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40 CFR Parts 260 and 261

Hazardous Waste Management System: Identification and Listing of Hazardous Waste: Conditional Exclusions From Hazardous Waste and Solid Waste for Solvent-Contaminated Industrial Wipes; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260 and 261

[RCRA–2003–0004; FRL–7587–7]

RIN 2050–AE51

Hazardous Waste Management System: Identification and Listing of Hazardous Waste: Conditional Exclusions From Hazardous Waste and Solid Waste for Solvent-Contaminated Industrial Wipes

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) today proposes to modify its hazardous waste management regulations under the Resource Conservation and Recovery Act (RCRA) for certain solvent-contaminated materials, such as reusable shop towels, rags, disposable wipes and paper towels. Specifically, EPA is proposing: to conditionally exclude from the definition of hazardous waste disposable industrial wipes that are contaminated with hazardous solvents and are going to disposal; and, to conditionally exclude from the definition of solid waste reusable industrial shop towels and rags that are contaminated with hazardous solvents and are sent for laundering or dry cleaning (hereinafter referred to as disposable industrial wipes and reusable industrial wipes, respectively). This proposal affects contaminated industrial wipes being sent to both landfill and non-landfill (*e.g.,* laundries and combustion) facilities and is applicable to: industrial wipes exhibiting a hazardous characteristic (*i.e.,* ignitability, corrosivity, reactivity, or toxicity) due to use with solvents; or industrial wipes contaminated with F001–F005 spent F-listed solvents or comparable P- and U-listed commercial chemical products that are spilled and cleaned up with industrial wipes.

Today's proposal would resolve, at the Federal level, long-standing issues associated with the management of solvent-contaminated industrial wipes by: facilitating pollution prevention and waste minimization opportunities, including the recycling of the spent solvents extracted from contaminated industrial wipes; fostering improved solvents management by generators and handling facilities; reducing compliance costs; increasing consistency in the regulations governing solvent-contaminated industrial wipes across the United States; clarifying existing federal rules; and creating flexibility for generators to work with industrial laundries, as appropriate, to ensure compliance with local pretreatment standards established by Publicly Owned Treatment Works (POTWs).

Today's proposal also contains the Agency's proposed response to rulemaking petitions filed by the Kimberly-Clark Corporation and the Scott Paper Company.

DATES: Submit comments on or before February 18, 2004. Comments postmarked after this date will be marked ''late'' and may not be considered. Any person may request a public hearing on this proposal by filing a request by January 20, 2004.

ADDRESSES: Comments may be submitted by mail to: RCRA Information Center, Mailcode: 5305T, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC, 20460, Attention Docket ID Number RCRA–2003–0004. Comments may also be submitted electronically, by facsimile, or through hand delivery/courier. Follow the detailed instructions as provided in section 1.B. of the **SUPPLEMENTARY INFORMATION** section.

FOR FURTHER INFORMATION CONTACT: For information, contact the RCRA/Superfund/EPCRA/UST Hotline at (800) 424–9346 (toll free) or TDD (800) 553–7672 (hearing impaired). In the Washington, DC metropolitan area, call (703) 412–3323 or TDD (703) 412–9810. You can also contact Kathy Blanton at (703) 605–0761 or at *blanton.katherine@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. How Can I Get Copies of This Document and Other Related Information?

1. Docket

EPA has established an official public docket for this action under Docket ID No. RCRA–2003–0004. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the OSWER Docket in the EPA Docket Center at 1301 Constitution Avenue, Washington, DC. The EPA Docket Center Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. Copies cost $0.15/page.

2. Electronic Access

You may access this **Federal Register** document electronically through the EPA Internet under the **Federal Register** listings at <*http://www.epa.gov/fedrgstr/*>, and you can make comments on this proposed rule at the Federal e-rulemaking portal, <*http://www.regulations.gov*>.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <*http://www.epa.gov/edocket/*> to submit or view public comments, access the index listing of the contents of the official public docket or to access those documents in the public docket that are available electronically. Once in the system, select ''search,'' then key in the appropriate docket identification number.

Certain types of information will not be placed in the EPA Docket. Information claimed as CBI and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. To the extent feasible, publicly available docket materials will be made available in EPA's electronic public docket. When a document is selected from the index list in EPA Dockets, the system will identify whether the document is available for viewing in EPA's electronic public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in Unit I.A.

For public commenters, it is important to note that EPA's policy is that public comments, whether submitted electronically or in paper, will be made available for public viewing in EPA's electronic public docket as EPA receives them and without change, unless the comment contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. When EPA identifies a comment containing copyrighted material, EPA will provide a reference to that material in the version of the comment that is placed in EPA's electronic public docket. The entire printed comment, including the

copyrighted material, will be available in the public docket.

Public comments submitted on computer disks that are mailed or delivered to the docket will be transferred to EPA's electronic public docket. Public comments that are mailed or delivered to the Docket will be scanned and placed in EPA's electronic public docket. Where practical, physical objects will be photographed, and the photograph will be placed in EPA's electronic public docket along with a brief description written by the docket staff.

B. How and to Whom Do I Submit Comments?

You may submit comments electronically, by mail, by facsimile, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your comment. Please ensure that your comments are submitted within the specified comment period. Comments received after the close of the comment period will be marked ''late.'' EPA is not required to consider these late comments.

1. Electronically

If you submit an electronic comment as prescribed below, EPA recommends that you include your name, mailing address, and an e-mail address or other contact information in the body of your comment. Also include this contact information on the outside of any disk or CD ROM you submit, and in any cover letter accompanying the disk or CD ROM. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your comment due to technical difficulties or needs further information on the substance of your comment. EPA's policy is that EPA will not edit your comment, and any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

a. EPA Dockets

Your use of EPA's electronic public docket to submit comments to EPA electronically is EPA's preferred method for receiving comments. Go directly to EPA Dockets at <*http://www.epa.gov/edocket,*> and follow the online instructions for submitting comments. To access EPA's electronic public docket from the EPA Internet Home Page, select ''Information Sources,'' ''Dockets,'' and ''EPA Dockets.'' Once in the system, select ''search,'' and then key in Docket ID Number RCRA–2003–0004. The system is an ''anonymous access'' system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it in the body of your comment.

b. E-mail

Comments may be sent by electronic mail (e-mail) to ''*rcra-docket@epamail.epa.gov,*'' Attention Docket ID Number RCRA–2003–0004. In contrast to EPA's electronic public docket, EPA's e-mail system is not an ''anonymous access'' system. If you send an e-mail comment directly to the Docket without going through EPA's electronic public docket, EPA's e-mail system automatically captures your e-mail address. E-mail addresses that are automatically captured by EPA's e-mail system are included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket.

c. Disk or CD ROM

You may submit comments on a disk or CD ROM that you mail to the mailing address identified in this section. These electronic submissions will be accepted in WordPerfect or ASCII file format. Avoid the use of special characters and any form of encryption.

2. By Mail

Send your comments to: OSWER Docket, EPA Docket Center, Mailcode: 5305T, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC, 20460, Attention Docket ID Number RCRA–2003–0004.

3. By Hand Delivery or Courier

Deliver your comments to: Environmental Protection Agency, EPA Docket Center, Room B102, 1301 Constitution Avenue, NW., Washington, DC, Attention Docket ID Number RCRA–2003–0004. Such deliveries are only accepted during the Docket's normal hours of operation as identified above.

4. By Facsimile

Fax your comments to: (202) 566–0270, Attention Docket ID Number RCRA–2003–0004.

C. How Should I Submit Confidential Business Information (CBI) to the Agency?

Do not submit information that you consider to be CBI electronically through EPA's electronic public docket or by e-mail. Send or deliver information identified as CBI only to the following address: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, Attention Docket ID No. RCRA–2003–0004. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD ROM, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket and EPA's electronic public docket. If you submit the copy that does not contain CBI on disk or CD ROM, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and EPA's electronic public docket without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

D. What Should I Consider as I Prepare My Comments for EPA?

You may find the following suggestions helpful for preparing your comments:

1. Explain your views as clearly as possible.

2. Describe any assumptions that you used.

3. Provide any technical information and/or data you used that support your views.

4. If you estimate potential burden or costs, explain how you arrived at your estimate.

5. Provide specific examples to illustrate your concerns.

6. Offer alternatives.

7. Make sure to submit your comments by the comment period deadline identified.

8. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your response. It would also be helpful if you provided the name, date, and **Federal Register** citation related to your comments.

ACRONYMS

Acronym	Definition
APA	Administrative Procedures Act.
ASTSWMO.	Association of State and Territorial Solid Waste Management Officials.
CAA	Clean Air Act.
CAS No	Chemical Abstracts Service Registry Number.
CBI	Confidential Business Information.
CESQG	Conditionally Exempt Small Quantity Generator.
CFR	Code of Federal Regulations.
CSI	Common Sense Initiative.
CWA	Clean Water Act.
DOT	Department of Transportation.
ELG	Effluent Limitations Guideline.
EPA	Environmental Protection Agency.
FR	Federal Register.
HSWA	Hazardous and Solid Waste Amendments.
ICR	Information Collection Request.
IRIS	Integrated Risk Information System.
LDR	Land Disposal Restrictions.
MIBK	Methyl Isobutyl Ketone.
MWC	Municipal Waste Combustor.
NESHAP	National Emission Standards for Hazardous Air Pollutants.
NSPS	New Source Performance Standards.
NTTAA	National Technology Transfer and Advancement Act.
OMB	Office of Management and Budget.
OPPE	Office of Policy, Planning and Evaluation.
OSHA	Occupational Safety and Health Administration.
PBMS	Performance Based Measurement System.
POTW	Publicly Owned Treatment Works.
SBREFA	Small Business Regulatory Enforcement Fairness Act.
RCRA	Resource Conservation and Recovery Act.
RFA	Regulatory Flexibility Act.
RfC	Reference Air Concentrations.
RfD	Reference Doses for Exposure through Ingestion.
RIC	RCRA Information Center.
TC	Toxicity Characteristic.
TCLP	Toxicity Characteristic Leaching Procedure.
TBD	Technical Background Document.
TDD	Telecommunications Device for the Deaf.
UMRA	Unfunded Mandates Reform Act.
VOCs	Volatile Organic Compounds.

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II. Legal Authority

EPA proposes these regulations under the authority of Sections 2002, 3001–3010, and 7004 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6912 , 6921–6930, and 6974.

III. Summary of Proposed Changes

EPA today proposes a conditional exclusion from the regulatory definition of hazardous waste for solvent-contaminated industrial wipes going to disposal and combustion, including use as a fuel, and a conditional exclusion from the regulatory definition of solid waste for solvent-contaminated reusable wipes, shop towels, and rags that are sent for laundering or dry cleaning (hereinafter referred to as disposable industrial wipes and reusable industrial wipes, respectively). As long as the specified conditions are met, the Agency proposes that the exclusions from both the definition of hazardous waste and the definition of solid waste be applicable to (1) industrial wipes exhibiting a hazardous characteristic (*i.e.*, ignitability, corrosivity, reactivity, or toxicity)[1] due to use with solvents or (2) industrial wipes contaminated with F001–F005 spent F-listed solvents or comparable P- and U-listed commercial chemical products that are spilled and cleaned up with industrial wipes. This proposal would not affect the regulatory status, under federal regulation, of Conditionally Exempt Small Quantity Generators (CESQGs)—those that generate no more than 100 kilograms of hazardous waste or no more than one kilogram of acutely hazardous waste in a month and who accumulate no more than 1000 kilograms of hazardous waste or no more than one kilogram of acutely hazardous waste at one time.

It has long been EPA's policy to encourage the appropriate state or EPA regional office to characterize the regulatory status of laundered and reused wipes based on site-specific factors. (*See* Appendix B, which contains a policy memo from Mike Shapiro, Director, Office of Solid Waste, to EPA Waste Management Division Directors, February 14, 1994.) Most authorized states already exclude reusable wipes from the definition of solid or hazardous waste as long as certain basic conditions are met, such as the removal of free liquids by the user. It is not EPA's intent to modify or in any way limit the existing state or EPA regional exclusions or policies through this proposed Federal rulemaking. Because this action is a proposed rulemaking, provisions of the proposal, as well as EPA's assumptions and rationale leading to them, are subject to public notice and comment. Therefore, until a final rule governing these materials is issued, the regulatory status and classification of these materials, including all regulatory exclusions under the current RCRA programs implemented by a state or EPA region implementing the RCRA program, remain unchanged. *See* section IX.B. of this preamble for the effect this rule would have on the RCRA program in authorized states when finalized.

EPA's recent examination of solvent-contaminated industrial wipes is a result of issues and questions raised by stakeholders concerning the Agency's current policy on these materials. In developing our response to those concerns, EPA also conducted a risk screening analysis and an investigation of potential damages from mismanagement of solvent-contaminated industrial wipes to make sure risks from wipes management would be addressed and taken into consideration.

We emphasize that EPA's concern surrounding the use of both types of industrial wipes—disposables and reusables—is based on the hazardous solvent contained in the used wipes, not the industrial wipes themselves. This proposed rule would not apply to industrial wipes contaminated with aqueous-based solvents or solvents that, when spent, are not hazardous wastes. We strongly recommend that generators examine the feasibility of substituting non-hazardous solvents for hazardous solvents. By using non-hazardous solvents, individual facilities may eliminate or reduce compliance costs associated with RCRA and the Clean Air Act (CAA), as well as U.S. Occupational Safety and Health Administration (OSHA), and U.S. Department of Transportation (DOT) regulations. For generators using reusable industrial wipes that are managed by an industrial laundry or dry cleaner, indirect costs associated with Clean Water Act (CWA) regulations may also be reduced. We also encourage generators to examine the possibilities of resource conservation through removal and reclamation of their solvents, if possible, and believe that the changes proposed today will encourage additional reclamation of hazardous solvents.

The conditions that would be required for the exclusion from the definition of hazardous waste and the exclusion from the definition of solid waste are outlined below. For a more detailed discussion of generator, handler and processing facility conditions, *see* Section V.

A. Generator Conditions

1. Generator Conditions: Exclusion From the Definition of Hazardous Waste

For disposable solvent-contaminated industrial wipes that will be managed at a non-landfill disposal facility to meet the exclusion from the definition of hazardous waste, generators would be required to (1) accumulate and store solvent-contaminated wipes on site in non-leaking covered containers; (2) ensure that the solvent-contaminated wipes contain no free liquids, except as noted below, when transported off site to a handling facility; and (3) transport the solvent-contaminated industrial wipes off site in containers designed, constructed, and managed to minimize solvent loss to the environment and labeled ''Excluded Solvent-Contaminated Wipes.''

Today's proposal would also require that disposable solvent-contaminated wipes managed at municipal landfills or other non-hazardous waste landfills that meet the standards under 40 CFR part 257 subpart B (the disposal standards applicable to the receipt of CESQG wastes at non-municipal, non-hazardous waste disposal units)[2] (i) must be ''dry'' (*i.e.*, contain less than five grams of solvent), and (ii) must not contain any of the 11 listed spent solvents which the Agency has tentatively determined may pose adverse risks to human health and the environment when disposed of in a landfill, even if the wipe is ''dry.'' *See* Table 1 below for the listed solvents that, when contaminating industrial wipes, would make landfilled wipes ineligible for an exclusion from the definition of hazardous waste. In other words, wipes contaminated with Table 1 solvents would not be allowed in municipal landfills or other non-hazardous waste landfills under the provisions of this proposal.

[1] Solvent-contaminated industrial wipes that are co-contaminated with another material that makes them characteristically hazardous for corrosivity, reactivity, or toxicity would not be eligible for the exclusion from the definition of hazardous waste or the exclusion from the definition of solid waste. If the industrial wipes are co-contaminated with a material that makes them characteristically hazardous for ignitability, they would remain eligible. For more discussion of this provision, *see* Section V.B.11.

[2] For the purposes of today's preamble, we will use the term *other non-hazardous landfill* to denote part 257 subpart B compliant non-hazardous waste landfills. If a non-hazardous landfill that is not a municipal landfill accepts this waste, it must meet the minimum strandards of 40 CFR part 257 subpart B.

TABLE 1.—LISTED SOLVENTS INELIGIBLE FOR MUNICIPAL OR OTHER NON-HAZARDOUS LANDFILL DISPOSAL

2-Nitropropane	Nitrobenzene.
Methyl Ethyl Ketone (MEK)	Methylene Chloride.
Pyridine	Benzene.
Cresols (o,m,p)	Carbon Tetrachloride.
Chlorobenzene	Tetrachloroethylene.
Trichloroethylene	

In addition, EPA is proposing that transporters be allowed to carry wipes with free liquids to other facilities within the same company under the hazardous waste exclusion when they are transporting them to a solvent recovery facility that will remove enough solvent to meet either the ''no free liquid'' or the ''dry'' condition, provided the other conditions are met.

III.A.2. Generator Conditions: Exclusion From the Definition of Solid Waste

For reusable solvent-contaminated industrial wipes going to be reclaimed and reused to meet the exclusion from the definition of solid waste, generators would be required to (1) accumulate and store solvent-contaminated wipes on site in non-leaking covered containers; (2) ensure that the solvent-contaminated wipes contain no free liquids when laundered on site or transported off site to a handling facility, except as noted below; and (3) transport the solvent-contaminated industrial wipes off site in containers designed, constructed, and managed to minimize losses to the environment (*e.g.*, plastic bags, 55-gallon drums, or other containers). The exclusion from the definition of solid waste would be applicable only to wipes that are being reclaimed for reuse through a cleaning process.

EPA is also proposing that wipes can be transported with free liquids to facilities within the same company under the exclusion when they are transporting them to a solvent recovery facility that will remove enough solvent to meet either the ''no free liquid'' or the ''dry'' condition, provided the other conditions are met.

B. Handling Facility Conditions

1. Handling Facility Conditions: Exclusion From the Definition of Hazardous Waste

For disposable industrial wipes to continue to meet the exclusion from the definition of hazardous waste, combustors and facilities that handle solvent-contaminated industrial wipes to remove solvent from them prior to disposal would be required to manage them (a) in containers designed, constructed and managed to minimize losses to the environment that meet the transportation requirements in today's proposal or (b) in non-leaking covered containers that would meet the generator accumulation conditions in today's proposal. Unless the handling facility and the generator are in the same company, if a handler discovers any free liquid accompanying the used solvent-contaminated industrial wipes, it would be required either to remove the free liquid and manage it properly as a hazardous waste, if applicable, or to return the container with the wipes and free liquid to the generator.

2. Handling Facility Conditions: Exclusion From the Definition of Solid Waste

For reusable wipes to continue to meet the exclusion from the definition of solid waste, industrial laundries and dry cleaners, as well as facilities that handle solvent-contaminated industrial wipes to remove solvent from them prior to cleaning, would be required to manage them in containers designed, constructed and managed to minimize losses to the environment (*i.e.*, today's proposed transportation condition), or in non-leaking covered containers that would meet the generator accumulation conditions in this proposal. Unless the handling facility and the generator are in the same company, if a handler discovers any free liquid accompanying the used solvent-contaminated industrial wipes, it would be required either to remove the free liquid and manage it properly or to return the container with the wipes and free liquid to the generator.

C. Who Would Be Affected by the Proposed Exclusions?

The following table summarizes the types and numbers of entities nationwide which we estimate could be eligible for the proposed exclusions. The exclusions would only affect those establishments which use industrial wipes in conjunction with operations involving solvents that are included in the scope of this proposal (*i.e.*, F001–F005 spent F-listed solvents at 40 CFR 261.31; comparable P- and U-listed commercial chemical products at 40 CFR 261.33 that are spilled and cleaned up with industrial wipes; and solvents exhibiting a hazardous characteristic (*i.e.*, ignitability, corrosivity, reactivity, or toxicity at 40 CFR 261.21–261.24)).

TABLE 2.—ENTITIES POTENTIALLY AFFECTED BY THE PROPOSED RULE

Item	Economic sub-sector (entity type)	NAICS Code	SIC Code	Number of affected establishments [1]
1	Printing manufacturing (mfg)	323	275 to 279	18,700 to 42,000.
2	Chemical & allied products mfg	325	28	1,100 to 2,900.
3	Plastics & rubber products mfg	326	30	1,400 to 3,700.
4	Fabricated metal products mfg	332	34	4,900 to 13,000.
5	Industrial machinery & eqpt mft	333	352 to 356	2,400 to 6,300.
6	Electronics & computers mfg	3344	367	550 to 1,500.
7	Transportation eqpt mfg	336	37	1,100 to 3,000.
8	Furniture & fixture mfg	337	25	1,600 to 4,300.
9	Auto dealers (retail trade)	4411	5511 & 5521	4,000 to 10,700.
10	Publishing (printed matter)	5111	271 to 274	10,600 to 23,600.
11	Business services	561439	7334	2,900 to 6,400.
12	Auto repair & maintenance	8111	753	13,500 to 35,900.
13	Military bases	92812	9721	50 to 130.
14	Solid waste services	562	4953	4,800 to 9,650.
15	Industrial launderers	812332	7218	590 to 1,175.
Total				68,000 to 164,000

[1] Establishment counts above do not necessarily represent all establishments in each industry; counts represent EPA's estimate of establishments which use solvent industrial wipes and to which the conditional exclusions may apply.

IV. Background

EPA is addressing the issue of solvent-contaminated industrial wipes in response to stakeholder concerns that these materials warrant special consideration to correct over-regulation, as well as to ensure more consistency in the regulation of these materials. In addition, EPA sees this proposed rule as encouraging resource conservation and responsible solvent management, as well as removing potential regulatory restrictions to solvent recovery.

Industrial wipes are used by thousands of commercial and industrial facilities throughout the United States to ensure that products and services meet design, performance, or operating standards. Generators often use these wipes in conjunction with ignitable solvents (any material with a flash point less than 140°F) or listed solvents that, when spent, are hazardous wastes (approximately 30 specific halogenated and non-halogenated solvents are defined by EPA as meeting the criteria for designation as hazardous).

For the purposes of this proposal, we are considering two broad categories of industrial wipes: reusables and disposables. Specific definitions for the different kinds of industrial wipes can be found in Appendix A to this proposal but we have chosen, for simplicity's sake, to call all disposable wipes and reusable shop towels and rags for which this proposed rule would be applicable ''industrial wipes,'' and to distinguish only between those which are going to be laundered, or otherwise cleaned for reuse (''reusables''), and those which will be discarded either by combustion, including use as a fuel, or landfilling (''disposables'').

A generator's decision to use disposable or reusable industrial wipes depends primarily on their processes, but sometimes it may be based on their waste management strategy. The process employed is important, for example, because the amount of lint a wipe generates can play a very significant role. Some processes, such as those in electronics and printing applications, cannot tolerate any lint, whereas other processes, such as cleaning auto parts, can tolerate large amounts of lint. Absorbent capacity is also another factor in some tasks, as is durability of a wipe in both physical strength and in its ability to withstand strong solvents.

As with other commodities, a wipe's life cycle depends on its ultimate disposition. The following description illustrates generally how industrial wipes are used, but is not exhaustive of all possibilities. Some disposable wipes arrive at the generator dry, whereas others are packaged already saturated with solvent and are, therefore, ready for use immediately. Either way, the generator uses the wipe in its process and then often discards it. These wipes are typically disposed of either in a landfill or by combustion. Alternately, some wipes generally thought of as ''disposable'' (perhaps if they are made with paper fiber) are used more than once by being put through a solvent removal system. Because this proposal makes a distinction between wipes destined for disposal and destined for reuse, in this case the industrial wipe would be considered ''reusable'' if it were to be reused, even if it was manufactured for typical one-time use.

Reusable wipes are part of a more systematic handling system. In general, a laundry owns reusable industrial wipes, rents them to generators, and collects them for laundering on a regular basis. Generators receive deliveries of wipes from the laundries, use them, and accumulate used wipes. Drivers, most often employed by the laundries, pick up the contaminated industrial wipes, replacing them with clean wipes at the same time, and then return the soiled wipes to the laundry. Once at the laundry, the wipes are then counted to assure the laundry is getting back from the generator the same number sent out and, finally, are cleaned before entering the cycle again.

Solvent removal and recovery can happen at various points in the life cycle of both disposables and reusables. Generators may choose to recover solvent either to reduce solvent use and save money, or to reduce environmental impact; generators may generally recover solvents without additional RCRA requirements under the provisions of 40 CFR 261.6(c). In addition, laundries may recover solvents from the wipes that arrive at their facilities to minimize the amount of solvent in their effluent to comply with pretreatment requirements imposed by a Publicly Owned Treatment Works (POTW) or to recover solvent, which can be sold, refined, and reused when it is recovered. One of EPA's goals in this rulemaking is to encourage solvent recovery and recycling in order to minimize the amount of potentially hazardous solvents that are released to the environment and to conserve resources.

A. What Is the Intent of Today's Regulatory Proposal?

A brief history of the current regulatory scheme applicable to solvent-contaminated wipes lends perspective on how EPA has developed this proposal and explains how EPA has focused its efforts on responding to stakeholder concerns.

Since EPA began to look at solvent-contaminated industrial wipes, we have heard from many interested groups that they are frustrated with the regulatory scheme now applicable to them. After the initial promulgation of the federal hazardous waste regulations, EPA began receiving inquiries from makers and users of disposable wipes, who stated that the regulations were too stringent for industrial wipes based on the risks they pose. Specifically, in 1985, EPA received a petition, pursuant to 40 CFR.260.20, from the Kimberly-Clark Corporation, a manufacturer of disposable industrial wipes, that asked EPA to exclude disposable wipes from the definition of hazardous waste. The petition stated that these materials are over-regulated because the amount of solvent in the wipes is insignificant and because the disposable wipes do not pose a threat to human health and the environment even when disposed of in a municipal solid waste landfill. In 1987, EPA received a second rulemaking petition from the Scott Paper Company that reiterated many of Kimberly-Clark's points and added that the hazardous waste regulations are not necessary because contaminated disposable wipes are handled responsibly, make up just 1% of a generator's waste stream, and could be beneficial to the operation of incinerators because of their heat value.

In addition to these petitions from the makers of disposable wipes, in 1987, EPA received a rulemaking petition pursuant to 40 CFR 260.20 from the industrial laundries requesting that the solvent-contaminated wipes they wash before returning them to their customers for reuse be excluded from the definition of solid waste. In 2000, the laundries withdrew their petition. Nevertheless, the various rulemaking petitions helped set in motion the development of this proposed rule that addresses the regulatory requirements for both disposable and reusable industrial wipes.

A rule addressing both types of wipes is also important because generators of solvent-contaminated wipes have asked EPA over the years to clarify our position on both disposable and reusable wipes. In the early 1990s, EPA developed a policy that deferred determinations and interpretations regarding regulation of solvent-contaminated industrial wipes to states authorized to implement the federal hazardous waste program or to the EPA region in the cases where a state is not authorized (see 2/14/94 Memo from Michael Shapiro to Waste Management

Division Directors Regions I–X in Appendix B). We did this because we felt, at that time, that these questions were best addressed by the regulatory officials responsible for implementing the regulations.

This policy led to the application of different regulatory schemes for both types of industrial wipes in EPA regions and states. Although the states differ in the details of their policies, in general, they regulate disposable industrial wipes as a hazardous waste when they are contaminated with a solvent that is listed or exhibits a hazardous waste characteristic. On the other hand, many, but not all, states provide regulatory relief for reusable contaminated wipes sent to an industrial laundry or other facility for cleaning and reuse. In about half the cases, this regulatory relief is in the form of an exclusion from the definition of hazardous waste, whereas other states provide an exclusion from the definition of solid waste. The substantive difference between these two approaches is that materials excluded from the definition of solid waste are not considered a waste at all, and are not subject to Federal RCRA regulation, whereas materials excluded from the definition of hazardous waste are considered to be wastes that, when certain conditions are met, do not need to be managed as hazardous wastes.

For reusable industrial wipes, the conditions for the various exclusions vary from state to state, but most require that the containers of wipes not contain free liquids, and require that the laundry discharge to a Publicly Owned Treatment Works (POTW) or be permitted under the Clean Water Act. Some states have established other requirements such as requiring generators to manage contaminated wipes according to the hazardous waste accumulation standards prior to laundering, and requiring generators to file a one-time notice under the land disposal restriction (LDR) program (*see* 40 CFR part 268) when wipes are sent to be laundered. More detail on the specifics of the states' policies can be found in Chapter 3 of the Technical Background Document to this proposal.

The EPA policy laid out in the Shapiro memo, deferring interpretation to the states or EPA regions, has led to some confusion. The state regulations and policies established on the basis of the Shapiro memo, as described above, differ from state to state. This rule, when finalized, would clarify that EPA believes that full RCRA hazardous waste regulation of these materials is not necessary to protect human health and the environment and, therefore, that management of solvent-contaminated wipes in the manner described in this proposal is appropriate.

In late 1994, EPA's policy regarding solvent-contaminated industrial wipes came under further review as a part of the Common Sense Initiative (CSI) for the printing industry. The CSI sought the insight and input of multiple stakeholders on how to make environmental regulation more easily implementable and/or less costly while still maintaining protection of human health and the environment. The one significant problem posed by RCRA regulations identified by the representatives from the printing industry was the ambiguity of the rules and regulations applicable to disposable and reusable solvent-contaminated industrial wipes. Specifically, they requested that EPA do three things: (1) Clarify the definition of ''treatment'' as it pertains to printers wringing solvent from their wipes; (2) examine the potential for over-regulation of disposable industrial wipes; and (3) increase regulatory consistency among the states.

This proposal, therefore, results from discussions during the printing industry CSI, as well as the concerns we have heard from other stakeholders on the Agency's (and states'') current policies. We are addressing these concerns, while at the same time encouraging recycling and solvent recovery and ensuring protection of human health and the environment. In summary, the stakeholders' general positions are that generators of contaminated industrial wipes seek clarification of the rules and a more consistent regulatory scheme throughout the states; manufacturers of disposable industrial wipes feel their product is over-regulated by RCRA when levels of risk are taken into consideration leading to inequitable treatment vis-à-vis reusable wipes; and industrial laundries which clean solvent-contaminated wipes believe they are managing a commodity, not solid wastes, and should be considered accordingly.

Additional stakeholder groups have also been involved in the development of this proposal. The first is made up of the state and local governments that have been developing and implementing policies for these materials for the past ten years. They have come to EPA to ask advice on what they should do when conditions established at the state level for an exclusion are not met. The second is worker unions which have also recently expressed interest in RCRA requirements for management of solvent-contaminated industrial wipes because of worker safety concerns.

B. Jurisdiction Over Solvent-Contaminated Industrial Wipes

1. Exclusion From the Definition of Hazardous Waste

The concept of regulating a waste if it fails to meet certain standards forms the basis of many RCRA regulations. To provide added flexibility for implementation, EPA has previously promulgated conditional relief from subtitle C regulation for low-level mixed waste,[3] for certain refining wastes,[4] and for non-chemical military munitions.[5] Today's proposed rule would limit regulation under subtitle C for solvent-contaminated industrial wipes that are disposed or combusted (circumstances when the industrial wipes are used as a fuel are included) when they meet the conditions described in this notice.

The DC Circuit Court of Appeals has expressly upheld EPA's authority under RCRA to establish a conditional exemption from subtitle C regulation (*i.e.*, hazardous waste regulation) for wastes that, absent the exemption, would be hazardous (*See Military Toxics Project* v. *EPA* 146 F.3d 948, D.C. Cir. 1998). For a more detailed discussion of EPA's authority to establish a conditional exemption from subtitle C regulation, *see* the discussion at 62 FR 6636–6637 for the Military Munitions Rule preamble.

2. Exclusion From the Definition of Solid Waste

Makers and users of reusable industrial wipes that are sent to laundries or dry cleaners to be cleaned prior to reuse have asked EPA to maintain our current policy of deferring to the states. Under current EPA policy, as established in 1994, EPA defers interpretations and decisions about how to regulate solvent-contaminated wipes to either an EPA region or authorized state (*see* 2/14/94 memo from Michael Shapiro to Waste Management Division Directors Regions I-X).

EPA is today proposing to exercise its discretion to exclude from the subtitle C definition of solid waste reusable industrial wipes exhibiting a hazardous waste characteristic due to use with

[3] *See* 66 FR 27266, May 16, 2001, Hazardous Waste Identification Rule (HWIR): Revisions to the Mixture and Derived-From Rules: Final Rule.

[4] *See* 63 FR 42109, August 6, 1998, Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Petroleum Refining Process Wastes; Land Disposal Restrictions for Newly Identified Wastes; and CERCLA Hazardous Substance Designation and Reportable Quantities.

[5] *See* 62 FR 6621, February 12, 1997, Military Munitions Rule; Hazardous Waste Identification and Management; Explosives Emergencies: Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways and Contiguous Properties: Final Rule.

solvents or containing listed solvents when the industrial wipes are laundered or cleaned for reuse under the conditions set out below. Liquids removed from such wipes are subject to hazardous waste regulation if they contain listed solvents or if they exhibit hazardous waste characteristics.

The proposed conditional exclusion from the definition of solid waste will not apply to wipes that are taken out of service to be disposed of. When the wipes are disposed of, they cease being ''reusable'' industrial wipes and become ''disposable'' industrial wipes and must be handled accordingly. The proposed exclusion also does not apply to reusable wipes containing solvents or other materials that are not hazardous wastes. These wipes are not subject to subtitle C regulation.

EPA also proposed a rule that would eliminate regulation of a range of materials which are reused in a continuous process within the same generating industry (68 FR 61558, October 28, 2003). The proposed rule would establish, if finalized, that such materials are not solid wastes under the rulings in *American Mining Congress* v. *EPA*, 824 F 2d 1177 (1987) (''AMC I'') and *Association of Battery Recyclers* v. *EPA*, 208 F. 3d 1047 (2000), (''ABR''). While today's proposal is more narrowly targeted in terms of waste streams, and involves cross-industry transfers, EPA will take appropriate action to ensure that the provisions in this rule are consistent with those of that broader rule, when finalized.

a. Basis for Proposed Exclusion From the Definition of Solid Waste

EPA's basis for the exclusion from the definition of solid waste proposed today is that industrial wipes being cleaned and returned into service are more commodity-like than waste-like and, therefore, that they can be conditionally excluded from the regulatory definition of solid waste. In 40 CFR 260.31(c), EPA states that a material's commodity-like properties can be a basis for a variance from being a solid waste, among other things, because of how they resemble a product rather than a waste and how they are managed. The finding that solvent-contaminated reusable industrial wipes are commodity-like is based on three factors and, importantly, on the fact that in this case all three factors apply to industrial wipes. EPA may not reach a similar conclusion for a material that meets just one or two of these factors.

The first of the ''commodity-like'' factors is that the industrial wipes are often partially reclaimed, that is, spun in a centrifuge, wrung out, or allowed to drain so that some of the unwanted solvent has been removed before shipment, helping to restore the wipes to a usable condition. We are proposing a ''no free liquid'' condition for transportation off site to ensure that wipes that are going to reclamation have low levels of solvent consistent with this factor.

The second of the factors is that industrial wipes are handled throughout the laundering or reuse process as valuable commodities because the laundry benefits from their use and reuse. When wipes return to a laundry from a user to be laundered, they are counted before the washing process. This process keeps users financially accountable for the number of wipes they have in their possession and demonstrates that the wipes are not waste-like, as they have value to the laundries and to the users. Consequently, it is more likely that the used industrial wipes will be handled carefully, in appropriate containers, and will be treated as commodities, rather than as wastes, by both users and laundries.

The final consideration is that the solvent-contaminated industrial wipes are owned by the same entity throughout the process. Laundries own the wipes and lease them to the users and, therefore, have an incentive to ensure that the wipes are reused, not discarded. This factor encourages much of the same behavior as the second factor does, leading to responsible management of the materials.

C. Solvent Removed From Industrial Wipes

When industrial wipes are returned to laundries, the solvents are removed through laundering so that the wipes can be reused. In some cases, the solvents are collected and recycled for further use, but, in other cases, the solvent is discarded as a hazardous waste or discharged to a Publicly Owned Treatment Works (POTW). Some stakeholders have argued that industrial wipes should not be considered eligible for an exclusion from the definition of solid waste for being commodity-like, because the solvent is the hazardous constituent, not the industrial wipe, and the solvent is often discarded rather than reused. However, spent material reclamation scenarios frequently involve the removal of unwanted contaminants from the material being reclaimed. In this case, as stated above, EPA perceives the reusable solvent-contaminated industrial wipes to be a commodity-like material. Even though it contains solvent, the material is predominantly a product that needs servicing (*i.e.*, solvent removal) before it can be used. Therefore, no discard occurs until after the contamination is removed from the wipe.

In addition, EPA has previously concluded that contaminated material can be excluded from the definition of solid waste even though contamination ends up in the wastestreams of the reclamation process. *See*, for example, the proposed exclusion for glass from cathode ray tubes (67 FR 40509) and the finalized conditional exclusion for waste-derived zinc fertilizers (67 FR 48393). Nevertheless, the Agency solicits comment on this issue, and specifically on whether reusable industrial wipes should be conditionally excluded from the definition of hazardous waste, as opposed to being conditionally excluded from the definition of solid waste.

V. Detailed Discussion of Proposed Rule

EPA is today proposing a conditional exclusion from the definition of hazardous waste for solvent-contaminated disposable industrial wipes and a conditional exclusion from the definition of solid waste for solvent-contaminated reusable industrial wipes.

This section discusses in detail the major features of and rationale for the proposal. The Agency also presents options we are considering in developing the proposed rule. We welcome any comments on all aspects of this proposed rule and on other options we considered in developing this proposal. More discussion of the options is also available in the Proposed Rule's Technical Background Document, available in the Rulemaking Docket. Throughout this description of the proposed rulemaking, EPA specifically requests comments on certain options, but comments are welcome on all elements of the proposal.

A. Scope of Solvents Covered by the Proposed Rule

EPA is proposing that both the exclusions in this proposal be applicable both to industrial wipes that exhibit a hazardous characteristic (*see* 40 CFR 261.21–261.14) due to use with solvents and to industrial wipes containing any listed hazardous waste solvents: F001–F005 listed spent solvents (*see* 40 CFR 261.31) and corresponding P- or U-listed commercial chemical products when spilled (*see* 40 CFR 261.33).

We also note that this proposed rule would not be applicable to generators using non-hazardous solvents, since these industrial wipes are not currently

subject to regulation under subtitle C. EPA strongly recommends that generators examine the feasibility of using non-hazardous solvents because of reduced risk from use of these solvents. However, EPA also realizes that in some cases, production incompatibilities may make such a substitution infeasible.

Table 3 summarizes which industrial wipes would be excluded from the definition of hazardous waste and which would be excluded from the definition of solid waste and the conditions each type of wipe would be required to meet.

TABLE 3.—SUMMARY OF CONDITIONS FOR GENERATORS

If you use or generate solvent-contaminated industrial wipes that will be managed at . . .	Then for your solvent-contaminated industrial wipes . . .
A combustion facility or other non-landfill disposal facility without first being sent to a handling facility for solvent removal	To be excluded from the definition of hazardous waste, you would be required to: 1. Accumulate the used wipes on site in a non-leaking, covered container; 2. Ensure that the wipes do not contain free liquids when transported off site; 3. Handle any removed solvents subject to hazardous waste regulations accordingly; 4. Package wipes for shipment off site in containers that are designed, constructed, and managed to minimize loss to the environment; and 5. Mark containers ''Excluded Solvent-Contaminated Wipes.''
A municipal or other non-hazardous[6] landfill without first being sent to a handling facility for solvent removal	To be excluded from the definition of hazardous waste, you would be required to: 1. Accumulate the used wipes on site in a non-leaking, covered container; 2. Ensure that the wipes meet the ''dry'' condition (contain less than 5 grams of solvent per wipe or have been processed by advanced solvent extraction) when transported; 3. Handle any removed solvents subject to hazardous waste regulations accordingly; 4. Package wipes for shipment off site in containers that are designed, constructed, and managed to minimize loss to the environment; 5. Mark the container ''Excluded Solvent-Contaminated Wipes''; and 6. Ensure that the wipe does not contain the listed solvents in Table 1.
—An industrial laundry —An industrial dry cleaner —A handling facility (not intra-company) that cleans wipes for reuse or removes solvent prior to cleaning or being sent for disposal	To be excluded from the definition of solid waste, you would be required to: 1. Accumulate the used wipes on site in a non-leaking, covered container; 2. Ensure that the wipes do not contain free liquids when laundered on site or transported off site; 3. Handle any removed solvents subject to hazardous waste regulations accordingly; and 4. Package wipes for shipment off site in containers that are designed, constructed, and managed to minimize loss to the environment.
Another facility within the company (intra-company) for free liquids removal processing to meet either the ''no free liquid'' condition or the ''dry'' condition	To be excluded from the definition of solid waste or from the definition of hazardous waste, you would be required to: 1. Accumulate the used wipes on site in a non-leaking, covered container; and 2. Package wipes for shipment off site in containers that are designed, constructed, and managed to minimize loss to the environment. Note: These wipes *can* be transported with free liquids.

Notes: (1) If wipes do not meet the appropriate conditions for accumulation and transportation, they would not be excluded and, if they cannot be made to meet the conditions, must be managed as hazardous waste.

(2) For residues from combustion and industrial laundry wastewater treatment (sludges), the generator must determine if they are characteristically hazardous and, if so, must be managed as hazardous waste. If not, additional generator or transport requirements do not apply.

[6] As stated above, for the purposes of this preamble, we will use the term *other non-hazardous landfill* to denote part 257 subpart B compliant non-hazardous waste landfills. That is, if a non-hazardous landfill that is not a municipal landfill accepts this waste, it must meet the minimum standards of 40 CFR part 257 subpart B.

B. Conditions for Exclusion From the Definition of Hazardous Waste for Solvent-Contaminated Industrial Wipes Destined for Disposal

1. Why Is EPA Proposing To Conditionally Exclude Disposable Solvent-Contaminated Wipes From the Definition of Hazardous Waste?

As discussed above, stakeholders have on several occasions indicated to us that regulating disposable solvent-contaminated industrial wipes as a hazardous waste is burdensome and unnecessary to protect human health and the environment and that this results in inequitable treatment relative to reusable industrial wipes. They argue that solvents associated with wipes are in low concentrations and are not likely to pose health and environmental risks similar to those from the disposal of process wastes. EPA's risk screening analysis, conducted to evaluate whether this contention is valid, suggests that management of these wipes under certain minimal, good management standards does not pose a substantial hazard to human heath and the environment and, therefore, we are proposing the conditional exclusion from the definition of hazardous waste presented today. The conditions proposed as part of the exclusion are designed both to minimize loss of solvent into the environment and, therefore, to minimize the risk of damage to the environment from those solvents, and to encourage solvent recovery and recycling.

Unions representing workers who come into contact with these materials have also raised concerns to EPA regarding the exposure of their members, both through direct contact and through air emissions, to hazardous solvents when handling industrial wipes. The conditions EPA would establish would also limit volatile releases and potential exposure of workers both at generator facilities and during transportation.

Finally, EPA has, where possible, designed these conditions to be performance-based and easy to understand and implement to address the concern that the Agency's current policy coupled with differing state policies, is complicated and hard to understand. Note that, as discussed in section IV of today's preamble, wipes are defined as disposable only if they will be disposed after use. If a wipe manufactured to be disposable is used and cleaned several times before disposal, it should be treated as a reusable wipe until its final use.

2. Proposed Conditions for Initial Storage and Accumulation

a. Proposed Condition

The proposed conditional exclusion from the definition of hazardous waste would apply to solvent-contaminated disposable industrial wipes at the point when the wipes are discarded by the generator. If the wipes were managed according to the proposed conditions, they would not be considered hazardous waste subject to subtitle C regulation.

The first condition the industrial wipes would have to meet is an accumulation standard. When an industrial wipe is contaminated with a hazardous solvent and is being disposed, generators would be required to place the hazardous solvent-contaminated wipe in a non-leaking, covered container. This performance standard leaves room for flexibility because a non-leaking covered container can range from a spring-operated safety container to a drum with its opening covered by a piece of plywood. Generators would not need to seal, secure, latch, or close the container every time a wipe is placed inside; rather, they would only need to ensure that the container was covered. EPA recognizes that many generators use a large number of wipes daily, so to require unsealing and sealing a container each time a wipe is placed inside would be impractical. This condition would reduce fugitive air emissions, maximizing the ability to capture free liquids for reuse or recycling. It would also be among good management practices for generators to have regardless of this proposal to minimize worker exposure to solvents.

Under the exclusion from the definition of hazardous waste, there would be no limit on accumulation time of wipes under federal regulations if the accumulation condition is being met-that is, the wipes are kept in a non-leaking covered container. Because the wipes would be solid waste but not hazardous waste, RCRA hazardous waste accumulation times would not apply.

This condition is designed to prevent releases of solvent while wipes are being accumulated for shipment. EPA believes that accumulating solvent-contaminated industrial wipes in covered containers is a responsible way to manage them to prevent loss of wipes and solvent, and represents good management practices for this material, as well as good housekeeping. The condition may also help to prevent the risk of fires, the most common damage reported from mismanagement of solvent-contaminated wipes, and would help reduce volatile organic compounds (VOCs) being emitted to the work environment and the atmosphere. It would also prevent the intentional air drying of wipes as a way to reduce free liquids.

One advantage of establishing a performance standard such as the one described above is that the generator may take innovative approaches to meet the performance standard being sought rather than having to use a specific design. A performance standard also provides a degree of flexibility in terms of allowing different approaches that minimize the length of time required for workers to place a used wipe in a storage container.

This condition would reduce requirements for generators of solvent-contaminated disposable industrial wipes. Currently, all states regulate disposable industrial wipes as a hazardous waste. 40 CFR part 265, subpart I describes the current federal requirements for the proper storage of hazardous waste in containers at generator facilities. These standards require generators of hazardous wastes to accumulate such wastes in units meeting certain technical requirements. The unit-specific requirements for generator accumulation units are found in 40 CFR part 265. In addition to requiring that containers are in good condition and that they are made of a material that is compatible with the wastes being contained, subpart I requires that containers be closed (*i.e.*, sealed) during accumulation. In addition, hazardous waste containers are subject to weekly visible inspections to locate potential deterioration, corrosion, or leaks. In addition, containers storing ignitable or reactive hazardous wastes are required to be located at least 50 feet from the facility's property line and special requirements exist for incompatible wastes.

b. Other Options

Accumulation Time Limit

EPA is also considering including a condition that establishes a time limit for accumulation of solvent-contaminated disposable wipes at a generator facility, so they cannot be kept on site indefinitely without management. This condition would be that solvent-contaminated disposable wipes being accumulated at the generator under the conditions proposed today must also follow the accumulation time limits in 40 CFR 262.34 that are applicable for their generator category (*i.e.*, 90 days for large quantity generators (LQGs) and 180 days for small quantity generators (SQGs)). In addition to following the time limits in 262.34, generators would have to mark any container in which solvent-contaminated disposable industrial wipes were being accumulated with a label stating that it holds excluded solvent-contaminated wipes and stating the date accumulation started.

Although this option would require generators to follow the appropriate time limit for their generator size, because the industrial wipes are excluded from the definition of hazardous waste from the point of generation, they would not have to be added to the generators counting of hazardous waste. In other words, generating solvent-contaminated wipes under the conditions of the proposal would not cause a facility to move from being an SQG to being an LQG.

No RCRA-Specific Condition

The Agency also is considering not establishing a specific accumulation condition, but relying on other regulatory statutes, like the Occupational Safety and Health Act (OSHA). The Occupational Health and Safety Standards of part 1910 provide both general and specific requirements for containers used to accumulate and store certain types of materials. Subpart H of part 1910 may be applicable for the storage of industrial wipes prior to solvent removal or recovery. Section 1910.106 contains standards for the management of hazardous materials, including requirements for the management of flammable [7] and combustible [8] liquids; facilities which either generate or launder solvent-contaminated industrial wipes may be subject to these standards. According to these standards, flammable liquids must be stored in approved containers which meet the requirements of § 1910.106(d). Metal containers and portable tanks meeting Department of Transportation standards (*see* 49 CFR parts 173 and 178) are acceptable. Section 1910.106 also specifies standards for the areas where containers holding flammable liquids are to be kept. The requirements for industrial plants may apply to generators or launderers of solvent-contaminated industrial wipes because the regulations apply to the portions of an industrial plant where the ''use and

[7] Flammable liquids are defined as any liquid having a flash point below 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture. Several solvents that are either listed or characteristic hazardous wastes and are used in conjunction with wipes also meet the definition of a *flammable liquid* (such as acetone, ethyl acetate, ethyl benzene, methyl ethyl ketone, petroleum naphtha).

[8] Combustible liquids are any liquids having a flash point at or above 100° F (37.8° C).

handling of flammable and combustible liquids is incidental to the principal business (*e.g.*, solvents used for cleaning presses at printing facilities).'' At industrial plants, flammable liquids must be stored in tanks or *closed containers,* defined as a container that is sealed with a lid or other device to prevent the release of liquids or vapors at ordinary temperatures (§ 1910.106(a)(9)).

Storage of spent solvent wipes that contain a negligible amount of solvents may be addressed under OSHA's regulations at 29 CFR 1910.106 (e)(9)(iii), which describe general housekeeping measures for ''combustible waste material and residues'' and residues of flammable liquids, combustible waste material and residues in a building or unit operating area. These standards specify that these materials are to be (1) kept to a minimum; (2) stored in covered metal receptacles; and (3) disposed of daily. However, these standards may not apply to solvents if they do not meet OSHA's definition of *flammable liquid,* although they may still be hazardous waste under RCRA.

We believe that OSHA requirements would be applicable in some situations involving solvent-contaminated industrial wipes and that those generators following OSHA's requirements would be managing their wipes in a protective manner. Another advantage of using the OSHA standards would be that many generators are already familiar with these standards. These standards would not, therefore, complicate implementation of the conditional exclusion.

However, it appears there would be gaps in coverage if we relied strictly on deferring to OSHA regulations. For example, the OSHA container standards may not apply to contaminated wipes with no free-flowing liquids or when wipes are contaminated with non-flammable solvents and, therefore, OSHA regulations may not cover every workplace that RCRA does. Note, however, that if generators meet the OSHA standard for flammable liquids (whether or not that standard is applicable to them under OSHA), they will meet the condition proposed here.

c. Request for Comment

We request comment on our proposal for accumulating spent reusable solvent-contaminated industrial wipes in non-leaking, covered containers while at the generator's facility. We also seek comment on whether wipes are accumulating at generator sites in large numbers that may pose a risk to human health and the environment and on the option of adding an accumulation time limit to this accumulation condition. In addition, we seek comment on the desirability of deferring to OSHA regulations for the proper storage of solvent-contaminated wipes on site at a generator's facility.

3. Proposed Conditions for Containers Used for Transportation

a. Proposed Condition

We are proposing a condition for containers generators use to transport solvent-contaminated industrial wipes off site under the conditional exclusion from the definition of hazardous waste. This condition is to ensure that transporting industrial wipes without full RCRA hazardous waste requirements will still protect against any risks posed by these materials to human health and the environment. Under this proposal, generators must transport industrial wipes in containers that are designed, constructed and managed to minimize loss to the environment. In proposing this condition, EPA intends for transporters to use containers that do not leak liquids and that provide for control of air emissions. This condition is designed to minimize loss of solvent to the environment during transportation and, therefore, minimizes risk as well. Minimization of loss through evaporation or leakage also makes it more likely that larger quantities of solvent will be recycled or properly managed.

EPA has chosen to propose a condition designed as a performance standard for this condition because it provides industry the ability to be creative in developing less expensive ways to reach a desired outcome. Because there are several common ways industrial wipes are presently transported that meet this description, such as in drums and in plastic bags, EPA determined that a performance standard would be a more flexible way to ensure protective management than establishing specific conditions that might unintentionally force the use of specific containers or types of containers. A performance standard allows for use of a wide variety of containers so generators could continue with current practices where appropriate. For example, we would consider containers that meet DOT packaging requirements for hazardous materials to meet the proposed performance standard, as would closed, sealed, impermeable containers. Plastic bags or cloth bags that were cinched shut might also meet this condition. Closed cinched bags would minimize exposed surface area and, thus, minimize evaporative loss and, provided no free liquids were present, as required, may not release liquid solvents. We would consider hazardous solvents that are spilled or leaked during transportation to be disposed and those managing the industrial wipes at the time the spill occurred would be responsible for managing the spilled hazardous waste according to generally applicable RCRA requirements. The excluded industrial wipes would remain excluded if the spill were managed properly and promptly.

Generators would also have to comply with the existing DOT standards.[9] EPA believes that the ''designed, constructed, and managed to minimize loss to the environment'' condition is necessary because the DOT regulations may not be applicable to all solvent-contaminated wipes if they do not meet certain DOT definitions, such as ''solids containing flammable liquid.'' Proposing this performance standard ensures that the container condition would apply to all solvent-contaminated industrial wipes to which today's proposal applies.

EPA's condition for transportation does not specify that the containers must be closed (*i.e.*, containers with lids screwed on). Nevertheless, EPA believes that closed containers would minimize loss to the environment. We do not expect that open containers would meet the performance standard due to the potential for wipes and/or solvent to be released from the container if an open container tipped over during transportation. We also do not believe that containers that are open to the environment would minimize other losses, such as evaporative losses.

b. Other Option

Closed Containers

EPA is also considering an alternative option of requiring all generators of

[9] DOT's Hazardous Materials Regulations (HMR) state that any person who offers a material for transportation in commerce must determine whether the material is classified as a hazardous material. Typically, reusable solvent-contaminated wipes are classified as ''solids containing flammable liquid, n.o.s.'' (*see* 49 CFR 172.101). Under 49 CFR 172.102, Special Provision 47 allows mixtures of solids not subject to regulation as a hazardous material and flammable liquids to be transported under the generic entry ''solids containing flammable liquid, n.o.s.'' without first applying the classification criteria of Division 4.1 Flammable Solids, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. All packaging must correspond to a design type that has passed a leak proof test at the Packing Group II level. Containers which are authorized for transporting hazardous materials in Packing Group II are listed under 49 CFR 173.212 and include, among other things, steel, aluminum, or plastic drums and plastic or cloth bags.

solvent-contaminated industrial wipes to transport them in impermeable closed containers. By *closed containers,* we specifically mean containers with a lid that screws on to the top and must be sealed to be considered *closed.* Some stakeholders have expressed concern that those transporting industrial wipes would not be able to determine if the industrial wipes met the ''no free liquids'' or the ''dry'' condition without having to further handle the container and wipes. Unsealing these containers each time a wipe is placed into the container and to make the no free liquids determination would be time consuming and would expose more of the solvents to the air than opening a covered container. In addition, stakeholders argue that, if the transporters of the wipes are unable to determine at the time of pick-up whether there are free liquids in the container, this may result in an unnecessary burden falling on the handlers if noncompliant wipes arrive at their site. We believe the approach taken in today's proposed regulation addresses these concerns and will ensure protection of human health and the environment.

c. Request for Comment

We request comment on our proposed performance standard and on the other option described above for containers used for transporting reusable solvent-contaminated industrial wipes.

4. Proposed Labeling Condition for Containers Used To Transport Disposable Wipes

a. Proposed Condition

EPA is proposing as a condition of the exclusion from the definition of hazardous waste that generators must appropriately label containers used to transport disposable industrial wipes containing hazardous solvents. This condition is meant to alert anyone handling the materials of what is enclosed in the container so that proper handling (or inspection) may occur. We are proposing to impose a labeling condition that would require the containers used to transport solvent-contaminated industrial wipes for disposal to be marked ''Excluded Solvent-Contaminated Wipes.'' This condition is comparable to the used oil designation labeling requirement in 40 CFR part 279.

This is a simple, straight-forward approach for labeling and would indicate the status of the materials to generators, workers, and downstream handlers. In addition, a label on containers of disposable industrial wipes stating that they are excluded from the definition of hazardous waste may benefit the generators of these wastes by eliminating questions from facilities receiving the waste, such as landfills or combustors, who may recognize that there are solvents in the waste and may be reluctant to accept the excluded industrial wipes before getting an assurance that they are not hazardous waste.[10]

A labeling condition would not add significant burden as existing regulatory programs administered by EPA, DOT, and OSHA already prescribe labeling requirements for containers, both in storage and transportation. Environmental Protection (40 CFR parts 260 through 265), Transportation (49 CFR parts 171 through173), and Labor (29 CFR 1910.1200) regulations all contain sections pertaining to the management of hazardous waste, including labeling requirements. Most of these labeling requirements refer to the DOT regulations found in 49 CFR 172. A variety of hazardous solvents may be used with industrial wipes, so DOT has a number of specific hazardous waste regulations, including labeling requirements, that apply to them.

b. Other Option

No RCRA-Specific Labeling Condition

Another option we are considering is not imposing a specific labeling condition. Under this approach, designation of the disposable industrial wipes as hazardous materials under DOT regulations might still require placarding or other marking for transportation of some fraction of these materials, as described previously. However, for the reasons explained above, we do not expect that the DOT provisions would apply to all solvent-contaminated industrial wipes covered by today's proposal and, therefore, would not be applicable to all industrial wipes covered by today's proposed rule.

c. Request for Comment

The Agency requests comment on today's proposal and the non-RCRA labeling condition. In particular, is a labeling requirement necessary, and, if so, is there a label that is more appropriate, easier to understand, and/or easier to implement than that being proposed?

[10] As will be noted later in today's preamble, a similar labeling requirement is not being proposed for reusable industrial wipes that are sent for reclamation/laundering or dry cleaning. The Agency believes such a requirement is not necessary for reusable industrial wipes. For further discussion, *see* Section V.C.5.

5. Proposed Condition for Transportation to a Municipal or Other Non-Hazardous Landfill

a. Proposed Condition

The conditional exclusion from the definition of hazardous waste for disposable industrial wipes proposed today would allow generators to transport certain disposable solvent-contaminated industrial wipes to municipal or other non-hazardous waste landfills [11] for disposal instead of to hazardous waste landfills when the conditions of the exclusion are met. EPA does not believe that other forms of land management, such as management in a waste pile or surface impoundment, are being applied to this waste stream. We, therefore, limited this proposed hazardous waste exclusion to land disposal of wipes in municipal or other non-hazardous waste landfills. A condition for disposal is that the industrial wipes contain no more than five grams of solvent per wipe, as explained in detail below.

Because of risk concerns, EPA is also proposing that industrial wipes contaminated with the specified F- or U-listed solvents in Table 4 or that are characteristically hazardous for other hazardous constituents, such as metals, cannot be disposed in municipal or other non-hazardous waste landfills. EPA has tentatively concluded that the solvents listed in Table 4 below may pose a substantial hazard to human health and the environment if wipes containing them were disposed in such landfills. If land disposed, industrial wipes contaminated with these solvents would have to continue to be managed in full compliance with the RCRA subtitle C hazardous waste management standards. Because of the risk concerns, this condition applies to any blends that contain a percentage of these solvents.

TABLE 4.—LISTED SOLVENTS NOT ALLOWED IN MUNICIPAL LANDFILLS

Benzene*	2-Nitropropane
Carbon tetrachloride*	Nitrobenzene
Chlorobenzene*	Pyridine
Cresols (o,m,p)*	Tetrachloroethylene*
Methyl ethyl ketone (MEK)	Methylene chloride
Trichloroethylene	

Nine of the solvents in Table 4 are characteristically toxic (TC), as defined in 40 CFR 261.24. Of these nine, six (as noted by an asterix: ''*'') are ineligible for disposal in a municipal or other non-hazardous waste landfill because they

[11] *See* footnote to Table 3 for explanation of the use of *non-hazardous waste landfill* in today's Preamble.

meet the toxicity characteristic, not because of the results of EPA's risk screening analysis. EPA's analysis finds that even when they have been through an advanced solvent-extraction process and contain less than five grams of solvent, the levels of these solvents in contaminated industrial wipes are likely to be higher than the regulatory levels indicated in 40 CFR 261.24. Therefore, these TC solvents are ineligible for disposal in municipal and other non-hazardous waste landfills because of their potential risk, as determined when they were originally identified by EPA as TC wastes.

We are proposing that the remaining five solvents in Table 4 also be restricted from disposal in municipal or other non-hazardous waste landfills because EPA's risk screening analysis indicates that they may pose an unacceptable risk to human health and the environment when disposed of at levels lower than the 5-gram condition described in detail below.[12] Included in these five are three solvents that both meet the toxicity characteristic and that were indicated in the risk screening assessment to pose an unacceptable risk (methyl ethyl ketone, nitrobenzene, and pyridine).

Table 5 contains the 19 listed solvents that were evaluated in the risk screening analysis and that would be allowed, under this proposal, to be disposed of in a municipal or non-hazardous waste landfill if they meet the ''dry'' condition. *Also see* Section VII for additional details on the results of our risk screening analysis.

TABLE 5.—LISTED SOLVENTS THAT MAY BE DISPOSED OF IN A MUNICIPAL LANDFILL UNDER TODAY'S PROPOSAL

Ethyl Ether	Carbon Disulfide	Isobutyl Alcohol	1,2-Dichlorobenzene
Acetone	Xylenes	Ethyl Acetate	1,1,2-Trichlorotrifluoroethane
Methanol	Cyclohexanone	Trichlorofluoromethane	1,1,1-Trichloroethane
Butanol	2-Ethoxyethanol	Methyl Isobutyl Ketone	1,1,2-Trichloroethane
Toluene	Ethyl benzene	Dichlorodifluoromethane	

Generators transporting their disposable industrial wipes to a municipal or other non-hazardous waste landfill must ensure that the wipes are ''dry.'' For purposes of this proposed rule, an industrial wipe is considered ''dry'' when it contains less than 5 grams of solvent. EPA chose 5 grams to be the standard for this condition because it falls within the range found in our risk screening analysis to not pose a substantial hazard to human health and the environment. This is also within the range of what is achievable through use of advanced solvent-extraction processes. Generators can meet this condition either by using less than five grams of solvent per wipe or by putting used industrial wipes through an advanced solvent-extraction process capable of removing sufficient solvent to meet the 5-gram condition. Generators can do the following to meet the ''dry'' condition:

- Remove excess solvents by centrifuging or other high-performance solvent-extraction or -removal technology, for example, microwave solvent recovery processes or the Petro-Miser or Fierro processes;[13]
- Use normal business records, such as the amount of solvent used per month for wiping operations divided by the number of wipes used per month for solvent wiping operations, to show they are under the threshold;
- Conduct sampling to measure the amount of solvent applied per wipe before use; or
- Sample to measure the amount of solvent remaining on wipes when use is completed.

EPA is proposing that generators using advanced solvent-extraction technologies will be considered to have met the ''dry'' condition because EPA believes that when properly operated these technologies will remove sufficient solvent to meet the 5-gram condition. For example, with respect to centrifuge effectiveness, our evaluation of existing centrifuges from site visits and data provided by industry shows that well-operated centrifuges result in wipes that contain less than 5 grams of solvent per wipe. We have found that the other high-performance processes have the same or greater rate of success at removing solvents. Therefore, if a generator uses one of these advanced solvent-extraction technologies on industrial wipes, they would qualify for the hazardous waste exclusion. Using business records to calculate the average amount of solvent on each wipe would also be an acceptable way of assuring that each wipe would have less than 5 grams of solvent on it. Finally, EPA considers sampling, when done properly using representative samples, to be an appropriate way of demonstrating that a standard is being met.

b. Request for Comment

EPA is requesting comment on its proposed ''dry'' condition. Comments are requested particularly on our preliminary decision that certain solvents contained in industrial wipes cannot be disposed of in municipal or other non-hazardous waste landfills. For example, should solvents which exhibit the characteristic of toxicity, but which were not found to pose a significant risk in our risk screening analysis for today's proposal, be prohibited from being sent to municipal or other non-hazardous waste landfills?

EPA is also requesting comment on what other high-extraction technologies not mentioned in this preamble could be used to meet the ''dry'' condition. Although we do not intend to promulgate a list of the only acceptable technologies, information on those that are appropriate for meeting the standard may be useful for future guidance.

In addition, as discussed in Section VII, our risk screening analysis identifies industrial wipes that pose an insignificant risk when disposed of in municipal or other non-hazardous waste landfills even though they contain solvents that meet the ''no free liquid'' condition, rather than the more stringent 5 gram condition (or ''dry'' condition). Nevertheless, to simplify the rule, we chose to propose that all industrial wipes containing solvents that can be landfilled under this proposal would be required to meet the ''dry'' condition prior to being allowed to be shipped to municipal or other non-hazardous landfills. The Agency requests comment as to whether we should allow industrial wipes containing solvents that pose insignificant risk when meeting the ''no

[12] Methyl Isobutyl Ketone (MIBK) was also found to be ineligible by the risk screening analysis, but because MIBK is listed for its characteristic of ignitability and, therefore, when mixed with solid waste, is no longer hazardous waste unless it continues to display its characteristic, a wipe containing it can be disposed of in a municipal or other non-hazardous waste landfill if it meets the other requirements.

[13] Descriptions of these technologies are found in the Technical Background Document. Mention of these processes is for descriptive purposes only and is not an endorsement of the products themselves.

free liquids'' condition to be placed in municipal or other non-hazardous waste landfills without being required to meet the ''dry'' condition.

Finally, we are requesting comment on whether solvent-contaminated industrial wipes meeting the ''dry'' condition should be required to meet the transportation requirements for wipes described in section V.B.3. The rationale for not specifying transportation standards would be that the level of solvents escaping would be insignificant if the industrial wipes were to contain less than 5 grams of solvent each. This option would increase relief for generators whose wipes meet the ''dry'' condition, but would complicate implementation of the rule both for regulators and generators.

6. Proposed Condition for Transportation to Non-Land Disposal Facilities

a. Proposed Condition

EPA is proposing a ''no free liquids'' condition to apply to solvent-contaminated industrial wipes going for disposal at a non-land disposal unit such as a municipal waste combustor (MWC) or other combustion unit (circumstances when the industrial wipes are used as a fuel are included) or to solvent-contaminated industrial wipes sent to an intermediate handler for further processing to meet the ''dry'' condition for disposal in a municipal or other non-hazardous waste landfill. This final case would apply to a generator who wants to send its solvent-contaminated industrial wipes to a landfill, but does not want to be responsible for making them meet the ''dry'' condition. The generator could send them to an intermediate handler under the ''no free liquids'' condition and contract with that handler to remove enough solvent that the wipes would meet the ''dry'' condition. This condition is meant to minimize the likelihood of loss of solvent into the environment, as well as to encourage solvent recovery and pollution prevention by generators.

In developing the ''no free liquids'' condition, EPA hopes to make it simple enough that both generators and handlers of the materials, as well as regulatory officials, would easily be able to verify that free liquids have been removed from the industrial wipes. For wipes to meet the ''no free liquids'' condition, no liquid solvent could drip from them when sent off site. In addition, no free liquids may be present in the bottom of the container in which the wipes are transported.

One concern certain stakeholders have expressed with this proposed condition is that once in a container, either at the generator site or in transit, industrial wipes can compress and solvent can percolate through them, collecting at the bottom of a container. This means that, while there may not have been free liquids in the container at the generator site, some may be generated during transportation. EPA believes that generators can take steps to minimize percolation by using less solvent or by recovering solvent from wipes before they are transported. However, EPA acknowledges that in some cases percolation can result in free liquids at the bottom of a container.

Because of percolation effects, the proposed rule contains the provision that, if free liquids are discovered at the handling/combustion facility, the solvent-contaminated wipes would remain excluded from the definition of hazardous waste as long as the handler either removes the solvent and manages it appropriately, or returns the shipment to the generator as soon as reasonably practicable, as described in Section V.B.10.a. However, if solvents escaped the container as a result of percolation, the container would not meet the ''minimize loss'' condition described above. Similarly, the mismanagement of the free solvents by the handler, either by illegal disposal or other means, would be a violation of the conditions of the exclusion. Because the generator is originally responsible for the existence of free liquids in the wipes, it would also be potentially responsible for the wipes having lost the exclusion at the handler despite the wipes being out of the generator's control at that moment.

Note that handlers/combustors would be required to determine whether the solvent which has been removed from the industrial wipes is listed as a hazardous waste or exhibits a characteristic of a hazardous waste as defined in 40 CFR part 261. Any hazardous waste solvent removed from the wipes would have to be managed in accordance with hazardous waste requirements found at 40 CFR parts 260 through 268 and 40 CFR part 270. In addition, for purposes of this proposed regulation, techniques or technologies used by generators to remove solvent from the wipes would not be defined as treatment under RCRA and, therefore, would not be subject to RCRA permitting (*see* Section V.B.8. for further discussion).

b. Other Option

EPA is considering a ''no free liquids when wrung'' condition instead of the ''no free liquids'' condition. Some states favor this approach, as it may minimize the chance for later solvent releases. They argue that this condition may result in better solvent management and less frequent receipt of free liquids at handling or combustion facilities. This approach differs from what we are proposing in that it would require that each wipe could not drip solvent when hand wrung. Some stakeholders argued that such a requirement would be a substantial change from current state policies on free liquids and would be burdensome for generators to implement. They also argue that this would expose wipes to the air more than necessary and, in essence, would require that the wipes be wrung immediately prior to placement on the shipping vehicle, further burdening generators. Based on these concerns, we are not including ''when wrung'' as part of the ''no free liquids'' condition in this proposal, but are seeking information on whether the benefits of an extra step of solvent removal at the generator outweigh the limitations of these concerns.

c. Request for Comment

We request comment on our proposed ''no free liquids'' condition and our decision not to propose a ''no free liquids when wrung'' condition.

d. How Can Generators Meet the ''No Free Liquids'' Condition?

Presently, state agencies have established several methods for verifying compliance with state-imposed ''no free liquids'' standards for a container or individual wipe. The majority of states require the use of the Paint Filter Test (SW–846 Method 9095) though other specified methods include the Liquids Release Test (SW–846 Method 9096), and the Toxicity Characteristic Leaching Procedure (TCLP) (SW–846 Method 1311). The Commonwealth of Massachusetts has established a ''one drop'' standard, where generators must ensure that the wringing of a wipe will not result in a drop of liquid flowing from the material. We understand that, although these are by no means the only ways of meeting the ''no free liquids'' condition, if generators meet any of these state standards or if they hand wring wipes, it is unlikely that the ''no free liquids'' condition proposed today would be violated.

In this proposal, EPA intends for compliance with the ''no free liquids'' condition to be determined by a practical test. That is, does a wipe drip liquid from it when held for a short period of time, for example, when being

transferred from one container to another? One way a facility or an inspector could test for compliance with this condition would be to place two containers adjacent to one another and to transfer wipes from one container to the other. If they drip liquid during transfer, or if there are free liquids in the bottom of the container, they would not meet the ''no free liquids'' condition. Generators and inspectors would have to make sure they are checking the industrial wipes at the bottom of containers, as well as at the top for release of free liquids because percolation could cause solvents to sink and saturate the wipes at the bottom of any given container. Facilities could also check for compliance with the condition by using screen-bottomed drums and checking the bottom portion of the drum for liquid solvent.

As stated above, rather than checking all wipes for free liquids, generators could hand wring wipes before placement in containers or send wipes through a mechanical wringer, centrifuge, or use any other effective method as a way to ensure that free liquids are not present. Stakeholders from the printing industry have recommended to EPA that we specify a list of acceptable technologies that would meet the ''no free liquids'' condition for the proposed exclusion from the definition of hazardous waste, and that we also specify the above performance standard as a catch all to account for new technologies that are developed in the future. Printing industry stakeholders believe this option would clarify for them and other industrial sectors those technologies that would pass the ''no free liquids'' performance standard so that no uncertainty exists on the part of either generators or EPA and state inspectors. While understanding generator concerns, EPA is not proposing in today's **Federal Register** specific regulatory language which identifies those technologies that would presumptively meet the ''no free liquids'' condition. Nevertheless, the Agency provides some discussion of the specific technologies EPA has examined that can reduce the amount of solvents in industrial wipes to meet the ''no free liquid'' condition both in this Preamble and in the Technical Background Document for this proposal.

Generators also have the option to use their knowledge of their processes to determine that their wipes contain no free liquids. For example, a generator may know that a certain process requires only small amounts of solvent on each wipe and, therefore, free liquids are unlikely to be present.

e. Request for Comment

EPA is taking comment on our proposed approach to determining if the ''no free liquids'' condition is met. Are there other approaches EPA should have considered in this proposal? The Agency also solicits comment on the printing industry's suggestion that the final rule should specify a list of technologies that would be considered to meet the condition to assist in the implementation of and compliance with this rule.

7. ''Exotic'' Solvents

In the process of developing this proposed rulemaking, the Agency has learned that there are new, ''exotic'' solvents on the market, such as terpenes and citric acids, that, while labeled as non-hazardous, could actually be flammable. Although the solvents do not exhibit the ignitability characteristic in 40 CFR 261.21, stakeholders have told us that, under certain conditions that have yet to be determined, oxygen can mix with the industrial wipes that contain these exotic solvents and spontaneously combust. According to some representatives of industrial laundries and fire marshals, resulting fires have caused major damage to facilities. Some stakeholders have suggested that EPA propose that generating facilities be allowed to transport their industrial wipes off site with free liquids if the facility is using one of these ''exotic'' solvents that could react or spontaneously combust, so that generators can wet down the wipes with water prior to sending them off site. They explain that this is consistent with what laundries do now with their customers.

We request information and comments on these ''exotic'' solvents and how they are presently managed. We would like to know which solvents that would currently be considered hazardous wastes are viewed as ''exotic'' and for which solvents commenters believe a ''no free liquids'' condition would be problematic. We request information on documented cases of combustion caused by a lack of free liquids. We also request comments on whether the final rule should give containers with wipes contaminated with exotic solvents special consideration, particularly, allowing the solvents to be wetted down with water during accumulation and transportation and, further, what other conditions should be placed on management of these materials if special consideration were to be given.

8. Generators That Remove Solvent From Industrial Wipes

a. Regulatory Status of Removed Solvent

Any solvent removed from an industrial wipe by a generator may be subject to regulation as a hazardous waste. Therefore, the generating facility would be required to determine whether the solvent removed from the industrial wipe, if it is not reused, is listed as a hazardous waste or exhibits a characteristic of a hazardous waste as defined in 40 CFR part 261, and, if so, manage the solvent according to prescribed RCRA regulations under 40 CFR parts 260–268 and 270.

b. Regulatory Status of Solvent Removal Technologies

Under today's proposed exclusion from the definition of hazardous waste, the solvent-contaminated wipes would not be hazardous waste at the time they undergo solvent-removal. Therefore, solvent removal technologies would not be considered treatment of hazardous waste under RCRA and such operations, whether they be conducted by generators or handling facilities, would not be considered to be treating hazardous waste and would not require a RCRA permit. Because under today's proposed rule solvent extraction would not trigger RCRA treatment standards, generators may be more likely to recover solvent for reuse and reduce the amount of solvent that they purchase.

9. Proposed Conditions for Intra-Company Transfers

a. Proposed Condition

Several stakeholders, particularly those who use large numbers of wipes daily with large amounts of solvent on each wipe, would like the flexibility of not having to meet the ''no free liquids'' condition when transferring their wipes off site to an intra-company facility that would extract the solvents from the wipes. Several states already allow these kinds of transfers to be made when both the generating facility and the extracting facility are part of the same company. Under the proposed condition, the extracted solvent at this point could either be returned to the originating customer or sold to another manufacturer for reuse as a feedstock in a manufacturing or service operation. Alternatively, when the economics of solvent recycling are not favorable, the extracted solvents could be disposed of as a hazardous waste.

To encourage reclamation and recycling of the solvents in the wipes, today we are proposing to allow industrial wipes to qualify for the exclusion from the definition of

hazardous waste if the generator transfers solvent-contaminated industrial wipes containing free liquids between their own facilities and if the receiving facility has a solvent-extraction and/or -recovery process that will remove sufficient solvent to ensure the wipes meet either the ''dry'' condition or the ''no free liquids'' condition. Generators taking advantage of this part of the rule could then use one piece of solvent-extraction equipment to serve industrial wipes from several of the company's generators. EPA hopes that allowing intra-company transfers of free liquid under these conditions would encourage companies to obtain advanced solvent recovery equipment that they would not purchase for use at just one of their facilities.

Of course, to be eligible for the exclusion from the definition of hazardous waste, the industrial wipes must meet the other conditions described in this notice. Specifically, the generators would be required to manage the wipes and free liquids in the same way as they would when they are under the hazardous waste exclusion. They would be required to accumulate the wipes and solvents in non-leaking covered containers and to transport the industrial wipes in containers that are designed, constructed and managed to minimize loss to the environment and labeled ''Excluded Solvent-Contaminated Wipes.'' EPA is proposing the same performance standards as for wipes meeting the ''dry'' and the ''no free liquids'' conditions, but note that because of the free liquids transported with these wipes, not all types of containers are likely to be appropriate (*e.g.*, cloth bags are not likely to minimize loss for wipes containing free liquids). The solvent, once extracted, would have to be managed as a RCRA hazardous waste if going to disposal. In the end, we believe this option would result in substantial savings for generators of solvent-contaminated industrial wipes, as well as in increased solvent recovery by generators.

As stated above, generators can only take advantage of this condition when the handling facility is in the same company as the generator. EPA is seeking comment on whether intra-company transfers should include affiliates, subsidiaries, and parent companies as eligible for this provision.

EPA is making this condition applicable to just intra-company transfers because the Agency believes the management of the free liquids in transportation to prevent loss or spills is likely to be more comprehensive when the whole transaction occurs within one company. Communication is likely to be better between the entities transporting and receiving the waste if they are in one company, as would oversight over the entire generation, transportation, and recovery system to ensure that solvents are being recovered.

Several potential benefits to allowing such shipments under the conditional exclusion from hazardous waste include the additional opportunities for increased recycling because some generating facilities would find recycling solvent more convenient when not having to meet the ''no free liquids'' condition. As stated elsewhere in this proposal, several technologies already exist to extract and/or recover the spent solvent contained on industrial wipes both economically and safely. In addition, there are likely to be environmental benefits because solvent that would have been sent to combustion or disposal in a landfill would be recovered and reused.

b. Other Options

Additional Conditions for Intra-Company Transfers

On the basis of discussions with state implementors and stakeholders, EPA is considering adding conditions to this provision in the proposed rule. Specifically, we are considering:

(i) Requiring a one-time notification to the state to alert the state that the generator is taking advantage of the intra-company transport allowed under this exclusion;

(ii) Maintenance of appropriate business records that identify where the industrial wipes are being managed and where the recovered solvent is being sent;

(iii) Compliance with RCRA's employee training and emergency response requirements in 40 CFR part 262, and

(iv) Transfer of the industrial wipes with free liquids in closed (*i.e.*, sealed) containers.

Inter-Company Transfers

Some stakeholders have also suggested that EPA propose to allow transfers of solvent-contaminated industrial wipes with free liquids between companies for solvent extraction. This option would allow generators to ship solvent-contaminated industrial wipes with free liquids to any facility if the receiving facility uses solvent extraction to remove enough solvent from the industrial wipes for them to meet the ''no free liquids'' condition required for shipment to a laundry. This option would allow more facilities to take advantage of this provision than the intra-company provision would allow and may encourage more use of advanced solvent-extraction technologies on these materials resulting in more potential recovery and reuse of solvents. EPA did not propose this option because it believes currently that intra-company transfers would maintain better control of the industrial wipes during transportation and would better prevent releases than transfers between different companies. However, we request comment on this premise and this option for transfer of industrial wipes.

c. Request for Comment

EPA seeks comment on whether intra-company shipments of industrial wipes containing free liquids should be allowed under the conditions of the exclusion from the definition of hazardous waste and whether this provision would be likely to facilitate the recovery of hazardous solvents.

As stated above, we seek comment on whether EPA should consider parent companies, subsidiaries, and affiliates as eligible for the intra-company transfer provision. EPA also seeks comment on whether the intra-company transfer provision should include a distance limit, such that only facilities shipping their wipes and solvents the prescribed distance or less would be eligible for the intra-company transfer option.

EPA also seeks comment both on whether the additional conditions discussed in Section V.B.9.b. should be included and also on whether we should expand the provision to allow industrial wipes, under the conditional exclusion from hazardous waste, to be sent with free liquids to third-party solvent-extraction facilities.

10. Proposed Conditions for Management at Handling Facilities

a. Proposed Conditions

Of all the handlers, generators have the primary responsibility for assuring that the industrial wipes they transport off site meet the conditions for the hazardous waste exclusion, but non-landfill facilities which receive disposable industrial wipes, such as combustors or handling facilities that perform further solvent removal, would also need to meet certain minimum conditions for the wipes to remain excluded from the definition of hazardous waste. First, during the time between when the wipes arrive on site and when the facility first introduces them into their process (*e.g.*, when the wipes are removed from their container and placed in a solvent-extractor), these facilities must store solvent-

contaminated industrial wipes either (a) in containers that are designed, constructed, and managed to minimize loss to the environment that would meet the transportation conditions in today's proposal, or (b) in non-leaking covered containers that would meet the generator conditions in today's proposal.

The second condition is that if facilities (other than those intra-company facilities where solvent is removed) receive solvent-contaminated industrial wipes with free liquids, in order to retain the exclusion from the definition of hazardous waste for the wipes, the facility would be required to either (a) return the container (with the wipes and liquid) to the generator as soon as reasonably practicable (*e.g.*, with the next scheduled delivery), or (b) recover any liquid solvent that arrives at the facility and properly manage it under federal or state hazardous waste regulations, as applicable. When returning the wipes and liquid to the generator, the facility would have to transport them in containers that meet the original shipment condition, but would not be required to use a hazardous waste manifest.

The objective of this condition is to address situations where free liquids arrive with industrial wipes at a handling facility through no fault of the handling facility. A shipment of industrial wipes would be considered to contain free liquids either if solvent drips from the wipes or if there are free liquids in the bottom of the container of industrial wipes. Rather than subject the industrial wipes to RCRA hazardous waste requirements in this situation, EPA is proposing that they be allowed to be further processed to ensure that the conditions of the hazardous waste exclusion are met and that removed solvents are appropriately managed either by the receiving facility or the original generator. We believe this can be done safely and we also believe that this will provide additional incentive for solvent recovery. At any time that hazardous solvents are spilled or leaked from a barrel of excluded wipes at a laundry or handling facility, or are otherwise mismanaged, we would consider this to be disposal and the handling facility managing the solvents would be responsible for cleaning up the spill.

b. Request for Comment

EPA seeks comment on the above conditions for handling facilities that manage industrial wipes. EPA also requests comment on whether handling facilities receiving shipments of wipes that do not meet the ''no free liquids'' condition should be required, as in the case of some other conditional exclusions, to submit a notification to the state or EPA region implementing RCRA to inform them that the ''no free liquids'' condition had not been met.

11. Management of Industrial Wipes Containing Co-Contaminants

Today's proposed rule is not intended to override EPA's mixture and derived-from rule regarding contaminants on industrial wipes other than the solvents specified in this proposal. In addition to these solvents, spent industrial wipes from industrial applications may be contaminated with material removed during the industrial process—anything from dirt and grease to listed hazardous wastes. The presence of these co-contaminants may make the industrial wipes subject to the hazardous waste mixture rule (40 CFR 261.3(a)(2)(iv)), which states that a mixture made up of any amount of a nonhazardous solid waste and any amount of a listed hazardous waste is a listed hazardous waste. Therefore, if the wipe contains a listed waste other than the identified solvents, it would still be considered a listed hazardous waste and would no longer be eligible for the conditional exclusion from the definition of hazardous waste being proposed today.

Solvent-contaminated industrial wipes that exhibit a characteristic of hazardous waste due to co-contaminants also are not eligible for the hazardous waste exclusion, unless the characteristic is ignitability. Specifically, EPA is proposing that industrial wipes that would exhibit the characteristics of toxicity, corrosivity, or reactivity because of wastes with which they are co-contaminated would not be eligible for the conditional exclusion. On the other hand, because the industrial wipes are already likely to be ignitable because of the nature of the solvents on them, and because this risk is managed by the conditions of the exclusion from hazardous waste, wipes co-contaminated with ignitable waste would remain eligible for the exclusion if they meet its other conditions.

12. Proposed Conditions for Burning Solvent-Contaminated Industrial Wipes in Combustors

a. Proposed Condition

Based on the results of our risk screening analysis discussed in Section VII of this preamble, we are proposing that municipal and other non-hazardous waste combustors be allowed to burn solvent-contaminated industrial wipes that meet the proposed conditions for the exclusion from the definition of hazardous waste. Facilities managing these wipes would have to ensure that the wipes remain in containers that meet today's proposed transportation condition until they enter the combustion process. Also, if a combustion facility finds wipes with free liquids when it initiates processing of the wipes, like other handlers, it would have the choice of removing the free liquids and managing them as a hazardous waste or closing the container and sending the wipes back to the originating generator. When returning the wipes and liquid to the generator, the combustor would have to transport them in containers that meet the original shipment condition, but would not need to use a hazardous waste manifest.

b. Basis for Condition

Allowing combustion of industrial wipes in municipal waste combustors (MWCs) and other non-hazardous waste combustion units, such as commercial and industrial solid waste incinerators (circumstances when the industrial wipes are used as a fuel are included) is a viable alternative for managing conditionally-excluded industrial wipes. First, combustion facility owners/operators should be screening industrial wipes contaminated with hazardous solvents that arrive at their facilities to ensure they do not violate local permit conditions. In addition, these combustors are easily capable of destroying the solvent in contaminated industrial wipes. As described in more detail in Section IV.F.11 of the Technical Background Document, EPA has promulgated revised air emission requirements under the New Source Performance Standards (NSPS) for large new and existing MWCs (facilities managing more than 250 tons of waste per day) and revised NSPS air emission requirements for smaller MWCs (facilities managing less than 250 tons of waste per day). EPA has also promulgated NSPS for commercial and industrial solid waste incinerators (65 FR 75338, December 1, 2000). These NSPS standards for non-hazardous waste combustors provide a level of protection comparable to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for hazardous waste incinerators and should ensure that at least 99.99 percent of the solvent in contaminated industrial wipes is removed or destroyed. Also, as stated in Section VII.C.2., the risk analysis for this proposal indicated that none of the solvents would exceed health benchmarks if the ash were disposed in a landfill.

c. Request for Comment

We request comment on our approach of allowing solvent-contaminated wipes to be managed in Municipal Waste Combustors and other non-hazardous waste combustors provided they meet the other conditions described in today's Preamble.

13. Disposal of Treatment Residuals From Municipal Waste and Other Combustion Facilities

Under today's proposed rule, when solvent-contaminated industrial wipes meet the conditions of the exclusion from the definition of hazardous waste before being combusted, they would not be considered a hazardous waste. Therefore, the mixture- and derived-from rule does not apply to the ash derived from the burning of these materials. In other words, the ash generated by a MWC or other combustion facility is a newly-generated waste and is subject to the waste identification requirements of 40 CFR parts 261 and 262. Owners and operators of MWCs and other combustion facilities must determine whether or not the ash generated at their facilities exhibits one or more of the characteristics of hazardous waste. They may do so by knowledge of the wastes they receive and/or generate, coupled with knowledge of the capability of their combustor facility or by testing. If they determine that MWC ash exhibits the hazardous characteristic, the ash must be managed as a hazardous waste in compliance with all applicable subtitle C management requirements, including the land disposal restrictions.

C. Conditions for the Exclusion From the Definition of Solid Waste for Reusable Industrial Wipes

1. Why Is EPA Proposing To Exclude Reusable Solvent-Contaminated Industrial Wipes From the Definition of Solid Waste?

EPA is proposing today to conditionally exclude reusable solvent-contaminated industrial wipes from the regulatory definition of solid waste. One of the reasons EPA is proposing an exclusion from solid waste for these materials, as opposed to the definition of hazardous waste exclusion proposed for disposable industrial wipes, is that the Agency believes that reusable solvent-contaminated industrial wipes are commodity-like. (*See* Section IV.B.2 for a detailed explanation of the Agency's basis for this.) Those wipes that have had free liquids removed are similar to partially-reclaimed materials because solvent removal, reclamation, laundering or dry cleaning of wipes removes solvent from the wipe. EPA believes that the conditions for the exclusion from solid waste are appropriate because they ensure that the manner in which generators and laundries manage these materials is consistent with how companies would manage a valuable commodity. For these reasons, today's proposed exclusion from the definition of solid waste is applicable only to industrial wipes that are being reclaimed for reuse through a cleaning or laundering process. EPA does not consider other types of recycling or reclamation, such as blending wipes into a fuel, as being eligible for this proposed exclusion from solid waste. Note, however, that as discussed in Section IV of today's preamble, any solvent-contaminated industrial wipe which will be reused as a wipe can be managed under the conditions for reusable wipes even if it was manufactured for one-time use. Likewise, any solvent-contaminated industrial wipe not being sent for reuse must be managed as a disposable industrial wipe.

EPA believes that the conditions proposed for management of disposable solvent-contaminated industrial wipes, described in detail above, in addition to ensuring that wipes don't pose a substantial hazard, are what generators and handlers would do in handling valuable commodities. Because of this, EPA is proposing many of the same conditions for the exclusion from the definition of solid waste for reusable wipes as we are proposing for the exclusion from the definition of hazardous waste for disposable industrial wipes. Nevertheless, in several places where it is appropriate, as described below, we are proposing different conditions for reusable wipes.

This section details a number of proposed conditions that specifically would ensure that reusable solvent-contaminated industrial wipes are handled as valuable commodities, such as the condition that industrial wipes must not contain free liquids and the container conditions for accumulation, transportation, and handling of solvent-contaminated industrial wipes. Solvent spillage from free liquids or leaking containers would increase the costs of managing industrial wipes incurred by laundries both during transportation and at the cleaning plant, thus devaluing the overall worth of reusable industrial wipes. In addition, free liquids arriving with the wipes would require laundries to incur the increased costs of disposing or otherwise managing the contaminated solvents, again reducing the overall value of the reusable industrial wipes. Additionally, because of the flammable nature of many of the solvents to which this proposal applies, proper containers and the reduction of free liquids reduces the fire hazard posed by industrial wipes. We believe that companies which value their industrial wipes would be likely to manage them in a manner that protects their facility from fire damage and that protects them from loss of value, which would occur if the wipes were to catch on fire.

Some laundries recover solvents from the industrial wipes, but their economic interest lies principally in the wipes themselves. Management of free liquids to ensure compliance with pretreatment standards established by local sewer authorities and to guard against fire hazards could increase overall operating costs. However, conditions that ensure the use of appropriate containers and that restrict the amount of solvents coming into the laundries, as described above, always enhance the value of solvent-contaminated industrial wipes to the laundries.

2. Applicable Solvents

Unlike the proposed exclusion from the definition of hazardous waste for industrial wipes sent for disposal in municipal or other non-hazardous waste landfills, which is not applicable to 11 of the listed solvents, the proposed exclusion from the definition of solid waste is applicable to wipes contaminated with all hazardous solvents. The central question in solid waste determinations is whether the material has been discarded and, therefore, because EPA believes reusable industrial wipes containing solvents would be commodity-like when generators meet the proposed conditions, the conditional exclusion from the definition of solid waste would apply to wipes contaminated with all hazardous solvents. Therefore, wipes containing the solvents in Table 4, which are not eligible for the exclusion from the definition of hazardous waste, would be eligible for the exclusion from the definition of solid waste.

3. Proposed Conditions for Initial Storage and Accumulation

a. Proposed Condition

The proposed conditional exclusion from the regulatory definition of solid waste would apply to solvent-contaminated industrial wipes at the point where the generator ceases using them. If the wipes are managed according to the proposed conditions, they are not considered solid waste.

The first condition the industrial wipes must meet is an accumulation

condition. For the exclusion from the definition of solid waste, EPA is proposing the same performance-based on site management condition as for the exclusion of disposable industrial wipes from the definition of hazardous waste: For reusable industrial wipes, the user must place them in a non-leaking, covered container. This condition is more fully described above in Section V.B.2.

One point that would differ for reusable solvent-contaminated industrial wipes is that under an exclusion from the definition of solid waste, speculative accumulation would apply for these materials. This means that in any calendar year, 75 percent of the material accumulated for recycling must actually be recycled. If this percentage of recycling is not fulfilled, the material becomes classified as a solid waste. The speculative accumulation provision ensures that materials that have been excluded from the definition of solid waste, such as solvent-contaminated industrial wipes, are not collected indefinitely under that exclusion instead of being recycled. However, because of the business practices between industrial launderers and users of reusable industrial wipes described above, we believe that excluded reusable industrial wipes will be traveling between users and the laundries often enough that the speculative accumulation provision will not be a concern.

Currently, management standards for accumulation of reusable industrial wipes differ from state to state due to varying state policies. Some states require that the reusable wipes be handled as hazardous waste prior to laundering, some require the use of best management standards or the use of closed containers, and other states simply exclude reusable industrial wipes from meeting any requirements. However, some trade associations and industrial laundries already encourage their members and customers to use closed or sealed containers during storage and transportation of solvent-contaminated wipes.

EPA believes that the proposed condition, designed to minimize loss of solvents into the environment, ensures responsible management of the wipes in a manner that is commodity-like by preventing the loss of wipes, preventing the loss of solvent which could be recovered and reused, and protecting against risks from fires. At the same time, by being performance-based, this approach allows for a wide variety of containers to be acceptable for accumulation of reusable wipes.

b. Other Option

As with disposable industrial wipes, EPA is considering not requiring a RCRA-specific condition to be met for accumulation of reusable solvent-contaminated industrial wipes and instead relying on OSHA regulations and any other applicable statutes. This option is fully described above in section V.B.2.b.

c. Request for Comment

We request comment on our proposed condition for accumulating reusable solvent-contaminated industrial wipes in covered containers while at the generator's facility, as well as the option of not proposing a RCRA standard, but relying on the OSHA regulations.

4. Proposed Conditions for Containers Used for Transportation

a. Proposed Condition

For transportation of reusable industrial wipes, we are proposing that facilities that transport reusable solvent-contaminated industrial wipes off site to an industrial laundry, a dry cleaner, or a facility that removes solvents from industrial wipes prior to cleaning must do so in containers that are designed, constructed and managed to minimize loss to the environment; this is the same condition we are proposing for disposable industrial wipes that are conditionally excluded from the definition of hazardous waste. We believe this condition reflects the manner in which a commodity would be transported because it minimizes the possibility that valuable material would be spilled, lost or damaged during transportation.

This condition is more fully described above in Section V.B.3. Its main advantage is that it allows for flexibility while assuring that losses are minimized.

b. Plastic and Cloth Bags

Used reusable wipes are often transported from the generator to the laundry in either plastic or cloth bags and throughout the development of this proposal, there has been much discussion with stakeholders about the use of such bags for transportation of industrial wipes and for management of them once they arrive at the laundry. Stakeholders have asked whether these bags could continue to be used under the proposed exclusion from the definition of solid waste.

EPA has chosen to propose a performance standard for this condition because it provides industry the ability to be creative in developing less expensive ways to reach a desired outcome. A performance standard allows for use of a wide variety of containers so many generators could continue with current practices. For example, while we would consider closed, sealed, impermeable containers to meet this condition, plastic or cloth bags that were cinched shut could also potentially meet this condition. Cinched bags would reduce exposed surface area and evaporative loss and, provided no free liquids were present, might not allow liquid solvents to leak. However, at any time that hazardous solvents are spilled or leaked during transportation, we would consider this to be disposal of a hazardous waste and those managing the industrial wipes at the time the spill occurred would be responsible for cleaning up the spill and returning the wipes to compliance with the conditions of the exclusion (*i.e.*, the performance standard).

c. Other Options

For reusable industrial wipes, EPA is considering two alternatives during transportation: (1) requiring transportation of the industrial wipes in impermeable closed containers, or (2) the addition of a provision that allows wipes containing less than five grams of solvent to be transported without any management standards.

EPA initially considered proposing that all generators of reusable industrial wipes would be required to transport them in impermeable, ''closed'' containers (*e.g.*, containers with the lids screwed on). Representatives of the industrial laundries (the Uniform Textiles Trade Association) questioned the need to require closed containers because they believe it would require them to purchase new and larger trucks for storage during transit. In addition, they expressed concern that those transporting industrial wipes would not be able to determine if free liquids were present within a closed container with a lid screwed on without further handling of the container and wipes. Unlike checking the bottom of a bag for liquids, unsealing these containers would be time consuming and would expose more of the solvents to the air. In addition, they argue that if the transporters of the wipes are unable to determine at the time of pick-up whether there are free liquids in the container, this may result in an unnecessary burden falling on the handlers were free liquids to arrive at their site. Based on these concerns, we are not proposing this alternative, but believe the approach taken in today's proposed regulation addresses these concerns and will ensure protection of human health and the environment.

The second alternative, regarding allowing wipes that contain less than five grams of solvent to be transported without management controls, is more fully described above in section V.B.3.b.

d. Request for Comment

We request comment on the proposed transportation condition, the alternatives considered, and on the ability of cloth bags to meet the proposed performance standard.

5. Proposed Condition for Transportation to Laundry, Dry Cleaner, or Handler

a. Proposed Condition

Today, we are proposing that generators meet the ''no free liquids'' condition prior to solvent-contaminated reusable industrial wipes being transported off site to be cleaned for reuse or being laundered on site. This is the same as the condition for disposable industrial wipes being transported for disposal at a non-land disposal facility, such as a municipal solid waste combustor, and is consistent with what state programs have required for their exclusions for reusable industrial wipes. For wipes to meet the federal ''no free liquid'' condition, no liquid solvent could drip from the wipes when sent off site. In addition, no free liquids could be present in the bottom of the container in which the wipes are transported.

EPA has tentatively concluded that the ''dry'' condition, proposed as a condition for disposable industrial wipes going to municipal or other non-hazardous waste landfills, is overly-stringent for the management of reusable industrial wipes. We believe this to be the case because, throughout the solvent removal and cleaning process, the conditions established for eligibility for the exclusion from the definition of solid waste are already consistent with the existing hazardous waste regulations. For example, solvents removed prior to cleaning at a laundry must be managed as hazardous waste. In addition, solvent discharges to POTWs are allowed under the wastewater exclusion found at 40 CFR 261.4(a)(2). Local POTWs have the authority to set limits applicable to individual indirect dischargers to prevent releases and to prevent interference with operations at the POTW; solvent discharges are often subject to these limits.

We believe the ''no free liquids'' condition helps ensure that reusable industrial wipes that are saturated with solvent are partially reclaimed before they are shipped for cleaning or laundry and helps ensure that they are handled as valuable commodities by reducing the risk of losing valuable wipes as the result of fires caused by ignitable solvents. Therefore, it may lead to resource conservation by encouraging recovery of solvent by the generator.

The ''no free liquids'' condition is more fully described above in Section V.B.6. As mentioned in that section, solvents removed from wipes are solid wastes and may be characteristic or listed hazardous wastes and must be managed accordingly.

For reusables going to laundries, dry cleaners and industrial wipes handlers, we are not proposing a labeling condition that parallels the one described in Section V.B.4. for disposable industrial wipes. EPA decided not to propose a labeling condition in this case because the commodity-like nature of reusable wipes means that, in general, laundries have agreements with their customers and already know what is in the containers of wipes that arrive. Therefore, containers of reusable industrial wipes do not require a label to provide this information or to notify the transporters or laundries how the wipes should be handled. EPA believes that because these materials are managed as commodities by the generators and the handlers, previously existing business documents should provide sufficient information to ensure proper handling.

b. Other Option

EPA is also considering a ''no free liquids when wrung'' condition instead of the ''no free liquids'' condition. This condition would differ from what we are proposing in that it would require that each wipe, when hand wrung at any time after its use until it is laundered, could not drip solvent. *See* section V.B.6.b. for further description of this option.

c. Request for Comment

We request comment on the ''no free liquids'' condition and the ''no free liquids when wrung'' option, as well as on whether EPA should include a labeling requirement as a condition for sending reusable wipes to laundries or industrial wipes handlers. In addition, we also specifically request comment on the information submitted by the Association of Nonwoven Fabrics Industry and the Secondary Materials and Recycled Textiles Association (which is available in the docket to this proposal) regarding whether to place a specific limit on either the maximum amount of solvent or the concentration of solvent on reusable wipes sent to a laundering or dry cleaning facility or a numerical limit on the number of shop towels launderers or dry cleaners can accept on an annual basis for cleaning.

d. How Can Generators Meet the ''No Free Liquids'' Condition?

The measures that a generator can take to meet a ''no free liquids'' condition are the same for reusable wipes as for disposable wipes. For more information on these measures, see Section V.B.6.d. above.

e. Request for Comment

EPA is taking comment on our proposed approach to determining if the ''no free liquids'' condition is being met. Additionally, we request comment on whether there are other approaches EPA should have considered in this proposal.

6. ''Exotic'' Solvents

In the process of developing this proposed rulemaking, the Agency has learned that there are new, ''exotic'' solvents on the market, such as terpenes and citric acids, that, while labeled as non-hazardous, could actually be flammable. Some stakeholders have suggested that we propose to allow generating facilities to add water to the containers used to transport their industrial wipes off site when these facilities are using one of these ''exotic'' solvents. For more information on this issue see Section V.B.7. above. In that section, we also request information and comments on these solvents, and on whether special conditions should be established for ''exotic'' solvents.

7. Generators That Remove Solvent From Industrial Wipes

a. Regulatory Status of Removed Solvent

Any solvent removed from an industrial wipe by a generator when using solvents in conjunction with industrial wipes may be subject to regulation as a hazardous waste. Therefore, the generating facility must determine whether the solvent removed from the industrial wipe is listed as a hazardous waste or exhibits a characteristic of a hazardous waste as defined in 40 CFR part 261, and, if so, manage it according to prescribed RCRA regulations under 40 CFR parts 260–268 and 270.

b. Regulatory Status of Solvent Removal Technologies

Under today's proposed exclusion from the definition of solid waste, the solvent-contaminated wipes would not be a solid or a hazardous waste at the time they undergo solvent-removal. Therefore, as discussed in Section V.B.8.b., solvent removal technologies would not be considered treatment

under RCRA and such operations, whether they were conducted at generating or handling facilities, would not be considered to be treating hazardous waste and would not require a RCRA permit.

8. Proposed Conditions for Intra-Company Transfers

a. Proposed Condition

EPA is proposing that wipes can qualify for the exclusion from the definition of solid waste when transferring solvent-contaminated reusable industrial wipes containing ''free liquids,'' provided the transfer is between facilities within the same company, and the receiving facility has a solvent-extraction and/or -recovery process that removes enough solvent from industrial wipes for them to meet the ''no free liquid'' condition. Generators must transport the industrial wipes in containers that are designed, constructed, and managed to minimize loss to the environment. This provision encourages use of technologies that remove more solvent than processes such as hand wringing would; it is an effort to increase solvent recovery and resource conservation, as well as a way to minimize solvent going into laundries' wastewater or into landfills. As we are proposing a similar condition for conditionally-excluded industrial wipes going to disposal, more detailed discussion of this provision, as well as other options EPA is considering can be found above in Section V.B.9. Note, however, that reusable solvent-contaminated wipes would not be required to meet the labeling requirement described in that section, as labels are not required for reusable wipes elsewhere.

b. Request for Comment

EPA seeks comment on whether intra-company shipments of industrial wipes containing free liquids should be allowed under the conditions of the exclusion from the definition of solid waste and whether this provision would be likely to facilitate the recovery of hazardous solvents. EPA also seeks comment both on whether the additional conditions should be included and on whether we should expand the provision to allow industrial wipes, under the conditional exclusion from the definition of solid waste, to be sent with free liquids to third-party solvent-extraction facilities. Both options are discussed in Section V.B.9.

9. Proposed Conditions for Management at Handling Facilities

a. Proposed Condition

As described for disposable industrial wipes, generators would have the primary responsibility for assuring that their industrial wipes meet the conditions for the proposed exclusion from the definition of solid waste. Additionally, handling facilities which receive and process reusable industrial wipes, such as industrial laundries, would also need to meet certain minimum conditions for the wipes to remain excluded from the definition of solid waste. The first condition is a container standard for the time between when the industrial wipes arrive on site and when the facility first introduces them into their process. The laundry's process begins when the laundry begins to handle the wipes. For example, at many laundries, the wipes are sent through a counting machine first, before they are cleaned, to record how many wipes the generator has sent to be cleaned. In this example, wipes would enter the handling process when they are counted.

We are proposing today that, to qualify for the exclusion from the definition of solid waste for industrial wipes, the wipes would have to be stored either (a) in containers that are designed, constructed and managed to minimize loss to the environment that would meet the transportation condition in today's proposal, or (b) in non-leaking covered containers that would meet the generator accumulation conditions in today's proposal. From site visits, we expect that at the laundries, the solvent-contaminated industrial wipes will generally remain in the containers in which they were transported. However, in the case where a facility chooses to transfer the industrial wipes into another container before the wipes enter the handling process, we are proposing that industrial wipes meeting the generator condition, placement in a non-leaking covered container, would also maintain the exclusion from the definition of solid waste.

Handling facilities would also not be allowed to mismanage free liquids. For example, an industrial laundry may not introduce free liquids into their laundering process. A shipment of industrial wipes would be considered to contain free liquids either if solvent drips from the wipes or if there are free liquids in the bottom of the container of wipes. Facilities that happen to receive solvent-contaminated industrial wipes in containers with free liquids (unless they are being transported intra-company) would be required to either (a) return the container (with the wipes and liquid) to the user as soon as practicable (*e.g.*, with the next scheduled delivery), or (b) recover and properly manage any liquid solvent that arrives at the facility under federal or state hazardous waste regulations if applicable. When returning the wipes and liquids to the user, the laundry would have to transport them in the containers that meet the original shipment conditions, but would not be required to use a hazardous waste manifest.

The conditions of this proposal would require a laundry or handling facility to take necessary steps to return the wipes to compliance with the conditions of the exclusion, as described above. The mismanagement of free liquid solvents by the laundry, either by illegal disposal, by adding them to the wash, or other means, would be a violation of the conditions of the exclusion. If the exclusion is not maintained by either of the ways described above, we would consider the wipes and solvent to be a solid waste and possibly a hazardous waste and would consider the laundry to be mismanaging the wipes and/or free liquids. In addition, because the generator is originally responsible for the existence of the free liquids in wipes, it would also be potentially responsible for wipes having lost the exclusion at the handler despite the wipes being out of the generator's control at that moment.

The objective of this condition is to address situations where free liquids arrive at a handling facility such as an industrial launderer, either (a) because of percolation and gravity effects during transportation, causing the solvents to sink and saturate the wipes at the bottom of any given container; or (b) because of mismanagement of the wipes by the generator. We believe that over time this approach will ensure that wipes are handled in the most efficient manner possible to minimize the need to return wipes and free liquids to users' facilities.

b. Request for Comment

EPA seeks comment on the above conditions for reusable industrial wipes managed at handling facilities to be excluded from the definition of solid waste. EPA also requests comment on whether laundries receiving shipments of wipes that contain free liquids should be required to submit a notification to the state or EPA region implementing RCRA to inform them that the ''no free liquids'' condition, and therefore a condition of the exclusion, had not been met.

D. Recordkeeping

EPA is not proposing any specific recordkeeping requirements for either the proposed exclusion from the definition of hazardous waste for disposable industrial wipes or for the proposed exclusion from the definition of solid waste for reusable industrial wipes, since 40 CFR 261.2(f) already requires persons to provide appropriate documentation that would demonstrate that the industrial wipes are not a solid waste, or are excluded from the hazardous waste regulations.

Nevertheless, we are considering whether specific recordkeeping requirements should be included in the conditions to qualify for the exclusions proposed today for the purpose of improving implementation by the relevant regulatory authority. We are asking for comment on a number of related issues. For example, should EPA require generators to keep basic information, such as the number or volume of industrial wipes generated, where the industrial wipes were sent, and how many shipments were sent off site? In addition, should EPA require generators to certify that their shipments of industrial wipes meet either the ''no free liquids'' or the ''dry'' condition, as appropriate, and maintain those records for three years? [14] Finally, should EPA require that the generators certify that their employees are adequately trained to manage wipes stored and handled on site through compliance with generator employee training and emergency response requirements in 40 CFR part 262. Should those records be maintained for three years if such requirements were ultimately promulgated? We request information on whether the certification could easily be added onto regular business records such as a transporter's pick-up sheets or shipping papers. In addition, would such a provision increase the likelihood that generators would ensure that the processes, techniques or technologies they use would meet the applicable ''no free liquids'' or ''dry'' condition?

EPA also seeks comment on whether industrial laundries, dry cleaners, and industrial wipes handling and disposal facilities should be required to certify the condition of wipes that arrive at their facility, such as whether or not they contain free liquids. If the wipes contain free liquids, should handlers be required to record what steps they took to address this problem (such as documenting whether they removed the free liquids and properly managed the solvents or returned the saturated wipes and free liquids to the generator) and maintain these records for three years? In addition, EPA seeks comment on whether, when returning industrial wipes to their customers, handlers should be required to use a ''streamlined'' manifest to reflect the type of solvents enclosed, the weight or volume of the free liquids, the date and destination of the shipment, and acknowledgment of receipt by the generator.

Finally, EPA requests comment on whether the inclusion of these recordkeeping requirements in the rule would improve compliance with the conditions of the rule and, therefore, improve implementation of the provisions of the rule.

E. Enforcement

Under today's proposed rule, reusable industrial wipes are excluded from the definition of solid waste and disposable industrial wipes are excluded from the definition of hazardous waste if certain accumulation, transportation, and handling conditions are met. The party operating under either conditional exclusion will be responsible for maintaining the exclusion by ensuring that all the conditions are met. In the event that a condition is not met, the party managing the wipes at that time will need to remedy the situation as soon as possible in order not to jeopardize the exclusion. Facilities taking advantage of the exclusion that fail to meet one or more of its conditions may be subject to enforcement action, and the wipes may be considered to be hazardous waste from the point of their generation (*i.e.*, from the point when the generator had finished using them). EPA could choose to bring an enforcement action under RCRA § 3008(a) for all violations of the hazardous waste requirements occurring from the time the industrial wipes are generated through the time they are finally disposed of, reclaimed, or reused. States could choose to enforce for violations of state hazardous waste requirements under state authorities.

EPA believes that this approach, which treats solvent-contaminated industrial wipes that do not conform to the conditions of the exclusions as either solid waste or hazardous waste from their point of generation, provides generators, disposers, and other handlers with an incentive to handle the industrial wipes in a manner that prevents the loss of the exclusion. It also encourages each person to take appropriate steps to see that others in the management chain handle the industrial wipes so that they are legitimately disposed of, reclaimed, or reused.

For example, if a laundry operating under the exclusion from the definition of solid waste receives a barrel of reusable industrial wipes containing free liquids and mixes them with other industrial wipes without removing the free liquids, then those industrial wipes would not be excluded. Likewise, if a municipal solid waste landfill disposes of industrial wipes containing a prohibited solvent such as trichloroethylene, the disposables would not be excluded. In both cases, EPA and an authorized state could choose to bring an enforcement action against those in the management chain, including the generator, transporter, and/or receiving facility, for violations of applicable RCRA hazardous waste requirements. In these cases, the material would be a hazardous waste from the time the generator first generated it.

As with any violation, EPA and authorized states would have enforcement mechanisms available that range in severity. In addition, EPA and authorized states would have flexibility in applying these mechanisms to the various responsible parties. Enforcing agencies would use their discretion to select the enforcement mechanisms and the parties that are appropriate to a specific case and its factual circumstances. Some of the enforcement mechanisms include sending a notice of violation, ordering that the situation be remedied, or assessing fines or other penalties as appropriate.

Generators and recycling, disposal, or handling facilities claiming the exclusion must be able to demonstrate to the appropriate regulatory agency that the conditions of the exclusion are being met. In an enforcement action, the facility claiming the exclusion bears the burden of proof pursuant to 40 CFR 261.2(f), to demonstrate conformance with the conditions specified in the regulation. For disposable industrial wipes, the burden of proof falls on the generator, commercial transporter, municipal solid waste landfill, municipal waste combustor, combustion facility, or handling facility claiming the exclusion, and for reusable industrial wipes, it falls on the generator, laundry, dry cleaner, or handling facility claiming the exclusion.

Additionally, the exclusions in today's rule would not affect the obligation to promptly respond to and remediate any releases that may occur of solvents and wipes managed within the exclusion. If, for example, a hazardous solvent is spilled or released, then the solvent would be discarded. Any

[14] Three years is the standard period of time that EPA usually requires for the maintenance of records.

management of the released material not in compliance with the applicable federal and state hazardous waste requirements could result in an enforcement action. For example, a person who spilled or released a hazardous solvent, and failed to immediately clean it up, could potentially be subject to enforcement for illegal disposal of the waste. The waste could also potentially be addressed through enforcement orders, such as orders under RCRA sections 3013 and 7003.

F. Alternative Options to the Approach in Today's Proposed Rule

The approach taken in today's proposed rule, the exclusion from the regulatory definition of hazardous waste for disposable wipes and the exclusion from the regulatory definition of solid waste for reusable wipes, is one of a few that EPA is considering. The others are described below.

1. Exclusion From the Definition of Hazardous Waste for Disposable and Reusable Solvent-Contaminated Industrial Wipes

We are considering an option that would exclude reusable industrial wipes from the regulatory definition of hazardous waste rather than exclude them from the regulatory definition of solid waste, using the same conditions as those specified in today's proposed rule. This approach would not differentiate the regulatory status of solvent-contaminated industrial wipes whether they are being sent for recycling or for disposal.

Under this approach, the provisions of the rule concerning disposable solvent-contaminated industrial wipes would remain the same as in today's proposed option. For reusable solvent-contaminated industrial wipes, the conditions for complying with the rule would be the same as in today's proposed option, but the reusable solvent-contaminated industrial wipes would remain solid wastes (though not hazardous wastes) when the conditions were met.

Some stakeholders, particularly laundries and other handlers of reusable wipes, are strongly opposed to this option. They believe that they manage a commodity rather than a waste and argue that an exclusion from the definition of hazardous waste would inappropriately classify them under the regulatory definition of solid waste. These stakeholders are also concerned that if contaminated wipes being laundered and reused were to be considered a solid waste by EPA, they may become subject to state solid waste fees if states were to decide to collect such fees.

EPA requests comment on the appropriateness of this option relative to today's proposal.

2. Exclusion From the Definition of Hazardous Waste for All Disposable Solvent-Contaminated Industrial Wipes Under a Single Set of Conditions

An additional option we are considering would provide an exclusion from the definition of hazardous waste for all disposable wipes under the same conditions. The option affects only the exclusion from the definition of hazardous waste proposed today; all provisions for reusable solvent-contaminated industrial wipes described in Section V.C. would remain the same. Under this option, the Agency would not differentiate between wipes managed in municipal and other non-hazardous waste landfills or non-landfill facilities—the conditions necessary for industrial wipes to obtain an exclusion from hazardous waste regulations would be the same for both types of management. For example, solvent-contaminated wipes would not need to be ''dry'' prior to landfill disposal; rather, they would be required to contain no free liquids.

We are carefully considering this option, since it would be simpler and easier to implement and would simplify the regulations for generators of solvent-contaminated disposable industrial wipes. However, we are concerned with this option because it would allow solvents that may pose an environmental and human health risk to be placed in municipal or other non-hazardous waste landfills without meeting the 5-gram condition (*i.e.*, the ''dry'' condition) that would reduce risks. The Agency requests comment on this approach and on the assumptions we used in our landfill risk screening analyses. Specifically, are there assumptions or parameters that should be modified to reflect a more accurate estimate of the level of risk posed by contaminated wipes in landfills?

VI. Additional Benefit of the Proposed Rule: Fostering Pollution Prevention

In addition to regulatory reform in response to stakeholder concerns, we believe this proposed rule will foster pollution prevention and recycling opportunities by encouraging users of disposable industrial wipes who desire less stringent management requirements to use alternative solvents, use less solvent, or remove solvents to achieve the ''no free liquids'' or ''dry'' conditions. For instance, generators desiring to dispose of wipes in municipal or other non-hazardous waste landfills must use solvents other than the 11 specified listed spent solvents and must reduce the amount of solvent which is contained in them to a ''dry'' state. In many instances, reduction and/or substitution can result in overall cost savings to a company. In a recent study, the Chemical Strategies Partnership found that the cost of managing chemicals ranges from $1 to $10 for every dollar of chemical purchased. These management costs include liability, safety training, compliance efforts, and collection and disposal costs that would not accrue to the company if they were purchasing a non-hazardous solvent.[15] A company could also achieve savings if they were to reduce the amount of solvent they use to meet the conditions of this proposed rule.

EPA strongly encourages companies to examine the feasibility of using less solvent and/or substituting non-hazardous solvents for hazardous solvents. Various industry and government sources might be able to assist in identifying alternative sources. (*See,* for instance, EPA's Design for the Environment Web site at *www.epa.gov/dfe* or contact your EPA region or state for technical assistance.)

This proposed rule would also have the potential to increase pollution prevention because it may increase the incentive to control the amount of solvent applied to industrial wipes. For example, the use of less solvent might make it easier to meet the conditions of either exclusion. In addition, generators using significant amounts of solvent on their disposable wipes would need to extract the solvent using solvent-extraction processes in order to meet the proposed ''dry'' or ''no free liquids'' conditions, increasing the likelihood of additional solvent reuse and recovery. Opportunities already exist in the marketplace to recover and reuse the extracted solvent by either establishing an on-site solvent-extraction process or by sending the industrial wipes to an off-site solvent-extraction facility. Technologies have emerged that primarily dry clean contaminated materials and, once dry cleaned, recover excess spent solvents through reclamation. Such technologies may offer alternatives to generators for recycling or reusing both the spent solvents and the used industrial wipes. In many instances, use of these technologies can result not only in

[15] *See* Chemical Strategies Partnership Manual, *Tools for Optimizing Chemical Management.* Copies can be obtained by e-mail at: *inquiry@csp.sfex.com* or *www.chemicalstrategies.org.*

opportunities to reduce pollution, but also to reduce disposal costs.

VII. Risk Screening Analysis

A. Introduction

The discussion below summarizes the Agency's risk screening analysis for disposable and reusable industrial wipes. For specifics regarding the risk analysis or details on how it was conducted, please see the background documents in the docket for today's proposed rulemaking, particularly the risk screening assessment document, ''Estimating Risk from Disposal of Solvent Contaminated Shop Towels and Wipes in Municipal Landfills,'' March 1999.

As previously stated, several stakeholders have argued that disposing of industrial wipes containing small amounts of solvent in municipal or other non-hazardous waste landfills would not pose a substantial hazard to human health and the environment and have submitted rulemaking petitions to the Agency on this matter. Similarly, they argued that disposal of treatment residues, such as ash from incineration of disposable wipes and sludges from wastewater treatment at laundries washing industrial wipes, would not pose a substantial hazard. In response to these arguments, EPA conducted risk screening analyses for the following scenarios to evaluate the potential risks to human health and the environment:

- Direct landfilling of disposable industrial wipes,
- Landfilling of combustor ash generated from burning disposable industrial wipes in a municipal waste combustion facility, and
- Landfilling of industrial laundry wastewater treatment sludges generated from washing reusable industrial wipes.

B. What Analyses Did EPA Do?

EPA first estimated risks from exposure to the 30 F-listed solvents commonly used on industrial wipes assuming they were directly disposed of in an unlined municipal landfill. We looked at potential risks from inhalation of the solvents volatilizing from the landfill, from ingestion of groundwater contaminated by solvents leaching from the landfill, and from inhalation of solvent vapors released from contaminated groundwater during showering and other uses. We evaluated exposure to solvents volatilizing from landfills using a partitioning model to determine solvent releases and an air dispersion model to determine the air concentration at a point of exposure 75 meters from the landfill. The partitioning model estimates what fraction of the total mass of solvent degrades, volatilizes, leaches, and adheres to the material in the landfill.

The evaluation of risks from groundwater incorporated previous probabilistic analyses of groundwater fate and transport to determine the relative concentrations of contaminants in the landfill leachate and at a nearby well. The 5th percentile value from the distribution of results, which is a conservatively low ratio of leachate concentration to well concentration (*i.e.*, indicates a high well concentration relative to a given leachate concentration), was used for the analysis. The results of the probabilistic groundwater analyses were combined with partitioning model results, which determined the initial leachate concentrations, and with standard default exposure assumptions, which determined the exposure to individuals from the calculated well concentrations.

The exposure evaluation examined the sensitivity of the results to different parameters such as the size of the landfill and climatic conditions. EPA determined that the most sensitive set of conditions was exposure to children due to releases to groundwater from a small landfill in a wet climate. This worst-case scenario was used to estimate maximum allowable daily loadings for each solvent, based on not exceeding specified risk levels.

In particular, to evaluate risks, EPA used health benchmarks from its Integrated Risk Information System (IRIS), supplemented with other sources as necessary. Benchmarks for noncarcinogenic solvents are presented as reference doses (RfD) for exposures through ingestion and as reference air concentrations (RfC) for exposures through inhalation. These are concentrations which are considered to be protective of human health; therefore, the calculated exposures were compared directly to these values to determine whether there was a potential human health risk for the noncarcinogenic solvents. For carcinogens, IRIS presents cancer slope factors, which are used to calculate risk as a function of exposure dose. For this analysis, EPA used the exposure dose corresponding to a cancer risk of 1 in 100,000 (10–5) as the health benchmark for an acceptable cancer risk level.

We initially evaluated disposal of industrial wipes from one generating facility sent to one landfill. EPA then evaluated various factors, such as the number of facilities likely to use one landfill for disposal, percentage of facilities using F-listed solvents, and the percentage of facilities sending their disposable industrial wipes to landfills rather than combustors in order to extrapolate the results from the initial analysis into results which would be representative of potential actual exposures.

EPA's second analysis estimated risks from disposal of ash from incinerators burning disposable industrial wipes. EPA assumed that 99.99% of the solvent was destroyed in the incinerator (with the remainder going into the ash) to derive a solvent loading in ash for each of the 30 F-listed solvents. We then used the same landfill analysis described above to determine how much solvent would be partitioned to leachate, transported to the receiving well, and exposed to the receptor. As in the above landfill analysis, EPA then calculated what the allowable solvent loadings to an incinerator could be to determine which listed solvent ash residues could safely be disposed of in a municipal or other non-hazardous waste landfill.

EPA's third analysis was of potential risks from disposal of sludge from wastewater treatment at laundries which clean solvent-contaminated industrial wipes. For this analysis, we used the maximum of a very limited number of wastewater concentrations collected from industrial laundries by the Office of Water as part of their effluent guidelines development process. We estimated the sludge concentrations of different solvents using a partitioning model to estimate the mass of solvent in the wastewater that partitions to air, water, and sludge. Since we had wastewater data for only a limited number of solvents, we extrapolated that data to the other solvents. Once we had a solvent loading in the sludge going to a landfill, we used the same analysis described above to estimate risks.

Finally, EPA examined potential ecological risks by estimating solvent concentrations in surface water streams which are affected by groundwater contamination from landfills with solvent wastes. These estimated concentrations were then compared to available water quality criteria. The analysis was very conservative in that 100% of the solvent in groundwater was assumed to be discharged into a small stream; however, water quality criteria were available for only ten of the solvents, so the other 20 were not evaluated for ecological risks. More information on the analysis can be found in Section V of the Technical Background Document for this proposal, available in the Docket.

C. What Were the Results of the Analyses, and What Do They Mean?

1. Disposable Solvent-Contaminated Industrial Wipes Managed in Landfills

The results of the risk screening analysis for each solvent are presented as a comparison of the allowable loading to a landfill (based on meeting the previously described risk thresholds) with the projected loadings under two possible conditions: (1) Untreated industrial wipes and, (2) industrial wipes treated by a technique such as centrifuging which was assumed to remove 90% of the solvent. The detailed results are presented below in Table 6 and show that:

- 16 listed solvent constituents would not exceed risk thresholds, even without treatment,
- 8 additional listed solvent constituents would not exceed the risk thresholds if wipes were processed by solvent extraction, and
- 6 remaining listed solvent constituents would exceed the risk thresholds even if wipes were processed by solvent extraction.

As indicated earlier, there are a number of conservative factors included in the analysis. Factors which would tend to increase our estimate of risk include the use of the 5th percentile value from the distribution of ratios of leachate concentrations to well concentrations, the assumption of a small landfill in a wet climate, and the assumption that the receptor for inhalation risks is only 75 meters from the landfill. On the other hand, the use of standard default exposure assumptions, as well as some of the loading assumptions were based on best estimates, not conservative assumptions. While EPA has not done a comprehensive sensitivity analysis of all risk factors, the analysis is generally consistent with the Agency policy of using high end risk estimates (above the 90th percentile, but on the real risk distribution) as one factor in its decision making.

Another factor to note is that there is considerable uncertainty in a large number of the parameters used in the analysis. For example, there was wide variability in the estimates of how much solvent would be on each industrial wipe; the estimates of how many facilities would use a particular landfill were based on general demographic data; and the fate and transport models, as well as some of the health benchmarks, have some degree of uncertainty. While the Agency has not conducted a detailed quantitative uncertainty analysis, it is likely that the range of the uncertainty in this risk analysis covers an order of magnitude or more. The Agency specifically solicits comments on the results and the assumptions and decisions made in conducting the risk screening analysis. More information on the analysis can be found in the Technical Background Document for this proposal, available in the Docket.

TABLE 6.—EVALUATION OF SOLVENT-CONTAMINATED DISPOSABLE WIPES FOR LANDFILLING

CAS No.	Constituent (RCRA waste codes)	Loading to meet the health benchmark (kg/day, per landfill)	Loading (kg/day, per landfill)	Loading assuming centrifuging (kg/day, per landfill)	Conclusion [1]
	Noncarcinogens				
67–64–1	Acetone (F003)	1.73	4.32	0.432	Centrifuge required.
71–36–3	Butanol (F003)	1.61	1.88	0.188	Centrifuge required.
75–15–0	Carbon disulfide (F005)	0.62	1.03	0.103	Centrifuge required.
108–90–7	Chlorobenzene [2] (F002) and (D021)	0.36	1.03	0.103	Centrifuge required.
108–94–1	Cyclohexanone (F003)	64.55	1.88	0.188	Acceptable.
1319–77–3	Cresols (F004) and (D026) [2]	0.41	1.03	0.103	Centrifuge required.
75–71–8	Dichlorodifluoromethane (F001)	2.16	1.03	0.103	Acceptable.
95–50–1	1,2-Dichlorobenzene (F002) and (D070)	12.84	1.03	0.103	Acceptable.
141–78–6	Ethyl acetate (F003)	16.17	2.26	0.226	Acceptable.
100–41–4	Ethyl benzene (F003)	11.95	1.88	0.188	Acceptable.
60–29–7	Ethyl ether (F003)	4.30	1.03	0.103	Acceptable.
110–80–5	2-Ethoxyethanol (F005)	3.82	1.03	0.103	Acceptable.
78–83–1	Isobutyl alcohol (F005)	4.31	1.88	0.188	Acceptable.
67–56–1	Methanol (F003)	5.90	3.20	0.320	Acceptable.
78–93–3	Methyl ethyl ketone (F005) (D035)	0.32	3.67	0.367	Unacceptable.
108–10–1	Methyl isobutyl ketone (F003)	0.03	1.03	0.103	Unacceptable.[3]
98–95–3	Nitrobenzene (F004) and (U169)	0.043	1.03	0.103	Unacceptable.
110–86–1	Pyridine (F005) (D038)	0.006	1.03	0.103	Unacceptable.
127–18–4	Tetrachloroethylene (F002) [2] (D039)	5.83	4.42	0.442	Acceptable.
108–88–3	Toluene (F005)	2.14	5.08	0.508	Centrifuge required.
71–55–6	1,1,1-Trichloroethane (F002)	15.81	9.02	0.902	Acceptable.
76–13–1	1,1,2-Trichlorotrifluoroethane (F002)	403.37	5.17	0.517	Acceptable.
75–69–4	Trichlorofluoromethane (F002) and (U121)	16.05	3.48	0.348	Acceptable.
1330–20–7	Xylenes (total) (F003)	6.18	1.88	0.188	Acceptable.
	Carcinogens				
71–43–2	Benzene (F005) (D018) [2]	0.24	1.03	0.103	Centrifuge required.
56–23–5	Carbon tetrachloride (F001) (D019) [2]	3.0	1.03	0.103	Acceptable.
75–09–2	Methylene chloride (F002)	0.39	9.54	0.954	Unacceptable.
79–46–9	2-Nitropropane (F005)	0.003	1.03	0.103	Unacceptable.
79–01–6	Trichloroethylene (F002) (D040) [2]	27.66	1.03	0.103	Acceptable.
79–00–5	1,1,2-Trichloroethane (F002)	0.83	1.03	0.103	Centrifuge required.

[1] For this analysis, the human health benchmarks were a hazard quotient of 1 for a non-carcinogen or a carcinogenic risk of 10^{-5}. Values above these numbers were deemed to pose an unacceptable risk to human health.

[2] One of those constituents which cannot be disposed of in a municipal or other non-hazardous waste landfill under today's proposal because they exhibit the toxicity characteristic instead of because of the outcome of the risk screening analysis. For further discussion, see Section V.B.5.

[3] Methyl isobutyl ketone is listed for its characteristic of ignitability and, therefore, when it is mixed with solid waste, is no longer considered hazardous waste unless it continues to display its characteristic. Therefore, although this risk screening analysis lists MIBK as Unacceptable, a wipe containing it can be disposed of in a municipal or other non-hazardous waste landfill if it meets the other conditions.

2. Ash From Incineration of Disposable Solvent-Contaminated Industrial Wipes Managed in Landfills

Even though the analysis of risks from disposing of incinerator ash in landfills was conservative by assuming that all of the solvent that was not destroyed went into the ash (as opposed to some of it being emitted from the stack) and that the ash was from a small combustion unit (meaning that a higher percentage of the total amount of material being burned consisted of wipes), the analysis still indicated that none of the solvents would exceed the health benchmarks if the ash were disposed of in a landfill.

3. Sludge From Wastewater Treatment at Industrial Laundries and Managed in Landfills

This analysis indicated that only one constituent, 2-nitropropane, would be present in sludge at a level which would reach the allowable health benchmark. Even for this highly toxic solvent, the loading in sludge (0.004 kg/day) just barely exceeded the allowable loading (0.0033 kg/day). In this case, the exposure route of concern is inhalation of the solvent which has volatilized from the landfill. For the reasons previously cited (receptor only 75 meters from the landfill, selection of the highest wastewater concentration value, etc.), we believe that a more rigorous risk assessment would determine that 2-nitropropane would not have exceeded the allowable loading for sludge from wastewater treatment.

An August 15, 2002 letter from representatives of the Association of Nonwoven Fabrics Industry (INDA) and the Secondary Materials and Recycled Textiles Association (SMART) provides information that suggests that the amount of solvent in reusable industrial wipes is substantially greater than the amount EPA used in conducting our risk screening analysis for this proposed rulemaking.[16] Based on this information, the letter questions whether a specific concentration limit should be placed on the amount of solvent remaining in reusable industrial wipes rather than relying on the ''no free liquids'' condition. It also suggests that most of this solvent will end up in the sludge that is generated from the treatment of wastewater from industrial launderers and will present more of a risk than EPA's risk screening assessment would indicate. Accordingly, the Agency is evaluating the issues raised in the letter to determine if there is a need to impose additional conditions to address risks posed by the disposal in municipal or other non-hazardous waste landfills of sludges generated by industrial laundries.

4. Ecological Assessment

The analysis projected that none of the solvents would exceed their respective water quality criteria despite the conservative assumptions that all of the solvent released in landfill leachate would reach a small stream.

D. What External Review Was Done of the Risk Screening Analysis?

In addition to conducting and reviewing the risk screening analysis internal to EPA, three independent experts provided an external peer review of the analysis of risks from constituents once they had been disposed of in a landfill. These reviewers did not evaluate the assumptions behind the loadings of solvents assumed to be sent to the landfill.

These reviewers indicated that the analysis could over predict risk because (1) the partitioning model accounts for too little degradation in a landfill, (2) degradation once a constituent leaves the landfill is not considered, and (3) the toxicity of trichloroethylene[17] may be overestimated. On the other hand, the reviewers indicated that the analysis could under predict risks because (1) parameters other than the ones for which a sensitivity analysis was conducted could be more sensitive in predicting risk, (2) effects from solubilization by organic compounds were not considered, (3) additional exposure pathways could contribute additional risk, and (4) the carcinogenicity of tetrachloroethylene was not considered. The peer reviewers full comments are presented in the docket. EPA has not yet addressed these comments, but will address them in concert with addressing public comments on the risk screening analysis, including the public's comments on the peer reviewers' comments.

In addition, the Integrated Waste Services Association commented on the analysis of risks from ash disposal. They found the analysis overly conservative; however, since the analysis did not indicate any risks from this waste, EPA does not believe it is necessary at this time to further refine this part of the risk analysis since further refinement would not change our general conclusions.

We request comment on the risk screening analysis discussed in this section of the preamble and discussed in more detail in Section V of the Technical Background Document. In particular, we seek comment concerning:

—The assumptions used in each of these analyses; *i.e.,* landfill, ash and sludges
—The data used in modeling risks
—The methodology used in each of these analyses
—Conclusions and recommendations
—The comments provided by the three external peer reviews
—Or any specific aspect of the risk screening analyses.

VIII. History and Relationship to Other Rulemakings

A. Proposed Effluent Guidelines for Industrial Laundries

On December 17, 1997, EPA proposed to establish pretreatment standards and effluent limitations guidelines (ELGs) for industrial laundries (62 FR 66181).[18] In conducting investigations of effluents discharged from industrial laundries to support the development of the proposed rulemaking, EPA found that the effluent from many industrial laundries contain concentrations of solvents known from site visits to be

[16] *See* ''8/15/02 letter from Bourdeau to Dellinger;'' ''Assessing Management of Sludge Generated by Industrial Laundries,'' EPA OSW, May 9, 2000; and our final risk screening analysis document, ''Estimating the Risk from the Disposal of Solvent Contaminated Shop Towels and Wipes in Municipal Landfills,'' USEPA, March 1999.

[17] EPA's Office of Research and Development is currently in the process of developing a new toxicity assessment for trichloroethylene.

[18] The proposed effluent guidelines would have established numerical limitations that are based on technology treatment of industrial laundry wastewater for 11 priority and non-conventional pollutants. These standards were based on a determination of the degree to which pollutants pass through or interfere with POTWs; the best available technology economically achievable for Pretreatment Standards for Existing Sources; and the best demonstrated available control technology for Pretreatment Standards for New Sources. The proposal also provided regulatory relief for facilities which launder less than 1 million pounds of incoming laundry per calendar year and less than 255,000 pounds of industrial wipes.

used in conjunction with industrial wipes identified as generators of solvent-contaminated wipes. Under the proposed effluent guideline rule, EPA proposed to limit the discharge of certain pollutants from existing and new industrial laundries into U.S. waters and POTWs. The proposed rule applied to ''any facility that launders industrial textile items from off site as a business activity.''

On August 18, 1999, EPA published a **Federal Register** notice withdrawing its proposed rule for the industrial laundry sector (64 FR 45072). EPA's primary basis for the withdrawal was that indirect discharges from industrial laundries contain very small amounts of toxic pollutants that are not removed by POTWs. Comments on the proposed rule and subsequent data collection resulted in the following conclusions: (1) Laundry discharges are not as toxic as estimated at proposal, (2) POTWs provide better treatment of the toxic pollutants remaining in laundry discharges than estimated at proposal, and (3) many former problems have been resolved by local pretreatment authorities.

EPA concluded that to the extent isolated problem discharges occur, existing pretreatment authority allows local POTWs to respond to problems effectively. Local POTWs have the authority to set local limits for individual indirect dischargers to prevent (1) pass through of pollutants through the POTW into waters of the U.S. and (2) interference both with POTW operations and sludge disposal options. EPA's pass-through analysis for the rulemaking determined that there is not significant pass-through of pollutants from industrial laundries to waters of the U.S. EPA also concluded that removing certain organic pollutants from industrial wipes before they are washed would be a better way to control their presence in effluent discharges.

B. Hazardous Waste Listing Determination for Spent Solvents

Five hazardous waste listings for specific spent solvents have been promulgated by EPA to date: F001, F002, F003, F004, and F005. These listings are found in 40 CFR 261.31. The criteria used by the Agency to determine whether or not a waste is hazardous are explained in the December 31, 1985 **Federal Register** notice (50 FR 53316). This rule also applies to P- and U-listed commercial chemical products that correspond with the F001–F005 listings when those products are spilled and, therefore, become waste.

The December 1985 **Federal Register** notice amended the original solvent listings to include spent solvent mixtures when the solvent, before it is used, contains 10 percent or more of total listed solvents. In addition, the notice clarified that the listings apply to ''spent'' solvents—those that are no longer fit for use without being regenerated, reclaimed, or otherwise processed, and clarified that the listings cover only solvents used for their solvent properties (*i.e.,* ''to solubilize (dissolve) or mobilize other constituents'').

On November 19, 1998, EPA published a determination not to list as hazardous wastes 14 chemicals that are used as solvents. These 14 chemicals are cumene, phenol, isophorone, acetonitrile, furfural, epichlorohydrin, methyl chloride, ethylene dibromide, benzyl chloride, p-dichlorobenzene, 2-methoxyethanol, 2-methoxyethanol acetate, 2-ethoxyethanol acetate, and cyclohexanol. EPA determined that waste solvents containing these chemicals are often hazardous wastes because they exhibit a characteristic under 40 CFR part 261, subpart C, or because they contain other solvent wastes that are listed as hazardous and, therefore, did not believe it was necessary to list them separately. However, in some cases, EPA determined that the solvent waste did not meet the criteria for listing as a hazardous waste. For additional detail regarding the technical basis for the decision, *see* 63 FR 64371, November 19, 1998.

IX. State Authorization

A. Applicability of Rule in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified states to administer their own hazardous waste programs in lieu of the federal program within the state and to issue and enforce hazardous waste permits. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized states have primary enforcement responsibility. The standards and requirements for state authorization are found at 40 CFR part 271.

Prior to enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a state with final RCRA authorization administered its hazardous waste program entirely in lieu of EPA administering the federal program in that state. The federal requirements no longer applied in the authorized state, and EPA could not issue permits for any facilities in that state, since only the state was authorized to issue RCRA permits. When new, more stringent Federal requirements were promulgated, the state was obligated to enact equivalent authorities within specified time frames. However, the new Federal requirements did not take effect in an authorized state until the state adopted the federal requirements as state law.

In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), which was added by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized states at the same time that they take effect in unauthorized states. EPA is directed by the statute to implement these requirements and prohibitions in authorized states, including the issuance of permits, until the state is granted authorization to do so. While states must still adopt HSWA related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states until the states do so.

B. Effect on State Authorizations

The proposed conditional exclusions would not be HSWA regulations. Therefore, the conditional exclusions would not be immediately effective in authorized states. They would be applicable only in those states that do not have final authorization for the base (non-HSWA) portion of the RCRA program.

Authorized states are required to modify their programs only when EPA enacts federal requirements that are more stringent or broader in scope than existing federal requirements. RCRA section 3009 allows the states to impose standards more stringent than those in the federal program (*see also* 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, that are considered less stringent than previous federal regulations. Today's proposed conditional exclusion from the definition of hazardous waste for disposable solvent-contaminated industrial wipes is considered less stringent than the existing federal regulations because it would exclude certain materials now regulated by RCRA subtitle C. Thus, states, except as described below, would not be required to adopt the conditional exclusion from the definition of hazardous waste if the proposal is finalized. However, because EPA believes that today's proposal is a better approach to controlling industrial wipes, the Agency would encourage states to adopt this rule, if promulgated, as soon as possible.

The current federal policy with regard to reusable solvent-contaminated

industrial wipes has been to defer the determination of their regulatory status to the states and EPA regions. This deferral has resulted in the development of various state programs. Today's proposal is generally consistent with these state policies. However, it is possible that conditions that would be imposed by the proposed rule could be more stringent than some existing state programs. As a result, these authorized states would be required to modify their programs when we promulgate a final rule. We seek comment on whether states consider the conditions posed by today's proposed rule to be more stringent than their current approaches to regulating reusable solvent-contaminated industrial wipes.

X. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

1. Economic Analysis

Under Executive Order 12866 (58 FR 51735), the Agency must determine whether this regulatory action is ''significant'' and, therefore, subject to formal review by the Office of Management and Budget (OMB) and to the requirements of the Executive Order, which include assessing the costs and benefits anticipated as a result of the proposed regulatory action. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may (1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and 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. Pursuant to the terms of Executive Order 12866, the Agency has determined that today's proposed rulemaking is a ''significant regulatory action'' because it raises novel legal or policy issues and because of its significance to a large number of interested stakeholders.

2. Affected Economic Sub-Sectors

We estimated the potential national economic impacts of today's proposal. Our ''Economics Background Document'' is available for public review and comment from the RCRA Docket (see public access instructions at the introduction to this notice). The document presents the methodology, detailed computation spreadsheets, and sources of the data applied in our economic analysis. We welcome the general public and affected industries to provide us with comments and questions about our economic analysis, in the interest of improving the key data elements and assumptions.

The scope of the expected economic impacts modeled in our study includes (i) potential cost savings, as well as (ii) potential implementation costs, for both the ''disposable'' and ''reusable'' industrial wipes markets. Our economic study models these impacts as potentially affecting seven economic sectors (manufacturing, retail trade, information, administrative services, other services, public administration, and transportation & utilities). These economic sectors consist of 15 economic sub-sectors, representing 121 industries which we suspect may in part or in whole generate or manage spent solvent industrial wipes in the U.S. economy. As enumerated in an introductory section of this notice, most of the industries which use industrial wipes are in the manufacturing sector, and use industrial wipes primarily for degreasing and cleaning operations.

Today's proposal could potentially affect 13 of these 15 sub-sectors as generators of spent solvent industrial wipes. These 13 sub-sectors consist of a total of 471,000 facilities, 13.2 million employees, and $2.7 trillion in annual revenues. Ninety-six percent of the companies affected are small businesses and they own 83% of the facilities in these sub-sectors. We estimate that a subset of 215,000 of these facilities use RCRA-regulated solvents in conjunction with industrial wiping operations. Introducing an uncertainty range of 50% to 100% as to how many states may ultimately adopt these program changes and counting only facilities which may be regulated as ''small quantity'' or ''large quantity'' generators (according to the calendar month waste generation quantity categories defined in the RCRA hazardous waste regulations at 40 CFR 262) produces an estimated range of 63,000 to 153,000 potentially affected spent solvent industrial wipes generators.

In addition to generators of industrial wipes, up to 1,175 industrial laundries supply and launder reusable industrial wipes, employing 60,000 workers and earning $2.9 billion in annual revenue (of which $408 million is from the industrial wipes business). Industrial launderers are primarily small businesses (94%) which operate 47% of this industry's facilities. Furthermore, up to 10,600 solid waste management establishments (which have 210,000 employees, earn $31 billion in annual revenue, and are 95% small business owned) could also be affected by these proposed changes. Introducing an uncertainty range of 50% to 100% for state adoption of these changes produces an estimated range of 590 to 1,175 industrial laundries, and 5,300 to 10,600 solid waste management establishments potentially affected by the proposed regulations. Adding these ranges together produces a total estimated count of 68,000 to 164,000 potentially affected solvent industrial wipes generator and management facilities.

a. Industrial Wipes Market

We estimate the size of the U.S. industrial wipes market at 9.6 billion wipes used in 2001. Our economic study characterizes this market as consisting of two sub-markets of industrial wipes products with respective annual market share of 88% reusable wipes (8.5 billion uses) and 12% disposable wipes (1.1 billion sold). In some industrial wiping operations, these two product lines may be price-competitive substitutes, but other factors such as lint content, absorbency, and durability often outweigh price as a factor in determining wipes selection for any particular industrial wiping operation.

b. Economic Analysis Framework

The proposed rule will affect these two sub-markets differentially relative to the current regime because of the significant difference in the current state-level and EPA regional-level regulatory status of each respective sub-market category. Spent disposable industrial wipes are currently managed as RCRA hazardous waste, whereas reusable industrial wipes are not usually managed as RCRA hazardous wastes or even solid wastes, depending on state regulations. Consequently, an exclusion from RCRA hazardous waste regulation is expected to provide the disposable wipes market with an annual net cost savings benefit relative to current RCRA regulatory compliance costs, whereas the solid waste exclusion will not provide the reusable wipes market with similar economic benefit, depending on the extent of free liquid solvents captured and recycled from solvent-contaminated reusable industrial wipes.

For the purpose of estimating this differential economic impact outcome

and potential net national economic effect on the industrial wipes market, our economic study included modeling the anticipated induced shift in respective wipes market share, resulting from direct cost savings and direct implementation cost pass-through on the respective wipes prices (*i.e.,* on wipes' life cycle usage costs, including costs of spent wipes disposal). In support of modeling induced market impacts, our economics study presents the findings of a meta-analysis of published own- and cross-price elasticity of demand coefficients, as applied in our study for purpose of simulating potential changes in wipes' market share. Our economic analysis also examined the potential composite outcome of direct and induced impacts of the solid waste exclusion on the industrial laundry industry, as suppliers of reusable industrial wipes.

Because we do not have exact information for every key data element applied, the economic study presents a sensitivity analysis over a ''lower-bound,'' ''most-likely,'' and ''upper-bound'' range in numerical values assigned to key baseline and exclusion compliance parameters, such as number of facilities using solvent wipes, percentage of solvent wipes not currently stored and transported in closed containers, percentage of solvent wipes generated which are not ''dry'' (*i.e.,* contain less than five grams solvent per wipe), price-elasticity of demand for industrial wipes, percentage of states which may adopt the proposed exclusions, and percentage of solvent wipes containers containing free liquids.

c. Impact Estimation Findings

The anticipated national net effect of the proposal is to provide the U.S. economy with $28 million to $72 million in average annual net benefits, consisting of four impact components: (1) $13 million to $20 million in annualized incremental cost for compliance with the conditions of the exclusions (*e.g.,* costs for purchasing accumulation and transportation containers for used industrial wipes); (2) $40 million reduction in annual direct costs for RCRA regulatory compliance; (3) $8 million to $36 million per year in avoided air pollution from increase in capture of free liquid solvents from used industrial wipes; and (4) $0.3 million to $9 million per year in avoided fire damages to facilities from spontaneous combustion of solvent-contaminated industrial wipes. Compared to annualized implementation costs as a numerical ratio, the $8 million to $85 million in annualized total benefits represent a benefit-cost ratio of 2.4 to 6.5. The annualized net benefits consist of $33 million to $37 million to generators for managing spent disposable industrial wipes and an uncertainty range of $35 million in annual benefits to $4 million in annual cost to generators managing reusable industrial wipes (depending upon the extent these costs may be shared with industrial laundries and the extent of reuse of captured solvents).[19]

The induced market impact simulated in the economic analysis estimates a potential 53% to 59% decrease in the life-cycle unit cost for using disposable industrial wipes (taking into account the cost of new wipes purchase plus spent wipes disposal), and a 0% to 17% increase in the effective unit cost of reusable wipes, associated with a potential induced reduction in reusable wipes' national market share of 3% to 15% for the fraction of the industrial wipes market potentially affected by the exclusions.

3. Economic Impact of Today's Other Proposed Exclusion Options

For the reasons explained below and in the ''Economics Background Document,'' we did not prepare a separate quantitative estimate of each of the following alternative options, because they are expected to fall incrementally within or near the impact estimation range for the main option. Below we describe the potential impacts of each of these options in qualitative terms.

a. Exclusion From the Definition of Hazardous Waste for Disposable and Reusable Solvent-Contaminated Industrial Wipes

This option would exclude both disposable and reusable solvent-contaminated industrial wipes from the definition of hazardous waste instead of making a distinction between the types of wipes and excluding disposable industrial wipes from the definition of hazardous waste while excluding reusable solvent-contaminated industrial wipes from the definition of solid waste. No aspect of the proposed rule would change for generators and handlers of disposable wipes. Generators and handlers of reusable solvent-contaminated wipes would be managing a solid waste under this option, but would be subject to the same conditions as those proposed today for the exclusion from the definition of solid waste and, therefore, anticipated net cost savings for this option would remain the same relative to the main option proposed today.

b. Exclusion for All Disposable Solvent-Contaminated Industrial Wipes Under a Single Set of Conditions

This option would not differentiate between disposable wipes managed at a landfill compared to a non-landfill facility. Disposable solvent-contaminated wipes would be excluded from hazardous waste regulations provided the wipes were stored in covered containers while on site, and as long as the wipes do not contain free liquids prior to sending them off site in closed containers that are marked ''Excluded Solvent-Contaminated Wipes.''

Under this option, greater regulatory relief would occur for generators of disposable industrial wipes relative to the main option because (1) they would not have to meet the ''dry'' condition that is proposed under our main option and (2) they would not have to worry about the types of solvent they used. Therefore, some number of generators would not have to spend additional resources to meet this ''dry'' condition (relative to the ''no free liquids'' condition), or switch to other solvents if they so desired to manage their wipes in a municipal or other non-hazardous waste landfill.

B. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 2127.01.

The information requirements established for this action, and identified in the Information Collection Request (ICR) supporting today's proposed rule, are largely a self-implementing process. This process would ensure that: (i) Handlers of solvent-contaminated industrial wipes are held accountable to the proposed requirements of the conditional exclusions; and (ii) inspectors can verify compliance when needed. For example, the proposal would require that solvent-contaminated industrial wipes contain no free liquids prior to being transported off site by generators for subsequent management. The conditions would also require

[19] EPA's cost estimates assumed that generators would transport solvent-contaminated wipes to laundries in closed containers despite the proposed performance standard. If industry can find cheaper methods of meeting the performance standard, the costs of reusable wipes management will be less than this estimate.

generators to properly label all containers of wipes sent for disposal.

In estimating ICR burden, EPA used the current state policies as the baseline since most states have specific policies addressing these materials. ICR burden is reduced because generators of solvent-contaminated wipes obtain regulatory relief from existing subtitle C hazardous waste regulatory requirements, such as use of a manifest in transporting these materials off site to a handling facility.

EPA has carefully considered the burden imposed upon the regulated community by the proposed regulation. We estimate a burden savings of 48,000 hours and approximately $1.9 million annually. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number RCRA–2003–0004. The public docket is available for viewing at the RCRA Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the RCRA Docket is (202) 566–0270. An electronic version of the public docket is available through EPA Dockets (EDOCKET) at <*http://www.epa.gov/edocket*>. Use EDOCKET to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select ''search,'' then key in the docket ID number RCRA–2003–0004. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after November 20, 2003, a comment to OMB is best assured of having its full effect if OMB receives it by December 22, 2003. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For the purposes of assessing the impacts on small entities of today's rule, *small entity* is defined as (1) a small business as defined by the Small Business Administration at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I hereby certify that this action will not have a significant economic impact on a substantial number of small entities. We have determined that about 83% of the 63,000 to 153,000 establishments in the 13 industries which use industrial wipes and which are potentially subject to today's proposed rulemaking are owned and operated by small companies. In addition, approximately 47% of the 1,175 industrial laundry establishments which supply reusable industrial wipes are owned by small companies. Based on the economic analysis summarized elsewhere in this preamble, we have estimated that a relatively small proportion of potentially affected small businesses (*i.e.*, up to 3% or 16 small industrial laundries) may be adversely impacted by this proposed solid waste exclusion at or above a 3% threshold of annual business receipts (revenues).

Although this proposed rule will not have a significant impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. In addition to the economic analysis, we conducted outreach activities to ensure that small business interests were informed of our potential actions, and to solicit input and comment from small business interests during our development of the proposal. We had a number of meetings with small business stakeholders, including representatives of the industrial laundries trade associations, to discuss the formulation of this proposed rule, and to obtain small business feedback. In these meetings, stakeholders expressed concerns about the implementation of this rule, and asked questions about the conditions being considered for the proposed regulation.

As part of these outreach efforts, the Agency held a meeting with members of the small business community on August 10, 1998. Following EPA's presentation, the stakeholders attending the meeting discussed potential issues and concerns they envisioned could arise with regard to the implementation of the Agency's preliminary options, particularly with regard to the ability of small businesses to comply with the options. Participants provided their initial reactions to the preliminary options, identified potential issues of concern and, in some cases, offered potential changes or improvements. A summary of the August 10, 1998 meeting can be found in the docket for today's proposed rulemaking.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may

result in expenditures by state, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year.

Before a Federal regulatory agency such as EPA promulgates a rule for which a written statement is needed, section 205 of the UMRA generally requires the agency to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA, a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's proposed rule contains no federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local, or tribal governments. In addition, EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments. Furthermore, today's proposed regulation will not impose incremental costs in excess of $100 million to the private sector, or to state, local, or tribal governments in the aggregate, in any one year, as based on the findings of the ''Economics Background Document,'' described elsewhere in this preamble.

Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.''

This proposed rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This proposed rule would provide a net reduction in RCRA regulatory burden to generators and handlers of solvent industrial wipes. For the proposed exclusions, both the annual direct implementation costs to affected private sector entities and the potential impact on annual state government revenues do not exceed the ''substantial'' compliance cost threshold defined in this Executive Order. This proposal would preempt state and local law that is less stringent for solvent-contaminated wipes. Under the RCRA, 42 U.S.C. 6901 to 6992k, the relationship between the states and the national government with respect to hazardous waste management is established for authorized state hazardous waste programs, 42 U.S.C. 6926 (section 3006), and retention of state authority, 42 U.S.C. 6929 (section 3009). Under section 3009 of RCRA, states and their political subdivisions may not impose requirements less stringent for hazardous waste management than the national government. Thus, Executive Order 13132 does not apply to this rule.

However, to incorporate the state perspective in the proposal, Agency personnel met with state representatives from the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) in July of 1998 to review, discuss and obtain feedback from them on EPA thinking at the time. The state representatives recommended that solvent-contaminated reusable wipes contain no free liquids when transported off site to an industrial laundry or dry cleaner and that the wipes be transported in closed containers that meet DOT requirements. Similarly, most states recommended that disposable wipes continue to be regulated under RCRA subtitle C (hazardous waste) regulations. The states continued to participate on the workgroup developing today's proposal and their input was received and considered throughout the regulation development process.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and state and local governments, EPA specifically solicits comments on this proposed rule from state and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by Tribal officials in the development of regulatory policies that have tribal implications.''

EPA has concluded that this proposed rule may have tribal implications to the extent that generating facilities on tribal lands using solvent-contaminated industrial wipes or handlers of these materials located on tribal lands could be affected. However, this proposed rule will neither impose substantial direct compliance costs on tribal governments nor preempt tribal law.

EPA did not consult directly with representatives of Tribal governments early in the process of developing this regulation.[20] However, as described above, EPA did conduct an extensive outreach process with industry, including small business. Thus, we believe we have captured concerns that also would have been expressed by representatives of Tribal governments.

EPA specifically solicits additional comment on this proposed rule from Tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonable alternatives considered by the Agency.

The proposed rule is not subject to the Executive Order because it is not

[20] ''Representatives of Tribal governments'' include non-elected officials of Tribal governments and representative authorized national organizations.

economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. EPA believes that this proposal will not increase exposure of solvents to the public, adults or children.

The public is invited to submit or identify peer-reviewed studies and data, of which the Agency may not be aware, that assess results of early life exposure to solvent-contaminated industrial wipes.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This proposed rule is not subject to Executive Order 13211, ''Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law 104–113, Section 12(d) (15 U.S.C. 272 *note*) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking involves environmental monitoring or measurement consistent with the Agency's Performance Based Measurement System (PBMS). EPA proposes not to require the use of specific, prescribed analytic methods. Rather, the Agency plans to allow the use of any method that meets the prescribed performance criteria. The PBMS approach is intended to be more flexible and cost-effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified.

EPA welcomes comment on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

Appendix A to Preamble—Demographics of the Industrial Wipes Industry

I. General Description of the Industrial Wipes Industry

A. Types of Industrial Wipes

The term ''industrial wipes'' as used in this preamble represents a heterogeneous group of products which come in a wide variety of types and brands to meet a broad range of application needs. The major division is between reusable shop towels, which are laundered or dry cleaned and used again, and disposable wipes and rags that are used for a limited number of applications and then discarded. Disposable wipes include both non-woven wipes and woven rags. The universe of materials affected by this proposed rule encompasses both reusable and disposable industrial wipes which are used by numerous industries in conjunction with solvents to clean surfaces, parts, accessories, and equipment. Industrial wipes are distinguished by their respective composition, durability, uses, and disposal methods.

The Agency has chosen to use the term ''industrial wipe'' throughout the preamble for the sake of simplicity. However, because of the many terms currently used throughout industry to identify industrial wipes, EPA believes it is helpful to provide an explanation of industry terms to set forth the Agency's understanding as we developed this proposal:

An *industrial shop towel* is a woven textile consisting of cotton or polyester blends. These materials are reusable items and are generally laundered or dry-cleaned a number of times before they have outlived their useful life and must be discarded. Shop towels are rented by industrial launderers to manufacturing, automotive, chemical, and other similar facilities to use for heavy-duty cleaning and wiping. Soiled shop towels are either washed or dry-cleaned at commercial laundry facilities.

An *industrial wipe* is a non-woven towel consisting of wood pulp, polyester blends or 100 percent polypropylene. These materials come in all sizes and thicknesses. They generally are designed for one time use and are used to wipe small quantities of solvents off hands, tools, equipment, or floors.

An *industrial rag* is a non-homogeneous material consisting of cotton or polyester blends. Rags are made from old clothing or from cloth remnants from textile mills, and vary in size and type of fabric.

Paper towels also are sometimes used in conjunction with solvents in the workplace. These materials are made from wood pulp with binders.

The wipe suitable for each application depends on a number of factors. The amount of lint allowed in a task plays a large role, because some electronic or printing applications cannot tolerate any lint, while other applications can tolerate large amounts of lint. Absorbent capacity is also another important factor in some tasks, while not in others. Durability is important in some tasks, such as those that require heavy scrubbing, while often not important in tasks where lint or absorbency is more important. Durability does not only refer to the physical strength of the wipe, towel, or rag, but also to its ability to withstand strong solvents.

B. Additional Data

Additional data collected from site visits, literature searches, and industry include information regarding the numbers of wipes used daily, types of solvents used, type of operation (*i.e.,* whether cleaning operations involve the use of small or considerable amounts of solvent per wipe); preference for disposable versus reusable wipes; and estimated total volumes of wipes used annually. A detailed discussion of these findings can be found in the Technical Background Document for this proposed rule, as well as other documents supporting this rule that are found in the Docket. Key findings include:

- Number of wipes used daily by a facility can vary from 50 to 6,000.
- Many facilities appear to use ignitable-only solvents (D001) that could be classified as characteristically hazardous when the wipes no longer can be used; most facilities also appear to use solvent blends consisting of two or more constituents.
- Most industrial sectors appear to only use a small amount of solvent per wipe: Auto body repair; electronics; furniture manufacturers; fabricated metals; and organic and inorganic chemical manufacturers. Conversely, the printing sectors, automobile manufacturers, parts of the military, and defense industries often use large amounts of solvent on each wipe.
- Using wipes sales and usage volume figures provided by wipes suppliers and industry users, coupled with U.S. Bureau of Census counts of related facilities, EPA estimates that approximately 9.6 billion industrial wipes are used by industry annually (88 percent reusable wipes and 12 percent disposable wipes) in 13 different industries. EPA further estimates that approximately 3.8 billion of these industrial wipes are used in conjunction with solvents in industrial cleaning and degreasing operations.

Appendix B to Preamble—Memorandum From Michael Shapiro

February 14, 1994

Memorandum

Subject: Industrial Wipers and Shop Towels under the Hazardous Waste Regulations

From: Michael Shapiro, Director, Office of Solid Waste

To: Waste Management Division Directors Regions I–X

We have received numerous questions about the regulatory status of used industrial wipers and shop towels (''wipers'') under the Resource Conservation and Recovery Act (RCRA) regulations from the users and launderers of these wipers, and the

regulatory agencies responsible for implementing the RCRA regulations. In addition, manufacturers, marketers and users of non-reusable wipers (*i.e.,* wipers that are not laundered, such as paper or other on-textile products) have been requesting clarification on the status of these materials as well. The purpose of this memorandum is to update you on this issue, and to reaffirm our policy regarding the regulatory status of these materials.

Ongoing Efforts

There are currently several activities within EPA that may affect wipers. The Definition of Solid Waste Task Force, as part of their dialogue with industry, environmental groups, State agencies, and EPA Regions, has been evaluating the RCRA regulations affecting launderable and disposable wipers. In addition, OSW has been dealing with the issue of wipers as we continue our efforts with the Hazardous Waste Identification Rule. As you may recall, EPA requested and received comment on alternative approaches for addressing wipers contaminated with listed solvent (May 20, 1992 **Federal Register;** 57 FR 21474); this proposal was later withdrawn. Finally, the Office of Water will be gathering data to support the development of effluent guidelines for industrial launderers, which handle certain types of reusable wipers.

Status of Used Wipers

Whether or not the used wipers are hazardous waste under the RCRA regulations has been a recurring question. Because there are many applications of wipers, we cannot at this time make any generic statements that all wipers are hazardous waste, or that all are not. A material that is a solid waste is by definition hazardous waste if it either (1) meets one of the listings in 40 CFR part 261, subpart D, or (2) exhibits one or more of the characteristics described in 40 CFR part 261, subpart C. Because there are no explicit listings for ''used wipers'' in part 261, subpart D, a wiper can only be defined as listed hazardous waste if the wiper either contains listed waste, or is otherwise mixed with hazardous waste. Whether or not a used wiper contains listed hazardous waste, is mixed with listed hazardous waste, only exhibits a characteristic of hazardous waste, or is not a waste at all, is dependent on site-specific factors; this is not a new policy. As a result, any determinations or interpretations regarding this diverse and variable wastestream should be made by the regulatory agency (*i.e.,* EPA Region or State) implementing the RCRA program for a particular State. This has been our long-standing policy.

One of EPA's concerns in determining whether the hazardous waste regulations apply to wipers in specific cases should be to prevent situations where someone is improperly disposing of spent solvents (or other hazardous wastes) by mixing them in with wipers, and then sending the wipers to a laundering facility or municipal landfill. This activity is clearly not allowed under the federal regulations. However, wipers that merely pick up incidental amounts of solvents may be handled in a number of ways. I have enclosed policy documents from several States and one EPA Region regarding the identification and/or management of wipers, that provide examples of how some implementing agencies have developed workable approaches to this issue. If you have additional information, or have questions, please contact Charlotte Mooney or Ross Elliott at (202) 260–8551.

Enclosures (4)
cc: RCRA Enforcement Branch Chiefs, Regions I–X
Regional Counsel, Regions I–X

List of Subjects

40 CFR Part 260

Environmental Protection, Administrative practice and procedure, Confidential business information, Hazardous materials, Recycling, Reporting and recordkeeping, Waste treatment or disposal.

40 CFR Part 261

Environmental protection, Hazardous waste, Recycling, Reporting and record keeping requirements, Waste treatment and disposal.

Dated: November 10, 2003.

Michael O. Leavitt,

Administrator.

For the reasons set out in the preamble, title 40, Chapter I of the Code of Federal Regulations, parts 260 and 261, are proposed to be amended as follows:

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921–6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

Subpart B—Definitions

2. Section 260.10 is amended by adding in alphabetical order the definitions of *Disposable industrial wipe, Industrial wipe, Industrial wipes handling facility, Intra-company transfer of industrial wipes, No free liquids, Reusable industrial wipe, and Solvent extraction* to read as follows:

§ 260.10 Definitions.

* * * * *

Disposable industrial wipe means an industrial wipe that is disposed after use without being sent to a laundry or dry cleaner for cleaning and reuse.

* * * * *

Industrial wipe means non-woven industrial wipes made of wood pulp or polyester blends; industrial shop towels, a woven textile made of cotton or polyester blends; and industrial rags, non-homogenous materials consisting of cotton or polyester blends. Industrial wipes of all kinds are used for a variety of purposes, including removing small quantities of solvents from machinery parts, hands, tools, and the floor.

* * * * *

Industrial wipes handling facility means a facility that removes solvents from industrial wipes prior to them being sent either to a laundry or dry cleaner for cleaning or to a municipal or other non-hazardous waste landfill that meets the standards under 40 CFR part 257, subpart B, municipal waste combustor, or other combustion facility.

* * * * *

Intra-company transfer of industrial wipes means the off site transportation of industrial wipes from a generator facility to another generator-owned facility that has a solvent extraction and/or recovery process for the purpose of removing sufficient solvent to ensure that the wipes contain no free liquids or less than 5 grams of solvent, as appropriate.

* * * * *

No free liquids, as used in 40 CFR 261.4(a)(24) and 40 CFR 261.4(b)(19), means that no liquid solvent may drip from industrial wipes, and that there is no liquid solvent in the container holding the wipes. Wipes that have been subjected to solvent extraction are presumed to contain no free liquids.

* * * * *

Reusable industrial wipe means an industrial wipe that after being used is sent to a laundry or dry cleaner for cleaning and reuse.

* * * * *

Solvent extraction, as used in 40 CFR 261.4(a)(24) and 40 CFR 261.4(b)(19), means an advanced extraction process such as mechanical wringers, centrifuges, or any other similarly effective method to remove solvent from industrial wipes.

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PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

3. The authority for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, 6924(y), and 6838.

Subpart A—General

4. Section 261.4 is amended by adding new paragraphs (a)(22) and (b)(19) to read as follows:

§ 261.4 Exclusions.

(a) * * *

(22) Industrial wipes that are sent to an industrial laundry, to a dry cleaner for cleaning, or to an industrial wipes

handling facility when they contain an F-listed spent solvent, a corresponding spilled P- or U-listed commercial chemical product, or when they exhibit the hazardous characteristic of ignitability, corrosivity, reactivity or toxicity when that characteristic results from the F-listed spent solvent or corresponding P- or U-listed commercial chemical products, provided that the conditions specified below are satisfied by the facility claiming the exclusion:

(i) Solvent-contaminated industrial wipes must be accumulated, stored and managed in non-leaking, covered containers;

(ii) Solvent-contaminated industrial wipes, if transported off site, must be transported in containers that are designed, constructed, and managed to minimize loss to the environment;

(iii) When laundered or dry cleaned on site or transported off site to a laundry, dry cleaner, or industrial wipes handling facility, solvent-contaminated industrial wipes must contain no free liquids or must have been treated by solvent extraction, except as stated in paragraph (a)(24)(iv) of this section. Any liquids removed from the industrial wipes must be managed according to the regulations found under 40 CFR parts 261 through 268 and 270 if discarded;

(iv) Intra-company transfer of solvent-contaminated industrial wipes containing free liquids may occur provided that the following conditions are satisfied:

(A) The transfer must occur in order to remove sufficient solvent from the industrial wipes so they meet the ''no free liquids'' condition; and

(B) The receiving facility must manage the extracted solvent according to regulations found under 40 CFR parts 261 through 268 and 270.

(v) Laundries, dry cleaners and industrial wipes handling facilities must manage the solvent-contaminated industrial wipes in non-leaking covered containers or in containers that are designed, constructed, and managed to minimize loss to the environment before the industrial wipes enter the handling process; and

(vi) If free liquids are in containers that arrive at a laundry, dry cleaner, or industrial wipes handling facility, the receiving facility must either:

(A) Remove the free liquids and manage them according to the regulations found under 40 CFR parts 261 through 268 and 270; or

(B) Return the closed container with the wipes and free liquids to the generator as soon as reasonably practicable, but no later than the next scheduled delivery.

(vii) Industrial laundries and dry cleaners may dispose of sludge from cleaning industrial wipes in solid waste landfills if the sludge does not exhibit a hazardous waste characteristic.

(b) * * *

(19) Industrial wipes that are sent for disposal to a municipal waste landfill or other non-hazardous waste landfill that meets the standards under 40 CFR part 257, subpart B, to a municipal waste combustor or other combustion facility, or to an industrial wipes handling facility when they contain an F-listed spent solvent, a corresponding spilled P- or U-listed commercial chemical product, or when they exhibit the hazardous characteristics of ignitability, corrosivity, reactivity, or toxicity when that characteristic results from the F-listed spent solvent or corresponding P- or U-listed commercial chemical products, providing that the conditions specified below are satisfied by the facilities claiming the exclusion:

(i) Solvent-contaminated industrial wipes must be accumulated, stored, and managed in non-leaking, covered containers;

(ii) Solvent-contaminated industrial wipes, if transported off site, must be transported in containers that are designed, constructed, and managed to minimize loss to the environment;

(iii) Solvent-contaminated industrial wipes, if transported, must be transported in containers labeled ''Exempt Solvent-Contaminated Wipes'';

(iv) When transported to a municipal waste landfill or other non-hazardous waste landfill that meets the standards under 40 CFR part 257, subpart B, solvent-contaminated industrial wipes:

(A) Must contain less than 5 grams of solvent each, or must have been treated by solvent extraction; and

(B) Must not contain the following solvents: 2-nitropropane, nitrobenzene, methyl ethyl ketone (MEK), methylene chloride, pyridine, benzene, cresols (o,m,p), carbon tetrachloride, chlorobenzene, tetrachloroethylene, trichloroethylene;

(v) When transported to a municipal waste combustor, other combustion facility, or industrial wipes handling facility, solvent-contaminated industrial wipes must not contain free liquids or must have been treated by solvent extraction. Any liquids removed from the wipes must be managed as hazardous wastes according to regulations found under 40 CFR parts 261 through 268 and 270 if disposed;

(vi) Intra-company transfer of solvent-contaminated industrial wipes containing free liquids may occur provided that the following conditions are satisfied:

(A) The transfer must occur in order to remove sufficient solvent from the industrial wipes so they meet the 5-gram condition or the ''no free liquids'' condition, as appropriate; and

(B) The receiving facility must manage the extracted solvent according to regulations found under 40 CFR parts 261 through 268 and 270;

(vii) Combustion and industrial wipes handling facilities must manage solvent-contaminated industrial wipes in non-leaking covered containers or in containers that are designed, constructed, and managed to minimize loss to the environment before the industrial wipes enter the handling process; and

(viii) If free liquids are in containers that arrive at combustion and industrial wipes handling facilities, the receiving facility must:

(A) Remove the free liquids and manage them as hazardous wastes according to regulations found under 40 CFR parts 261 through 268 and 270; or

(B) Return the closed container with the industrial wipes and free liquid to the generator as soon as reasonably practicable, but no later than the next scheduled delivery;

(xi) Combustion facilities may dispose of residuals from combustion of industrial wipes in solid waste landfills if residuals do not exhibit a hazardous waste characteristic.

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