop a retrofit or retirement plan that will complete the retrofit or retirement of the affected appliance by August 8, 1996. This plan (or a legible copy) must be kept at the site of the appliance. The original must be made available for EPA inspection upon request. Where the conditions of paragraphs (i)(7) and (i)(8) of this section apply, and where the length of time necessary to complete the work is beyond August 8, 1996, all records must be submitted to EPA in accordance with § 82.166(o), as well as maintained on-site.

(7) The owners or operators of industrial process refrigeration equipment will be allowed additional time to complete the retrofit or retirement of industrial process refrigeration equipment if the conditions described in paragraphs (i)(7)(i) or (i)(7)(ii) of this section are met. The owners or operators of industrial process refrigeration equipment will be allowed additional time beyond the additional time provided in paragraph (i)(7)(ii) of this section if the conditions described in paragraph (i)(7)(iii) of this section are met.

(i) Additional time, to the extent reasonably necessary will be allowed for retrofitting or retiring industrial process refrigeration equipment due to delays occasioned by the requirements of other applicable federal, state, or local laws or regulations, or due to the unavailability of a suitable replacement refrigerant with a lower ozone depletion potential. If these circumstances apply, the owner or operator of the facility must notify EPA within six months after the 30-day period following the discovery of an exceedance of the 35 percent leak rate. Records necessary to allow EPA to determine that these provisions apply and the length of time necessary to complete the work must be submitted to EPA in accordance with § 82.166(o), as well as maintained on-site. EPA will notify the owner or operator of its determination within 60 days of receipt the submittal.

(ii) An additional one-year period beyond the initial one-year retrofit period is allowed for industrial process refrigeration equipment where the following criteria are met:

(A) The new or the retrofitted industrial process refrigerant equipment is custom-built;

(B) The supplier of the appliance or one or more of its critical components has quoted a delivery time of more than 30 weeks from when the order is placed;

(C) The owner or operator notifies EPA within six months of the expiration of the 30-day period following the discovery of an exceedance of the 35 percent leak rate to identify the owner or operator, describe the appliance involved, explain why more than one year is needed, and demonstrate that the first two criteria are met in accordance with § 82.166(o); and

(D) The owner or operator maintains records that are adequate to allow a determination that the criteria are met.

(iii) The owners or operators of industrial process refrigeration equipment may request additional time to complete retrofitting or retiring industrial process refrigeration equipment beyond the additional one-year period if needed and where the initial additional one year was granted in accordance with paragraph (i)(7)(ii) of this section. The request shall be submitted to EPA before the end of the ninth month of the first additional year and shall include revisions of information required under 82.166(o). Unless EPA objects to this request submitted in accordance with § 82.166(o) within 30 days of receipt, it shall be deemed approved.

(8) Owners or operators of federally-owned commercial or comfort-cooling appliances will be allowed an additional year to complete the retrofit or retirement of the appliances if the conditions described in paragraph (i)(8)(i) of this section are met, and will be allowed one year beyond the

additional year if the conditions in paragraph (i)(8)(ii) of this section are met.

(i) Up to one additional one-year period beyond the initial one-year retrofit period is allowed for such equipment where the following criteria are met:

(A) Due to complications presented by the federal agency appropriations and/or procurement process, a delivery time of more than 30 weeks from the beginning of the official procurement process is quoted, or where the appliance is located in an area subject to radiological contamination and creating a safe working environment will require more than 30 weeks;

(B) The operator notifies EPA within six months of the expiration of the 30-day period following the discovery of an exceedance of the applicable allowable annual leak rate to identify the operator, describe the appliance involved, explain why more than one year is needed, and demonstrate that the first criterion is met in accordance with § 82.166(o); and

(C) The operator maintains records adequate to allow a determination that the criteria are met.

(ii) The owners or operators of federally-owned commercial or comfort-cooling appliances may request additional time to complete retrofitting, replacement or retiring such appliances beyond the additional one-year period if needed and where the initial additional one year was granted in accordance with paragraph (i)(8)(i) of this section. The request shall be submitted to EPA before the end of the ninth month of the first additional year and shall include revisions of information earlier submitted as required under § 82.166(o). Unless EPA objects to this request submitted in accordance with § 82.166(o) within 30 days of receipt, it shall be deemed approved.

(9) Owners or operators must repair leaks pursuant to paragraphs (i)(1), (i)(2) and (i)(5) of this section within 30 days after discovery, or within 30 days after when the leaks should have been discovered if the owners intentionally shielded themselves from information which would have revealed a leak, unless granted additional time pursuant to § 82.156(i).

(10) The amount of time for owners and operators to complete repairs, retrofit plans or retrofits/replacements/retirements under paragraphs (i)(1), (i)(2), (i)(5), (i)(6), (i)(7), (i)(8), and (i)(9) of this section is temporarily suspended at the time an appliance is mothballed as defined in § 82.152. The time for owners and operators to complete repairs, retrofit plans, or retrofits/replacements will resume on the day the appliance is brought back on-line and is no longer considered mothballed. All initial and follow-up verification tests must be performed in accordance with paragraphs (i)(3), (i)(3)(i), and (i)(3)(ii) of this section.

(11) In calculating annual leak rates, purged refrigerant that is destroyed at a verifiable destruction efficiency of 98 percent or greater will not be counted toward the leak rate. Owners or operators destroying purged refrigerants must maintain information as set forth in § 82.166(p)(1) and submit to EPA, within 60 days after the first time such exclusion is used by that facility, information set forth in § 82.166(p)(2).

* * * * *

4. § 82.166 is amended by adding paragraphs (n), (o), (p), and (q) to read as follows:

§ 82.166 Reporting and recordkeeping requirements.

* * * * *

(n) The owners or operators of appliances must maintain on-site and report to EPA at the address listed in § 82.160 the following information, where such reporting and recordkeeping is required and within the timelines specified under § 82.156 (i)(1), (i)(2), (i)(3) and (i)(5). This information must be relevant to the affected appliance and must include: identification of the facility; the leak rate; the method used to determine the leak rate and full charge; the date a leak rate of greater than the allowable annual leak rate was discovered; the location of leaks(s) to the extent determined to date; and any repair work that has been completed thus far and the date that work was completed.

(1) The reasons why more than 30 days are needed to complete the work and an estimate of when repair work will be completed must be submitted with the initial information submitted with the information listed in paragraph (n) of this section. If changes from the original estimate of when work will be completed result in moving the completion date forward from the date submitted to EPA, the reasons for these changes must be documented and submitted to EPA within 30 days of discovering the need for such a change.

(2) If the owners or operators intend to establish that the appliance's annual leak rate does not exceed the applicable allowable annual leak rate in accordance with § 82.156(i)(3)(v), the owner or operator is required to submit a plan to fix other outstanding leaks for which repairs are planned but not yet completed to achieve a rate below the applicable allowable leak rate with the information listed in paragraph (n) of this section. Identification of the facility and date the original information regarding additional time beyond the initial 30 days was filed, and notification of the determination that the leak rate no longer exceeds the allowable annual leak rate must be included within 30 days of making such determination.

(3) The dates and types of all initial and follow-up verification tests performed and the test results for all initial and follow-up verification tests must be maintained and submitted to EPA within 30 days after conducting each test where recordkeeping and reporting is required within the timelines specified under § 82.156 (i)(1), (i)(2), (i)(3) and (i)(5).

(o) The owners or operators of appliances must maintain on-site and report to EPA at the address specified in § 82.160 the following information where such reporting and recordkeeping is required and in the timelines specified in § 82.156 (i)(7) and (i)(8), in accordance with § 82.156 (i)(7) and (i)(8). This information must be relevant to the affected appliance and must include:

(1) The identification of the industrial process facility;

(2) The leak rate;

(3) The method used to determine the leak rate and full charge;

(4) The date a leak rate of 35 percent or greater was discovered;

(5) The location of leaks(s) to the extent determined to date;

(6) Any repair work that has been completed thus far and the date that work was completed;

(7) A plan to complete the retrofit or replacement of the system;

(8) The reasons why more than one year is necessary to retrofit to replace the system;

(9) The date of notification to EPA; and

(10) An estimate of when retrofit or replacement work will be completed.

(i) If the estimated date of completion changes from the original estimate and results in moving the date of completion forward, documentation of the reason for these changes must be submitted within 30 days of occurring.

(ii) If the estimated date of completion changes from the original estimate and results in moving the date of completion forward, the date of notification to EPA regarding this change and the estimate of when the work will be completed must be maintained and submitted.

(p) (1) Owners or operators who wish to exclude purged refrigerants that are destroyed from annual leak rate calculations must maintain records on-site to support the amount of refrigerant

claimed as sent for destruction. Records shall be based on a monitoring strategy that provides reliable data to demonstrate that the amount of refrigerant claimed to have been destroyed is not greater than the amount of refrigerant actually purged and destroyed and that the 98 percent or greater destruction efficiency is met. Records shall include flow rate, quantity or concentration of the refrigerant in the vent stream, and periods of purge flow.

(2) Owners or operators who wish to exclude purged refrigerants that are destroyed from annual leak rate calculations must maintain on-site and make available to EPA upon request the following information after the first time the exclusion is utilized by the facility:

(i) The identification of the facility and a contact person, including the address and telephone number;

(ii) A general description of the refrigerant appliance, focusing on aspects of the appliance relevant to the purging of refrigerant and subsequent destruction;

(iii) A description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept by the owners or operators where the appliance is located;

(iv) The frequency of monitoring and data-recording; and

(v) A description of the control device, and its destruction efficiency. This information must also be included, where applicable, in any reporting requirements required for compliance with the leak repair and retrofit requirements for industrial process refrigeration equipment, as set forth in paragraphs (n) and (o) of this section.

(q) Owners or operators choosing to determine the full charge as defined in § 82.152 of an affected appliance by using an established range or using that methodology in combination with other methods for determining the full charge defined in the following information:

(1) The identification of the owner or operator of the appliance;

(2) The location of the appliance;

(3) The original range for the full charge of the appliance, its midpoint, and how the range was determined;

(4) Any and all revisions of the full charge range and how they were determined; and

(5) The dates such revisions occurred.

* * * * *

[FR Doc. 95–18999 Filed 8–7–95; 8:45 am]

BILLING CODE 6560–50–P