ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 266, 270, 271, and 280

[SWH-FRL 2724-6]

Hazardous Waste Management System; Final Codification Rule

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On November 8, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA). This new statute makes many changes to EPA's existing hazardous waste management program. The purpose of this rule is to amend EPA's existing hazardous waste regulations to reflect those statutory provisions that have immediate or short-term effects on the regulated community. This rule also adds Part 280 to the EPA regulations to incorporate the interim prohibition of new section 9003(g), added by the 1984 Amendments. This section prohibits the installation of any new underground storage tank for regulated substances unless the tank is protected against corrosion and structural failure and is compatible with the substance to be stored.

EFFECTIVE DATE: These rules become effective July 15, 1985.

ADDRESSES: The official record for this rulemaking is located in Room S-212A, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, and is available for viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Holidays.

FOR FURTHER INFORMATION CONTACT: For technical information, contact Jim O'Leary, Office of Solid Waste (WH-562B), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Toll free: RCRA Hotline (800-424-9346). In Washington, D.C.: (202-382-3000).

SUPPLEMENTARY INFORMATION:

Preamble Outline

I. Authority

These regulations are issued under authority of sections 2002(a), 3001, 3002, 3004, 3005, 3006, 3010, 3015, 3017, 3019, 9001, and 9003 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6912(a), 6921, 6922, 6924, 6925, 6926, 6930, 6935, 6937, 6939, 6991, and 6993.

II. Background

On November 8, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA), a major new statute that will require profound changes in the way that this country manages hazardous wastes. A brief summary of the new law's major provisions indicates the magnitude of the changes:

1. A new program for banning wastes from land disposal.

2. Prohibitions against certain land disposal practices (e.g., placement of liquids in landfills; placement of waste in salt bed formations, mines, and caves; use of hazardous waste as a dust suppressant; and certain types of underground injection).

3. Minimum technological measures for landfills, surface impoundments, and incinerators.

4. Expanded requirements for ground-water monitoring and cleanup at permitted facilities.

5. Requirements for retrofitting certain existing surface impoundments with liners.

6. Authority to expedite permits for new and innovative treatment technologies to foster research and development.

7. Authority to require permit conditions beyond the scope of EPA's existing regulations.

8. Tighter controls on small quantity generators of hazardous waste.

9. Requirements to identify additional hazardous wastes.

10. A full assessment of the hazards posed by a waste before EPA may delist it.

11. Requirements for thorough inspections of State and Federal facilities.

12. Enhanced Federal enforcement authorities (including the ability to issue "corrective action orders" to interim status facilities).

13. Specific controls on the burning and blending of hazardous wastes as fuels.

14. Specific requirements for the regulation of used oil.

15. Tighter controls on the export of hazardous wastes.

16. A new program for identifying the health risks presented by surface impoundment and landfill facilities.

17. An expanded program for the regulation of solid waste management facilities.

18. Greater citizen involvement in "imminent and substantial hazard" cases under section 7003.

19. A major new program for regulating underground storage tanks.

20. The establishment of a National Ground Water Commission.

These comprehensive amendments are all the more significant because of the ambitious schedules the Congress has established for the imposition of these requirements. Many of the provisions are already in effect; others go into effect within very short time frames. Other sections of the statute establish "hammer" provisions (i.e., requirements that go into effect by statute if EPA fails to issue regulations by certain dates).

These new amendments present serious new challenges to EPA, the regulated community, and the public at large. The first of these challenges is the

task of developing a working understanding of the new statute's provisions. To fully appreciate the changes to EPA's hazardous waste program that have been made by this statute, one must not only become familiar with the specifics of individual provisions but also must understand the interrelationships that exist among the various sections of the law.

As will be described in more detail in the next section, today's rule is EPA's effort to facilitate such an understanding of the new amendments to RCRA. In EPA's view, an early, clear articulation of the regulated community's new responsibilities is an essential step in any strategy for the effective implementation of the Congress' will.

III. Purpose of Today's Rule

The purpose of today's rule is to incorporate into the existing Subtitle C regulations a set of requirements from the new RCRA amendments that become effective as a matter of statute in the short term. EPA is making these modifications to the existing rules through a final rule that will be immediately effective. In addition, EPA is adding a new interim prohibition on the installation of certain new underground storage tanks. In light of the fact that this rule is being issued before there has been an opportunity for public comment, EPA has, for the most part, simply codified into the regulations the statutory language associated with each provision.

Specifically, today's rule addresses the following provisions of the RCRA amendments:

1. The ban on placement of bulk liquid hazardous waste and nonhazardous liquids in landfills.
2. The permitting and interim status requirements for double liners and leachate collection systems at surface impoundments and landfills.
3. The redefinition of "regulated unit" for purposes of the ground-water monitoring and response program.
4. The obligation to institute corrective action for solid waste management units at permitted facilities.
5. The elimination of the double liner variance from the ground-water monitoring and response program allowed for landfills, surface impoundments, and waste piles.
6. The variance from ground-water monitoring allowed for certain engineered structures.
7. The ban on disposal in certain salt dome formations, caves, and underground mines.
8. The ban on use of materials mixed with dioxins or other hazardous waste for dust suppression.
9. The interim measures (i.e., manifest and destination requirements) for small quantity generators producing between 100 and 1000 kilograms of waste per month.
10. The preconstruction ban with the variance for PCB facilities having EPA approvals under TSCA.
11. The restrictions on a facility's permit life.
12. The authority to add conditions to a permit beyond those provided for in regulations.
13. The extension of interim status to facilities that become subject to permitting requirements because of new regulatory requirements.
14. The loss of interim status for facilities failing to submit Part B applications within specific deadlines and for failure to self-certify compliance with ground-water monitoring and financial responsibility requirements.
15. The ban on the burning of hazardous wastes in certain cement kilns.
16. The requirement to label hazardous waste fuels.
17. The exclusion for certain wastes burned at resource recovery facilities.
18. The additional criteria (i.e., other constituents or factors) that must be evaluated before a waste can be delisted.
19. The authority to foster innovative research and development by the issuance of special treatment permits.
20. Extending the life of interim authorization for State programs by one year.
21. The requirement that State programs assure the public availability of information.
22. The identification of the new requirements that will go into effect in authorized States prior to State authorization.
23. The requirements concerning recordkeeping for hazardous waste exports.
24. The requirements for generators and owners or operators of treatment, storage, and disposal facilities to certify that they have instituted a waste minimization program.
25. The interim prohibition on the installation of any new underground storage tank for regulated substances unless the tank is protected against corrosion and structural failure and is compatible with the substance to be stored.

EPA recognizes that many of these provisions raise interpretive questions. For the most part, EPA has avoided adding regulatory language to resolve interpretive questions. This is in keeping with EPA's view that the principal purpose of today's rule is to codify the new statutory requirements. EPA has articulated in the preamble, however, its view of what Congress intended these new requirements to be. Such statements of statutory interpretation are derived from the legislative history and EPA's view of Congressional purposes for the new requirements.

In addition, EPA intends to prepare a companion proposed rule to today's final rule that proposes modifications to the existing regulations to assist in implementing the new statutory provisions. This proposal will deal with issues that are logical outgrowths of the new provisions rather than matters addressed directly by the statutory language.

While it recognizes the importance of public comment in its rulemaking activity, EPA believes that the circumstances presented by the new RCRA amendments create a need for swift administrative action before public comment can be obtained. The Administrative Procedures Act, 5 U.S.C. 551, *et seq.*, specifically recognizes that there will be situations where an administrative agency need not go through a round of public comment before issuing a substantive rule. Under 5 U.S.C. § 553(b)(3)(B), a rule is exempt from notice and public comment requirements "when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefore in the rules issued) that notice and public procedures thereon are impractical, unnecessary, or contrary to the public interest."

The Administrative Conference of the United States has recently summarized the case law that has developed on the use of the "good cause" exemption by offering the following guidance to administrative agencies:

> Examples of the types of situations requiring use of the exemption are those in which (1) advance notice of rulemaking will defeat the regulatory objective, (2) immediate action is necessary to reduce or avoid health hazards of imminent harm to persons or property, (3) immediate action is required to prevent serious dislocation in the marketplace, and (4) delay in promulgation will cause an injurious inconsistency between an agency rule and a newly enacted statute or judicial decision. ACUS Recc. 83-2: *The "Good Cause" Exemption from APA Rulemaking Requirements*, 1 CFR Part 305.83-2 (1984).

An examination of the circumstances presented by the new amendments and the limited objectives of this rule indicates that EPA may properly invoke

the good cause exemption from the notice and comment requirements of the APA. First of all, the Congress has specifically indicated that it expects EPA to make use of the good cause exemption in the early stages of its implementation program. The Conference Report on the statute [H.R. Report No. 1133, 98th Cong., 2d Sess., 112 (1984)] states:

> For those provisions of this Act which are immediately effective, it would be contrary to the public interest and impractical for EPA to engage in the time-consuming rulemaking procedures required by Section A of the APA, 5 U.S.C. Section 553, to carry out swiftly its statutory mandate. Therefore, for such immediately effective provisions, EPA appropriately may invoke the "good cause" exemption of 5 U.S.C. Section 553(b)(B) and (d)(3), in issuing final substantive or interpretative rules to implement those provisions. This will enable the Agency to put into place swiftly the enacted requirements.

Second, immediate action serves important public policy objectives. The Congress has clearly indicated in the new statute that many of its provisions are to go into effect immediately or within a very short period of time. If that objective is to be met, it is vital that the regulated community become aware of the new requirements and fully understand how their operations must change. EPA's regulations provide the most effective vehicle for officially communicating the will of Congress. The regulated community has been working with EPA's regulations for several years now. Those regulations have become the touchstone for the hazardous waste program, defining the basic requirements that must be met. Many permits that have been issued to owners and operators of treatment, storage, and disposal facilities reference specific sections of the regulations. Many State regulatory programs are modeled after EPA's regulations; some States even incorporate EPA's regulations by reference.

Thus, by modifying the current EPA regulations to reflect the new statutory amendments, EPA is translating those requirements into the regulatory parlance with which the interested public is most familiar. This step should help to eliminate much of the confusion that would result if individual members of the regulated community had to struggle on their own to understand the effect of the new amendments on their responsibilities. They certainly would have difficulty understanding which parts of the existing regulations had been superseded by new requirements and which had not.

This effort to bring EPA's regulations into line with the new statutory provisions also has important benefits for the Agency's enforcement efforts. An important aspect of any effective enforcement program is an effort to put regulated parties on notice of what the law says so that they cannot claim that they were confused about their responsibilities.

By reducing confusion about the program and clarifying responsibilities for enforcement purposes, EPA is ultimately serving the basic purposes of the statute—the protection of human health and the environment. An atmosphere of confusion about the content of a new environmental law can only paralyze efforts by responsible segments of the regulated community to move ahead to meet their responsibilities and can only provide another excuse for those segments of the regulated community that are not inclined to comply with the law. Neither result advances the Congress' objective of promptly reducing the threats to human health and the environment posed by hazardous waste management. Thus, EPA's efforts to codify the new amendments into its regulations should provide important immediate benefits for protecting human health and the environment.

A third consideration is that EPA has tried to minimize the need for public comment on the final rule by codifying the exact statutory language for most of the provisions. Given this approach, the need for public comment on the final rule is much reduced.

For the reasons described above, EPA has concluded that there is good cause to issue today's rule prior to receiving public comment because, under the circumstances, notice and comment procedures would be impracticable, unnecessary, and contrary to the public interest under 5 U.S.C. 553(b)(B). For the same reasons, EPA believes that it has good cause to make today's rule immediately effective, instead of effective within 30 days, as provided for in 5 U.S.C. 553(d)(3). EPA also believes it has a sound basis for suspending the statutory six-month effective date for regulations under RCRA provided by section 3010(b). The Hazardous and Solid Waste Amendments of 1984 amended section 3010(b) to provide that EPA may shorten or provide for an immediate effective date where (1) the regulated community does not need six months to come into compliance, (2) the regulation responds to an emergency situation, or (3) there is other good cause. For the reasons described above, EPA believes there is a good cause to make today's rule immediately effective.

IV. Other Elements of EPA's Strategy for Implementing Amendments

EPA's effort to communicate with the public about these new requirements has not and will not be limited to the promulgation of today's rule. A variety of activities have already taken place or are planned to ensure that EPA receives the feedback from Regions and States and from other interested parties necessary for intelligent implementation of the new RCRA program. These activities include:

1. A working conference held on October 24 and 25, 1984, to discuss with the Regions and States options for implementing the early enactment provisions.
2. A December 11, 1984, teleconference held on the new amendments with all ten Regions, and anyone else with a satellite hook-up.
3. A series of informal meetings with State interests and with industrial and environmental groups to further explore major implementation decisions.
4. Mailing of draft guidance to the Regions, States, and outside interests for review prior to publication.
5. A series of regional and public meetings (scheduled for April 1985) to describe implementation plans.
6. Date of Enactment Alert (RSI #1) mailed November 9, 1984, to the Regions and States to inform them of the immediate impact of new provisions on permitting.
7. A series of pamphlets, brochures, and papers to further describe new provisions to affected interests.
8. Direct mailing to treatment, storage, and disposal facilities informing them of the new requirements for which they will be responsible.
9. Direct mailing to small quantity generators informing them of the manner in which they will be affected by new provisions of law.

V. Section by Section Analysis of Regulatory Changes

In this section, EPA discusses in more detail the specific changes being made to the existing regulations by today's rule.

A. Land Disposal Amendments

1. Liquids in Landfills

a. Ban on bulk or non-containerized liquid hazardous waste. The Hazardous and Solid Waste Amendments of 1984 (HSWA) amend section 3004 of RCRA by adding paragraph (c) dealing with the placement of liquids in landfills. Section 3004(c)(1) calls for an absolute ban on the placement of bulk or non-containerized liquid hazardous waste or

hazardous waste containing free liquids in any landfill after May 8, 1985.[1] The statute makes it clear that the ban encompasses hazardous waste containing free liquids even if absorbents have been added to such waste. Until this ban takes effect on May 8, 1985, the requirements set forth in EPA's existing regulations, as promulgated on July 26, 1982, remain applicable.

The rule promulgated today amends EPA's existing regulations for permitted and interim status landfills to implement this new statutory provision. Section 264.314(a) (setting forth standards for permitted landfills) and § 265.314(a) (setting forth standards for interim status landfills) have been changed to reflect the fact that the standards contained therein remain applicable only until May 8, 1985, at which point the absolute ban on the placement in landfills of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids takes effect. This absolute ban is now codified in a new paragraph (b) which has been added both to § 264.314 and to § 265.314.

The Agency interprets the ban on "placement" to include, but not be limited to: (1) Placing bulk liquids into a landfill cell where the liquids are solidified and then transferred to another landfill cell, and (2) placing treated bulk liquids still in liquid form into a landfill cell prior to solidification. The term "placement" is sufficiently broad to encompass treatment, storage, or disposal. The legislative history of a related provision, section 3004(b) (banning the placement of liquid hazardous waste in salt domes, underground mines, or caves) confirms that Congress intended the ban on "placement" to be construed broadly to prohibit even storage of material while awaiting further treatment or disposal, and to preclude use of such locations as treatment chambers. *See* 129 Cong. Rec. H8141 (daily ed. Oct. 6, 1983). Thus, it is evident that the ban is effective regardless of the purpose of placing the liquids into a landfill.

b. Ban on non-hazardous liquids. HSWA also adds new section 3004(c)(3), which imposes a ban on the placement of non-hazardous liquids in permitted or interim status landfills after November 8, 1985. This provision provides an exemption from the prohibition, however, if the owner or operator of such a landfill demonstrates to EPA's satisfaction[2] that: (1) The only reasonably available alternative for these non-hazardous liquids is a landfill or unlined surface impoundment (including units not operating pursuant to a permit or interim status) which already contains, or may reasonably be anticipated to contain, hazardous waste, and (2) the disposal of the non-hazardous liquids in the owner or operator's landfill will not present a risk of contamination to any underground source of drinking water. This exception is designed to prevent the shifting of non-hazardous liquid waste from Subtitle C landfills to muncipal landfills and unlined surface impoundments that contain or might contain hazardous wastes due to prior disposal practices. 129 Cong. Rec. H8138 (daily ed. Oct. 6, 1983). As used in this provision, the term "unlined" surface impoundment means a surface impoundment that does not meet the requirements of 40 CFR Part 264, Subpart K, as promulgated on July 26, 1982. 129 Cong. Rec. H8141 (daily ed. Oct. 6, 1983). Section 3004(c)(3) specifies that the term "underground source of drinking water" has the same meaning as provided in regulations promulgated under the Safe Drinking Water Act (*see* 40 CFR 144.3).

To implement this provision, paragraph (e) has been added to §§ 264.314 and 265.314 (f) banning the placement of a liquid which is not a hazardous waste in permitted or interim status landfills after November 8, 1985. These paragraphs essentially repeat the prohibition and exemption found in section 3004(c)(3). In addition, the permit application requirement pertaining to landfills receiving bulk or non-containerized liquid waste (§ 270.21(h)) is amended to reflect the fact that such waste may continue to be received at landfills only until May 8, 1985.

2. Minimum Technological Requirements

HSWA amends section 3004 of RCRA by adding a new paragraph (o) imposing minimum technological requirements on the owners or operators of certain landfills and surface impoundments seeking permits. HSWA also adds a new section 3015 to RCRA imposing similar requirements on certain interim status waste piles, landfills, and surface impoundments.

Specifically, section 3004(o)(1)(A) provides that a permit for a new landfill or surface impoundment, a new landfill or surface impoundment unit at an existing facility, or a replacement or lateral expansion of an existing landfill or surface impoundment unit, must require the installation of two or more liners, a leachate collection system above (in the case of a landfill) and between the liners, and ground-water monitoring. Section 3004(o)(5)(B) allows the use of a particular type of liner design pending the issuance of EPA regulations or guidance implementing the double-liner requirement in section 3004(o)(1). In today's rule, this provision appears in § 264.221(c) (for surface impoundments) and § 264.301(c) (for landfills).

Section 3004(o)(2), codified in today's rule at §§ 264.221(d) and 264.301(d), provides an exemption from the section 3004(o)(1)(A) standards for liners and leachate collection systems if alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous constituents into the ground water or surface water at least as effectively as the liners and leachate collection systems. Section 3004(o)(3) exempts certain monofills from the double liner requirements. The monofill exemption is added in §§ 264.221(e) and 264.301(e).

Section 3015(b)(1) establishes standards for interim status surface impoundments and landfills. Any new unit, or replacement or lateral expansion of an existing unit, is subject to the requirements of section 3004(o) (relating to minimum technological requirements), with respect to waste received beginning May 8, 1985. According to section 3015(b)(2), the owner or operator of any unit subject to section 3015(b) must notify EPA as least sixty days prior to receiving waste and must file a Part B application within six months of the receipt of the notice. Today's rule adds new § 265.221 to codify the requirements for interim status surface impoundments. New § 265.301 contains the requirements for interim status landfills.

Section 3015(b)(3) provides that the owner or operator of a surface impoundment or landfill who installs liners and a leachate collection system in good faith compliance with EPA regulations and guidance documents, may not be required to install a different liner or leachate collection system at the time that the facility receives its first permit. Notwithstanding this provision, the Administrator may require installation of a new liner at permitting if the Administrator has reason to believe that the liner installed during interim status is leaking. The language

[1] "Free liquids" are liquids which readily separate from the solid portion of a waste under ambient temperature and pressure. 40 CFR 260.10.

[2] The language of section (c)(3) requires a determination by the "Administrator." In codifying this and other statutory provisions which use the term "Administrator," EPA has substituted the term "Regional Administrator" where this usage would be consistent with EPA's current regulations.

of this provision appears in §§ 265.221(e) and 265.301(e).

Section 3015(a) sets out standards for interim status waste piles. Any new waste pile unit, or replacement or lateral expansion of an existing unit, must comply with requirements for liners and leachate collection provided in current regulations or in revised regulations under section 3004(o). The new standards are applicable to any new waste pile unit, or replacement or lateral expansion of an existing unit, with respect to waste received beginning May 8, 1985. Today's rule has added these requirements in new § 265.254.

The following discussion explains in more detail the intended applicability and content of the minimum technological requirements.

a. Who is affected by the statutory amendments. Section 3004(o)(1)(A) specifies which facilities, units, and lateral expansions will have to comply with the new minimum technological requirements at the time of permitting. Section 3015 specifies which units and lateral expansions are subject to the new standards during interim status. This section of the preamble compares the scope of the two provisions and explains who must comply with the new requirements.

Under section 3004(o)(1)(A), a permit issued after November 8, 1984 must require liners, leachate collection, and ground-water monitoring for each new landfill or surface impoundment, each new landfill or surface impoundment unit at an existing facility, and each replacement or lateral expansion of an existing landfill or surface impoundment unit. The requirements apply with respect to waste received after the issuance of the permit.

Section 3015, which subjects the owner or operator of a waste pile, landfill, or surface impoundment operating under interim status to minimum technological requirements, uses language similar to that used in section 3004: units subject to section 3015 include any new unit, any replacement of an existing unit, and any lateral expansion of an existing unit. The provision applies with respect to waste received beginning May 8, 1985.

Currently, EPA defines "unit" in the preamble to the July 26, 1982, regulations as a contiguous area of land on or in which waste is placed, or the largest area in which there is a significant likelihood of mixing waste constituents in the same area. *See* 47 FR 32289. This definition envisions a unit as a defined or bounded area designed to contain waste, with either natural or artificial boundaries. The legislative history to HSWA confirms that Congress intended "unit" to be defined as in the preamble to the EPA regulation published on July 26, 1982, and as further defined by EPA. *See* H.R. Rep. No. 198, 98th Cong., 1st Sess. part 1, at 60 (1983).

Consistent with this definition, EPA considers that the available physical evidence (e.g., berms, excavation, or other construction) offers the best indication of where the boundaries of a unit are located. Other objective information, such as operating records or the Part A permit application, also may be used to identify the boundaries of a unit.

Surface impoundments will generally be either excavated or bounded by dikes. Similarly, most landfill trenches or cells are excavated and the boundaries of the unit will be readily recognizable. For certain areafills and waste piles, where no defined boundaries exist and no construction or excavation is necessary or planned (because waste is placed on the unprepared land surface), the boundaries of the unit will be determined based on various objective factors, such as evidence in the facility operating record or the Part A permit application, which would indicate whether a particular area was intended to be an individual unit (i.e., a bounded area where waste will be placed).

Neither the statutory language nor the legislative history specifically provides an interpretation of the term "lateral expansion." A lateral expansion would be defined as an expansion of the boundaries of the existing unit. Hence, if an existing interim status surface impoundment or landfill unit expands after November 8, 1984 to cover new land area, the expanded area must comply with the double liner and leachate collection requirements if that area is still receiving waste on May 8, 1985. Expansion is usually accomplished in a surface impoundment by moving dikes to create additional capacity, or in a landfill by excavating additional areas to enlarge an existing trench.

For interim status purposes, section 3015 specifies that the new requirements apply to a lateral expansion of an existing unit that is within the "waste management area" identified in the Part A permit application.[3] In codifying the new interim status requirements in §§ 265.221(a), 265.254, and 265.301(a), EPA has used the term "area," rather than the term "waste management area" used in the statute. EPA believes Congress intended the term "waste management area" to refer to the area identified in the original or amended Part A. The term "waste management area" as used in EPA regulations has a precise meaning: it designates the area on which waste will be placed during the active life of a *regulated unit. See* 40 CFR 264.95(b). Because "regulated unit" is a term of art under the ground-water monitoring and response program, the use of the term "waste management area" will not always be appropriate in the context of the provision dealing with double-liner requirements. It is reasonable to assume that Congress, in using the term, intended to refer to the area designated in the Part A permit application, not "waste management area" as the term is used in § 264.95(b).

A "replacement" waste pile or surface impoundment unit is a unit that is taken out of service and emptied by removing all or substantially all waste from it. The unit must be brought into compliance with the minimum technological requirements before it can be reused. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 24 (1983).

In codifying sections 3004(o)(1)(A) and 3015, EPA had to determine what the terms "new" and "existing" should mean in this context. The statutory scheme, the legislative history, and the existing regulatory system support the conclusion that the terms "new" and "existing" must have different meanings for the purposes of interim status (section 3015) and of permitting (section 3004(o)(1)).[4]

The language of section 3015, and the relationship of this provision to section 3004(o), dictate that the applicability of the minimum technological requirements to interim status units be determined with reference to the date of enactment of HSWA, November 8, 1984. For

[3] The language of section 3015 refers to a lateral expansion of an existing unit that is "within the waste management area identified in the permit application submitted under Section 3005." EPA has interpreted the phrase "permit application submitted under section 3005" to mean the Part A permit application. *See* S. Rep. No. 284, 98th Cong., 1st Sess., 24 (1983).

[4] The definitions of "new facility" and "existing facility" set out in EPA's current regulations at 40 CFR § 260.10 (October 21, 1976 for "new" facilities, and November 19, 1980 for "existing" facilities), cannot be used for the new regulations, because the applicable dates do not relate to the purposes of the liner amendments in HSWA.

New section 3004(o)(4) (requiring EPA to promulgate standards on leak detection systems within thirty months) does provide a definition of "new unit" as a unit on which construction commences after the promulgation of regulations under section 3004(o)(4). However, the statute expressly restricts the use of that definition to the purposes of section 3004(o)(4). Such a definition would not be appropriate for section 3004(o)(1), which goes into effect on the date of enactment of HSWA.

purposes of section 3015, a new unit, replacement of an existing unit, or lateral expansion of an existing unit is defined as a unit, replacement, or lateral expansion that first receives waste after November 8, 1984. Such a unit or expansion must comply with the minimum technological requirements with respect to waste received beginning May 8, 1985.[5]

This interpretation of section 3015 tracks the unambiguous legislative history to this provision. The legislative history defines new units, replacements, and lateral expansions for the purposes of section 3015 as those units or lateral expansions that first receive waste after the date of enactment of HSWA (November 8, 1984). The legislative history specifies that any such unit or expansion must comply with the minimum technological requirements if it continues to receive hazardous waste six months after enactment (May 8, 1985). *See* S. Rep. No. 284, 98th Cong., 1st Sess. 24 (1983).

Thus, any new unit, replacement, or lateral expansion of an existing unit that first receives waste after November 8, 1984 is subject to the new requirements. *If* such a unit is still receiving waste on May 8, 1985, the minimum technological requirements must be in place on that date. In effect, the statute allows such a unit or lateral expansion a six-month period from the date of enactment of HSWA to come into compliance with the new standards.

Moreover, the entire unit or lateral expansion is subject to the new standards if the unit continues to receive waste after May 8, 1985. This means that if waste has been placed in a new unit or lateral expansion prior to May 8, 1985, the owner or operator must still bring the *entire* unit into compliance with the new liner and leachate collection standards in order to continue using the unit after May 8, 1985. The language and legislative history of section 3015 both require that "new units" have the required liners and leachate collection systems in order to receive waste after May 8, 1985. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 24 (1983). The provision acts to give owners and operators the option of either closing new units or bringing the units into compliance with the double liner and leachate collection requirements.

Under section 3015, then, several options are available for a new unit or lateral expansion:

(1) If the unit continues to operate on May 8, 1985, an owner or operator who wishes to continue using the whole unit must line the entire unit in accordance with the new requirements. If the unit has received waste between November 8, 1984, and May 8, 1985, the owner or operator will have to retrofit.

(2) An owner or operator may be able to restructure a unit that has received waste between November 8, 1984, and May 8, 1985, by creating a barrier between the area that contains waste and any empty area (e.g., a berm within a landfill trench). The empty area would then constitute a new unit which can receive waste after May 8, 1985, if it complies with the new statutory requirements. To avoid retrofitting in this situation, the owner or operator would have to cease placing waste into the portion of the old unit that had received waste between November 8, 1984, and May 8, 1985.

(3) If a new unit or a replacement or lateral expansion of an existing unit operating under interim status stops receiving hazardous waste before May 8, 1985, the unit need not comply with the minimum technological requirements. In other words, section 3015 does not impose any new requirements on an interim status unit or lateral expansion that first receives waste after November 8, 1984, but ceases receiving waste before May 8, 1985.

The above analysis suggests that if a unit had received waste prior to the date of enactment of HSWA, it would automatically be exempt from the minimum technological requirements. However, the legislative history accompanying section 3015 indicates that in addition to having already received waste by the date of enactment, a unit must also be "operational" by that date in order to be exempt from the new requirements. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 24 (1983). EPA believes that in order to be "operational" as of November 8, 1984, a unit must have been constructed to comply with all Federal, State and local requirements, including licenses and permits, in effect prior to the enactment of HSWA, so that as of November 8 there was no legal impediment to the operation of the unit. EPA believes that Congress would not have viewed a unit as being operational unless it was authorized to receive waste and had the legal right to operate.

If, for some reason, the entire unit was not operational on November 8 (for example, a liner or leachate collection system required by a State permit was not in place), only the part of the unit which was ready to receive waste in accordance with existing requirements in effect on November 8, 1984, will be exempt from the new requirements. EPA believes that this is the only area that can qualify as an "existing unit" under section 3004(o) given this legislative history. An owner or operator who has installed liners or leachate collection systems which exceed the applicable Federal, State or local requirements in effect on November 8, 1984, need not have completed such installation by November 8 in order for the unit to be exempt from the new double liner provisions (as long as the applicable legal requirements have already been complied with). It should be emphasized that in order to be exempted from the new minimum technology requirements, the unit must satisfy both criteria enumerated in the legislative history of the bill from which this provision was drawn: the unit must already have begun receiving waste by the date of enactment of HSWA, and it must have been fully operational by that date.

Section 3015 does not expressly identify the type of waste a unit must contain in order to qualify as an existing unit. Based on the purposes of HSWA and on current regulatory practice, a unit should qualify as an existing unit if it has received hazardous wastes or solid wastes (as defined in 40 CFR 261.2) or both before November 8, 1984. This characterization is appropriate for the purposes of HSWA because it exempts from the new requirements those units for which retrofitting would most likely be impracticable or dangerous. Retrofitting may be burdensome not only for wastes identified or listed as hazardous, but also for many non-hazardous solid wastes as well. This rationale is also consistent with the provision in current regulations exempting from the single liner requirements those units for which retrofitting would be impracticable or burdensome. *See* 47 FR 32290, 32315.

As noted above, while section 3015 defines the applicability of the minimum technological requirements to interim status units, section 3004(o)(1)(A) applies the requirements to permitted

[5] The applicability provisions for interim status facilities are the same for waste piles, landfills, and surface impoundments. Although section 3015 deals separately with waste piles (section 3015(a)) and with surface impoundments and landfills (section 3015(b)), the two sections use identical language: both 3015(a) and 3015(b) refer to new units, replacements and lateral expansions of existing units.

Section 3015(a) differs from section 3015(b) in that the technical requirements imposed on waste piles (a single-liner system) are not the same as the technical requirements imposed on landfills and surface impoundments (a double liner system). These technical requirements are further explained in Sections b. and d. below.

landfills and surface impoundments.[6] In the context of the permit program, new facilities, new units, and replacements or lateral expansions of existing units refer to those units or lateral expansions that first receive waste after the date of permit issuance. Such facilities, units, replacements, or lateral expansions must comply with the minimum technological requirements under section 3004(o)(1)(A).

Today's regulations interpret section 3004(o)(1)(A) to apply to all facilities that receive a permit after the date of enactment of HSWA. The language of section 3004(o)(1)(A) could be read to impose the minimum technological requirements only on those facilities for which a Part B application is received after the date of enactment.[7] Such a limitation, however, would be inconsistent with the new standards established in section 3015, requiring interim status units that first receive waste after the enactment of HSWA to comply with the minimum technological requirements of section 3004(o). If applied literally, the statutory language could be read to require that a facility comply with minimum technological requirements during interim status but be relieved from these same requirements after permitting if the permit application was received prior to November 8, 1984.

For example, an interim status landfill for which a Part B application was submitted prior to November 8, 1984, would still be subject to new section 3015 during interim status. (The timing of the submission of the Part B application does not affect the applicability of the minimum technological requirements during interim status, because section 3015 applies to all new interim status units and expansions.) If several trenches were planned at the landfill, any new interim status trench that began receiving waste after November 8, 1984 and continued to receive waste after May 8, 1985, would have to comply with the new double liner requirements. After the facility received its permit, it would be subject to the requirements of section 3004(o). Applied literally, the language of section 3004(o) could exempt from the double liner requirements any trenches which first received waste after permit issuance, if the facility's Part B application was submitted before November 8, 1984. In consequence, the minimum technological requirements would apply to new units at such a facility only until the facility received its permit, at which time any new units at the same facility would be exempted from the requirements.

Such a result cannot be reconciled with the structure of the treatment, storage, and disposal standards that EPA has pursued since the inception of the hazardous waste program. EPA has operated on the assumption that shifting a facility from interim status to permitting results in stricter controls, or at least no less stringent requirements, on the facility. The original theory behind the interim status standards was that they constituted a subset of the standards EPA planned to impose during permitting. *See* 45 FR 33159. EPA does not believe that Congress intended to reverse that basic principle of the RCRA program with this amendment. No such intent can be drawn from the statutory language or legislative history. Certainly it cannot be concluded that Congress intended to have EPA downgrade environmental controls when it issued a permit.

Therefore, today's rule interprets section 3004(o)(1)(A) to apply to all facilities receiving a permit after November 8, 1984, regardless of when the Part B was submitted. However, neither the statutory language nor the legislative history mandates the minimum technological requirements of section 3004(o)(1)(A) for facilities that received permits on or before November 8, 1984. Accordingly, today's regulation does not impose the requirements on facilities that received permits by that date.

An additional provision, paragraph (b)(3) of section 3015, outlines EPA's authority during the permitting process to require the retrofitting of liners and leachate collection systems installed in interim status landfills and surface impoundments. (This provision does not apply to waste piles.) Section 3015(b)(3) provides that if the interim status liners and leachate collection systems have been installed in good faith, EPA may not require the unit to retrofit at the time the facility receives its first permit.

Section 3015(b)(3) also provides an exception to the good faith provision. The Administrator is authorized to require installation of a new liner when the Administrator has reason to believe that the liner installed during interim status is leaking.

EPA has construed its authority to require retrofitting under section 3015(b)(3) as being limited to the time of permitting. Neither the statutory language nor the legislative history suggests that Congress intended to give EPA a broader authority under section 3015(b)(3) to require interim status units to retrofit prior to issuance of a permit.[8] (For a discussion of the technical requirements associated with the good faith provision, see Section c. below.)

Existing units, as noted above, are not affected by the new law. A landfill or surface impoundment unit that already contained waste and was operational on November 8, 1984, qualifies as an existing unit under the new law: it is an existing unit under section 3015 (interim status) because it received waste and was operational before the date of enactment of HSWA, and it is also an existing unit under section 3004(o)(1) (permitting) because it received waste before permit issuance. Therefore, the entire unit is exempt from the new minimum technological requirements. However, EPA's current regulations do require the lining of partial units at the time of permit issuance: Section 264.221(a) (for surface impoundments) and § 264.301(a) (for landfills) require the portions of units not covered with waste at permit issuance to install a single liner (with a leachate collection system above the liner, in the case of a landfill). This means that even if a unit is exempt from the new double liner standards, it is still subject to EPA's current single liner standards at permitting. Nothing in HSWA suggests that Congress intended entirely to invalidate these regulations; rather, the regulations are superseded in part by the standards in new sections 3015 and 3004(o)(1)(A). Today's rule amends existing §§ 264.221(a) and 264.301(a) to limit the applicability of those provisions to units which are exempt from the new double liner standards.

In summary, the combined effect of sections 3004(o)(1)(A) and 3015 is to require any unit, replacement, or lateral expansion that first receives waste after November 8, 1984 to comply with the minimum technological requirements on May 8, 1985 (if such unit, replacement, or lateral expansion is still receiving waste on that date), or at permitting, whichever occurs first. Landfill and surface impoundment units that install

[6] Section 3004(o)(1)(A) applies only to permitted landfills and surface impoundments and does not impose any new requirements on permitted waste piles. All permitted waste piles will continue to be subject to the current regulation, § 264.251(a)(1), which requires the portions of units not covered with waste at permit issuance to have a single liner and leachate collection system.

[7] Section 3004(o)(1)(A) refers to facilities "for which an application for a final determination regarding issuance of a permit under section 3004(c)" is received. Today's rule interprets this phrase to mean a Part B application.

[8] This is not the only authority, however, under which a retrofit requirement might be imposed. As discussed in Section V.A.3. of this preamble, EPA has authority under setion 3008(h) to issue orders requiring corrective action at interim status facilities, which may include source control measures such as retrofitting of liners.

double liners and leachate collections systems in good faith during interim status cannot be required to retrofit at the time of first permitting unless the liner is leaking. Any landfill or surface impoundment unit that received waste and was operational before November 8, 1984, is exempt from the statutory minimum technological requirements but must comply with the Agency's current single liner regulations at permitting.

b. Technical requirements: Liners and leachate collection systems. New section 3004(o)(1)(A)(i) adds a provision requiring new units and lateral expansions and replacements of existing landfills and surface impoundments that receive permits after November 8, 1984, to have two or more liners. Surface impoundments must have a leachate collection system between the liners, while landfills must have a leachate collection system above and between the liners. These new requirements are codified in §§ 264.221(c) (setting out design and operating requirements for permitted surface impoundments) and 264.301(c) (setting out design and operating requirements for permitted landfills). Every landfill or surface impoundment subject to the new law must meet the statutorily mandated minimum technological requirements for two or more liners and a leachate collection system above and between the liners (for landfills) and two or more liners with a leachate collection system between the liners (for surface impoundments), unless the conditions for a statutory variance are met. (See Section e. below for a discussion of variances.)

The Agency interprets section 3004(o)(1)(A)(i) to require that the liner and the leachate collection system between the liners extend to any area of the unit that is in contact with the waste. This interpretation of the statutory requirement is consistent with the Agency's current regulatory practice regarding the design of liners and leachate collection systems. Congress intended that the Agency's existing design standards provide the basis for interpreting the new minimum technological requirements. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 27 (1983); H.R. Rep. No. 198, 98th Cong., 1st Sess. part 1, at 63 (1983). In addition, the legislative history suggests that the leachate collection system should act both as a leachate collection and removal system and a leak detection system. These purposes can be achieved only if the liners and the leachate collection system between the liners cover all surfaces of the unit that are in contact with the wastes. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 26 (1983); H.R. Rep. No. 198, 98th Cong., 1st Sess. part 1, at 62, 63 (1983).

Sections 264.221(c) and 264.301(c) provide a broad narrative standard for the new liner requirement: the statutorily mandated double liners and leachate collection systems shall "protect human health and the environment." This broad standard is drawn directly from the statutory language in section 3004(a). While section 3004(o)(1) does not specifically set forth a standard, that section is ultimately designed to implement the mandate of section 3005(a).[9] It must be assumed that Congress wanted EPA to issue double liner standards "as necessary to protect human health and the environment" when enacting section 3004(o).

Under section 3015(b)(1), landfills and surface impoundments operating under interim status must comply with the minimum technological requirements set out in section 3004(o). To implement this statutory requirement, today's rule requires interim status landfill and surface impoundment units to comply with the liner and leachate collection requirements set out in the new Part 264 regulations described above. Specifically, new § 265.221(a) requires interim status surface impoundments to install liners and leachate collection systems in compliance with § 264.221(c). Similarly, new § 265.301(a) requires interim status landfills to install liners and leachate collection systems in compliance with § 264.301(c).

Section 3004(o)(5)(A) requires EPA to promulgate regulations or issue guidance documents implementing the requirements of section 3004(o)(1) within two years after the enactment of HSWA. Until the effective date of such regulations or guidance documents, section 3004(o)(5)(B) provides that the requirement for the installation of two or more liners may be satisfied by the installation of a top liner designed, operated, and constructed of materials to prevent the migration of any constituent into such liner during the period the facility remains in operation (including any post-closure monitoring period) and a lower liner designed, operated and constructed to prevent the migration of any constituent through the lower liner during such period. The statute further provides that a lower liner shall be deemed to satisfy this requirement if it is constructed of at least a three-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1×10^{-7} centimeter per second. This interim liner standard is codified in §§ 264.221(c) and 264.301(c). The statute makes it clear that the standard set out in section 3004(o)(5)(B) will be superseded by EPA regulations or guidance documents implementing the statutory requirement contained in section 3004(o)(1). The Congress viewed this interim design as a measure intended to fill the gap before EPA acted. *See* 130 Cong. Rec. S9182 (daily ed. July 25, 1984).

The statute does not mandate the use of the liner standard set out in section 3004(o)(5)(B) during the period prior to the issuance of implementing regulations or guidance; rather, the statute provides that the requirement for two or more liners "may" be satisfied by following section 3004(o)(5)(B). The Agency believes that, during this interim period, an owner or operator who wishes to install a liner system other than the one described in section 3004(o)(5)(B) must meet the broad narrative standard of protection of human health and the environment.

c. Requirements under the good faith provision. As noted in Section a. above, section 3015(b)(3) provides that if the owner or operator has installed liners and a leachate collection system pursuant to the requirements of section 3015 and in good faith compliance with regulations and guidance documents governing liners and leachate collection systems, the Administrator shall not require the owner or operator to install a different liner or leachate collection system for the unit when issuing the first permit, except that a new liner may be required if the Administrator has reason to believe that a liner installed during interim status is leaking.

The intent of this provision was to provide that anyone who followed EPA guidance documents would be presumed to have acted in good faith. Retrofitting would be required in cases involving fraud or gross noncompliance, including failure to install a liner or leachate collection system, installation of a liner or leachate collection system not in compliance with EPA guidance documents, or inadequate documentation of any major design feature or construction activity. In addition, failure to submit the required notice prior to receipt of waste (see Section g. below) would result in the elimination of the "good faith" protections of this provision. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 24–25 (1983).

In order to determine whether a liner system has been installed in good faith,

[9] Section 3004(o) begins with the phrase "The regulations under subsection (a) of this section shall * * *."

the Agency will need to have information showing that all appropriate units have been lined in accordance with EPA regulations and guidance documents. The owner or operator should provide the Agency with sufficient information to allow the Agency to determine what areas at any interim status facility are new units, or replacements or lateral expansions of existing units, as of November 8, 1984. EPA intends to issue guidance documents on the installation of liners and leachate collection systems and on recordkeeping. EPA anticipates that the owner or operator will be keeping information showing that he complied with EPA guidance in the facility operating records described in § 265.73. The Agency's upcoming liner guidance will also discuss a construction quality assurance (CQA) plan. Such a plan would document the liner design, materials, and installation procedures. The Agency will review the operating records and other documents at permitting to assist in its determination of good faith.

d. Waste piles. As discussed in Section a. above, section 3004(o), which establishes new double liner requirements for permitted landfills and surface impoundments, does not apply to waste piles. The existing requirements for a single liner and leachate collection system, as set out in § 264.251, remain in effect for permitted waste piles.

HSWA does impose new requirements on interim status waste piles. Section 3015(a) subjects the owner or operator of a waste pile operating under interim status to the requirements for liners and leachate collection systems or equivalent protection, as set out in EPA regulations or as revised under section 3004(o) (relating to minimum technological requirements). Essentially, the language in section 3015(a) provides that interim status waste piles must comply either with standards established under section 3004(o), or with standards in current regulations. *See* S. Rep. No. 284, 98th Cong., 1st Sees. 24 (1983). EPA has not issued new standards for waste piles under the authority of section 3004(o). Therefore, section 3015(a) requires interim status waste piles to comply with requirements for a single liner and leachate collection system, as set out in existing § 264.251(a) (dealing with permitting standards for waste piles). Today's rule adds new § 265.254 to codify that provision.

The reference in section 3015(a) to "equivalent protection" is intended to authorize waste piles to use the variances to the liner and leachate collection system requirements in current regulations. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 25 (1983). EPA construes this provision to mean that owners and operators of interim status waste piles are eligible for the exemptions from the single liner requirement set out in § 264.250(c) (exempting from regulation under § 264.251 any waste pile that is inside or under a structure) and § 264.251(b) (providing a variance if the owner or operator demonstrates that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constitutents into the ground water or surface water at any future time).

e. Variances. Section 3004(o)(2), codified in §§ 264.221(d) and 264.301(d), allows the owner or operator of a landfill or surface impoundment to obtain an exemption from the requirements for liners and leachate collections systems set out in section 3004(o)(1)(A). The owner or operator must demonstrate that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the ground water or surface water at least as effectively as the liners and leachate collection systems.

Section 3004(o)(3), codified in §§ 264.221(e) and 264.301(e), authorizes an exemption from the requirements of section 3004(o)(1)(A) for a monofill containing only hazardous wastes from foundry furnace emission controls or metal casting molding sand, as long as the wastes do not contain constituents which would render them hazardous for reasons other than the Extraction Procedure (EP) toxicity characteristics set out in EPA regulations.[10] The EP toxicity characteristics are set out in 40 CFR 261.24.

To obtain the exemption, the monofill must also meet one of two additional requirements set out in new sections 3005(j)(2) and 3005(j)(4). (Sections 3005(j)(2) and 3005(j)(4), which deal with existing surface impoundments, have not been codified elsewhere in today's rule because these two sections do not go into effect immediately.)

To comply with paragraph (j)(2), the monofill must meet three conditions. First, it must have at least one liner which is not leaking. Section 3005(j)(12)(A) defines "liner" for the purposes of section 3005(j)(2) as either a synthetic liner or a clay liner, as long as at closure the clay liner, waste materials, and contaminated soils are removed or decontaminated to the extent practicable. Today's regulations incorporate this definition of "liner" into the monofill variance for surface impoundments. EPA believes that it is appropriate to incorporate this definition into the monofill variance for surface impoundments because section 3005(j) itself deals with requirements for surface impoundments and because giving a removal option to surface impoundments is consistent with EPA's current regulations. The definition of "liner" in section 3005(j)(12)(A) has not been included in the variance for landfills because existing EPA regulations do not allow such a removal option for landfills. *See* 40 CFR 264.310, 265.310.[11] Nothing in the language or legislative history of section 3004(o)(3) suggests that Congress, in establishing the exemption for monofills, intended to alter the closure requirements of the existing regulations by giving landfills a closure option which the regulations currently prohibit.

Second, the statute requires that the monofill be in compliance with generally applicable ground-water monitoring requirements for facilities with RCRA permits. The requirements for facilities with RCRA permits may be found in Subpart F of Part 264. Finally, the monofill must be more than one-fourth mile from an underground source of drinking water, as defined in the Safe Drinking Water Act regulations.

Alternatively, the monofill may meet the requirements of section 3004(j)(4), which requires the owner or operator to demonstrate that the monofill is located, designed, and operated to assure no migration of any hazardous constituent into ground water or surface water at any future time.

Under section 3004(o)(6), which is codified in new § 264.301(k), any permit for a landfill located within the State of Alabama must require the installation of two or more liners and a leachate collection system above and between the liners, notwithstanding any other provision of RCRA. The intent of section 3004(o)(6) is to provide that Alabama

[10] Section 3004(o)(3) refers to a variance from the "double-liner requirements set forth in section 3004(o)(1)(A)." EPA construes this language to mean a variance from the liner *and* leachate collection requirements in 3004(o)(1)(A).

[11] Current regulations allow the owner or operator of a surface impoundment (*see* 40 CFR 264.228, 265.228) or waste pile (*see* 40 CFR 264.258, 265.258) to remove or decontaminate all waste residues and other contaminated materials at closure. The regulations establish specific closure and post-closure requirements for facilities which remove these materials at closure. In contrast, the landfill regulations establish closure requirements only for facilities that close with wastes in place.

landfills are not eligible for the variances set out in section 3004(o). *See* H.R. Rep. No. 1133, 98th Cong., 2d Sess. 90 (1984); 129 Cong. Rec. S12819 (daily ed. Oct. 5, 1983) (statement of Sen. Chafee).

Section 3015 subjects interim status facilities to the minimum technological requirements of section 3004(o) but does not make clear whether interim status facilities are eligibile for the variances from the liners and leachate collection system in sections 3004(o)(2) and (o)(3). The Agency has interpreted section 3015 to allow interim status units to apply for these variances. For interim status surface impoundments, § 265.221 allows the owner or operator to obtain the variances provided in § 264.221(b) (for alternate designs) and § 264.221(e) (for monofills). Similarily, § 265.301 makes the variances in § 264.301(b) (for alternate designs) and § 264.301(h) (for monofills) available to the owner or operator of a landfill operating under interim status.

The Agency has construed the statute in this way because a contrary approach could subject interim status facilities to technological requirements which are potentially more stringent than those applicable to permitted facilities. As discussed earlier, such a result is inconsistent with the general structure of the Subtitle C regulations.

f. Ground-water monitoring. Section 3004(o)(1)(A)(ii) requires new permitted landfills and surface impoundments, new units, and replacements and lateral expansions of existing units to have ground-water monitoring. The Agency has construed this provision to refer to the ground-water monitoring requirements of Subpart F of Part 264 of the regulations.

Section 3015 requires interim status units to comply with the minimum technological requirements for permitted units as set out in section 3004(o). This reference to section 3004(o) includes the ground-water monitoring requirement.

Section 3015 is ambiguous, however, because it does not specify which ground-water monitoring requirements apply to interim status units. On the one hand, the reference in section 3015 to the ground-water monitoring requirements set out in section 3004(o) could be construed to require interim status units to comply with the same ground-water monitoring requirements which apply to permitted units.

On this reading, interim status units would be subject to the requirements of Subpart F of Part 264 of the regulations. Alternatively, the provision could be construed merely to require ground-water monitoring for all interim status units as specified in existing Part 265 regulations.

EPA has interpreted the ground-water monitoring requirement for interim status units to refer to existing Part 265 requirements. Congress' intent in requiring ground-water monitoring in section 3004(o) was to eliminate the provision in current regulations allowing double liners and ground-water monitoring to be alternatives. *See* S. Rep. No. 284, 98th Cong., 1st Sess. 26 (1983); H. R. Rep. No. 198, 98th Cong., 1st Sess. part 1, at 63 (1983). There is no indication that Congress sought to change the existing ground-water monitoring requirements for interim status facilities with this provision. Therefore, interim status surface impoundment and landfill units, replacements, and expansions will continue to be subject to the ground-water monitoring requirements of Subpart F of Part 265.

g. Notification. Section 3015(b)(2), codified in today's rule at §§ 265.221(e) and 265.301(e), calls for the owner or operator of an interim status landfill or surface impoundment unit subject to the minimum technological requirements of section 3015(b)(1) to notify the Administrator at least sixty days prior to receiving waste at that unit. Section 3015(b)(1) applies to units that first receive waste after November 8, 1984. Owners or operators of these units must comply with the notice requirement if such units are still receiving waste on May 8, 1985.

Section 3015(b)(2) also provides that within six months of receipt of notice, EPA (or an authorized State) shall require the owner or operator to file a Part B application.[12] EPA does not read this provision to require a formal request for a Part B permit application by EPA or the State as now provided for in EPA's permitting regulations. It is clear that the Congress wanted the duty to send in an application to become automatic once the sixty-day notification has been given. Therefore, EPA is simply incorporating the duty to submit an application directly into the regulations.[13]

[12] The statute uses the phrase "application for a final determination regarding issuance of a permit," which EPA has construed to mean a Part B application and applicable post-closure permit application.

[13] Section 3005(e) provides that interim status for owners and operators of land disposal facilities will terminate on November 8, 1985, unless the owner or operator submits a Part B application before that date. (See Section C.5. of this preamble.) Thus, most facilities will have submtted a Part B by November 8, 1985, if not before that time. EPA thus construes section 3015(b)(2) to require an owner or operator to submit a Part B six months after the receipt of notice if the Part B has not previously been submitted.

3. Corrective Action

a. Redefinition of Regulated Unit. The Act introduces a new subsection (i) to section 3005 which provides that the ground-water monitoring, unsaturated zone monitoring and corrective action requirements applicable to new land disposal units (i.e., those requirements set forth in Part 264) are applicable to landfills, surface impoundments, waste piles or land treatment units that received hazardous waste after July 26, 1982. The legislative histories of the House and Senate bills from which this provision has been drawn reveal that the intent of the provision is to override the existing EPA regulations which subject such units to ground-water monitoring and corrective action requirements at the time of permitting only if they receive hazardous waste after January 26, 1983. S. Rep. No. 284, 98th Cong., 1st Sess. 25–26 (1983); H.R. Rep. No. 198, 98th Cong., 1st Sess., Part 1, 44–5 (1983); 130 Cong. Rec. S13818 (daily ed. Oct. 5, 1984).

Accordingly, today's rule amends § 264.90(a) to provide that the general ground-water monitoring and corrective action requirements of Subpart F of Part 264 apply to landfills, surface impoundments, waste piles and land treatment units that receive hazardous waste after July 26, 1982. Since the unsaturated zone monitoring requirements of § 264.278 were never subject to the January 26, 1983 cut-off, this section has not been amended. Active land treatment units continue to be subject to unsaturated zone monitoring requirements regardless of the date on which hazardous wastes were received at such units.

b. Cleanup of Continuing Releases. Section 3004 of RCRA is amended by adding paragraph (u) governing releases at facilities seeking a permit under Subtitle C. This new subsection provides that any permit issued after November 8, 1984, must require corrective action for all releases of hazardous waste or constituents from any solid waste management unit regardless of when waste was placed at such unit. It further requires financial assurance for the completion of such corrective action. The provision applies to any solid waste management unit, including inactive units, at any treatment, storage, or disposal facility seeking a permit under section 3005(c) of RCRA. 130 Cong. Rec. H11129 (daily ed. October 3, 1984).

The Agency's jurisdiction under this new provision is defined by a number of key terms. First, as noted above, this new corrective action authority applies to facilities seeking a permit under

Subtitle C. Congress is silent as to whether the permits referred to in this section include post-closure permits as well as operating permits. EPA sees no legal basis for departing from a literal reading of the statute, which appears to encompass *any* Section 3005(c) permit within its mandate. Accordingly, any solid waste management unit located at a facility required to obtain a post-closure permit (i.e., units that close after January 26, 1983 (§ 270.1(c)) or an operating permit will be subject to corrective action for continuing releases.

Section 3004(u) does not appear to contemplate that its terms apply to solid waste management units located at facilities that are not required by regulation to obtain a Subtitle C permit. Accordingly, solid waste management units located at interim status facilities that closed before January 26, 1983, will not be subject to section 3004(u) since these facilities are not required to obtain permits under the existing regulations. Similarly, regulated units (now defined as any waste pile, landfill, surface impoundment, or land treatment unit that received waste after July 26, 1982) located at facilities which closed before January 26, 1983, are not required to obtain post-closure permits.[14] Releases from such units may be addressed by the interim status corrective action orders authorized by section 3008(h) of the new law. (See section f, *infra.*)

EPA must assume that in using the term "facility," Congress intended, in the absence of contrary statutory language or legislative history, to adopt the definition of this term traditionally employed by the Agency. The preamble to the July 26, 1982, regulation elaborates on the definition of this term. Specifically, the preamble notes that "[w]hen using the term 'facility', EPA is referring to the broadest extent of EPA's area jurisdiction under Section 3004 of RCRA . . . [meaning] the entire site that is under the control of the owner or operator engaged in hazardous waste management." 47 FR 32288–9 (July 26, 1982). The legislative history of the conference bill makes it clear that Congress was aware of the Agency's definition. In discussing new section 3004(v) (see subsection e, *infra*), the Congress noted EPA's position limiting the scope of its remedial authorities to the property of the polluting facility. 130 Cong. Rec. H11129 (daily ed. Oct. 3, 1984). Accordingly, for purposes of section 3004(a), the term "facility" is not limited to those portions of the owner's property at which units for the management of solid or hazardous waste are located, but rather extends to all contiguous property under the owner or operator's control.

The extent to which the above interpretation applies to Federal facilities raises legal and policy issues that the agency has not yet resolved. To address these issues, it is necessary to examine the objectives of Section 3004(u), the purposes of HSWA, and the relationship of RCRA to other Federal laws. Permit applications for Federal facilities will continue to be processed, but recognizing that final Federal facility permits may not be issued where these unresolved issues exist, EPA will make its best efforts to reach a resolution in the next 60 days.

The Agency's cleanup authority under section 3004(u) extends to all "solid waste management units" at a facility seeking a permit under section 3005(c). The term "solid waste management unit" includes any unit at the facility "from which hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous wastes." H.R. Rep. No. 198, 98th Cong., 1st Sess., Part 1, 60 (1983). It is generally not intended to encompass areas where wastes were not placed in such units. The legislative history notes that "[t]he term 'unit' is intended to be defined as in the preamble [sic] to EPA regulations published on July 26, 1982 and as further defined by EPA in the future." *Id.* Consistent with that concept, EPA believes that the term "unit" at least encompasses the units identified in that preamble, which refers to "containers, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells." 47 FR 32281 (July 26, 1982).

In understanding the scope of the term solid waste management unit, several points need to be made. First, units falling into the above categories are subject to section 3004(u) regardless of their purposes. EPA has in the past considered developing special standards for certain types of units and has temporarily exempted classes of units from the substantive standards applicable generally to hazardous waste management units. For example, there are such exemptions for recycling units (§ 261.6) and for tanks qualifying as "wastewater treatment units" (§ 264.1(g)(6) and § 265.1(c)(10)). Such units are solid waste management units under RCRA and thus are subject to Section 3004(u).

EPA expects that implementation of corrective action requirements for wastewater treatment tanks would be limited to submission of descriptive information with the permit application and a preliminary assessment by EPA that did not include sampling and analysis. EPA will impose additional requirements where this first phase turns up evidence of releases of hazardous waste or constituents from the tanks. EPA estimates that the costs per facility for the initial phase would result in an annualized cost of less than $3,000. In addition, it may make sense, based on the same considerations that motivated EPA's earlier examination of special standards for these units, to develop remedial investigation requirements implementing section 3004(u) for these units that differ from requirements applicable to other solid waste management units.

Second, in considering injection wells as units, it should be recognized that for a "Class I injection well" (as that term is used in the Underground Injection Control (UIC) regulations under the Safe Drinking Water Act), the injection zone into which the well discharges is essentially part of the waste management unit. Thus the emplacement of liquids into an injection zone through a Class I well does not constitute a release from a solid waste management unit but rather constitutes migration within the solid waste management unit.

Third, the legislative history indicates that the term "solid waste management unit" is intended to limit EPA's jurisdiction under section 3004(u) to *discernible units.* One of the questions raised by this definition is whether an area on which a spill occurs is intended to be viewed as a solid waste management unit. Clearly, a spill of hazardous waste or hazardous constituents from a discernible unit would constitute a "release" from a solid waste management unit under the definition of this term adopted by the Agency (see below). Similarly, any subsequent contamination resulting from this spill (e.g. subsequent releases to air, ground water or surface water) would also be considered a release from the original solid waste management unit and would thus be subject to EPA's jurisdiction.

EPA does not, however, believe that section 3004(u) applies to spills that cannot be linked to solid waste management units. For example, a spill from a truck traveling through a facility would not constitute a release from a

[14] It should be noted that "closure" in this context does not mean simply ceasing to place waste in a unit. Closure, as a regulatory concept under these rules, is a proceeding during which EPA determines, after public review, that the facility has an adequate closure plan and that the facility implements that plan. Thus, closure is not complete under the hazardous waste regulations until a certification of closure has been given under 40 CFR 265.115.

solid waste management unit. It should be recognized, however, that such a spill, if it occurs after November 19, 1980, is nonetheless actionable because it constitutes illegal disposal (i.e., disposal that does not occur in an authorized unit).

The Agency's authority under section 3004(u) encompasses "all releases of hazardous waste or constituents" from any solid waste management unit. Section 3004(u) contemplates that EPA will issue standards addressing corrective action for such releases. Once EPA establishes such standards they will guide the Agency's decisions about appropriate corrective action. Section 3004(u) also indicates, however, that permits issued after November 8, 1984, must implement the corrective action requirement. Therefore, until EPA establishes specific standards under section 3004(u) it is reasonable for EPA to make case-by-case decisions on the appropriate corrective action, guided by the general regulation being codified today.

EPA believes that this language contemplates coverage of any release of hazardous constituents from a solid waste management unit. The term "hazardous constituent" as used in this section is intended to mean those constituents listed in Appendix VIII to 40 CFR Part 261 [H.R. Rep. No. 198, 98th Cong., 1st Sess., part 1, 60–61 (1983)] and includes hazardous constituents released from solid waste and hazardous constituents that are reaction byproducts. S. Rep. No. 98–284, 98th Cong., 1st Sess. 32 (1983).

While the statute does not explicitly define the term "release," EPA believes that the purposes behind the provision indicate that the term should be at least as broad as the definition of release under CERCLA. *See* CERCLA § 101(22), 42 U.S.C. 9601. The legislative history of Section 3004(u) clearly indicates that one of its purposes was to prevent RCRA sites from becoming future burdens on the Superfund program. H.R. Rep. No. 198, 98th Cong., 1st Sess., part 1, 61 (1983). The Congress has, however, placed constraints on the scope of Section 3004(u) (*i.e.*, "solid waste management unit", "hazardous constituents" discussed above) that may result in cleanups at RCRA facilities that do not have the same breadth as CERCLA cleanups. Within these constraints, it is nonetheless logical to use a definition of release that is at least as broad as the definition under CERCLA. Moreover, such an integration with the CERCLA definition of release is consistent with the spirit of section 1006 of RCRA, which calls for integration of RCRA provisions with those of other statutes administered by EPA.

Section 1006 also provides, however, that EPA's integration of RCRA with other statutes should be accomplished "only to the extent that it can be done in a manner consistent with the goals and policies expressed in [RCRA] and in the other acts." Thus certain elements of the CERCLA definition are not, in EPA's view, part of the RCRA definition of release. Certain CERCLA exemptions are simply inapplicable, such as those for emissions from certain engine exhausts and for fertilizer applications. Other exemptions are inappropriate. The CERCLA exemption for releases subject to the Atomic Energy Act and the Uranium Mill Tailings Radiation Control Act (UMTRCA) are not needed because RCRA includes a specific statutory scheme for how overlaps between those statutes and RCRA are to be addressed. See section 1004(27), section 1006 of RCRA. (Section 703 of HSWA also specifically indicates that nothing in the new amendments, including section 3004(u), should be construed to modify or amend UMTRCA.) EPA also does not see anything in the legislative history of RCRA indicating an intent to ignore releases to the workplace at the facility.

Accordingly, EPA believes that the term "release" under section 3004(u) means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. The Congress is currently considering amendments to CERCLA that could alter the scope of that program. If the scope of CERCLA is altered, EPA will, consistent with Section 1006 of RCRA, decide whether modifications are needed in the scope of the releases covered by Section 3004(u).

It is clear that Congress intended the term "release" to encompass at least releases to ground water. The Senate legislative history notes that in order "[to] assure corrective action is taken in response to releases . . . the Administrator will need to revise *groundwater* [sic] monitoring requirements . . . (emphasis added) S. Rep. No. 284, 98th Cong., 1st Sess. 32 (1983).

Similarly, the House legislative history notes that the corrective action required for a release "must be accomplished in the manner currently prescribed in [§ 264.100]." H.R. Rep. No. 98th Cong., 1st Sess. Part 1, 60 (1983). The requirements of § 264.100 pertain only to cleanup of ground water. Accordingly, corrective action instituted under the regulations promulgated today must, at a minimum, address any release to ground water from a solid waste management unit.

However, there is nothing in the Act or legislative history to suggest that Congress explicitly intended to limit this provision to releases to ground water. As discussed previously, section 3004(u) requires corrective action for *all* releases of hazardous wastes or constituents. EPA believes use of the term "all releases" indicates Congress' intent that section 3004(u) governs releases to all media, including ground water.

The HSWA provides other evidence of such an intent as well. As will be discussed in more detail later, new section 3008(h) authorizes EPA to issue administrative orders requiring corrective action at interim status facilities as necessary to protect human health and the environment. That authority can clearly reach media other than ground water.[15] See H.R. Rep. No. 1133, 112 (1984). It is reasonable to assume that Congress intended EPA's powers to require cleanup at the time of permitting to be at least as broad as its power to do so under interim status. Accordingly EPA believes that it is authorized to address releases to air, surface water, ground water, and soils under section 3004(u).

Although the scope of section 3004(u)'s jurisdiction appears broad given the definition of release and its multimedia jurisdiction, the Agency has limited the application of this provision by mandating corrective action only *where necessary to protect human health and the environment.* This interpretation is consistent with the legislative history of section 3004(u) which provides that the "new subsection [is] intended to assure that appropriate corrective action is taken to protect human health and the environment from any past, present or future release of hazardous waste from a permitted hazardous waste facility." S. Rep. No. 284, 98th Cong. 1st Sess., 31 (1983).

Under this legal interpretation, the Agency would not mandate corrective action for all releases into the environment. For example, with respect to ground-water releases to the uppermost aquifer only, the Agency would only apply corrective action to those releases which exceeded the 40 CFR Part 264 Subpart F Ground-Water Protection Standards. The ground-water

[15] By way of analogy it is also worth noting that the term "environment" when defined in Federal environmental statutes has generally included all media. See CERCLA 101(8) and FIFRA 2(j).

protection standard is defined by the Subpart F regulations to be either the background concentration of the constituent at issue or the maximum contaminant level for that constituent established by the National Interim Primary Drinking Water Regulations, unless the owner or operator demonstrates that an alternate concentration limit is warranted.

It should be noted that, consistent with Section 1006 of RCRA, EPA will implement Section 3004(u) in a manner consistent with other EPA programs. For example, where a release from a solid waste management unit is otherwise subject to regulation under Section 402 of the Clean Water Act, EPA will use the NPDES program to address such a discharge.

Section 3004(u) requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a facility seeking a RCRA permit *regardless of the time at which such waste was placed in such unit.* This clear statutory directive precludes a reading of the statute which would limit an owner's or operator's responsibilities to waste placed in units during his or her tenure. Accordingly, the owner or operator of a solid waste management unit containing only waste placed there by a previous owner would be fully responsible for corrective action for any release from such unit. This interpretation would not, of course, preclude such owner or operator from bringing any action otherwise allowed by law against the previous owner seeking remuneration for the costs of corrective action.

New section 3004(u) further provides that permits issued to facilities containing solid waste management units shall include schedules of compliance and financial assurance for completing any necessary corrective action. The legislative history explains that where insufficient information exists at the time of permitting to specify in the schedule of compliance the corrective action required (if any) and the financial assurance needed to ensure its completion, the schedule of compliance included in the permit may establish a time frame by which the information necessary to determine the extent and cost of corrective action will be obtained and financial assurance demonstrated. 130 Cong. Rec. H11129 (daily ed. Oct. 3, 1984). Once the necessary information has been acquired, the permit is amended [through the major modification process, 40 CFR 270.41(a)(2)], to incorporate financial assurance and to institute the appropriate corrective action.

Today's rule adds a new section to Subpart F, § 264.101, to codify these new standards for permitted facilities containing solid waste management units. New section 264.101(a) provides that all section 3005(c) permits issued after November 8, 1984, shall require the owner or operator of a treatment, storage or disposal facility to institute corrective action where necessary to protect human health and the environment whenever EPA determines that there has been a release of hazardous waste or constituents from any solid waste management unit, regardless of the time at which waste was placed in such unit.

Paragraph (b) of § 264.101 codifies the statutory requirement that all permits issued after November 8, 1984, to facilities containing solid waste management units incorporate either a schedule of compliance for completing any necessary corrective action (for all solid waste management units, and except as discussed further in section c, *infra,* regulated units with releases to ground water in the uppermost aquifer) or a schedule for gathering information to determine the extent of corrective action required (if any) and assurances of financial responsibility for completing such corrective action. Any permit issued with a schedule of compliance directing the owner or operator to gather information necessary to determine the extent and cost of corrective action needed (if any) must include either financial assurances for completing any corrective action deemed necessary (where this can be determined at the time of permit issuance) or a schedule of compliance for obtaining the information necessary to determine the cost of corrective action and demonstrating financial assurances.

In order to implement the provision of new section 3004(u), the owner or operator of any facility seeking a 3005(c) permit to be issued after November 8, 1984, must submit with the permit application sufficient information to enable EPA to assess the applicability of section 3004(u) to the owner's or operator's facility. EPA is not authorized to issue a permit absent a determination that the facility is in compliance with the requirements of section 3004 [*see* 3005(c), 42 U.S.C. § 6925(c).]

c. Relationship between sections 3004(u) and 3005(i). As noted earlier, new subsection (i) of section 3005 provides that the ground-water monitoring, unsaturated zone monitoring, and corrective action standards applicable under section 3004 to new units will apply to units receiving waste after July 26, 1982. The purpose of this amendment, as explained in the pertinent legislative history, is to revise EPA's existing Part 264 standards so that a regulated unit is defined as a landfill, surface impoundment, waste pile, or land treatment unit that receives hazardous waste after July 26, 1982 (rather than after January 26, 1983, as is provided in EPA's existing regulations). New subsection (u) of section 3004, on the other hand, deals with a broader class of units: that is, all solid waste management units that have received solid waste (including hazardous waste) at any time. Thus, regulated units, as defined by 3005(i), are clearly a subset of solid waste management units. In assessing the effect of the Hazardous and Solid Waste Amendments of 1984, one of the major legal questions has been how Congress intended to reconcile these provisions. The legislative history sheds some light upon the intended relationship between these provisions.

As noted above, the legislative history of section 3005(i) suggests that the major purpose of this provision is to ensure that landfills, waste piles, surface impoundments and land treatment units that receive waste after July 26, 1982, are subject to the ground-water monitoring and corrective action requirements contained in existing Subpart F of Part 264. Subpart F deals exclusively with releases to ground water in the uppermost aquifer. It provides explicit measures to be followed in detecting a release to ground water and instituting corrective action for any such release. Section 3004(u), on the other hand, does not limit corrective action to ground-water releases. Moreover, it does not prescribe specific measures to be taken in detecting and correcting a release.

To the extent that section 3004(u) could be read to impose on solid waste management units different standards for detection and correction of ground-water releases than would be required for regulated units under existing Subpart F, it would appear to be consistent with Congressional intent to let the more explicit provision of section 3005(i) govern. On the other hand, to the extent that section 3004(u) imposes obligations that are not addressed by section 3005(i) (such as the requirements to correct releases to media other than ground water and to demonstrate financial assurance for corrective action) there would appear to be little basis for excluding a regulated unit from such obligations.

Accordingly, the Agency has interpreted these sections to provide that regulated units, as newly defined by section 3005(i), shall be subject to

existing standards under Subpart F of Part 264 in detecting and correcting any release to ground water in the uppermost aquifer. For all other releases, regulated units shall be subject to the detection and corrective action standards implemented under section 3004(u). Similarly, the existing exemptions from Subpart F requirements for ground water protection apply only to regulated units with releases to ground water in the uppermost aquifer, not to *all* solid waste management units.

By that same logic, regulated units are treated somewhat differently for purposes of the special financial assurance and schedule of compliance provisions in this section. Section 3004(u) authorizes EPA to incorporate into a permit issued after November 8, 1984, to the owner or operator of a solid waste management unit, a schedule of compliance allowing the owner or operator to gather information to establish the extent of any necessary corrective action. Subpart F of Part 264 already establishes specific requirements for gathering such information for releases to ground water in the uppermost aquifer at regulated units. Since those units, defined as "regulated units", generally are required to gather sufficient ground-water data during interim status to determine whether a release has occurred, it would not be appropriate to afford such units an additional opportunity to gather such information at the time of permit issuance.[16]

Since the "information collection" type of schedule of compliance is not available to regulated units with releases to the uppermost aquifer, the financial assurance requirements in section 3004(u) cannot be deferred through a schedule of compliance for such releases. Once the owner or operator of a regulated unit has identified the releases to the uppermost aquifer, pursuant to existing Subpart F regulations, and developed a cost estimate of the necessary corrective action, he becomes responsible for establishing financial assurance for completion of the corrective action.

[16] It may be argued that this rationale does not apply to certain waste piles. Waste piles are not subject to ground-water monitoring during interim status. Accordingly, some may assert that the owner or operator of a waste pile will not have determined whether a release has occurred by the time of permit issuance. However, since waste piles have always been subject to ground-water monitoring requirements under Part 264 and the attendant Part 270 application standards, the Agency believes that many owners or operators of waste piles have determined at the time of permit issuance whether corrective action is required.

The foregoing distinctions are reflected in today's amendments. Section 264.90(a)(1) provides that solid waste management units are subject to the new detection, corrective action, financial assurance, and schedule of compliance authorities contained in § 264.101. Section 264.90(a)(2) also makes it clear that the requirements imposed by new § 264.101 do not apply to regulated units for purposes of detecting, characterizing and responding to releases into the uppermost aquifer. The financial responsibility requirements of § 264.101 apply to regulated units.

d. Corrective Action for Programs Covered Under RCRA Permits by Rule. Certain facilities specifically included under the RCRA permitting requirements by regulation (§ 270.1(c)(1)) are currently deemed to have a RCRA permit if they have permits under other programs and comply with the special requirements under the permit-by-rule provision (§ 270.60). The addition of the new requirements under section 3004(u) for RCRA-permitted facilities requires conforming changes to RCRA permits by rule for UIC facilities and for municipal facilities with National Pollutant Discharge Elimination (NPDES) permits under the Clean Water Act. Corrective action requirements for vessels and barges permitted by the Marine Protection, Research, and Sanctuaries Act (MPRSA) do not require a conforming change for the reasons explained below.

(1) Permit by rule for underground injection wells—Section 270.60(b) provides a permit by rule to underground injection wells if they have a permit issued by EPA or the State under the UIC program and if they meet other specified RCRA requirements. With the addition of the new requirements for solid waste management units at RCRA permitted facilities, there is a need to incorporate additional requirements into the UIC permit by rule to reflect those changes. Accordingly, § 270.60 has been modified to provide that all solid waste management units at UIC facilities must meet the requirements in § 264.101 in order for the facility to qualify for a permit by rule.

(2) Permit by rule for municipal NPDES facilities—Section 270.60(c) provides a permit by rule to publicly owned treatment works (POTWs) that have an NPDES permit, receive hazardous waste by rail, truck, or by a pipe that did not carry sewage, comply with specified RCRA requirements, and meet all Federal, State, and local pretreatment requirements under the Clean Water Act. The corrective action requirement of section 3004(u) of RCRA, however, requires permits issued after November 8, 1984 to contain the corrective action requirements. The regulations under § 270.60(c) have been modified to add this new permit-by-rule requirement. The corrective action requirement will be implemented through the NPDES permitting process.

It should be noted that the overlap between the requirements of section 3005(i) and section 3004(u) discussed in part c above does not exist for POTWs. Section 3005(i) applies to regulated units at interim status facilities that receive hazardous waste after July 26, 1982. POTW facilities, however, have a RCRA permit by rule and, therefore, are not covered by interim status. Thus, section 3005(i) does not apply to POTW facilities with a RCRA permit by rule. Since section 3005(i) does not operate to supersede section 3004(u) for any units at POTW facilities, all such units at the facility are covered by the requirements of § 264.101. This includes releases from regulated units to the uppermost aquifer. In fashioning such requirements at a municipal NPDES facility for solid waste management wastes, including regulated units, a compliance schedule may be used. EPA intends to propose a rulemaking package which will discuss how the corrective action requirement will be implemented for POTWs with RCRA permits by rule.

(3) Permit by rule for vessels and barges permitted under MPRSA—Section 270.60(a) provides a permit by rule for any vessel that obtains a permit for the disposal of hazardous waste in ocean waters under the Marine Protection, Research, and Sanctuaries Act (MPRSA) and complies with specified RCRA requirements. Any onshore storage or treatment facility that may be associated with the ocean disposal operation, however, must obtain a RCRA permit. EPA regards the vessels and the onshore operations as separate facilities rather than units belonging to the same facility. Since the vessel and any onshore operation are separate facilities, no applicant for a permit for ocean disposal under the MPRSA is required to undertake corrective action for releases at any onshore facility. EPA will discuss the issues raised by applying corrective action requirements to permitted vessels in a future proposal.

EPA is not making any conforming change to the permit-by-rule provisions for ocean dumping vessels. The conforming changes for the UIC and NPDES programs insure that corrective

action requirements apply to releases from *all* solid waste management units at UIC or NPDES facilities, including units not regulated by the UIC or NPDES programs. MPRSA permits, however, cover all portions of ocean dumping vessels. Hence, there are no unregulated "units" within an ocean dumping "facility", and no conforming change is necessary.

e. Cleanup beyond the property boundary. New subsection (v) of section 3004 requires EPA to amend its regulations to impose upon owners and operators of hazardous waste treatment, storage, and disposal facilities the obligation to clean up any contamination that has migrated beyond the facility boundary. Specifically, this provision requires that the owner or operator institute corrective action beyond the facility boundary where necessary to protect human health and the environment unless the owner or operator demonstrates to EPA that, despite the owner's or operator's best efforts, he is unable to obtain the necessary permission to undertake such action. This provision applies to all permitted facilities, including facilities containing landfills, surface impoundments and waste piles that are embraced by the new definition of "regulated unit" (i.e., units receiving waste after July 26, 1982).

In the future, EPA intends to propose regulations which impose upon owners and operators of hazardous waste management facilities the obligation to clean up contamination that has migrated beyond the facility boundary as necessary to protect human health and the environment. Pending promulgation of these regulations, EPA intends, as required by the statute, to issue orders to implement section 3004(v)'s directives on a case-by-case basis.

f. Interim status corrective action authority. In addition to introducting the foregoing new statutory provisions dealing with corrective acton, the HSWA vests EPA with authority to issue corrective action orders to interim status facilities. The new provision, section 3008(h), authorizes EPA to issue such an order whenever it determines, on the basis of any information, that there is, or has been, a release of hazardous waste into the environment from an interim status facility.

The authority conferred upon the Agency by this provision is a broad one. The legislative history makes it clear that the term "release" as it is used in this section is not limited to releases to ground water. 130 Cong. Rec. H11135 (daily ed. October 3, 1984). Indeed, Congress specifically noted that interim status corrective action orders could be used to control air emissions. *Id.* The order may require corrective action or any other response measure that EPA determines is necessary to protect human health and the environment.

"The amendment is a supplement to EPA's power to impose corrective action through permits." *Id.* EPA is authorized to exercise this order authority to apply to interim status facilities those "environmental standards promulgated under section 3004." *Id.* Since section 3004 has been amended to extend corrective action requirements to all solid waste management units at facilities seeking a RCRA permit, the Agency interprets this mandate to authorize the issuance of corrective action orders to any interim status facility containing solid waste management units, including regulated units, from which there has been a release to the environment. Similarly, by virtue of section 3004(v), the requirement to institute corrective action beyond the facility boundary becomes an applicable section 3004 standard and may be enforced through the section 3008(h) order authority at interim status facilities.

Congress has made it clear that the interim status corrective action order is meant to be a flexible mechanism. The legislative history notes, for example, that this provision authorizes EPA to issue an order which, as a first step, requires the owner or operator to characterize the extent of ground-water contamination and to submit to EPA a proposed corrective action plan. *Id.* The Agency and the owner could then confer on the corrective action plan and incorporate any modifications to the plan in an amendment to the order.

According to the new statutory provision, any order issued pursuant to this section may include a suspension or revocation of a facility's authority to operate under interim status. If anyone named in an interim status corrective action order fails to comply with the order, EPA may assess a civil penalty of up to $25,000 for each day of noncompliance. In additon to the authority to issue corrective action orders, this provision confers upon EPA the authority to commence a civil action for appropriate relief, including a temporary or permanent injunction.

4. Ground-Water Monitoring Variances

Section 3004(p) of the HWSA introduces a new provision governing variances from general ground-water monitoring requirements. Specifically, paragraph (p) provides that ground-water monitoring requirements applicable to surface impoundments, waste piles, landfills and land treatment units shall apply whether or not such units are located above the seasonal high water table, have two liners and a leachate collection system, or have liners that are periodically inspected. The effect of this provision is to render invalid several of the ground-water monitoring waivers incorporated in EPA's existing standards.

Sections 264.222, 264.252 and 264.302 of the existing regulations allow surface impoundments, waste piles and landfills to waive Subpart F ground-water monitoring requirements if such units are fitted with a double liner, leak detection system, leachate collection system (in the case of landfills and waste piles), and are located entirely above the seasonal high water table. In light of the above provision calling for ground-water monitoring notwithstanding the presence of double liners or location above the seasonal high water table, these variances cannot stand. Accordingly, today's final rule deletes §§ 264.222, 264.252 and 264.302.

Today's rule also deletes § 264.253. This section exempts any lined waste pile from ground-water monitoring requirements if such a pile is located entirely above the seasonal high water table and the waste is removed periodically so that the liner can be examined. Again, the plain language of section 3004(p) would subject such a pile to ground-water monitoring requirements notwithstanding its location above the seasonal high water table and the periodic liner inspection. Accordingly, the regulations have been amended to reflect this change.

Section 3004(p) also introduces a new variance from ground-water monitoring requirements for engineered structures that meet certain requirements. Specifically, this variance is applicable on a case-by-case basis, only to an engineered structure that (1) does not receive or contain liquid waste (or waste containing free liquids), (2) is designed and operated to exclude liquid from precipitation or other runoff, (3) has multiple leak detection systems within the outer layer of containment which are operated and maintained throughout the life of the unit, including the closure and post-closure care periods, and (4) prevents the migration of hazardous constituents beyond the outer layer of containment prior to the end of the post-closure care period. Section 264.90(b) of the existing regulations has been amended to incorporate this new ground-water monitoring waiver.

The regulatory requirements set forth in § 264.90(b)(2) repeat the statutory

language with one exception. The statute provides that in order to be eligible for this new exemption an engineered structure must utilize "multiple leak detection systems within the outer layer of containment." EPA has interpreted this reference to an "outer" layer of containment to imply that there must be at least one "inner" layer as well. This interpretation is supported by the legislative history which provides that "[a] qualifying structure would also have to be engineered to have inner and outer layers of containment enclosing the waste." 130 Cong. Rec. S9179 (daily ed. July 25, 1984). Accordingly, § 264.90(b)(2)(iv) calls for both inner and outer layers of containment. EPA has also interpreted the reference to "multiple leak detection systems within the outer layer" to mean that a leak detection system must be built into each layer of containment. Again, this interpretation is expressly sanctioned by the legislative history, which provides that a leak detection system must "be built into the structure at each internal containment layer." *Id.* Today's rule codifies this requirement at § 264.90(b)(2)(v).

Section 3004(p) expressly states that its provisions shall not be construed to affect other regulatory exemptions or waivers from ground-water monitoring requirements to the extent that such exemptions are consistent with the new provisions. EPA interprets this provision to mean that section 3004(p) does not affect the ground-water monitoring waiver contained in § 264.90(b)(4) which exempts units at which "there is no potential for migration" of liquid to the uppermost aquifer during the operating, closure and post-closure periods. This interpretation finds support in the legislative history which expressly provides that the § 264.90(b)(4) waiver is not nullified by § 3004(p). S. Rep. No. 284, 98th Cong., 1st Sess. 64 (1983). The Agency also believes that the ground-water waiver set forth in § 264.280(e), which exempts land treatment units from ground-water monitoring if it is demonstrated that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit, is unaffected by the new statutory provision.[17]

One of the questions emerging from a review of the new statute is the relationship between section 3004(o) and (p). Section 3004(o) provides that certain landfills and surface impoundments must be double lined (with appropriate leachate collection systems) and must comply with ground-water monitoring. The Agency has interpreted this reference to ground-water monitoring to mean that the units governed by section 3004(o) must comply with applicable ground-water monitoring requirements unless exempted from such requirements in accordance with paragraph (p). As noted previously, paragraph (p) allows for an exemption from ground-water monitoring only if a unit meets the new engineered structure exemption, or complies with § 264.90(b)(4) or, in the case of land treatment units, § 264.280(e).

5. Salt Dome Formations, Salt Bed Formations, Underground Mines and Caves.

Under new section 3004(b), the Congress has placed strict controls, effective on the date of enactment, on the placement of hazardous wastes in salt dome formations, salt bed formations, underground mines and caves. The applicable requirements will depend on whether a hazardous waste falls into one of the two categories.

For all noncontainerized (or bulk) liquid hazardous waste, the placement of waste in the four settings identified above is prohibited until:

(1) EPA has determined, after notice and opportunity for hearings on the record in the affected areas, that such placement is protective of human health and the environment;

(2) EPA has promulgated performance and permitting standards for such facilities under Subtitle C; *and*

(3) a permit has been issued for the facility.

For containerized liquid hazardous waste and all other non-liquid hazardous waste, the placement of such waste in the four enumerated settings is prohibited until a permit has been issued for the facility.

The new provision also provides that EPA's decisions on banning land disposal of certain hazardous wastes under section 3004 (d), (e) and (g) cannot negate the prohibitions explicitly stated in this provision. In other words, EPA must take action under section 3004(b) in order to lift the prohibitions stated therein. In addition, the Congress makes it clear that the prohibitions provided in section 3004(b) do not apply to the Department of Energy Waste Isolation Pilot Project in New Mexico.

In integrating this provision into the current regulations, EPA believes that this provision is best viewed as a location standard that applies to all treatment, storage, and disposal facilities. The statutory language refers to any "placement" of hazardous wastes in the four types of settings. This language would appear to include treatment, storage, and disposal activities because each involves placement of waste in the enumerated settings.

Accordingly, EPA has included this provision as a location standard in § 264.18 and § 265.18. In Part 265, the ban applies absolutely to all hazardous wastes because no wastes may be placed in the enumerated settings until an individual permit has been issued under Part 264.

In Part 264, the ban only applies to noncontainerized or bulk liquid hazardous waste. For other hazardous waste the issuance of a permit relieves an owner or operator from the ban. The statute appears to contemplate, however, that EPA must take additional steps beyond issuing a Part 264 permit for noncontainerized hazardous waste before EPA may relieve an owner or operator from the ban. For example, the statute states that EPA must conduct some kind of hearing in an "affected area" before a ban may be lifted. It is unclear what this requirement necessarily entails and how that process might be integrated with EPA's existing permit program. Since EPA is not prepared at this time to define what steps must be taken to lift the ban on placement of noncontainerized liquid hazardous waste in the enumerated settings, it has simply incorporated the ban into the Part 264 provisions. Based on further review, EPA may clarify when the ban on noncontainerized liquid hazardous waste can be lifted. EPA intends in the future to propose regulations which would specifically solicit comments on this issue.

The ban in new section 3004(b) applies to *underground* mines. EPA believes that by using that term the Congress did not intend to apply the ban to strip mines. Operations at strip mines involve removal of mineral deposits located near the surface of the ground by excavation of large surface areas. This is in contrast to operations at shaft mines. Strip mines will typically create a large depression in the ground that would be regulated as a surface impoundment or a landfill under RCRA if it was used to manage hazardous wastes. EPA does not believe that the Congress meant, in section 3004(b), to modify how EPA generally regulates surface impoundments and landfills. Accordingly EPA believes that only

[17] This interpretation is in accordance with the legislative history which notes that apart from the exemptions specified in §§ 264.222, 264.252, 264.302 and 264.253, this amendment does not affect other exemptions from the ground-water monitoring standards. *Id.*

underground mines rather than strip mines were meant to be covered by section 3004(b).

6. Dust Suppression

New section 3004(1) prohibits use of hazardous waste (except hazardous wastes exhibiting the characteristic of ignitability and not hazardous for any other reason) mixed with waste oil, used oil, or other material for dust suppression or for road treatment. The provision is codified in a new Subpart C to Part 266, a subpart reserved for regulation of hazardous waste uses constituting disposal.

The statutory language raises a number of issues. The first pertains to the reference of dioxin: "[t]he use of waste oil or used oil or other material which is contaminated with dioxin or any other hazardous waste. * * *" The issue is whether dioxin must be present as a result of being added as hazardous waste, or if the language refers to dioxin contamination from any source. The Agency believes that the ban applies only when the dioxin is present as a result of being added as a constituent in a hazardous waste. This is indicated by the fact that Congress placed the provision in section 3004—where regulatory jurisdiction is generally limited to hazardous wastes identified or listed in section 3001—and also by the explanation in the legislative history that the ban is for "hazardous waste contaminated materials * * *" S. Rep. No. 284, 98th Cong., 1st. Sess. 23.

A second issue is the reference to "waste oil or used oil." Waste oil is virgin oil that has been discarded before use. The Agency believes the term was used purposely (since the phrase is otherwise redundant), so that if virgin oil is mixed with hazardous waste, it cannot be used legally as a dust suppressant or for treatment.

The prohibition applies on its face to hazardous wastes that are mixed with other materials, but does not explicitly ban the use of *unmixed* hazardous wastes (i.e., hazardous wastes applied directly as dust suppressants). The Agency believes the provision should be read as banning this type of direct application. This appears to be the only sensible reading because an unmixed waste is likely to be more hazardous than a mixed, diluted one. Moreover, the Conference Report states that the provision "bans the use of * * * any * * * hazardous waste as a dust suppressant." H.R. Rep. No. 1133, 98th Cong., 2nd Sess. 88 (1984).

A final issue is the question of what is used oil and what is hazardous waste. The bill's prohibition applies on its face only to used oil that is contaminated with hazardous waste, not to used oil applied directly, even if the used oil is contaminated through use. At this time, determining whether used oil is contaminated by use or through adulteration with a hazardous waste is a question of fact to be decided on a case-by-case basis. EPA plans to address this issue in future rulemakings, including those dealing with hazardous waste fuels and with standards for recycled oil.

7. Underground Injection

The HSWA introduces a new section to RCRA governing the underground injection of hazardous waste.[18] Section 7010 bans the injection of hazardous waste into or above any underground formation which contains, within one-quarter mile of the injection well, an underground source of drinking water. This statutory ban on so-called "Class IV" wells is effective automatically, six months from the date of enactment, in any State which does not have identical or more stringent prohibitions in effect under an "applicable undergound injection control program" ("UIC" program) (defined at 42 U.S.C. 300h–1(d)) which has been approved or prescribed by EPA under the Safe Drinking Water Act ("SDWA"). 42 U.S.C. 300f *et seq.* In any State in which the "applicable underground injection control program" *does* include an identical or more stringent prohibition, no new notice to the public or six-month phase-in period is necessary, and the ban may be enforced immediately.

In May 1984, EPA adopted a regulatory ban upon all hazardous and radioactive waste injection into or above a USDW, effective six months after the date the applicable underground injection control program becomes effective. *See* 49 FR 20138, 20181 (May 11, 1984) (codified at 40 CFR 144.13 (1984). Because this regulatory ban was adopted pursuant to both the SDWA and Subtitle C of RCRA, *see* 49 FR 20138, at 20138 (May 11, 1984); 40 CFR 144.1(a) (1984), the regulatory ban may be enforced pursuant to both SDWA 1423, 42 U.S.C. 300h–2, and RCRA 3008, 42 U.S.C. 6928. Furthermore, as provided in HSWA 7010(c), the *statutory* prohibition on hazardous waste injection into such wells may be enforced pursuant to RCRA sections 7002 (citizen suits) and 7003 (imminent and substantial endangerment) as well as the SDWA, in States in which the applicable UIC program includes the same ban or a ban which is more stringent. Finally, in States in which no identical or more stringent prohibition exists under the applicable UIC program, and in which the Administrator has not prescribed a UIC program, the statutory ban imposed by § 7010(a) may be enforced immediately under sections 7002 or 7003 of RCRA, and may later be enforced under the SDWA when the applicable underground injection control program includes the ban.

Although EPA may invoke RCRA 3008 compliance order authority to enforce the *regulatory* ban on these "Class IV" wells in States where EPA implements the UIC program, it appears that such compliance order authority is not available to the Agency to enforce the statutory ban in States which have UIC primary enforcement responsibility and which have not yet adopted the full Class IV ban now required by 40 CFR 144.13. This is because section 3008(a) orders may be used only to enforce the provisions of subtitle C of RCRA, whereas Congress included section 7010 in subtitle G of the Act. EPA does not believe that by referencing the enforcement authority contained in sections 7002 and 7003, Congress has precluded the Agency from enforcing the *regulatory* ban on Class IV wells under RCRA § 3008, or from initiating an action in equity to enjoin a violation of the prohibition contained in section 7010(a).

Section 7010(b) provides an exception to the ban provision. The ban does not apply to the injection of contaminated ground water into the aquifer from which it was withdrawn if

(1) The injection is part of a federally-supervised cleanup action under RCRA (e.g., corrective action requirements of § 264.100, 101), or section 104 or 106 of CERCLA;

(2) Contaminated ground water is treated to substantially reduce hazardous constituents prior to injection; and

(3) Such cleanup, when completed, will be sufficient to protect human health and the environment. The legislative history elaborates on the intent of this exception, noting that since "[t]he pumping, treatment and reinjection of already contaminated ground water may be the preferred removal or remedial technique" at some site, such injections are not to be

[18] In 40 CFR 144.13, as amended on May 11, 1984 at 49 FR 20138 et seq., EPA promulgated a ban on hazardous and radioactive waste injection into or above "underground sources of drinking water." (This phrase, often referred to as "USDW," is broadly defined in 40 CFR 144.3.) Congress ratified that definition in § 7010(d). The ban includes an exception, similar to that in the statute, for reinjection of treated, contaminated ground water during an EPA-approved cleanup action under RCRA or CERCLA.

banned. 130 Cong. Rec. S9179 (daily ed. July 25, 1984).

A question of interpretation arises with respect to section 7010(b)(3), which requires that any response action or corrective action involving reinjection of contaminated ground water be sufficient to protect human health and the environment. Section 300.68(j) of the CERCLA regulations provides that a remedial action must effectively mitigate and minimize damage to and provide adequate protection of public health, welfare, and the environment. Similarly, §§ 264.100 and 264.101 of the RCRA regulations provide that any corrective action program must protect human health and the environment by meeting the standards specified therein. Finally, the EPA regulations at 40 CFR 144.13(c) provide that EPA must specifically approve of any such reinjection. EPA believes that any response or corrective action carried out in conformance with these provisions should be deemed to satisfy the standard set forth in section 7010(b)(3).

B. Small Quantity Generators

The HSWA adds a new subsection (d) to section 3001 of RCRA designed to modify EPA's current regulatory exemption (40 CFR 261.5) of wastes generated by small quantity generators from full Subtitle C regulation.[19] The principal focus of section 3001(d) is a comprehensive set of standards specifically tailored to wastes produced by small quantity generators of between 100 kilograms and 1000 kilograms per calendar month which EPA must promulgate by March 31, 1986 pursuant to sections 3001(d)(1), 3001(d)(2), and 3001(d)(6). If EPA fails to promulgate these small quantity generator standards by March 31, 1986, the requirements set forth in section 3001(d)(8) automatically go into effect.

Section 3001(d) makes certain minimum requirements applicable to small quantity generators of between 100 kilograms and 1000 kilograms per calendar month effective before March 31, 1986. Effective immediately, section 3001(d)(5) provides that all hazardous waste from generators producing greater than 100 kilograms but less than 1000 kilograms of hazardous waste per calendar month must be either treated, stored, or disposed of at a facility having a permit under section 3005 of RCRA or disposed of at a facility authorized by a State to manage municipal or industrial solid waste. Section 3001(d)(3) provides that, no later than 270 days after enactment, hazardous waste shipped off-site by a generator producing greater than 100 kilograms but less than 1000 kilograms during one calendar month must be accompanied by a copy of the EPA Uniform Hazardous Waste Manifest form signed by the generator and containing certain specified information.

EPA is publishing today regulatory amendments necessary to codify requirements dictated by the statutory amendments effective until March 31, 1986. These regulatory amendments will remain in effect until standards are promulgated pursuant to section 3001(d)(1) or until March 31, 1986, whichever occurs first. The Agency has already initiated a study of small quantity generators and will continue this study consistent with the mandates of Section 221(c). On the basis of this study, EPA intends to propose and promulgate a comprehensive set of small quantity generator standards in accordance with sections 3001(d)(1), 3001(d)(2), and 3001(d)(6) of RCRA. In the event the Agency finds it is unable to promulgate these standards by March 31, 1986, it may publish further regulatory amendments to codify additional requirements of section 3001(d)(8) that are applicable to small quantity generators on March 31, 1986.

The statutory provisions codified today affect only those generators generating between 100 kilograms and 1000 kilograms of non-acutely hazardous waste per calendar month. Section 3001(d)(7) of RCRA expressly provides that existing EPA regulations pertaining to acutely hazardous waste are not affected by the statutory amendments. Thus, these amendments, together with existing regulations, distinguish three classes of small quantity generators for regulatory purposes:

(1) Those generating between 100 kilograms and 1000 kilograms of non-acutely hazardous waste per calendar month;

(2) Those generating up to 100 kilograms of non-acutely hazardous waste per calendar month; and

(3) Those generating acutely hazardous waste in those quantities currently set forth in paragraphs (e)(1) and (e)(2) of § 261.5.

EPA is amending § 261.5 to reorganize existing provisions and to codify new statutory requirements to provide a separate paragraph for each class of small quantity generators listed above. Today's regulatory amendments add three new paragraphs to § 261.5 designated as paragraphs (f), (g), and (h); existing paragraphs (f) and (g) are stricken; and existing paragraphs (h) and (j) are redesignated as (i) and (k), respectively.

New paragraph (f) of § 261.5 recodifies all existing requirements applicable to small quantity generators of acutely hazardous waste in quantities set forth in paragraph (e). It provides that the generator must comply with § 262.11 to determine whether his waste is hazardous (recodified from existing paragraph (g)(1) of this section); conditionally allows for on-site accumulation (recodified from existing paragraph (f) of this section); and sets out treatment, storage, and disposal requirements (recodified from existing paragraph (g)(3) of this section).

New paragraph (g) of § 261.5 recodifies existing requirements applicable to small quantity generators generating less than 100 kilograms of non-acutely hazardous waste in one calendar month.[20] It requires that generators comply with § 262.11 (recodified from existing paragraph (g)(1) of this section); conditionally allows for on-site accumulation (recodified from existing paragraph (f) of this section); and provides for treatment, storage, and disposal practices (recodified from existing paragraph (g)(3) of this section).

New paragraph (h) recodifies one existing requirement and incorporates new requirements pursuant to Sections 3001(d)(3) and 3001(d)(5) of RCRA, applicable to generators generating between 100 kilograms and 1000 kilograms of non-acutely hazardous waste during one calendar month. The existing provision requiring the generator to comply with § 262.11 is recodified from existing paragraph (g)(1) of this section and is now found at paragraph (h)(1).

New paragraph (h)(3) codifies section 3001(d)(3) of RCRA requiring, effective August 5, 1985, any hazardous waste shipped off-site by a generator of

[19] Enactment of section 3001(d) eliminates the issue, initially raised with respect to EPA's regulatory exemption of small quantity generators in 1980, as to whether EPA has legal authority to conditionally exempt small quantity generators from full Subtitle C regulation. Section 3001(d)(1) directs EPA to promulgate standards applicable to wastes generated by generators of between 100 kilograms and 1000 kilograms per calendar month, which may, pursuant to section 3001(d)(2), differ from existing subtitle C regulations applicable to wastes from larger quantity generators. Section 3001(d)(4) further provides that EPA may establish standards for generators of less than 100 kilograms per month if such standards are required to protect human health and the environment.

[20] Section 3001(d)(4) of RCRA provides that EPA may establish standards applicable to small quantity generators of less than 100 kilograms hazardous waste per calendar month, if the Administrator finds such standards necessary to protect human health and the environment. EPA is not publishing, at this time, any requirements applicable to these generators beyond those currently required by existing § 261.5.

between 100 kilograms and 1000 kilograms per month to be accompanied by a copy of EPA's Uniform Hazardous Waste Manifest form signed by the generator. This form must contain the following information:

(1) The name and address of the generator;

(2) The U.S. Department of Transportation description of the waste including the proper shipping name, hazard class, and identification number; [21]

(3) The number and type of containers;

(4) The quantity of waste being transported; and

(5) The name and address of the designated facility.

This information corresponds to Items 3, 9, 11, 12, 13, 14, and 16 of EPA's Uniform Hazardous Waste Manifest, form 8700–22 and accompanying instructions, promulgated by EPA on March 20, 1984 (40 CFR Part 262, Appendix; 49 FR 10490). Although use of the form is mandatory after August 5, 1985, small quantity generators are not required by Federal law to complete the entire form or to comply with the full manifest system established by 40 CFR Part 262 applicable to generators of greater than 1000 kilograms of hazardous waste per month. However, States operating approved hazardous waste programs in lieu of the Federal program pursuant to section 3006 of RCRA may have additional manifest requirements applicable to small quantity generators. Generators in States having their own hazardous waste program are strongly advised to contact the appropriate State agency when completing this form to ensure compliance with State law.

New paragraph (h)(4) of § 261.5 sets forth requirements for the treatment, storage, or disposal of wastes produced by generators of between 100 kilograms and 1000 kilograms of nonacutely hazardous wastes per month. These requirements allow a generator to either treat or dispose of his hazardous waste on-site or ensure delivery to an off-site storage, treatment, or disposal facility providing that the on-site or off-site facility is either:

(1) Permitted by EPA pursuant to section 3005 or by a State having an authorized permit program pursuant to Part 271 of this chapter;

(2) In interim status under Parts 270 and 265 of this chapter;

(3) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste; or

(4) A facility which beneficially uses or reuses, or legitimately recycles or reclaims its waste; or treats its waste prior to reuse, recycling or reclamation.

These are the same requirements currently applicable to small quantity generators, recodified from § 261.5(g)(3). In retaining these requirements, EPA is relying on the only reading of section 3001(d)(5) that is consistent with Congress' overall scheme of small quantity generator waste regulation and the legislative history.

Section 3001(d)(5) governs the destination of hazardous waste from generators of between 100 kilograms and 1000 kilograms from the date of enactment until promulgation of the full set of small quantity generator standards or until March 31, 1986 (when the alternative provisions of section 3001(d)(8) become effective). It provides that:

> . . . any hazardous waste . . . which is not treated, stored, or disposed of at a hazardous waste treatment, storage, or disosal facility with a permit under section 3005, shall be disposed of only in a facility which is permitted, licensed, or registered by a State to manage municipal or industrial solid waste.

Section 3001(d)(5) explicitly allows for treatment, storage, or disposal at a facility with a permit under section 3005. In addition, since a permit issued by a State having an approved hazardous waste permit program pursuant to section 3006 generally has the same force and effect as a permit issued by EPA under section 3005, section 3001(d)(5) also allows for small quantity generator waste management at a hazardous waste facility permitted by a State. (See section 3006(d) of RCRA). To implement this provision, today's rule recodifies existing regulations (§§ 261.5(g)(3) (i) and (iii)) to allow small quantity generators of between 100 kilograms and 1000 kilograms of hazardous waste to continue to treat, store, or dispose of such waste at a facility having either an EPA- or State-issued hazardous waste permit.

The plain language of section 3001(d)(5) does not expressly provide for treatment, storage, or disposal of small quantity generator waste at a facility in interim status. Section 3001(d)(5) refers only to a facility "having a permit under Section 3005." EPA has consistently interpreted this language as meaning only a facility actually having obtained a permit pursuant to Parts 270 and 264 of this chapter (see, *Hempstead County and Nevada County Project, et al.* v. *U.S. EPA*, 700 F. 2d 459 (8th Cir. 1983)). Since section 3001(d)(5) does not expressly provide for treatment, storage, or disposal of small quantity generator waste at a facility in interim status, a strict reading of this section, apart from other statutory provisions governing small quantity generator waste, would effectively rule out treatment, storage, or disposal at a facility in interim status. As discussed below, EPA is rejecting such a restrictive reading of section 3001(d)(5) because it does not fit within the statutory scheme chosen by Congress for small quantity generator waste and is not consistent with the legislative history accompanying this section.

EPA believes that implementation of section 3001(d)(5) must be consistent with the nature and structure of section 3001(d) governing small quantity generator waste as a whole. The overall statutory scheme chosen by Congress in section 3001(d) provides that, from the date of enactment, progressively more stringent requirements are to be applied to small quantity generator waste. This phase-in of regulatory requirements begins with the partial manifest requirement of section 3001(d)(3) applicable to only generators of between 100 kilograms and 1000 kilograms of hazardous waste per month which remains in effect only until EPA promulgates the full set of small quantity generator standards. If EPA fails to promulgate a full set of standards by March 31, 1986, additional requirements will be applied to generators of between 100 kilograms and 1000 kilograms of hazardous waste per month pursuant to section 3001(d)(8). Both the minimum requirements of section 3001(d)(6) for the full set of standards and the alternative provisions of section 3001(d)(8) allow treatment, storage, or disposal of small quantity generator waste at a facility in interim status. Implementation of section 3001(d)(5) based on a strict interpretation would prohibit treatment, storage, or disposal of small quantity generator waste at a facility in interim

[21] Section 3001(d)(3) provides that if the Department of Transportation ("DOT") description is "not applicable" the manifest form shall contain the EPA identification number, or a generic description of the waste, or a description of the waste by hazardous waste charcteristic. Today's rule does not include a provision allowing use of these descriptions in lieu of DOT's description because DOT's description will always be applicable. DOT's regulations implementing the Hazardous Materials Transportation Act require all shipments of hazardous materials (a universe which includes all RCRA hazardous wastes) to be accompanied by a shipping paper including DOT's descriptive information. For shipments of hazardous waste, the completed manifest serves the dual purpose of satisfying both DOT's shipping paper requirements and EPA's manifest requirements. Thus, in order to conform with DOT's shipping paper requirements, the manifest must contain DOT descriptive information including the proper shipping name, hazard class, and identification number (UN/NA).

status and thus would produce the anomalous and inconsistent result of making interim requirements more stringent than the full set of small quantity generator standards or alternative requirements of section 3001(d)(8), since either set of requirements allows management of small quantity generator waste at an interim status facility. EPA does not believe that such a result can be reconciled with the Congressional objective of imposing progressively more stringent regulatory requirements on small quantity generator waste.

This conclusion is bolstered by the legislative history accompanying section 3001(d)(5). Both the conference report for HSWA and the Senate report accompanying the Solid Waste Disposal Act Amendments of 1983, S. 757 (from which this provision was taken) indicate that Congress intended section 3001(d)(5) to allow treatment, storage, or disposal of small quantity generator waste at facilities having interim status. The conference report explains that section 3001(d)(5) requires that small quantity generator waste, "shall go to Subtitle C facilities or facilities licensed by a State to manage municipal or industrial wastes." H.R. Rep. No. 1133, 98th Cong., 2nd Sess. 103 (1984). Subtitle C of RCRA authorizes management of hazardous waste at either a facility with a permit under sections 3004 and 3005 or at a facility having interim status pursuant to section 3005. Accordingly, reference to "Subtitle C facilities" includes facilities in interim status. The Senate report on section 3001(d) (originally reported as section 3002(b)) explains that the language "having a permit under section 3005" includes "both facilities that have a Subtitle C permit issued by either EPA or an authorized State or *facilities with interim status, since interim status facilities are deemed to have a permit under the language of section 3005.*" [Emphasis added.] S. Rep. No. 284, 98th Cong., 1st Sess. 12 (1983). These discussions relative to section 3001(d)(5) clearly evidence Congress' intent to allow management of small quantity generator waste at interim status facilities.

Similarly, EPA has retained the existing provision allowing treatment or storage as well as disposal of small quantity generator waste at facilities permitted, licensed, or registered by a State to manage municipal or industrial solid waste. Although section 3001(d)(5) refers only to *disposal* of small quantity generator waste at a State-approved municipal or industrial solid waste facility, the legislative history indicates that Congress did not intend to restrict use of State-authorized municipal or industrial solid waste facilities to disposal only. The conference report states that small quantity generator waste "shall go" to municipal or industrial waste facilities, not limiting such destination to disposal. H. Rep. No. 1133, 98th Cong., 2nd Sess. 103 (1984). The Senate report on S. 757 from which section 3001(d)(5) was taken, explains that this section was meant to codify existing small quantity generator regulatory requirements relative to State-approved solid waste facilities. S. Rep. No. 284, 98th Cong., 1st Sess. 9 (1983). Inasmuch as existing requirements allow treatment and storage of small quantity generator waste at a State-approved solid waste facility, Congress thus intended to continue these requirements. Moreover, allowing treatment and storage as well as disposal of small quantity generator waste in a State-approved solid waste facility is consistent with the general objective in section 3001(d) of ensuring sound management of small quantity generator waste; arguably, treatment or storage of hazardous waste at a State-approved solid waste facility is less environmentally threatening than disposal of waste at such a facility.

Thus, State-approved industrial or municipal solid waste facilities that choose to accept hazardous wastes from small quantity generators during the interim before the effective date of the standards or March 31, 1986, whichever comes first, do not have to have either interim status or a permit. However, if these facilities intend to continue accepting hazardous wastes after the effective date of the standards or March 31, 1986, they must have either interim status or a permit since both the full set of standards and the alternate provisions effective March 31, 1986 restrict treatment, storage, and disposal of small quantity generator waste to Subtitle C facilities.[22]

New paragraph (h)(2) recodifies the existing requirement (§ 261.5(f)) allowing small quantity generators to accumulate on-site up to 1000 kilograms of hazardous waste, provided that if the accumulation limit of 1000 kilograms is exceeded, all of the accumulated wastes are subject to full Subtitle C regulation.

[22] Section 3005(e)(1)(A)(ii) provides that facilities in existence on the effective date of statutory or regulatory changes that render the facility subject to permit requirements may qualify for interim status. Since State-approved industrial and municipal solid waste facilities choosing to accept hazardous waste after promulgation of the full set of standards or March 31, 1986 will be subject to permitting requirements, they will be eligible for interim status pursuant to section 3005(e)(1)(A)(ii).

The HSWA does not explicitly address on-site storage of small quantity generator hazardous waste during the period between enactment and the effective date of the full set of small quantity generator standards. If the full set of standards is not promulgated by March 31, 1986, the alternative requirements of section 3001(d)(8) apply. As discussed earlier, EPA does not believe that Congress intended to place more stringent requirements on small quantity generator waste during the interim before promulgation of the set of small quantity generator standards, but rather intended to maintain the status quo with respect to the destination of small quantity generator wastes. Accordingly, EPA has retained the existing regulatory scheme for on-site accumulation for up to 1000 kilograms of hazardous waste.

C. Permits/Interim Status

1. Preconstruction Ban/TSCA Exception

On May 19, 1980 EPA promulgated regulations prohibiting the construction of new hazardous waste management facilities without a finally effective RCRA permit (40 CFR 270.10(f)(1)). In the HSWA, Congress adopted these regulations by amending section 3005(a) of RCRA to clarify the Administrator's authority to require a RCRA permit to construct a hazardous waste treatment, storage, or disposal facility. The preconstruction ban in section 3005(a) is, however, qualified. The statute exempts facilities constructed pursuant to an approval issued by the Administrator under section 6(e) of the Toxic Substances Control Act (TSCA), for the incineration of polychlorinated biphenyls (PCBs), from the requirement to have a RCRA permit prior to construction. Any person owning or operating such a facility may file an application for a RCRA permit to incinerate hazardous wastes at any time after construction or operation of such a facility.

The purpose of the TSCA exemption from the preconstruction ban is to remove an inconsistency between the RCRA and TSCA regulations affecting incinerators. As discussed previously, under current RCRA regulations no construction may occur prior to receipt of a final permit. However, under TSCA, construction may occur prior to final approval (the analogue of a RCRA permit).

The Congressional intent underlying the TSCA exemption is as follows:

[w]here an incinerator has been constructed and approved pursuant to TSCA for the burning of PCBs, the owner or operator shall

not be precluded from applying for a RCRA permit solely because a RCRA permit was not obtained prior to construction. The EPA regulation being codified by this amendment was designed to assure that when it has been unable to influence the location, design, and construction chosen by the applicant, the permitting agency would not face a choice between approving an incinerator or "forcing the abandonment or devaluation of the premature investment." Here, however, if a company proceeded with construction, obtained TSCA approval, and then sought a RCRA permit, the company would not have to abandon or suffer a devaluation of its investment if it was ultimately denied a RCRA permit for the incinerator. The company would still have a PCB incinerator. 130 Cong. Rec. S.9175, (daily ed. July 25, 1984).

In order to codify the TSCA exemption, the Agency is today amending § 270.10(f)(3). That provision currently allows a person to begin physical construction of a new hazardous waste management facility subsequent to November 19, 1980, but prior to the effective date of the unit-specific Part 264 standards (i.e., Subpart I et seq.) in limited circumstances. The Agency believes that this provision is legally inconsistent with the general preconstruction ban and is, accordingly, deleting that provision in today's rule. The Agency is instead codifying the section 3005(a) TSCA exemption in § 270.10(f)(3).

Congress did not specifically address whether the TSCA exemption from the preconstruction ban is applicable to units that store PCBs prior to incineration at a TSCA-approved incineration facility. Under the TSCA regulation, any PCB articles or PCB containers may be stored for disposal for up to one year (40 CFR 761.65). The facility need not obtain a permit for construction of the storage unit but must ensure that the unit meets the criteria specified in § 761.65. The Agency believes that, as a legal matter, the TSCA exemption to the preconstruction ban for facilities constructed pursuant to approval under TSCA is applicable to storage units at these facilities in compliance with § 761.65. To hold otherwise would eviscerate the statutory exemption since it is common practice for facilities to store PCBs prior to incineration.

2. Permit Life

On May 19, 1980, EPA promulgated a regulation providing that RCRA permits shall be effective for a fixed term not to exceed 10 years. 40 CFR 122.9(a) (now codified as 40 CFR 270.50(a)). On February 8, 1983, EPA proposed to amend that regulation to issue permits for the life of the facility (48 FR 5872). In response to that proposal, Congress, in HSWA, amended section 3005(c) to provide that any permit for a treatment, storage, or disposal facility shall be for a fixed term, not to exceed 10 years.

In enacting this provision, Congress stated that "with the advancing state of technology and the long projected useful life of many of these facilities, it is preferable to limit permit life to the minimum period consistent with the cost and administrative burden of issuing a permit. * * * Limited permit duration will assure that facilities are periodically reviewed and requirements for them upgraded to reflect the current state of the art." S. Rep. No. 284, 98th Cong., 1st Sess. 30 (1983).

The Agency believes that § 270.50(a)–(c), as currently drafted, is consistent with the statutory amendment to section 3005(c). Therefore, the Agency is not amending those regulations today.

The HSWA also amends section 3005(c) to provide that each permit for a land disposal facility shall be reviewed 5 years after the date of issuance or reissuance and shall be modified as necessary to assure that the facility complies with the currently applicable requirements in sections 3004 and 3005. Since section 3005 provides that the Agency has the authority to issue permits encompassing conditions necessary to protect human health and the environment, the Agency may modify land disposal permits to include these conditions.

In order to codify the amendment to section 3005(c), the Agency is today amending § 270.50 by adding a new subsection, § 270.50(d). That subsection requires the Director to review the permit for a land disposal facility 5 years after the date of permit issuance or reissuance and to modify the permit in accordance with § 270.41.

The Agency is also amending § 270.41(a) in order to implement the amendment to section 3005(c). Section 270.41(a)(3) as currently drafted, provides that permits may be modified because of regulatory amendments only if the permittee requests such a modification. That provision conflicts with the statutory requirement that the Agency modify land disposal permits to assure continued compliance with applicable regulations. Accordingly, the Agency is today amending § 270.41(a) by adding a new cause for modification, § 270.41(a)(6). Section 270.41(a)(6) provides that notwithstanding any other provision in § 270.41(a), when a permit for a land disposal facility is reviewed under § 270.50(d), the Director shall modify the permit to assure that the facility continues to comply with the currently applicable requirements in Parts 264, 266, and 270. Since, as discussed below, EPA has the authority under Part 270 to issue permit conditions beyond those specified in the regulations, the Agency may, where appropriate, modify land disposal permits to reflect conditions beyond those specifically set forth in the regulations under the authority of Part 270.

Pursuant to today's rule, the Agency may modify permits to incorporate new regulatory requirements without the request of the permittee in the context of land disposal permit reviews. Such permit modifications would constitute major modifications and would, accordingly, be subject to the procedural rights of notice and comment under 40 CFR Part 124 accorded permittees undergoing major permit modifications.

3. Authority To Add Conditions

In enacting HSWA, Congress amended § 3005(c) to provide that each RCRA permit issued shall contain such terms as the Administrator (or the State) determines necessary to protect human health and the environment. The accompanying legislative history indicates a Congressional intent to authorize the Administrator to add permit conditions beyond those specified in the regulations. S. Rep. No. 284, 98th Cong., 1st Sess. 31 (1983). The Agency is today implementing this amendment by adding a new subsection to the RCRA regulations, concerning the establishment of permit conditions, § 270.32(b)(2).

Since the Administrator has the authority to review land disposal facility permits every five years to assure that the facility operates in a manner which protects human health and the environment, the Administrator has the authority to add permit conditions where necessary to protect human health and the environment when conducting such reviews of land disposal facility permits under § 270.50(d). The Administrator also has the authority to add conditions necessary to protect human health and the environment when reviewing an application for permit renewal. Such an interpretation is in accordance with the amendment to section 3005(c) which specifically requires the permitting authority, in any permit renewal, to consider among other things improvements in the state of control and measurement technology as well as changes in applicable regulations. Such improvements and changes must be incorporated in the renewed permit. S. Rep. No. 284, 98th Cong., 1st Sess. 30–31 (1983). Improvements and changes in control and measurement technology are

factors that Congress intended the Administrator to take into account when adding permit terms and conditions as necessary to protect human health and the environment. *Id.* Accordingly, the Administrator has the authority under section 3005 to add conditions necessary to protect human health and the environment when reviewing an application for permit renewal. In addition, the Administrator shall consider any changes that may have occurred in operation of the facility since the permit was issued, and other information concerning the impact of the facility on human health and the environment.

Section 3005(c) provides that each RCRA permit *issued* under section 3005 shall contain such terms as the Administrator deems necessary to protect human health and the environment (emphasis added). The Congressional intent underlying this amendment is to authorize the Agency to impose permit conditions beyond those mandated by the regulations, such as new or better technologies or other new requirements. S. Rep. No. 284, 98th Cong., 1st Sess. 31 (1983). The purpose of this amendment is to upgrade facility requirements in order to protect human health and the environment. The Agency believes that the authority to *issue* permits containing conditions deemed necessary to protect human health and the environment must encompass the authority to *deny* permits where necessary to afford such protection. To hold otherwise would deprive this statutory amendment of its intended effect.

4. Expansion of Interim Status for Newly Regulated Units

Section 3005(e) of RCRA previously restricted interim status to owners or operators of "existing HWM facilities" or facilities in operation or for which construction commenced on or before November 19, 1980. In HSWA, Congress amended section 3005(e) by providing that facilities in existence on the effective date of statutory or regulatory changes under the Act that render the facility subject to the requirement to have a permit, qualify for interim status if they make an application for a permit and comply with the section 3010 notification requirements. Facilities which have been previously denied a RCRA permit or for which authority to operate the facility under RCRA has been previously terminated may not, however, qualify for interim status pursuant to the amendment to section 3005(e).

In the legislative history accompanying this provision, Congress indicated that the amendment to section 3005(e) would apply to facilities in existence which treat, store, or dispose of newly listed hazardous wastes. The legislative history also noted that facilities which were previously exempted from certain RCRA requirements but subsequently became subject to those requirements (e.g., small quantity generators) would also be eligible for interim status as a result of this amendment. 130 Cong. Rec. S9170 (daily ed. July 25, 1984).

If a unit at a facility has been previously denied a RCRA permit or had its interim status terminated, the owner or operator of the facility may not qualify for interim status for any unit at the facility in existence on the effective date of statutory or regulatory changes that render the facility subject to the requirement to have a permit. This interpretation is in accordance with the legislative history which notes that *facilities* for which RCRA permits have been previously denied or for which interim status has been previously terminated would be unable to qualify for interim status pursuant to this amendment *under any circumstances. Id.*

As discussed previously, facilities must submit a permit application in order to qualify for interim status. In order to implement the statutory amendment to section 3005(e), the Agency is today amending 40 CFR 270.70(a). Section 270.70(a), as amended, provides that owners and operators of facilities in existence on the effective date of changes under the Act that require the facility to have a permit, qualify for interim status if they comply with the requirements of 40 CFR 270.10 governing submission of Part A permit applications. Since § 270.10 does not currently provide Part A application requirements for owners and operators of these facilities, the Agency is today amending the application requirements in § 270.10(e) to reflect the new § 270.70(a). Today's rule provides that owners and operators of HWM facilities in existence on the effective date of statutory or regulatory amendments under RCRA that render the facility subject to permit requirements must submit Part A of their permit application by the dates specified in § 270.10(e)(1) in order to qualify for interim status. The Agency is also adding a new provision, § 270.70(c), in order to implement the amendment to section 3005(e). Section 270.70(c) provides that a person shall not qualify for interim status if he owns or operates a facility which has been previously denied a RCRA permit or if authority to operate the facility has been previously terminated.

5. Loss of Interim Status for Failure To Submit Part B

The HSWA amends section 3005(e) by providing that interim status for owners and operators of land disposal facilities terminates within a 12-month period unless the owner or operator submits a Part B prior to that date and certifies compliance with the applicable ground-water monitoring and financial responsibility requirements. Congress also amended section 3005(c) to provide that interim status for owners and operators of incinerators terminates by November 8, 1989 unless a Part B application is submitted by November 8, 1986. For all other facilities, interim status terminates by November 8, 1992, unless an application is submitted by November 8, 1988. The Agency is today amending the regulation concerning termination of interim status, 40 CFR 270.73, to reflect these grounds for termination of interim status.

In addition to amending § 270.73, the Agency is also amending 40 CFR 270.10(e)(4) which specifies the application requirements for HWM facilities. Section 270.10(e)(4) now provides that an owner or operator shall submit his Part B voluntarily or in response to a request from the State or EPA. Section 270.10(e)(4), as amended today, provides that owners or operators of HWM facilities must submit their Part B application in accordance with the dates specified in § 270.73. This regulatory amendment conforms with the statutory requirement that the owner's or operator's duty to submit a Part B application is mandatory. The Agency or the State need not first request the Part B application. It is the Agency's intention, however, to continue, as a matter of policy, to request Part B applications from owners and operators of hazardous waste management facilities, consistent with the deadlines now specified in § 270.73. It should also be noted that submission of a UIC permit application would meet the requirement to submit the Part B application for facilities covered by the UIC permit by rule (See § 270.60(b)).

If at the expiration of the specified statutory time periods, the owner or operator of the facility fails to submit his Part B application or applicable certifications of compliance, interim status will terminate immediately under section 3005. EPA need not take any specific action to terminate the facility's interim status. Requiring specific Agency action prior to termination of interim status would delay the

termination of interim status which would, in turn, conflict with the statutory requirement that interim status terminates on the expiration of the statutory time period.

As discussed previously, the applicant must certify compliance with applicable ground-water monitoring and financial responsibility requirements. The statute is silent as to whether the applicable requirements are found in Part 264 or Part 265. However, the legislative history indicates that the applicable ground-water monitoring requirements are found in Part 265. In discussing the amendment, Congress asserted that since EPA's ground-water monitoring requirements have been in effect since November 1981, there is no excuse for noncompliance at this late date. 129 Cong. Rec. H8142 (October 6, 1983). The ground-water monitoring requirements in effect since November 1981 are those found in Part 265, Subpart F. See § 265.90. Accordingly, certification with the Part 265 ground-water monitoring standards or the State analogue to the Part 265 requirements will satisfy section 3005(e)(3). In order to be internally consistent with respect to certifications of compliance under section 3005(e)(3), the owner or operator must certify compliance with the financial responsibility requirements found in Part 265 or the State analogue to the Part 265 requirements rather than Part 264.

If the owner or operator of a facility fails to submit the application or the applicable certifications of compliance for such facility, the statute provides that interim status shall terminate for such facility. The Agency believes that the termination of interim status only affects the unit or units at the hazardous waste management facility for which the required information is not submitted. For example, if a hazardous waste management facility had both an incinerator and a land disposal unit, and the owner or operator of the facility submitted the Part B for the incinerator by the specified date but *not* for the land disposal unit, interim status would terminate for the land disposal unit and *not* for the incinerator.

EPA believes this interpretation is reasonable for several reasons. First, EPA sees no evidence in the legislative history to suggest that Congress meant to stop all operations at a large, multiple-unit facility simply because one unit has not properly submitted its Part B application or applicable certifications. Terminating waste management at these units that are not covered by the owner's or operator's application or certification would seem an adequate sanction to achieve the Congressional purpose. Moreover, allowing loss of interim status for a subset of units at a facility is consistent with EPA's regulatory authority to divide its consideration of units for permitting purposes. See § 270.1(c)(4). Under its current regulations EPA may grant or deny a permit to a set of units at a facility without disturbing the facility's interim status for other units at the facility.

D. Burning and Blending of Hazardous Waste

1. Ban on Hazardous Waste in Certain Cement Kilns

Section 204 of the Hazardous and Solid Waste Amendments of 1984 amends section 3004 of RCRA to prohibit cement kilns located in incorporated cities with populations greater than 500,000 from burning hazardous waste, or any fuel containing a hazardous waste, unless they comply with the regulations applicable to hazardous waste incinerators. This prohibition, contained in section 3004(8)(2)(C), remains in effect until the Agency develops substantive standards for cement kilns burning hazardous waste. As discussed more fully below, the prohibition would not apply to cement kilns burning petroleum coke containing hazardous waste indigenous to petroleum refining, unless the petroleum coke exhibited a characteristic of hazardous waste. *See* RCRA amended sections 3004(q)(2)(C)(i) and 3004(q)(2)(A), respectively.

The "hazardous wastes" covered by this prohibition are any hazardous wastes identified or listed in regulations implementing section 3001, and explicitly include commercial chemical products that are burned in lieu of their original intended use. *See* RCRA amended section 3004(g)(1).[23] The statute supersedes the exemption for the actual act of recycling (in this case, burning in a cement kiln) found in existing § 261.6(b), and also in EPA's recently published amendment, found in amended § 266.30, 50 FR at 667.

We have codified the statutory language in a new Subpart D to Part 266 of the regulations. This Subpart is reserved for rules dealing with burning hazardous wastes in thermal combustion devices other than incinerators, namely boilers and industrial furnaces. We also have made conforming changes to §§ 261.6(a) and 261.33.

The statutory prohibition applies to "fuels" containing hazardous wastes. The provision thus does not appear to apply to cement kilns burning hazardous wastes for material recovery. This is consistent with legislative history distinguishing between cement kilns burning for energy and material recovery. See H.R. Rep. No. 198, 98th Cong., 1st Sess. 40 (1983). An issue not specifically addressed is the status of a cement kiln burning hazardous waste for the dual purposes of energy and material recovery. In light of the remedial purpose of the provision, and the broad reach of section 204 in general, the Agency believes that cement kilns burning for a dual purpose are covered by the prohibition. See also 50 FR at 630–31 (January 4, 1985).

2. Labeling of Hazardous Waste Fuels

The new statutory amendments also require that any person who produces, distributes, or markets a fuel containing a hazardous waste, or a hazardous waste burned directly as a fuel, must include a warning label in the invoice or bill of sale for the fuel. The warning label must state that the fuel contains hazardous wastes, and must list the hazardous wastes contained therein. *See* RCRA Section 3004(r)(1). The legislative history indicates that this latter requirement is satisfied by identifying wastes by generic classes (such as "chlorinated solvent") rather than by precise chemical name. H.R. Rep. No. 198, 98th Cong., 1st Sess. 42 (1983). The warning label must be located conspicuously, and be printed in conspicuous, legible, and contrasting type. This requirement took effect on February 6, 1985. The warning label requirement applies to fuels containing *any* hazardous waste (with three exceptions described below), and so supersedes provisions in §§ 261.6(a) and 261.33 of EPA's existing regulations [as well as provisions in EPA's recent January 4 amendment to § 261.6(a)].

An issue arises as to precisely who is to prepare a warning label, particularly with reference to intra-company shipments of hazardous waste fuels. The labeling requirement applies to any person required to notify under paragraphs (1) and (3) of section 204, namely persons who produce, market, or distribute hazardous waste fuel. The

[23] For this prohibition to apply, a commercial chemical product must be burned in lieu of its normal use, or added to a fuel in lieu of its normal use. A fuel merely containing a chemical on the § 261.33 list is *not* automatically a hazardous waste. For the fuel to be a waste, the chemical must have been a commercial product (or off-specification variant or spill residue thereof) when it was added, and the commercial chemical must not be a fuel itself. See H.R. Rep. No. 570, 97th Cong., 2d Sess. 18–19 (1982). EPA has recently amended § 261.33 in a manner virtually identical to the statute. See 50 FR at 665 (January 4, 1985).

legislative history indicates that the purpose of the provision is to put users and transporters on notice that they are handling a fuel potentially more dangerous than a virgin fuel. H.R. Rep. No. 198 at 42; S. Rep. No. 284 at 40. The Agency thus is of the view that this requirement should apply whenever a hazardous waste fuel is sent off-site, even if the ultimate user is the same company that produced the fuel.

We note that the labeling requirement may be superseded by EPA regulations. RCRA section 3004(r)(1). EPA believes that a hazardous waste manifest serves the same function as the warning label, and is far more efficient to administer. EPA thus proposed requiring a manifest rather than a warning label. 50 FR at 1704 (January 11, 1985).

3. Exception to Labeling Requirement

The statute contains three exceptions to the labeling requirement: for hazardous waste-derived petroleum coke, and for two types of hazardous waste-derived fuels from petroleum refining operations. These are discussed below in turn.

The exception for petroleum coke applies to petroleum coke which contains as ingredients oil-bearing hazardous wastes from petroleum refining operations, for those wastes that are indigenous to the refining operations. Thus, if a refinery added spent solvents to the coke, the coke would not be exempt. *See* S. Rep. No. 284 at 39. Hazardous waste-derived petroleum coke exhibiting a characteristic of hazardous waste is not exempt. In addition, the legislative history is clear that only the petroleum coke is exempt: "the exemption for hazardous waste to be converted to coke begins only with the introduction to the conversion process." *Id.* The hazardous refinery wastes are subject to regulation up until that point.

The second statutory exemption from the labeling requirement is for hazardous waste-derived fuels from petroleum refining operations (defined as refining operations within SIC Code 2911). There are three conditions precedent to this exemption: the wastes must contain oil, they must be generated and reinserted on-site into the refining process at a point where contaminants are removed, and they must be converted into product along with normal process streams. As with the previous exemption, this exemption applies only to fuel containing wastes that are indigenous to the petroleum refining process. H.R. Rep. No. 198 at 43.

The legislation does not state precisely what is meant by the requirement that "contaminants (be) removed" by reinsertion into the process. The Agency does not read this as a requirement that all contaminants be removed. This is shown by the legislative history, which states that this standard was adopted by analogy to the definition of rerefined oil in section 104(39) of RCRA. S. Rep. No. 284 at 41. Rerefining is a process that removes some but not all contaminants.

The Agency believes that the requirement that wastes be inserted into a part of the refining process where contaminants are removed means that wastes must be inserted at or before a point in the process designed to remove toxic metal and organic contaminants in the normal operation of the refining process. The requirement does not mean, however, that all contaminants in the waste be removed. Examples of parts of the refining process designed to remove contaminants are atmospheric distillation towers, vacuum distillation towers, fluid cokers, and catalytic cracking operations.

Fuels resulting from refining operations where hazardous wastes are added at or before these points would not be automatically subject to the warning label requirement. Conversely, certain downstream refining operations (e.g., product finishing, blending, and packaging operations) are not designed to remove contaminants in the sense required by the bill. These operations are designed primarily to improve product saleability; removal of toxic metals and organics is incidental to this purpose. Fuels containing hazardous wastes added at these points in the process would have to have a warning label.

The final exemption from labelling is for oily wastes from petroleum refining and transportation practices that are inserted into the petroleum refining process as in the previous exemption. RCRA section 3004(r)(3). This exemption is to a large degree coextensive with the previous one, but it differs in three respects: it applies to "oily materials" as well as to petroleum refining wastes; it applies to wastes generated from petroleum transportation practices (as well as production and refining practices), and the wastes need not be generated and inserted on-site.

The Agency reads section 3004(r)(3) as applying only to wastes not already covered by section 3004(r)(2). Any other reading would render section 3004(r)(2) surplusage, violating standard tenets of statutory construction. The legislative history in fact indicates that paragraph (r)(3) was intended to apply to used oil that is hazardous. *See* S. Rep. No. 284 at 40.

4. Household Waste

New section 3001(g) adds a clarification to the household waste exclusion contained in § 261.4(b)(1). That regulation states that household wastes are not hazardous wastes. The preamble accompanying that regulation states that residues remaining after treating household wastes also are not hazardous wastes. 45 FR 33099 (May 19, 1980).

The legislative clarification is that a resource recovery facility recovering energy from burning municipal waste is not considered to be managing hazardous waste, provided the facility meets two conditions:

(a) the facility receives and burns only household waste, and solid waste from other sources that contains no hazardous wastes; and

(b) the facility cannot accept hazardous wastes from any non-household sources, and must adopt precautionary measures—such as contractual arrangements of other notification procedures—to assure that hazardous wastes are not received or burned.

EPA has codified this provision in § 261.4(b), repeating the statutory language. The statutory provision appears to raise two principal issues:

(1) The status of facilities that, in spite of good faith efforts, receive and burn hazardous wastes; and

(2) The status of residues from burning household waste and non-hazardous solid waste if the residue exhibits a characteristic of hazardous waste.

As to the first issue, the statutory language contains no exception for facilities that, in spite of their best efforts, receive hazardous wastes. The legislative history indicates, however, that if good faith precautionary measures are in place and a resource recovery facility still receives and burns a hazardous waste, that the "facility * * * should not be penalized for the occasional, inadvertent receipt of hazardous waste * * *". S. Rep. No. 284 at 61. Thus EPA believes that resource recovery facilities do not become Subtitle C facilities when they inadvertently burn hazardous waste if they have taken good faith measures to avoid burning such waste.

The statute is silent as to whether hazardous residues from burning combined household and non-household, non-hazardous waste are hazardous waste. These residues would be hazardous wastes under present EPA regulations if they exhibited a characteristic. The legislative history does not directly address this question,

although the Senate report can be read as enunicating a general policy of non-regulation of these resource recovery facilities if they carefully scrutinize their incoming wastes. On the other hand, residues from burning could, in theory, exhibit a characteristic of hazardous waste even if no hazardous wastes are burned, for example, if toxic metals become concentrated in the ash. Thus, the requirement of scrutiny of incoming wastes would not assure non-hazardousness of the residue. EPA believes that the principal purpose of section 3001(g) was to prevent resource recovery facilities that may inadvertently burn hazardous waste, despite good faith efforts to avoid such a result, from becoming subject to the Subtitle C regulations. EPA does not see in this provision an intent to exempt the regulation of incinerator ash from the burning of non-hazardous waste in resource recovery facilities if the ash routinely exhibits a characteristic of hazardous waste. However, EPA has no evidence to indicate that these ash residues are hazardous under existing rules. EPA does not believe the HSWA impose new regulatory burdens on resource recovery facilities that burn household and other non-hazardous waste, and the Agency has no plans to impose additional responsibilities on these facilities. Given the highly beneficial nature of resource recovery facilities, any future additional regulation of their residues would have to await consideration of the important technical and policy issues that would be posed in the event serious questions arise about the residues.

5. Minimum Technological Requirements for Incinerators

Section 202(a) of the Amendments adds a section 3004(o)(1)(B) to RCRA which states that incinerators which receive permits after enactment of the Amendments must meet the minimum destruction and removal requirements contained in § 264.343(a) of EPA's regulations. That regulatory provision states that principal organic hazardous constitutents (POHC's) in the waste feed must be destroyed and removed to a minimum efficiency of 99.99%

It is unnecessary to include any new provisions in EPA's regulations because the statute simply codifies the existing rules. We also note that the provision does not preclude the Agency from adopting a more stringent destruction and removal requirement (the statute refers to "attainment of a *minimum* destruction and removal efficiency"). Nor does it prohibit changes (either more or less stringent) in other performance standards for incinerators, including those for control of hydrogen chloride emissions or total particulates.

Finally, the requirement applies only to incinerators, and so does not mandate minimum technological requirements for other combustion units burning hazardous waste, such as boilers and industrial furnaces. *See* H.R. Rep. No. 198 at 42. (Boilers and industrial furnaces are subject to the same ultimate standard as incinerators, but need not meet the same technological requirements.)

E. Exposure Information and Health Assessments

In enacting the HSWA, Congress amended Subtitle C of RCRA by adding a new section concerning exposure information and health assessments, section 3019. Under section 3019, RCRA permit applications for landfills and surface impoundments must be accompanied by information on the potential for the public to be exposed to hazardous wastes through releases related to the unit. The Administrator will then make that information available to the Agency for Toxic Substances and Disease Registry (ATSDR) established under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Whenever the Administrator or a State judges that the release poses a substantial potential risk to human health, the Administrator may request the ATSDR to perform a health assessment and take appropriate action under CERCLA.

In order to codify section 3019, the Agency is today adding a new regulatory provision, 40 CFR 270.10(j). Section 270.10(j)(1) provides that Part B applications for landfills or surface impoundments submitted after August 8, 1985, must be accompanied by certain exposure information. Section 270.10(j)(2) provides that by August 8, 1985, owners and operators of a landfill or surface impoundment who have already submitted their Part B application are also required to submit exposure information.

40 CFR 270.10(j) is applicable to both operating permits and post-closure permits because in both types of permits the owner or operator is required to submit a Part B application. The submittal of the Part B triggers the duty to submit the exposure information. Owners or operators of closed units or active solid waste units for which a post-closure permit is not required would not be required to submit a Part B. Therefore, owners and operators of such units would not have to submit exposure information.

At a minimum, the exposure information must address reasonably foreseeable potential releases from normal operations and accidents, the potential pathways of human exposure to hazardous wastes or constituents resulting from the releases, and the potential magnitude and nature of the human exposure resulting from the releases.

Section 3019 provides that exposure information must *accompany* the permit application; the information is not part of the permit application. In enacting this provision, Congress intended that the exposure information should not delay the permitting process. Submission of exposure information is not a condition for permit issuance. 130 Cong. Rec. S9187 (daily ed. July 25, 1984). Accordingly, the Agency is today amending 40 CFR 270.10(c) to provide that an application which is not accompanied by exposure information will not be deemed incomplete for purposes of permitting a facility. This interpretation is in accordance with the legislative history which notes that noncompliance with section 3019 is a separate violation of RCRA and should not be considered when determining the completeness or adequacy of Part B permit applications. 130 Cong. Rec. S13822 (daily ed. October 5, 1984).

Neither the statutory amendments nor the legislative history defines the term "release." The statute does, however, provide that in conducting health assessments, the potential pathways of human exposure must be evaluated. These pathways include ground or surface water contamination, air emissions, and food chain contamination. Given the multi-media nature of the health assessment pathways, and for the reasons previously discussed in connection with section 3004(u), it is appropriate to model the definition of release after section 101(22) of CERCLA. Pursuant to section 101 of CERCLA, "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, with certain exclusions. Since the CERCLA exclusions are not generally appropriate for this section, the Agency will not adopt these exclusions when defining a "release".

Section 3019(a) provides that owners and operators who submitted Part B applications prior to the date of enactment of the HSWA must submit exposure information by August 8, 1985. Section 3019(a) also provides that after August 8, 1985 each Part B application shall be accompanied by exposure

information. The Agency intends that owners and operators who submitted Part B applications subsequent to the date of enactment but prior to August 8, 1985 must also submit exposure information because section 3019(a) requires that beginning on August 8, 1985, *each* Part B application shall be accompanied by exposure information. A contrary interpretation would create a gap in the implementation of section 3019 by not requiring exposure information from owners and operators who submitted Part B's between the date of enactment and August 8, 1985. Such an interpretation would not be justifiable in light of the fact that all owners and operators who submitted Part B's prior to the date of enactment must submit exposure information by August 8, 1985.

F. Delisting Procedures

The new amendments add a paragraph (f) to section 3001, establishing specific criteria and procedures for delisting petitions. This subsection requires EPA to consider additional factors, such as constituents other than those for which the waste was listed, if the Administrator has a reasonable basis to believe that such additional factors could cause the waste to be a hazardous waste.

This provision is intended to eliminate what both Houses of Congress perceived as a defect in the standards used by EPA to evaluate delisting petitions. The Senate noted that, "[t]he Agency's practice has been to consider only the constituents given as the original justification for the Agency's decision to list a waste." S. Rep. No. 284, 98th Cong., 1st Sess. 33 (1983). This practice, however, does not ensure that wastes which are delisted are not hazardous. EPA often could have listed wastes for other constituents than those used as the basis for the listing and cited in Appendix VII of Part 261. A petitioner's waste could be non-hazardous with respect to the listed constituents, and exempted from regulation under recent EPA practices, yet still be hazardous due to constituents not considered. *Id.* (To the same effect, see H.R. Rep. No. 198, 98th Cong., 1st Sess. 57–58 (1983).) The amendments also require the Administrator to provide notice and an opportunity for comment on the additional factors considered before granting or denying a petition.

The statute forbids the granting of any new temporary exclusions without notice and comment as is currently permitted by § 260.22(m) of EPA's regulations, since the statute calls for notice and comments on all petitions evaluated after enactment of the amendments.[24] A provision in an earlier version of the House bill permitting the continued issuance to temporary exclusions, if notice and comment was provided, was eliminated from the final legislation. See H.R. Rep. No. 198, at 13, 58.

The amendments further set deadlines for Agency action on all future petitions received. To the maximum extent practicable, the Agency must propose a decision within twelve months of receiving a complete application[25] and grant or deny a petition within twenty-four months. Unlike the self-executing elimination of previously granted temporary exclusions noted below, this provision does not mean that the petitions are granted by operation of the statute if the Agency has not acted within the time limits specified.

The statute also places a time limit on the effectiveness of any temporary exclusions granted before its enactment. Beginning 24 months after enactment, wastes covered by a petition granted such a temporary exclusion no longer will be exempted from RCRA regulations, unless a final decision granting or denying the petition, after notice and comment, has been issued. This provision reflects the desire of Congress to eliminate the possibility that a delisting petition will be temporarily granted, without notice or an opportunity for comment, and then not reviewed for a final determination within a reasonable time. See, e.g., S. Rep., *supra*, at 33.

The new delisting standard and the need for notice and comment require a number of regulatory changes. The Agency has changed the substantive standard on which delisting petitions are reviewed to conform to the statutory mandate. In addition, today's regulation eliminates the temporary exclusion provision in the Agency's regulations.

[24] The Agency believes that the statute prohibits temporary exclusions as previously granted by EPA (i.e., exclusions, without notice and comment, based on a substantial likelihood that a petition eventually would be granted). Exclusions still may be granted, however, without notice and comment if the requirements of the good cause exception, 5 U.S.C. § 553(b)(3)(B), are met.

[25] A complete application includes both the original submission by the petitioner and any subsequent information requested by EPA in order to determine whether the waste contains any additional constituents which could cause it to be a hazardous waste. Congress required the Agency to consider, under certain circumstances, factors other than those for which the waste was listed. EPA does not believe that Congress would have expected the Agency to make this determination without adequate information. EPA therefore concludes that the time limits incorporated in the amendment begin to run only after the Agency has received all information necessary to determine whether the waste is hazardous.

1. The New Substantive Standard

The primary change in 40 CFR 260.22 made in this regulation is to modify the substantive standard on which delisting petitions are evaluated, in accordance with the statute. The current regulation requires that the petitioner demonstrate to the satisfaction of the Administrator that the waste produced does not meet any of the criteria under which the waste was listed and notes that a waste so excluded still may be a hazardous waste if it fails any of the characteristics in Subpart C of Part 261 (40 CFR 260.22(a)). Today's regulation retains these provisions, but requires in addition that, before a waste may be excluded, the Administrator determine that the waste does not satisfy any factors other than those for which the waste was listed or that there is no reasonable basis to believe that such additional factors could cause the waste to be hazardous. This provision codifies the two-prong test mandated by the amendments, i.e., the Agency must consider both the factors for which the waste was listed (in all cases) and the factors and constituents other than those for which the waste was listed (in cases where the Administrator has a reasonable basis to believe that these additional factors could cause the waste to be hazardous).

2. No New Temporary Exclusions

The regulation eliminates the provision authorizing temporary exclusions, which were issued without prior notice and comment when the Administrator found that there was a substantial likelihood that an exclusion would be granted. 40 CFR 260.22(m). Dissatisfaction with the lack of notice and comment was a major impetus for the revision of the delisting procedures. *See*, e.q., S. Rep., *supra*, at 33.

Today's regulation require notice and an opportunity for comment before a delisting may be granted.[26] The statute mandates notice and an opportunity for comment on the additional factors (including additional constituents) which the Agency now must consider, before granting or denying a petition. EPA regulations already require notice and comment for petitions, other than temporary exclusions. *See* 40 CFR 260.20. These provisions applied to petitions which addressed only the

[26] The Agency believes that the statute does not prohibit use of the APA provision permitting final agency action without notice and comment if there is good cause. See 5 U.S.C. 553(b)(3)(B). There is no suggestion in the language of the amendment or the legislative history that Congress meant to overrule the APA. These regulations also permit the Agency to use the good cause exception.

constituents for which the waste was listed. Congress wanted to ensure that notice and comment would continue to be required for the expanded petitions, addressing not only the listed constituents, but any additional constituents as well. The Agency concludes that the Act mandates notice and comment for all petitions, and for the entire petition, and the regulation so provides.

G. Research, Development, and Demonstration Permits

The HSWA adds section 3005(g) which provides EPA with authority to issue permits for research, development, and demonstration treatment activities. The amendment grants EPA authority to issue permits independent of existing regulations relating to hazardous waste treatment processes. EPA is directed to include certain provisions in each permit as well as any other requirements deemed necessary to protect human health and the environment. With several exceptions, the amendment also allows waiver or modification of the permit application and permit issuance requirements of the general permit regulations.

EPA has codified this new authority in § 270.65 of its regulations. This regulation has four basic provisions.

Paragraph (a) of the regulation authorizes the Administrator to issue RD&D permits for innovative and experimental treatment technologies or processes for which permit standards have not been established under Part 264 or 266. The regulation authorizes the Administrator to establish permit terms and conditions for the RD&D activities as necessary to protect human health and the environment. The statutory amendment allows the Administrator to select the appropriate technical standards for each RD&D activity to be permitted. EPA is required to address construction (if appropriate), limit operation for not longer than one year, and place limitations on the waste that may be received to those types and quantities of wastes deemed necessary to conduct the RD&D activities. The permit must include the financial responsibility requirements currently in EPA's regulations and other such requirements as necessary to protect health and environment. Other possible requirements include, but are not limited to, provisions regarding monitoring, operation, closure, remedial action, and testing and providing information. EPA may decide not to permit an RD&D project if it determines that the project, even with restrictive permit terms and conditions, may threaten human health and environment.

Paragraph (b) provides that the Agency will generally follow the permitting procedures of Parts 124 and 270. As authorized, EPA reserves the right to waive or modify these procedures to expedite permitting as long as human health and the environment are protected. However, EPA will not waive the public participation procedures of Part 124 established under § 7004(b)(2) of RCRA, nor will EPA waive the financial responsibility requirements currently in EPA regulations.

Paragraph (c) implements the statutory provision that authorizes the Administrator to order an immediate cessation of any operations at the facility if necessary to protect human health or the environment.

Under paragraph (a) and the statutory amendment, permits are initially to be issued for a maximum period of one year of operation. The legislative history provides that the permit is to be issued for a maximum of 360 days of operation. The 360-day time period does not refer to calendar days, to periods of construction, or to operation using materials other than hazardous waste. (*See* 129 Cong. Rec. H8160 (daily ed. October 6, 1983.) The permit may be renewed up to three times for periods of not more than one year of operating days as provided in paragraph (d). EPA has also amended § 270.10(a) to provide that procedures for issuing and administering RD&D permits are governed exclusively by § 270.65.

Congress made clear that RD&D permits could cover a variety of experimental activities, but suggested several limitations on EPA authority. The legislative history provides three examples of the types of RD&D activities which may be covered by this section. [*See* 129 Cong. Rec. H88160 (daily ed. October 6, 1983)]. First, a common experiment involves an individual or company who has designed on paper or in the laboratory an innovative treatment system for hazardous waste. In order to determine whether this new technology is technically feasible, a small pilot-scale unit may be constructed and operated for purposes of evaluation. If this is successful, a larger but still pilot-scale, experimental unit may be constructed to demonstrate the reliability, economic feasibility, and environmental impacts of the process.

A second type of hazardous waste management experiment involves an equipment vendor and a waste-generating or processing customer. Vendors often custom prepare storage and processing equipment, that is, tanks, incinerators, etc., based on a customer's individual needs, and this may require one or more tests with a pilot facility using samples of the customer's waste. And third, a manufacturer or user of a particular commercial treatment process may want to improve its efficiency or effectiveness or reduce environmental impacts. This may involve the construction of a pilot-scale treatment unit that will be operated in an experimental mode to test new wastes or alternate operating conditions. This list of examples is not an exclusive list of the activities that may be permitted.

Congress also explained how it expected EPA to operate in issuing RD&D permits. Under this section, EPA may permit (1) treatment technologies, processes, methods, or devices that are innovative and experimental (2) for the sole purpose of gathering information to evaluate their technical or economic feasibility. These factors are discussed below.

First, innovative and experimental treatment technologies or processes intended to be covered by this section at a minimum include experimentation and demonstration with technologies that have never been utilized in commercial application, as well as further refinement and development or performance testing of technologies that, in some form, have been operated in a commercial capacity.

Second, under a permit, EPA may allow the experimental treatment activities and associated storage. Such permits will not authorize disposal of hazardous waste. The disposal of hazardous waste must occur at a facility which has received a RCRA permit under Part 264 or which has interim status. RD&D permits may only be issued for the purpose of demonstration or evaluation of the economic or technical feasibility of a particular treatment technology, process, method, or device and associated storage. If the waste management activity related to the technology, unit, process, or device is used at any time to store or treat waste for any reasons other than the conduct of a treatment experiment, it must be permitted and operated in accordance with all applicable sections of 40 CFR Parts 264 and 266. *Id.*

H. State Authorization

HSWA made several significant changes regarding the authorization and implementation of State hazardous waste programs. Part 1 of this section discusses the new, dual State-Federal regulatory program in authorized States and some conforming changes to the State authorization regulations in Part

271 necessitated by the HSWA. Part 2 discusses section 3006(f), a new provision requiring authorized States to make information about hazardous waste facilities available to the public to the same extent that EPA would make the same information publicly available. Part 3 discusses the extension of the expiration date for interim authorization under the 1976 RCRA. Prior to the HSWA, responsibility for the RCRA program in a State with interim authorization would have reverted to EPA on or before January 26, 1985 if the State had not yet obtained final authorization. Part 4 discusses the new type of interim authorization under the HSWA and the requirements States must meet to obtain and retain final authorization ("moving target" and program revisions).

The preamble to the proposed rule to be published as a companion to this rule addresses additional issues pertaining to State authorization under the HSWA. Both preambles should be read together.

1. Applicability of Today's Rule in Authorized States

New section 3006(g) of RCRA provides that any requirement or prohibition which is applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste and which is imposed under the 1984 Amendments shall take effect in each authorized State on the same date as such requirement or prohibition takes effect in non-authorized States. The Administrator is directed to carry out such requirements or prohibitions directly in an authorized State until the State is granted authorization to do so. This includes the authority to issue or deny permits or portions of permits where the State is not yet authorized to implement the requirements and prohibitions established by the amendments. (Section 227.)

These amendments dramatically alter the existing Federal-State relationship under section 3006 of RCRA. Before the amendments, pursuant to sections 3006(b) or 3006(c), States with final authorization or all phases of interim authorization administered their hazardous waste program entirely in lieu of EPA. Changes to the Federal Subtitle C program did not take effect automatically in such States; States needed to revise their programs to include those changes and receive EPA's approval. Further, EPA could not issue permits for any facilities covered by the State permitting program which EPA had approved. *See* 40 CFR 264.1(f), 271.1(f), 271.121(f).

In contrast, the new amendments create a dual regulatory system in authorized States. Because of new section 3006(g), the requirements and prohibitions stemming from the amendments take effect immediately in all States, regardless of any less stringent State statute, regulation, or permit. For example, even though a facility may now hold a State RCRA permit allowing it to dispose of bulk liquid waste in a lined landfill, RCRA prohibits it from doing so after May 8, 1985. (See section V.A.1. of preamble.) And, even though authorized States have previously promulgated their permit application requirements, facilities in all States will have to comply with new Federal permit application requirements in Part 270.

EPA reviewed today's rule to determine which provisions in it are "requirements or prohibitions" that are applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste. EPA concluded that all of the provisions in the rule are requirements or prohibitions. They therefore take effect in authorized States and are Federally enforceable.

The Agency started its analysis with the Conference Report which specified that certain requirements and prohibitions should take effect immediately in all States. (130 Cong. Rec. H11134 (daily ed. Oct. 3, 1984).) With the exception of the "liquids in landfills" provision, these provisions were in the Senate version of the HSWA and appear in 3001(d)(3), (5), 3004(c), (1), (o), (r), (u), 3005(c)(3), 3007(e)(1), 3015, and 7010, as enacted. In addition, EPA concluded that the household waste exclusion in section 3001(i), the delisting procedures in section 3001(f), the requirements concerning corrective action and ground-water monitoring in sections 3004(p), (v), 3005(i), the prohibition concerning salt domes in section 3004(b), the ban on hazardous waste in cement kilns in section 3004(q)(2)(C), the requirement for health assessments in section 3019, the preconstruction ban in section 3005(a), the termination of interim status and extension of interim status requirements in section 3005(e), and the waste minimization requirements in section 3002(a)(6), (b) and 3005(h) are requirements and prohibitions. EPA also concluded that the requirements concerning hazardous waste exports in section 3017(g) were requirements concerning the generation and transportation of hazardous waste.

Finally, the Agency analyzed the statute to determine whether EPA's authority to issue research and development permits under section 3005(g) is a requirement concerning the treatment of hazardous waste. In doing so, EPA considered whether section 3005(g) is the type of provision that Congress would have wanted EPA to be able to implement directly in authorized States pursuant to section 3006(g). EPA concluded that section 3005(g) was intended to be implemented by EPA in the case of an authorized State which does not have State legal authority to issue permits to these types of facilities. While the language in section 3005(g) is discretionary ("The Administrator may issue a research, development, and demonstration permit * * *"), EPA does not believe that Congress, in amending the statute to encourage new and innovative technologies and to allow permitting before section 3004 standards are developed, intended to preclude the issuance of permits to research and development facilities in authorized States.

Thus, pursuant to 3005(g) and 3006(g), EPA is able to issue a research and development permit, in consultation with the State, to encourage development of the innovative technology. However, as discussed next, an EPA permit could not override more stringent State requirements governing the facility or precluding its construction or operation without a State permit.

Some of these new requirements and prohibitions provide for variances and exclusions. For example, exemptions from liner and ground-water monitoring requirements are available under certain conditions. *See*, e.g., § 264.90(b)(2), § 264.221(d). In addition, facilities constructed to incinerate PCBs pursuant to EPA's approval under section 6(e) of the Toxic Substances Control Act are exempted from the preconstruction ban in new 40 CFR 270.10(f)(1). See section 3005(a) of RCRA, as amended.

The Agency considered whether a variance or exclusion from such a requirement was itself a "requirement" or "prohibition" of the Act. EPA concluded that the entire provision on a subject matter—such as minimum technological requirements—should be treated as the "requirement" or "prohibition" since all the subparts are related. However, section 3009 of RCRA and existing 40 CFR 271.1(i) and 271.121 provide that nothing in RCRA prohibits States, political subdivisions, or localities from imposing more stringent requirements than those in EPA's RCRA regulations. Thus, any State or local requirement that is more stringent than a requirement or prohibition in today's rule remains in effect under State or local law.

As a practical matter, this means that facilities in authorized States may not

be able to benefit from the Federal exclusions and variances as would facilities in non-authorized States unless and until the authorized State amends its more stringent regulations or enabling authority. That result is compelled by the Act; nothing in the amendments or legislative history suggests any Congressional intent to override section 3009 or preempt more stringent State requirements. Thus, the universe of the more stringent provisions in the authorized State program and today's rule defines the applicable requirements. Each member of the regulated community must familiarize himself with both the State and Federal regulations to be assured that he is in compliance with all applicable requirements. EPA may enforce any violation of the authorized State program, the HSWA, or today's rule; a State may, of course, enforce violations of its requirements regardless of authorization status.

The Agency also wishes to emphasize that future regulations implementing the requirements and prohibitions in the HSWA will take effect in authorized States at the same time that they take effect in non-authorized States. For example, EPA may publish additional regulations further defining the double liner requirement in today's rule. Even though a State may receive authorization for today's double liner requirements, any new EPA regulation on double liners will be applicable in that State until the State receives authorization for the newly-amended double liner requirement. Thus, a State's authorization status may change in response to further implementation of the HSWA. The Federal Register notices promulgating new requirements will explain their applicability in authorized States.

EPA has made various changes to Part 271 to reflect EPA's new authority in authorized States. In § 271.1(a), a reference to section 3006(f) of RCRA has been added since a new State authorization requirement appears in section 3006(f). Sections 271.1(i), 271.19, 271.121(f), and 271.134 have been amended to reflect the Administrator's new authority under sections 3006(c) and (g) to issue permits in authorized States. Without these changes the regulations would continue to prohibit EPA from permitting facilities in authorized States.

A new section, 271.1(j), has been added to identify the Federal program requirements and prohibitions that are promulgated or take effect pursuant to HSWA. The Agency determined that it was extremely important to clearly specify which EPA regulations implement HSWA since these requirements are immediately effective in authorized States. These HWSA provisions also impact whether interim or final authorization is available to States as discussed in detail in following sections of this preamble. Therefore, the Agency is creating a table in § 271.1(j) that lists the HSWA regulations promulgated to date (specifically, the January 1985 dioxin waste listing and today's final codification rule). Future regulations promulgated under the authority of the HSWA will be added to the table in § 271.1(j).

Sections 271.3(a) and 271.121(c)(3) have been amended to reflect section 3006, as amended by the HSWA, and section 3009. They now describe the respective Federal and State roles in administering Subtitle C and indicate that all of the HSWA requirements identified in § 271.1(j) take immediate effect in authorized States. In addition, § 271.24 and § 271.138 have been added, and § 271.21(e)(1)(i) and § 271.121(a) amended, to refer to the availability of interim authorization under the HSWA.

EPA also amended §§ 264.1(f) and 265.1(c)(4) to clarify that the regulatory modifications to Parts 264 and 265 made by today's rule apply to the regulated community in authorized States until a State receives authorization to carry out the new requirements. This change is necessary to reflect section 3006, as amended, and is consistent with the other amendments to Part 271.

2. Public Availability of Information

Section 3006(f) provides that information obtained by authorized States regarding facilities and sites for the treatment, storage, and disposal of hazardous waste must be made available to the public in substantially the same manner, and to the same degree, as would be the case if EPA were carrying out the RCRA program in the State. Previous to the HSWA, the only EPA requirement in this area was that the name and address of a permit applicant could not be withheld from the public. *See* 40 CFR 270.12(b); 271.14(f).

Initially, EPA has interpreted "in substantially the same manner" in section 3006(f) to refer to the procedures EPA employs in deciding how and when to release information under the Freedom of Information Act (FOIA), 5 U.S.C. 552. EPA has interpreted "to the same degree" to refer to the type and quantity of information that is released under EPA's FOIA regulations. Further, the Agency has concluded that information regarding facilities and sites would at least cover information relating to permitting, compliance, and enforcement, and include information gathered under section 3007 of RCRA (or a State analogue). Section 271.17(c) has been amended to address section 3006(f).

EPA's procedural and substantive regulations implementing FOIA and governing the treatment of confidential business information are set forth in 40 CFR Part 2. Any State requirements which are equivalent to those regulations will satisfy section 3006(f). While the use of "substantially the same manner" in section 3006(f) seems to offer the opportunity for greater flexibility than an equivalent standard, EPA has not had the opportunity to identify whether different standards are feasible. Thus, today's final rule does not go beyond the statutory language, thereby allowing case-by-case judgments about whether a State has satisfied section 3006(f).

Another issue concerns the effective date of the section 3006(f) requirements. The HSWA does not clearly indicate whether a State may receive final authorization after the date of enactment if its application does not demonstrate equivalence to section 3006(f). Section 3006(f) could be read as requiring any State which did not receive final authorization by the date of enactment to demonstrate compliance with the new requirement in order to be authorized. EPA rejects that reading because the Agency believes it is inconsistent with the statute as a whole and the legislative intent.

Section 225 of the amendments specifically amended section 3006(b) to allow the Administrator to authorize a State program that is not fully equivalent to the Federal program. That amendment was intended to assure that last minute changes to the Federal program which the State did not have time to adopt would not prevent an otherwise qualified State from obtaining final authorization. Further, the Conference Report, while ambiguous, does stress the need to allow States sufficient time to amend their programs to implement section 3006(f). 130 Cong. Rec. H11134 (daily ed. Oct. 3, 1984). The Report, in fact, specifically refers to EPA's regulations in 40 CFR 271.21(e) concerning the phase-in of new Federal requirements.

Accordingly, EPA concludes that States now applying for final authorization are not legally required to have an analogue to section 3006(f)(1). Such States, and States which have already received final authorization without demonstrating compliance with section 3006(f), are required to revise their programs to demonstrate

compliance pursuant to the time schedules in § 271.21(e). [See part 4 of this preamble which summarizes § 271.21(e). The Agency intends to propose a rule which describes § 271.21(e) in depth.]

EPA notes that interim authorization, as described in sections 227 and 228 of the 1984 amendments, is not available for this new requirement. Congress made section 3006(f) an independent requirement that is subject to the standard in that provision, and not to a test of "equivalency" or "substantial equivalency." Thus, any State with final authorization or applying for final authorization to carry out the RCRA program must demonstrate full compliance with section 3006(f) within the timeframes specified in § 271.21(e). States applying for interim authorization need not address this provision.

3. Extension of Interim Authorization Expiration Date

Section 3006(c) of RCRA, as enacted in 1976, allowed EPA to grant "interim authorization" to a State program that EPA determined was "substantially equivalent" to the Federal program. EPA established a phased approach to interim authorization: Phase I, covering the EPA regulations in 40 CFR Parts 260–263 and 265 (universe of hazardous wastes, generator standards, transporter standards, and standards for interim status facilities) and Phase II, covering the EPA regulations in 40 CFR Parts 124, 264, and 270 (procedures and standards for permitting hazardous waste management facilities).

Phase II, in turn, has three components. Phase IIA covered general permitting procedures and technical standards for containers, tanks, surface impoundments, and waste piles. Phase IIB covered incinerator facilities, and Phase IIC addressed landfills and land treatment facilities. Some States were authorized only for Phase I; others received interim authorization for all Phase I and II components.

By statute Phase I and II interim authorization were to expire after the twenty-four month period beginning on the date six months after the date of promulgation of regulations under section 3002 through 3005. (That expiration date was January 26, 1985.) However, Congress amended section 3006(c) to provide that interim authorization under the 1976 Act ends "no later than January 31, 1986."

EPA has amended § 271.122(b)(1) to reflect the new statutory date. The Regional Administrator's existing authority in § 271.137(a) to extend the deadlines in section 271.137(a) to January 31, 1986 may be used if the "good cause" finding in that provision can be made.

Under § 271.137(a), State programs which received interim authorization for only part of the RCRA program were supposed to revert to EPA by a certain date if the State failed to apply for interim authorization for all components of the interim authorization program or for final authorization. However, the Regional Administrator was allowed to extend this deadline for "good cause," thereby avoiding reversion.

When EPA promulgated § 271.137(a), the Agency did not anticipate that this deadline could extend to January 31, 1986. However, EPA believes it is appropriate for the Regional Administrator to use § 271.137(a) for that purpose if "good cause" exists. Otherwise, States which are diligently proceeding toward final authorization would lose their interim authorization because of their inability to obtain final authorization before the January 1986 statutory deadline.

4. Authorization Under the HSWA: Application and Revision Requirements

Congress provided in section 3006(g)(2) that any State which has been granted interim or final authorization before the enactment of the HSWA may apply for interim authorization to carry out any requirement of the HSWA which takes effect in authorized States (i.e., today's rule and subsequent rules implementing the HSWA). If the Administrator finds that the State requirement is substantially equivalent to the Federal requirement, he is directed to grant the State interim authorization to carry out the requirement in lieu of EPA. Thus, as in the 1976 RCRA, States have an opportunity for a developmental period of interim authorization before they are required to be equivalent to and no less stringent than the HSWA program. Several significant issues have arisen concerning implementation of section 3006(g) and its relationship to the deadlines States must meet to obtain and maintain final authorization. Some of these issues are discussed here and others are discussed in the preamble to the proposed rule to be published in the near future.

To minimize confusion, EPA has used "1976 interim authorization" to refer to Phase I and Phase II interim authorization under RCRA as enacted in 1976, and "1984 interim authorization" to refer to the new type of interim authorization under the HSWA. Occasionally, "HSWA interim authorization" is substituted for 1984 interim authorization.

a. Impact of HSWA on Existing Authorized State Programs. One issue concerns the impact of the amendments on authorized States which have requirements that are more stringent or broader in scope than those required by Part 271 before the HSWA. At the time some States received 1976 interim authorization or final authorization, the State program may have included provisions the State believes are substantially equivalent (or equivalent) to some of the requirements in today's rule. The question has arisen about whether such States automatically have 1984 interim authorization for those requirements. EPA does not believe the statute allows this result.

Section 3006(g)(2) specifically allows an authorized State to submit an application demonstrating that its "existing program contains (or has been amended to include)" substantially equivalent requirements. If States were already authorized with respect to those requirements, there would have been no need for the reference to existing programs in the above provision. Thus, the statute contemplates that any State seeking authority to administer the 1984 amendments in lieu of EPA must submit an application for EPA's approval. Until the application is approved, EPA would enforce the Federal requirement.

It could be argued that this aspect of the amendments imposes an unnecessary burden on the States. In fact, submission of a new application serves several important functions. When the State submitted its original application for 1976 interim authorization or final authorization, the State's Attorney General would not have been able to certify substantial equivalence (or equivalence) to the new amendments since the amendments had not yet been passed. For the same reason, EPA could not have determined whether the State's regulations properly implemented the amendments. Finally, the public would not have had the opportunity to comment on whether the State's requirements were substantially equivalent (or equivalent).

In sum, major elements of the authorization process have not been satisfied for those States. Accordingly, they must still submit an application to receive 1984 interim authorization. However, the application need not be lengthy or complicated. While an Attorney General's statement will always be required, little explanation will be required where the State's authority is clear. Further, all revisions will not require addenda to the program description or a memorandum of

agreement. EPA will issue further guidance in this area.

b. Applications and program revisions: deadlines and requirements. The relationship of 1984 interm authorization to final authorization raises several issues relating to § 271.21(e). Section 271.21(e) (as amended, 49 FR 21678, May 22, 1984) specifies which regulations a State must adopt to receive final authorization ("moving target") and contains deadlines by which States with final authorization must modify their programs to adopt new Federal requirements.

In summary, any State applying for final authorization for the pre-HSWA RCRA program after November 8, 1985 must have authority for those HSWA statutory provisions taking effect on November 8, 1984, and any State applying for final authorization after July 15, 1986 must also have authority for the final rule appearing today. However, a State program applying for final authorization before those dates need not have the authority described above.

Any State with final authorization, regardless of the date it received or will receive final authorization, must modify its program by November 8, 1985, to reflect the HSWA provisions taking effect on November 8, 1984 if only regulatory changes are necessary to change the State program, or by November 8, 1986 if statutory changes are needed. Similarly, such States must modify their programs to reflect today's final rule by July 15, 1986 or July 15, 1987 depending on whether regulatory or statutory changes are necessary. Extensions of up to six months for these deadlines are available in certain circumstances.

The above interpretation reflects EPA's legal construction of § 271.21(e) as revised today to reflect HSWA. In addition, the Agency is proposing some major changes to § 271.21(e) which will be discussed at length in the preamble to the proposed rule to be published in the near future. If adopted, many of the deadlines presented here will change.

b.1. States Applying for Final Authorization. Section 3006(b) of RCRA was amended by HSWA to provide more specificity with regard to the requirements that apply to a State submitting an application for final authorization. It allows EPA to grant final authorization to a State program which is not equivalent to the Federal program in effect at the time of authorization, provided that the State program is equivalent to the Federal program in effect one year prior to submission of the State's application for final authorization.

Section 271.21(e) currently requires a State application to be reviewed based on the Federal program existing 12 months prior to application submission unless the State has made a good faith effort to meet the 12 month deadline and applies for an extension. Because the opportunity for an extension in current § 271.21(e)(1)(ii) would allow the State program more time than provided in Section 3006(b) to adopt changes to the Federal program we are deleting that provision.

EPA is today adding a new § 271.24 to make clear that States which apply for authorization after November 8, 1984, may apply for interim authorization for the HSWA provisions. Section 3006(b)(1) of RCRA, like existing § 271.21(e)(1), uses equivalence as the legal standard for final authorization, suggesting that a State applying for final authorization after November 8, 1984, would have to apply for final authorization for both the pre-HSWA RCRA program and post-HSWA requirements. However, section 3006(q) offers States the opportunity to apply first for interim authorization for the new amendments. The 1984 interim authorization, like 1976 interim authorization, allows a State to demonstrate that its program is "substantially equivalent" to EPA's, rather than "equivalent to and no less stringent than" EPA's.

EPA reads the two statutory provisions together to offer States applying for final authorization for the pre-HSWA program the opportunity to qualify for either 1984 interim authorization or final authorization to carry out the new amendments. A contrary reading requiring States to be equivalent to the new amendments would effectively deny them any opportunity to receive 1984 interim authorization—a result EPA has no reason to believe Congress intended.

A State which does choose to meet the "moving target" deadline by seeking 1984 interim authorization for portions of its program will have to obtain final authorization for those portions at a later date. That date has not been determined yet because, under the statute, it will be the same date that HSWA interim authorization expires. That is, if HSWA interim authorization were to expire, for example, on February 1, 1990, States with HSWA interim authorization would have to obtain final authorization by that date. In the proposed rule that will appear in the Federal Register, EPA discusses various options for the expiration date of interim authorization under HSWA.

Section 271.21(e) is not expected to affect the application process for States which do not yet have final authorization for the pre-HSWA RCRA program. In order for States to receive final authorization before the expiration of interim authorization under the 1976 RCRA, they will have to submit their applications to EPA by this summer—several months before the time they would be required to adopt requirements based on the HSWA provisions that took effect upon enactment of today's rule. Thus, the HSWA should not delay the authorization of any State which planned to receive final authorization by January 31, 1986.

States applying for final authorization are not, however, relieved of the obligation to adopt regulations based on today's rule. To the contrary, those States must also proceed to adopt State analogues to the HSWA provisions that took effect on November 8, 1984 and today's rule. States must read § 271.21(e) carefully; because of the deadlines discussed there, it is possible that a State will be required to have completed its program revisions by about the same time it expects to receive final authorization. It should be noted, however, that EPA will propose major changes to § 271.21(e) that would change or suspend many of the deadlines discussed above. The preamble of the proposed rule will describe the proposed amendments in detail.

b. 2. States with Final Authorization. An analogous change has been made to § 271.21(e)(2) that provides for interim authorization for States that have final authorization for the pre-HSWA RCRA program. As previously written, these provisions would have required States which already have final authorization, or which will receive final authorization before expiration of the § 271.21(e)(1) deadline for making changes, to modify their programs within one or two years of this rule to become equivalent to the Federal program. Since Congress has now provided the opportunity for interim authorization for new requirements under the HSWA, the Agency has concluded it is also necessary to allow States the option of complying with those deadlines by modifying their programs to become substantially equivalent to the Federal HSWA program (the test for interim authorization). Retaining the former provisions would have diminished the utility of 1984 interim authorization to such an extent that the statutory purpose would not have been achieved. As explained before, however, States which obtain 1984 interim authorization will be required to obtain final authorization subsequently.

b. 3. All States. Whether a State is applying for final authorization or is already authorized, it is, of course, allowed to submit program revisions prior to the applicable § 271.21(e) deadline. A State need not seek authorization for all provisions at once. Indeed, States should apply now for interim or final authorization for any major portions of today's rule for which they already have legal authority. However, for those areas in which a State needs to amend its regulations or statute, EPA strongly encourages the State to submit one program revision application and not several piece-meal applications. This consolidation of State program revisions would minimize repetitive State and EPA involvement in the approval process.

States should note that they may not apply for final authorization to implement requirements of the HSWA if they have only interim authorization for the pre-HSWA RCRA program. States with interim authorization for all components of pre-HSWA program may apply for and be granted interim authorization for the new requirements. However, § 271.138(b) specifies that if the State fails to receive final authorization for the pre-HSWA program by January 31, 1986, its program (both pre-HSWA and HSWA) will revert to EPA on that date.

Finally, States should be aware that the deadlines for obtaining final authorization in § 271.21(e) have not changed regarding regulatory amendments unrelated to implementation of HSWA. For example, States must adopt regulations equivalent to the recently promulgated redefinition of solid waste (50 FR 614, January 4, 1985) within the one- or two-year deadline specified in § 271.21(e); interim authorization is not available. When EPA promulgates new RCRA regulations, the Agency will distinguish between those that implement HSWA requirements and those that do not.

I. Hazardous Waste Exports

1. Today's Amendments

As part of the HSWA, Congress enacted section 3017 governing the export of hazardous waste. Generally, section 3017 prohibits the export of hazardous waste unless the person exporting such waste: (1) Provides notification to the Administrator; (2) the government of the receiving country has consented to accept the waste; (3) a copy of the receiving country's written consent is attached to the manifest which accompanies the shipment; and (4) the shipment conforms to the terms of the consent.

In lieu of meeting the above requirements, a person may export hazardous waste if the United States and the government of the receiving country have entered into an agreement and the shipment conforms to the terms of the agreement. Section 3017(a). Subsections (d) and (e) establish procedures involving the Administrator and the Secretary of State for obtaining the consent of the receiving country, while subsection (f) discusses procedures for international agreements. Subsection (c) requires any person intending to export hazardous waste to notify the Administrator before the shipment leaves the United States and specifies the information to be included in such notification. Pursuant to subsection (b), the Administrator is required to promulgate regulations necessary to implement this section by November 8, 1985. Finally, Congress amended section 3008 of RCRA to provide criminal penalties for knowingly exporting hazardous waste without the consent of the receiving country or in violation of an existing international agreement between the United States and the receiving country.

Section 3017 of the HSWA contains one additional requirement with which exporters must comply immediately: section 3017(g) requires any person exporting hazardous waste to submit annually a report containing information relative to the wastes exported during that previous calendar year. EPA has today codified this requirement in the regulations by the addition of a new paragraph (d) to § 262.50 which provides that any person who exports hazardous waste must file with the Administrator, no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous year.

EPA is not publishing, at this time, amendments to codify the new notification requirement of section 3017(c) because it is a key element of the full section 3017 exportation scheme and, in the context of that scheme, presents several interpretive issues best resolved as part of the full set of regulations required by section 3017(b) to implement the entire section. Section 3017(c) requires notification "before such waste is scheduled to leave the country" without specifying whether or not separate notification is required for each shipment of hazardous waste, and without specifying the timing of such notification. Since the notification is a critical part of the section 3017(d) scheme for obtaining the consent of the receiving country, these issues should be addressed in the full set of regulations after opportunity for notice and comment. Accordingly, until November 8, 1985, or until EPA promulgates new requirements, persons exporting hazardous waste should comply with existing notification requirements of 40 CFR 262.50(b).

J. Waste Minimization

As part of the HSWA, Congress amended section 3002 of RCRA to add a new subsection (b) requiring that, effective September 1, 1985, the manifest required by subsection (a)(5) must contain a certification by the generator regarding efforts taken by him to minimize the amount and toxicity of wastes generated. Section 3002(b) provides that a generator must certify that he has a program in place to reduce the volume or quantity and toxicity of waste generated, to the degree determined by him to be economically practicable, and that the proposed method of treatment, storage, or disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

EPA is today publishing a revised Uniform Hazardous Waste Manifest Form (EPA Form 8700–22), the Appendix to Part 262, that includes a supplemental statement in Item 16 containing the certification required by the statutory amendment. This revised form, containing the supplemental statement, must be used after September 1, 1985. In addition, EPA is amending the instructions to the Appendix to Part 262 to include instructions for the waste minimization certification, Item 16. The instructions explain that any generator generating greater than 1000 kilograms of hazardous waste in any calendar month must sign (by hand) the certification. The instructions also make it clear that certain small quantity generators of less than 1000 kilograms of hazardous waste per month are exempt from the waste minimization manifest certification requirement. Specifically, generators of acutely hazardous waste in quantities below those specified in § 261.5(c) and generators of non-acutely hazardous waste in quantities below 1000 kg per month are exempt from the certification requirement, except that if they accumulate on-site more than the above threshold amounts they become subject to the full Subtitle C program (including the waste minimization requirements) for the increment of waste that exceeds these. *See* recodified § 261.5(f)(2), § 261.5(g)(2), and § 261.5(h)(2). Small quantity generators

are exempt from this requirement since section 3002(b) refers to "the manifest required by [section 3002] subsection (a)(5)" and the special manifest provisions for small quantity generators are imposed by section 3001(d), not section 3002(a)(5). *See* S. Rep. No. 284, 98th Cong., 1st Sess. 67 (1983).

The legislative history to section 3002(b) makes clear that Congress' objective in enacting this section was to encourage generators of hazardous waste to voluntarily reduce the quantity and toxicity of waste generated. S. Rep. No. 284, 98th Cong., 1st Sess. 66 (1983). The amendment does not authorize EPA to interfere with or to intrude into the production process by requiring standards for waste minimization; rather it specifically provides that the substantive determinations of "economically practicable" and "practicable method currently available" are to be made by the generator in light of his own particular circumstances. Thus, from an enforcement perspective, the Agency will be concerned primarily with compliance with the certification signatory requirement. Each generator subject to the waste minimization requirement should make a good faith effort to minimize the amount and toxicity of waste generated and to select a means of treatment, storage, or disposal most likely to minimize the present and future threat to human health and the environment.

Section 3002 was further amended to include a new requirement that generators submit, at least once every two years, a report describing their efforts to minimize waste generation. EPA is thus amending § 262.41, which currently requires submission of a biennial report, to add two additional waste minimization information items required by the recently enacted section 3002(a)(6).

Congress also amended section 3005 of RCRA to provide that, effective September 1, 1985, RCRA permits for the treatment, storage, or disposal of hazardous waste on the premises where the waste was generated must contain a certification by the permittee regarding efforts taken to minimize the amount and toxicity of the generated wastes. In order to implement this amendment, EPA is today adding a new provision § 264.73(b)(9) which provides that the permittee record the waste minimization certification in the written operating record kept at the facility. The Agency is also amending § 264.70 to provide that § 264.73(b)(9) is only applicable to permittees who treat, store, or dispose of hazardous waste on the site where such waste was generated. In order to make it clear that this certification is applicable to permits, the Agency is today amending § 270.30(j)(2) to provide that the requirement to retain the operating record is a RCRA permit condition.

K. Financial Responsibility

Section 205 of the HSWA modifies section 3004 of RCRA by adding subsection (t) with respect to financial responsibility requirements. EPA does not believe that any new regulations are required to implement section 3004(t).

Section 3004(t)(1) affirms the action already taken by EPA in establishing financial responsibility requirements in 40 CFR Parts 264 and 265, Subparts H. While the trust fund and State-required mechanisms are not mentioned in the statute as a means of providing financial assurance for closure and post-closure care or corrective action, there is no evidence that Congress intended to eliminate either approach as a permissible mechanism; EPA believes that the trust fund is a viable instrument for the assurance of closure and post-closure care or corrective action and that the trust fund is particularly well-suited for small firms. The Agency uses standby trust funds to collect money from surety bonds and letters of credit. Without the standby trust funds, all monies collected from the instruments would revert to the U.S. Treasury and the Agency would not be able to draw on those funds directly for closure and post-closure activities. Accordingly, the Agency will continue to allow the trust fund to be used for financial assurance under Subpart H.

Section 3004(t)(2) provides for the assertion of a claim directly against the guarantor providing evidence of financial responsibility in cases where the owner or operator is in bankruptcy, reorganization or arrangement pursuant to the Federal Bankruptcy Code, or where judicial jurisdiction cannot be obtained over an owner or operator likely to be solvent at the time of judgment.

EPA interprets this provision to allow for "direct action" against persons providing insurance to owners or operators under 40 CFR §§ 264.147 and 265.147. While the working of the statute allows direct action against "guarantors," defined in section 3004(t)(4) to include persons who provide evidence of financial responsibility under that section, the remarks of Senator Moynihan, who introduced the direct action amendment, indicate only an intention to allow injured parties to assert claims directly against insurers where action against the owner or operator would be fruitless. 130 Cong. Rec. S9176 (daily ed. July 25, 1984).

The liability insurance requirements in §§ 264.147 and 265.147 are designed to provide assurance for injuries caused to persons and property by hazardous waste disposal facilities. However, there is no "injured party" *per se* when an owner or operator fails to comply with applicable closure and post-closure requirements. Only EPA can require that such obligations be performed. Moreover, the mechanisms allowed by EPA to provide closure and post-closure assurance were crafted to ensure that EPA could direct that the monies assured by the mechanisms be applied to closure and post-closure costs, whether or not the owner or operator was available or solvent. For these reasons, the Agency does not believe that the direct action amendment has any applicability to the mechanisms required for financial assurance of closure or post-closure care.

L. Underground Storage Tanks

The HSWA adds Subtitle I to RCRA to govern the regulation of underground storage tanks that are not subject to regulation under Subtitle C. Section 9001 of Subtitle I defines "underground storage tanks" as any one or combination of tanks (including any connected underground piping) which has ten percent or more of its volume beneath the surface of the ground (including the volume of connected pipes) and which is used to store "regulated substances." Regulated substances include (1) any substances defined as "hazardous substances" in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) that are not regulated as "hazardous wastes" under Subtitle C, and (2) petroleum, including crude oil or any fraction thereof. Expressly excluded from the definition of underground storage tanks are:

(1) Farm or residential tanks with a capacity of 1,100 gallons or less used to store motor fuels for noncommercial use.

(2) Tanks used for storing heating oil for consumptive use on the premises where stored.

(3) Septic tanks.

(4) Pipelines regulated under other acts.

(5) Surface impoundments, pits, ponds, or lagoons.

(6) Storm water and waste water collection systems.

(7) Flow-through process tanks.

(8) Liquid traps or associated gathering lines related to oil or gas production and gathering operations.

(9) Storage tanks located in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the tank is situated upon or above the surface of the floor.

Subtitle I establishes a comprehensive scheme for the regulation of underground storage tanks. Some of its provisions require EPA to promulgate requirements. Others go into effect without action on the part of EPA. The major provisions of Subtitle I include:

(1) A notification provision requiring that all owners of currently-used tanks and non-operational tanks taken out of service after January 1, 1974, notify designated State and local agencies of the existence of their tanks (section 9002).

(2) A requirement that EPA promulgate regulations governing petroleum tanks within 27 months, regulations governing new tanks containing hazardous substances within 33 months, and regulations governing existing tanks containing hazardous substances within 45 months (section 9003).

(3) A prohibition against the installation of new tanks that do not satisfy enumerated statutory requirements (section 9003(g)).

(4) A provision for the approval of State underground storage tank programs that are no less stringent than Federal regulations promulgated under section 9003 (section 9004).

(5) A provision providing EPA authority to inspect facilities, conduct monitoring and testing at facilities, or to require tank owners to conduct monitoring and testing and to provide information pertaining to their tanks to EPA (section 9005).

(6) A provision providing EPA authority to enforce the requirements of Subtitle I through the use of administrative orders, injunctions, or civil penalties (section 9006).

(7) A provision making tanks within the control of Federal government subject to Subtitle I requirements (section 9007).

(8) A requirement that EPA conduct the following studies: (i) a study concerning petroleum tanks within 12 months; (ii) a study concerning tanks containing hazardous substances within 36 months; and (iii) a study concerning exempted farm and heating oil tanks within 36 months (section 9009).

Of the requirements established by Subtitle I, the interim prohibition of section 9003(g) will go into effect automatically on May 7, 1985, without prior EPA rulemaking proceedings. That section prohibits the installation of any new underground storage tank for the purpose of storing regulated substances unless (A) the tank will prevent releases due to corrosion or structural failure for the operational life of the tank; (B) the tank is cathodically protected against corrosion, constructed of noncorrosive material, or designed in a manner to prevent the release or threatened release of any stored substance; and (c) the material used in the construction or lining of the tank is compatible with the substance to be stored. Notwithstanding the above requirements, section 9003(g)(2) permits the installation of tanks without corrosion protection in soil with a resistivity of 12,000 ohm-cm or more. Today EPA is adding Part 280 to its regulations to incorporate the interim prohibition of section 9003(g). New

VI. Regulatory Analysis

A. Executive Order 12291: Regulatory Impact Analysis

Executive Order 12291 requires each Federal agency to determine if a regulation is a "major" rule as defined by the Order and "to the extent permitted by law," to prepare and consider a Regulatory Impact Analysis (RIA) in connection with every major rule. OMB has indicated that the regulation promulgated today is a major rule; however, OMB has also concluded that this rule is exempt from the RIA requirement. The exemption is based on Section 8 of the Executive Order, *Exemptions,* which states that

> procedures prescribed by this order shall not apply to: * * * (2) Any regulation for which consideration or reconsideration under the terms of the order would conflict with deadlines imposed by statute or by judicial order.

EPA has prepared preliminary estimates for the range of costs which the final rule may impose on hazardous and solid waste management units of various kinds and sizes, and for the total costs of the regulations. EPA estimated lower bound, upper bound, and most likely estimates for each of the provisions in the final rule that impose costs. The costs of the individual provisions were then aggregated to develop total cost estimates. EPA's general approach for estimating the costs, as well as the detailed assumptions underlying the estimates for each of the provisions, are described in Section D. In addition, EPA has begun analyzing the impacts of the costs of these requirements on particular waste-generating industries and expects to complete its analysis later this year.

This regulation was submitted to OMB for review under E.O. 12291.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires each Federal agency to prepare a Regulatory Flexibility Analysis (RFA) when it promulgates a final rule. (5 U.S.C. 604). The purpose of the RFA is to describe the effects the regulations will have on small entities and examine alternatives that may reduce these effects. An agency head may delay completing the analysis for up to 180 days after publishing the rule in the Federal Register, if he publishes a finding that the final rule is being promulgated in response to an emergency that makes timely compliance impracticable. (5 U.S.C. 608).

EPA intends to examine the impact of today's regulations on waste-generating industries and will report results for those industries where the regulations have a substantial impact on a significant number of small entities.

Regulatory Flexibility Analysis

As indicted earlier in the preamble, the purpose of this rule is to promptly and effectively notify the regulated community of their responsibility under this new law. EPA believes this is a valid argument for evoking the regulatory flexibility emergency provisions.

C. Paperwork Reduction Act

The information collection requirements contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control numbers: Notification 2050–0028; Manifest 2050–0039; Generators 2050–0035; Permittees 2050–0037; Biennial Report 2050–0024; Blending and Burning Fuels 2050–0047; and Exposure Assessments and Loss of Interim Status 2050–0007.

D. Estimated Cost of the Final Rule

1. General Approach

EPA estimated costs for each provision of the final rule which has compliance activities associated with the provision. EPA developed estimates of the affected population, the unit costs of compliance, and the aggregate costs of compliance for each provision. EPA developed likely lower- and upper-bound estimates of costs as well as a most likely estimate. In some cases, differences in assumptions about the affected population determine the lower

and upper bounds; in others, the range reflects differences in assumptions about the unit costs of compliance with the provision. Moreover, the upper- and lower-bound estimates do not represent the worst or lowest case costs, but, rather, EPA's estimate of the *most reasonable* upper and lower bounds. The most likely estimate represents either EPA's best estimate, or, in some cases, the midpoint of the upper and lower bounds. Estimates are presented as the aggregate costs for the provision for all affected facilities.

EPA developed its estimates of affected populations largely on the basis of EPA's "National Survey of Hazardous Waste Generators and Treatment, Storage and Disposal Facilities Regulated Under RCRA in 1981" (hereafter referred to as the "1981 RCRA Survey").

EPA developed two different types of unit costs and applied these costs to the affected population to estimate provision-specific costs: (1) Costs that vary significantly with the size and type of unit; and (2) costs that are the same, regardless of the size or type of units at the facility. Costs that vary with the size and type of unit were used to estimate the costs of the minimum technological requirements. Other requirements of this final rule impose unit costs that are the same, regardless of the size or type of units at the facility. For example, the cost to complete an exposure assessment depends on the level of detail required in the assessment rather than the size or type of unit.

The costs are presented in two ways: First-year costs and annualized-present-value (APV) costs, and where appropriate, are presented as low, most likely, and upper bound estimates for each. First-year costs represent the initial capital/startup costs plus first-year operating costs (if applicable) that the provision imposes. If the first-year costs are the same as those in succeeding years, the first-year cost will equal the annualized present value.

Because the stream of costs over time may be uneven, EPA converted this stream to its equivalent annual cost over the life of the facility using discounted cash flow analysis. First, EPA calculated the total present value (TPV) which is the sum of costs incurred in each year divided by a discount factor, as follows:

$$PV = \sum_{n=0}^{n} \frac{(costs)_n}{(1+r)^n}$$

where the real rate of return (r) equals 3 percent and n is the number of periods in which costs are incurred. The cash flows do not include inflation, taxes, or depreciation. As such, the resulting present value cost reports the full social cost in real terms.

In order to spread the costs evenly over the life of the facility, EPA annualized the total present value by multiplying it by a capital recovery factor (CRF):

$$CRF = \frac{r*(1+r)^{OL}}{(r+1)^{OL}-1}$$

where OL is the operating life. Unless otherwise specified, EPA assumed a 20 year operating life. The 3 percent real rate of return and the 20-year operating life assumptions lead to a CRF of .0672. The annualized present value represents the annual revenue required to cover the costs imposed by the provision. This value provides a consistent basis for presenting and comparing costs of different provisions. However, it implicitly assumes that facilities can predict future costs and can recover them at a steady rate over the life of the facility.

2. Ban on Hazardous Liquids In Landfills Provision

Effective May 8, 1985, this provision of the final rule bans the placement of bulk or noncontainerized liquid hazardous waste in landfills. Under current Part 264 regulations, liquids are permitted in lined landfills or in any landfill if the liquids have been treated or stabilized.

Affected Population—Based on the 1981 RCRA Survey, EPA identified seven landfills which accept hazardous liquids; five of these, accounting for approximately 57,000 metric tons (MT) per year, solidify the liquids in the landfill, while the other two, accounting for 11,000 MT per year, place liquids directly in their landfills. These seven facilities represent the lower bound estimate of the affected population.

To calculate an upper bound on the number of affected landfills, EPA assumed that the seven landfills represented only one-half of firms actually disposing of bulk liquids. Further, EPA assumes that the seven additional landfills, for which there is no information on the quantity managed, handle the same amount as those surveyed.

Unit Costs—In order to treat the liquids so that their placement in landfills is acceptable, EPA assumes that the wastes must be solidified outside of the unit and then placed in the landfill. In order to solidify wastes so that liquids are permanently fixed, EPA assumes that the liquids will be mixed with cement. The unit costs are based on engineering cost estimates developed for four model sizes of solidification plants. Plant sizes are based on MT per year of waste input. These plants would be built on site and would be replaced once over the 20-year expected lifetime of the facility. Over the relevant range, the larger the solidification plant, the smaller the per-ton cost of solidifying the liquids. The size of the solidification plant at each of the affected landfills was adjusted to match the needs of the facility.[27] The cost per ton solidified ranged from $235 for the smallest to $68 for the largest facility.

Total Costs—The total cost of the provision was determined by multiplying the quantity of bulk liquids handled at each landfill by the appropriate unit cost of constructing a solidification plant with sufficient capacity to meet current needs. The lower-bound first-year costs are estimated to be $7.4 million. The annualized present value is $5.1 million. The upper bound first-year costs are $14.8 million; annualized costs are $10.2 million. The most likely costs represent the average of the lower and upper bound estimates: $11.1 million in the first year, with an annualized cost of $7.7 million.

3. Minimum Technological Requirements

Provisions—The final rule requirements apply to each new landfill or surface impoundment and to replacements or lateral expansions of existing landfills or surface impoundments. The rule requires that these units must have two or more liners and a leachate collection system; the leachate collection system must be between the top and bottom liners for surface impoundments and above the top liner and between the top and bottom liners for landfills. The 1984 HSWA does not require existing surface impoundments to immediately install new liner and leachate collection systems.

Affected Population: Landfills—Based on the 1981 RCRA Survey, EPA estimates that there are 199 active landfills that handle hazardous waste. EPA assumes that these landfills operate for 20 years, with a new cell opening and closing each year. As each landfill opens a new cell, the rule will

[27] Unit costs were defined using ordinary least squares regression of the cost for the model plants. The cost functions were of the form $C = aQ^b$ where C is the cost, Q is quantity in metric tons, a is a constant and b is the "scale" coefficient.

require that the cell be lined in accordance with the double liner standard. Therefore, all 199 landfills will be affected annually by the final rule because, as they open a new cell, they will incur the additional cost imposed by the double liner requirement.

Because the engineering costs for the affected population are specific to unit size, EPA could generate engineering costs for virtually any unit size. To limit the number of unit cost estimates and to simplify the analysis, EPA developed size categories based on the actual size distribution of landfill units from the 1981 RCRA Survey. Each landfill is placed into one of eight size classes ranging from 500 MT per year to 123,000 MT per year.

Affected Population: Surface Impoundments—EPA estimates that there are 758 hazardous waste facilities with surface impoundments and that, on average, each facility has 2.3 surface impoundments, for a potentially affected total population of 1,743 impoundments. As detailed below, approximately 33 percent of these existing surface impoundments are expected to incur costs associated with this regulation within the next four years, when other provisions of the amendments will require the remaining surface impoundments to retrofit.

In the near term this provision will affect only that portion of surface impoundments which are laterally expanded or replaced. Since lateral expansion is an unlikely engineering option for surface impoundments, EPA estimated only the number of impoundments that are likely to be replaced in the next four years. EPA defines replacement as "a unit taken out of service and emptied by removing all or substantially all waste from it." Therefore, EPA regards dredging of a surface impoundment as constituting replacement. Dredging is a normal part of the operation of a surface impoundment and EPA assumed that impoundments are normally dredged when the depth of settled sludge is equal to one-half of the operating depth. The time to dredging varies from 7 to over 13 years, depending on the size of the impoundment. Therefore the potentially affected population of 1,743 surface impoundments has been reduced to reflect the normal dredging schedules for units of six different model sizes. Accordingly, EPA estimates that 194 surface impoundments would normally be dredged in each of the next four years. Finally, EPA assumes that the facilities that would normally have dredged in each of the next four years will postpone dredging one year (see *Unit Costs: Surface Impoundments* below).

Unit Costs: Landfills—Because EPA assumes that landfills are filled one cell at a time and that one cell is filled each year, the cost of the final rule is estimated as the incremental cost of opening and closing a new cell using the design specified in the final rule. Under the final rule, the new cell must comply with a double liner and leachate collection system requirement and must be closed with an equivalent cap. Instead of placing a single liner under the new cell (as required under current Part 264 regulations), the owner or operator must use a double liner. EPA has defined an interim statutory, synthetic/clay liner to conform with the double liner requirement for the purpose of meeting the final rule requirements.

The cost attributable to the final rule is the incremantal cost of opening and closing new cells with as synthetic/clay liner and two leachate collection systems instead of the single liner and single leachate collection system currently required. The cost estimate assume that the clay for the liner is available on-site. If this were not the case, the costs would be larger, ranging from 12 to 53 percent more than those calculated, depending on facility size. EPA assumed that it is unlikely that facilities would need to bring clay from off-site.

The first-year costs range from $8,200 for the smallest landfills to $285,000 for the largest. On a per-ton basis, the incremental first-year cost is $12/MT for the smallest landfills and under $2/MT for the largest landfills.

Total Costs: Landfills—The initial capital cost for all 199 landfills is $9.68 million; the estimate is the same for the lower and upper bounds. The annualized costs are $10.2 million.

Unit Costs: Surface Impoundments—Surface impoundment unit costs rely on two major assumptions about compliance with the final rule. The first is that, rather than retrofit existing impoundments in accordance with the regulation, operators will instead choose the less costly option of closing the existing unit as a land disposal facility and constructing a new surface impoundment. The second assumption is that due to the high cost of managing hazardous waste in surface impoundments there will be additional incentive for operators to minimize the quantity of hazardous waste they place in them, such that operators will separate hazardous from non-hazardous waste sources to decrease the volume of hazardous waste that must be managed.

In order to model this expected behavior on the part of operators, EPA assumes first, that operators will extend the time until dredging by one year because of the reduced flow of hazardous waste into the impoundment. The estimated 194 surface impoundments that would normally dredge in 1985 will delay their dredging until 1986, and so on. Moreover, once the unit is ready for dredging (i.e. closure and replacement), EPA further assumes that the replacement impoundment will be only approximately half as large as the original impoundment. In terms of the model sizes used to calculate costs, the new unit will be one model size smaller than the impoundment it replaces. The full cost to surface impoundment facilities includes the cost of both the new surface impoundment and the cost of a new surface impoundment to handle the non-hazardous liquids. The cost of the latter impoundment is not included in these estimates of the cost of the minimum technological requirements for land disposal facilities.

Given these assumptions, the new unit costs of complying with the final rule include the incremental costs of:

(1) Closing the old surface impoundment as a land disposal facility in the next few years instead of 20 years from now;

(2) Constructing a new, smaller impoundment within the next few years with the interim statutory double liner and leachate collection system instead of the current Part 264 single liner and leachate collection system; and

(3) Closing the new surface impoundment with a cap equivalent to the interim statutory liner, rather than the cap specified in the existing Part 264 regulations.

The unit costs are dominated by closure costs for all model sizes: Moving closure costs approximately 20 years forward means that the present value practically doubles (an outlay of $100 today has a value of $181 in 20 years assuming a 3 percent discount rate). The initial year costs for closure of the old unit accounts for between 46 and 79 percent of total initial year costs; the balance is attributable to the cost of land and constructing the new unit.

The annualized costs of compliance with this rule vary from $55,000 per facility for the smallest new impoundments, to over $1.5 million for the largest. The annualized cost per ton managed in the newly constructed units ranges from approximately $18 for the smallest impoundments down to less than $1 per metric ton for the largest impoundments.

Total Costs: Surface Impoundments—The total annualized cost of the surface impoundment provision in the final rule is $53.2 million and is the same for the lower and upper bounds.

Total Costs: Minimum Technological Requirements—The first year costs are all from landfill compliance with the final rule and equal $9.68 million in both the lower and upper bound estimates. The total annualized cost of the provision is $63.5 million.

4. Corrective Action

Provisions—The final rule requires that any Subtitle C permit issued to a RCRA facility after the date of enactment must require corrective action for all releases of hazardous wastes or constituents from solid waste management units as well as hazardous waste management units at the facility. The final rule grants EPA the authority to issue corrective action orders to interim status facilities to clean up releases from both solid and hazardous waste management units on a site-specific basis. This analysis only addresses releases to ground water. It does not estimate the costs of corrective action for releases to other media.

Owners or operators of hazardous waste management facilities must also assure EPA that they can meet a financial responsibility test for the required expenditures. The costs of this provision are treated later in this section.

EPA developed estimates of corrective action costs for releases from solid waste management units (SWMU) at RCRA facilities. Corrective action for releases from active land disposal units is already required under existing Part 264, Subpart F regulations. This provision of the final rule imposes no incremental costs on these units. The costs for SWMUs are based on corrective action for releases only up to the facility boundary; the costs include the cost of counterpumping and treating contaminated ground water and, in some cases, the cost of controlling the source of contamination.

Affected Population: Solid Waste Management Units—The final rule requires owners or operators to take corrective action for releases from solid waste management units (SWMUs) at facilities seeking Subtitle C (RCRA) permits. The 1981 RCRA Survey estimated that there are 1,049 hazardous waste land disposal facilities and 3,769 hazardous waste treatment and storage facilities. Many of these facilities also have solid waste management units. The size of the affected population, therefore, depends on the number of these facilities with SWMUs and the number of leaking SWMUs at each of these facilities. To account for this uncertainty, EPA developed low, high and most likely population estimates.

The lower bound estimate assumes that there are no leaking SWMUs at the 1,049 hazardous waste land disposal facilities, and that one-fourth (942) of the 3,769 treatment and storage facilities have one leaking SWMU on-site. EPA further assumed no releases from facilities in arid climates and that those facilities granted ACLs under § 264.94 are exempt from the requirements. EPA assumes that 10 percent of the facilities are in arid climates and 10 percent will receive ACLs. Thus, the lower bound estimate assumes that corrective action begins immediately for these 754 SWMUs.

The upper bound assumes that 25 percent of all land disposal facilities have a SWMU on site that is leaking. In addition, each of the 3,769 treatment and storage facilities has one leaking SWMU. Thus the upper bound estimate assumes that corrective action begins immediately for all 4,031 facilities.

EPA's most likely estimate assumes that 12.5 percent of facilities with land disposal units, the midpoint of the upper and lower bound, also have a SWMU. Also, one-fourth of the remaining treatment and storage facilities have a single leaking solid waste management unit on site. Thus the best estimate assumes that corrective action begins immediately for 1,073 facilities.

Unit Costs: Corrective Action for Solid Waste Management Units—The unit costs of corrective action at SWMUs include the cost of containing or counterpumping the part of the plume that extends to the facility boundary and then treating the contaminated ground water. EPA used its Stochastic Model of Corrective Action Costs to estimate the costs of counterpumping and treatment. The model estimates these costs based on various inputs about the hydrogeology of sites, plume characteristics, and treatment options. Costs were adjusted to account for replacement of capital over the term of the corrective action. The mean length of time for completing the corrective action is 48 years. EPA assumes that the mean distance from the disposal unit to the facility boundary is 500 feet and that the cost model can be used to extrapolate costs for clean-up of plumes of this length.[28] The first year cost for cleaning up a 500 foot plume is $622,000 per unit if the clean-up begins immediately. The annualized present value is $249,000.

Total Costs: Corrective Action for Solid Waste Management Units—The estimates for first year corrective action costs at facilities with SWMUs range from $469 million to $2.5 billion. The annualized costs range from $188 million to $1.0 billion.

Unit Costs: Source Control for Solid Waste Management Units—In order to protect human health and the environment, it may be necessary to do more than contain or remove and treat the contaminated ground water. One additional component of the cost of corrective action would be the cost to remove or isolate the source of the plume from ground water. EPA assumed that source control requirements would only apply to SWMUs that have releases requiring corrective action (because active land disposal units at RCRA facilities are already subject to these requirements under the current regulations).

As noted above in the general approach, EPA generated upper and lower bound cost estimates which should not be regarded strictly as upper and lower limits on total costs. This point is important in light of the sensitivity of source control cost estimates to the assumptions about the affected population. The first assumption is that half of the facilities with SWMUs are required to perform corrective action involving source control. The second assumption involves the distribution of three alternative source control methods across affected facilities. The three methods are: controlling the source by removing it, building slurry walls, and capping the unit.

- Source removal option: Source removal, which requires both source removal and solidification, is the most expensive source control option. The lowest excavation and solidification costs per unit are $450,000 in the first year for a ¼ acre surface impoundment. The annualized cost is $30,000. The highest unit costs are for a 123,000 MT per year landfill. The first year cost is $63 million, 87 percent of which is the cost of solidification. The annualized cost is $4.2 million.
- Slurry wall option: A less expensive solution is to supplement the counterpumping with a slurry wall, constructed around the unit, down to the top of the saturated zone. The wall will divert upgradient flow around the unit and contain leakage from the unit itself. First year costs for slurry walls range

[28] EPA reviewed model sensitivity analysis of plume length and assumed that the cost functions display constant elasticity with respect to plume length ($C = a(\text{length})^b$).

from $10,000 for the ¼ acre impoundment to $513,000 for the 123,000 MT per year landfill; annualized costs range from $672 to $34,000.

• Capping the unit: The third option is to solidify the waste in the unit and place an impermeable cap on the unit. Because the waste must be solidifled in order to support the cover, this option can be nearly as expensive as source removal, especially for large units. First year costs per facility range from $142,900 for ¼ acre impoundments ($9,600 annualized) to $62 million for the 123,000 MT per year landfill ($4.2 million annualized).

The choice of specific source control measures can have a significant effect on the costs. The most expensive option may be as little as 11 times more expensive than the least cost option for a given unit size, or as much as 120 times more expensive. As a result, EPA made several assumptions about the source control option applicable to the population.

For the lower bound, EPA assumed a uniform distribution among the three options: One-third of the affected facilities capped the unit, one-third excavated and solidified the waste, and one-third constructed slurry walls.

For the upper bound and best estimate, EPA selected the source control option on the basis of depth to the ground water at each site. If the ground water is within 10 feet of the bottom of the unit, source removal is necessary. (Based on information from the 1981 RCRA Survey, 67 percent of the landfills and 63 percent of the surface impoundments met this criterion.) Where the ground water is between 10 and 50 feet from the bottom of the unit, the operator would construct a slurry wall. (Twenty percent of the landfills and the rest of the surface impoundments (37 percent) included in the 1981 RCRA Survey met this criterion.) Finally, all other SWMUs (i.e., those situated more than 50 feet above the ground water) solidify the waste in the unit and then cap it.

Total Costs: Source Control for Solid Waste Management Units—The lower bound estimates for first year costs of source control at SWMUs is $1.4 billion or $92 million annualized. The upper bound costs are $11.7 billion for the first year or $784 million annualized. The most likely first year costs are $3.1 billion. The most likely estimate of annualized costs is $208 million.

Total Costs: Solid Waste Management Units (Corrective Action and Source Control)—Table VI-1 describes the individual components of the costs of corrective action and source control at solid waste management units. Source control costs dominate the first year costs because all of the source control options require a one-time investment. On an annualized basis, counterpumping costs that continue for many years are more important.

TABLE VI-1.—SUMMARY OF FINAL RULE CORRECTIVE ACTION COSTS AT FACILITIES WITH SOLID WASTE MANAGEMENT UNITS

	Lower bound		Upper bound		Most likely	
	First year costs	Annualized PV	First year costs	Annualized PV	First year costs	Annualized PV
Solid waste management units:						
Counterpumping	$468,864,000	$187,931,000	$2,507,438,000	$1,005,039,000	$667,640,000	$267,605,000
Source control:						
Land disposal facilities	0	0	721,439,375	48,480,726	360,719,688	24,240,363
Treatment and storage facilities	1,362,727,141	91,575,264	10,950,519,248	735,874,893	2,737,629,812	183,968,723
Source control total	1,362,727,141	91,575,264	11,671,958,623	784,355,619	3,098,349,500	208,209,086
Total	1,831,591,141	279,506,264	14,179,396,623	1,789,394,619	3,765,989,500	475,814,086

Total Costs of the Provision—The total costs of the provision include the cost to clean up plumes from SWMUs to the property boundary and the cost to remove the source of contamination at these units. When corrective action and source control are considered, the lower bound cost of the corrective action provision is $280 million annually and $1.8 billion the first year. The upper bound annualized cost is $1.8 billion or $14 billion the first year. The most likely annualized costs are $476 million with a first year cost of $3.8 billion.

The cost estimates for the provision are very sensitive to the assumption that RCRA treatment, storage, and disposal facilities have only one SWMU. If facilities have more than one SWMU, the costs could increase dramatically.

5. Dust Suppression

Provision—The final rule prohibits the use of used oil, mixed with hazardous waste, as a dust suppressant.

Affected Population—The provision affects two distinct groups: first, firms that generate the used oil and second, firms that buy the oil for re-use and recycling. The highest value use of the oil is as a dust suppressant applied to roads. EPA estimates that approximately 68.5 million gallons of this type of used oil are applied to roads each year. Under the final rule, generators will no longer be able to sell the oil for use as a dust suppressant. Firms that apply oil to roads will have to find an alternative to used oil and pay the additional cost of the alternative.

Unit Costs—The cost to generators depends on the number and type of alternate uses for the oil. For the lower bound, EPA estimates that generators can simply sell the oil to other users at no loss of revenue. The upper bound is that the oil has no resale value and the generators lose the revenue they earned on the sale of the oil to road oilers. The most likely estimate reflects the fact that the oil has some value, at least for its BTU content, but no higher value than it had as a dust suppressant (or the generators would have sought out the higher value use).

For road oilers, the lower bound cost assumes that they will switch to calcium chloride. This means a higher cost per gallon and a higher application rate. The upper bound cost includes the same assumptions plus a 50 percent higher application frequency.

Total Costs—The lower bound cost is $16 million and is the same each year. The upper bound is $35 million and the most likely cost is the average of the two, approximately $26 million.

6. Small Quantity Generators

Provision—The final rule imposes interim requirements for small quantity generators (SQGs) of hazardous waste. The final rule only requires SQGs to fill out portions of the Uniform Hazardous Waste Manifest for shipments of their waste.

Affected Population—EPA estimates that between 100,000 and 175,000 generators produce between 100 and 1,000 kg. of hazardous waste per month. Based on changes in the amount of time that generators may store waste on-site without a storage permit, EPA estimates

that, on average, these generators will send between 1.33 and 2 shipments off-site per year. If the generator stores waste for 270 days (the most allowed under the new rules), he would send 1.33 shipments off-site each year. If the generator does not qualify for the 270 day storage period, he can store wastes for 180 days and would therefore ship 2 loads off-site each year on average.

Even if the generator stores for 270 days, the most waste he could accumulate is 9,000 kg. (9 MT), far less than a full load for either tank trucks or flatbeds (assumed to be roughly 23 MT and 18 MT respectively). The effect of this is that in the lower bound, 100,000 generators will each have 1.33 shipments per year, while in the upper bound, 175,000 generators will each have 2 shipments per year. The best estimate assumes 100,000 generators, each with 1.67 shipment per year.

Unit Costs—The generators are only required to fill out a small part of the Uniform National Manifest. Based on EPA estimates of the time required, the cost per manifest varies between $2.50 and $4.00 per manifest.

Total Costs—The lower bound cost is $332,500 per year; the upper bound is $1,400,000 and the most likely estimate is $542,750.

7. Burning and Blending

Provision—The final rule includes a provision banning the burning of hazardous waste in cement kilns which are located in cities with populations greater than 500,000.

Affected Population—EPA has information on several cement kilns that may currently burn or are considering burning hazardous waste, but it is difficult to estimate the actual population affected by this provision. For a lower bound estimate, EPA assumes that the provision is merely precautionary, and is designed to preclude this activity until EPA develops standards for these kilns. The upper bound and most likely estimate is that one kiln currently burns hazardous waste.

Generators of the solvents burned in the kiln will also be affected by the ban. They will lose the revenue they would now earn on the sale of the waste to the kiln operator and they may have to pay to dispose of the waste.

Unit Costs—In the upper bound and most likely scenarios, the owner of the kiln will lose the cost advantage he enjoyed by burning cheaper solvents in place of some other fuel. One facility reported savings of $.29 per gallon on the solvents burned; this is the difference between burning hazardous waste and number 6 fuel oil.

For the upper bound, EPA assumes that generators of the solvents will lose the revenue from the sale of the solvent to the kiln operator and will now have to pay to dispose of the solvents. The most likely estimate assumes that they will pay only a moderate fee to dispose of the solvents because of their BTU content.

Total Costs—The lower bound costs are zero. The upper bound cost is $167,000 per year and the most likely estimate is $108,000.

8. Exposure Assessments

Provision—The final rule requires all owners and operators of landfills and surface impoundments to supplement their RCRA permit applications with information on the potential for public exposure to releases from the unit. This should include information on potential releases, pathways of exposure, and the magnitude of possible exposures. In general, owners and operators are not expected to collect additional data; they can submit existing information.

Affected Population—The number of applicants is expected to match the current estimates for facilities with landfills (199) and surface impoundments (758) from the 1981 RCRA Survey. EPA also assumes that there will be approximately 20 new applicants each year.

Unit Costs—The costs of the final rule are based on estimates of the paperwork burden required of applicants to assemble and transmit the required information to EPA. Based on an estimate of 120 hours per respondent and an average cost of $16 per hour, the cost per facility is estimated at $1,920.

Total Costs—Most of the costs are incurred in the first year. After that, only new facilities need to submit the information. The upper and lower bound first year costs are $1.9 million; annualized costs are $176,000.

9. Delisting

Provision—The final rule requires that generators petitioning to exclude a waste generated at their facility from regulation must submit information beyond what is currently required. EPA is required to consider factors other than those for which the waste was originally listed if those factors might cause EPA to continue to regard the substance as a hazardous waste, i.e., to not delist.

Affected Population—To date, EPA has processed 369 petitions under the existing delisting provision. These petitions will be reexamined in light of this new regulation. In addition, based on the past number of petitions per year, EPA estimates that new petitions will arrive at the rate of approximately 136 per year.

Unit Costs—EPA assumes that an additional constituent analysis of the waste in question will be required in order to comply with the final rule. The expected cost for these analyses plus other petition costs is $3,000 per petition.

Total Costs—Most of the costs occur in the first year because of the need to reexamine old petitions. The first year upper and lower bound costs are estimated at $1.5 million and the annualized cost is $480,000.

10. Hazardous Waste Exports

Provision—The final rule requires exporters of hazardous waste to submit an annual report on their export activity. The report may be submitted as part of the biennial report or separately.

Affected Population—EPA assumes that between 150 and 200 generators export hazardous waste each year. The lower bound estimate is 150, 200 is the upper bound and 175 is the most likely.

Unit Costs—When the information is part of a biennial report, the cost of supplying additional information regarding exports is slight. EPA assumes that the additional cost ranges from a lower bound of $10 to an upper bound of $20. If the export report is not part of a biennial report, the costs will be higher. EPA assumes the costs range from $20 to $100.

Total Costs—EPA estimates first year and annualized costs of $2,250 for the lower bound, $12,000 for the upper bound, and $6,600 for the most likely.

11. Waste Minimization

Provision—The final rule requires that generators filling out hazardous waste manifests and TSDFs managing waste generated on-site must certify that they have taken economically practicable steps to minimize wastes generated. All generators must report on these efforts in their biennial reports.

Affected Population—Generators shipping waste off-site must sign a compliance statement on the manifest; the incremental cost is negligible. The number of TSDFs that must certify compliance is based on the total number of TSDFs reported by the RIA Survey, 4,818. The affected population is 90 percent of the TSDF population based on EPA assumptions that 90 percent of all TSDFs generate waste on-site.

All generators must submit a report on waste minimization in their biennial report. The number of generators is 14,098 according to the 1981 RCRA Survey; this is both the lower bound and the most likely. The upper bound is that all generators who notified must submit

these reports. EPA estimates that 48,791 biennial reports would be required if all notifiers were active.

Unit Costs—The certification costs for generators are negligible and are excluded here. For TSDFs, the costs are estimated at less than $10. The cost of a biennial report will increase between $10 and $50. According to EPA paperwork burden estimates, the preparation of a biennial report will take 10 percent more time. This yields a most likely estimated cost of $13 per facility.

Total Costs—Lower bound first year and annualized costs are $141,000. EPA estimates the upper bound costs at $2.5 million with a most likely estimate of $205,000.

12. Financial Responsibility

Provision—The final rule requires facilities to perform corrective action as specified under §§ 206 and 207 of the amendments. In addition, facilities must provide financial assurance for that corrective action.

Affected Population—The same population estimates derived for the corrective action provision apply here. In summary, the lower bound population consists of 25 percent of the 3,769 treatment and storage facilities with leaking solid waste management units; 10 percent of these are assumed to be located in arid climates and another 10 percent are granted ACLs for constituents found in the ground water near the site, reducing the affected population to 754 facilities.

The upper bound population estimate assumes that 25 percent of the 1,049 land disposal facilities have one leaking SWMU. Each remaining treatment and storage facility (3,769) has one leaking SWMU.

The most likely population estimate is an average of the upper and lower bound for land disposal facilities. For treatment and storage facilities, 25 percent are assumed to have one leaking SWMU.

The final assumption about the population involves the difference between the number of facilities and the number of firms that own them. Only firms are responsible for showing financial responsibility, not individual facilities. EPA estimates that the average number of facilities per firm is three.

Unit Costs—EPA assumes four possible mechanisms for firms to demonstrate financial responsibility for corrective action. The least expensive mechanism is the financial test or guarantee. This may be provided to a firm based on certain information about its financial condition for $400.

The other options all depend in some way on the expected cost of the corrective action that will be required. A letter of credit involves a $420 fee plus .7 percent of the undiscounted cost of the corrective action; a surety bond costs the same fixed fee plus 1 percent of the undiscounted costs; and a trust fund includes a $400 fee plus .9 percent of the undiscounted cost.

The undiscounted cost of the corrective action is simply the sum of the costs incurred cleaning up a plume as far as the facility boundary over the average length of time that pumping is required (48 years). The cost estimate reflects the cost of cleaning up a 500 foot plume. The undiscounted total cost for a 500 foot plume is $6.6 million.

The lower bound cost estimate assumes that all affected firms can satisfy the financial responsibility requirement with a financial test or guarantee. That means that the cost to each firm will be $400.

For the upper bound, EPA assumes that each firm must establish a trust fund to prove it can meet the corrective action costs. The cost of a trust fund to meet these corrective action costs is $59,930 per facility or $179,000 per firm.

The most likely estimate assumes that 83 percent of the firms use a financial test or guarantee, 9 percent use a letter of credit, 4 percent use surety bonds, and 4 percent a trust fund. This is based on the current distribution of allowable demonstrations for closure and post-closure care. Letters of credit will cost firms $139,000 for corrective action to the facility boundary. The corresponding cost for firms using surety bonds is $199,000.

Total Costs—The lower bound estimate is $100,400 for both the first year and the annualized costs. The upper bound is $241 million and the most likely is $9.8 million.

13. Underground Storage Tanks

Provision—The final rule bans the placement of new, unprotected steel tanks in "corrosive" soils. The ban is effective until EPA promulgates new regulations in 2 years.

Affected Population—EPA assumes that 100,000 tanks are replaced each year. Approximately 60,000 are for farm and home use and are not subject to these requirements. The remaining 40,000 tanks are for commercial/industrial use. Approximately 28,000 of these are metal tanks of which roughly 13,000 are unprotected carbon steel and are subject to these requirements. Most of those tanks (75 percent) are probably placed in noncorrosive soils, defined as soils with resistivity higher than 12,000 ohm-cms.

The owners or operators of all these tanks will need to perform a soil resistivity test. EPA assumes that two-thirds will install cathodically protected tanks instead of bare steel, and the rest will install externally coated tanks.

Unit Costs—The costs represent the increment required by the final rule and include the cost of a soil resistivity test ($36), and installing a protected tank that is either cathodically protected (an incremental cost above bare steel ranging from $2,367 to $4,340 per tank depending on the size of the tank), or externally coated (incremental cost from $632 to $1,774, depending on size).

The lower bound unit cost includes these incremental costs in the first year, and replacement costs in year 14. EPA assumes that unprotected steel tanks that would have been placed in corrosive soil without the regulation, would fail in an average of 14 years. At this time, the tank would have to be replaced. The regulation forces the owner to install a tank with a longer expected lifetime (20 years), so the owner pays more the first year, but saves money over the 20 year horizon because the tank lasts longer. This conclusion is dependent on the assumption that an owner would put an unprotected steel tank in corrosive soil, as well as an assumed life of 14 years for an unprotected tank, and the 3 percent discount rate.

The upper bound unit costs includes the same incremental cost, but assumes that even a bare steel tank would last the full 20 year period, so there is no replacement cost in year 14.

The most likely estimate of the unit cost is zero. EPA believes that owners operate to maximize net present value (and therefore minimize the present value of costs) and would therefore not install a tank that was expected to fail so quickly. Given EPA's assumptions, an owner would pursue the course of action that minimized the present value of costs. He would compare the incremental cost of protecting the tank now, to the discounted cost of replacing a failed tank in 14 years. If protecting the bare tank were cheaper in present value terms (which it is under these assumptions) the owner would opt to invest in a protected tank now. In short, the owner already optimizes, so there is no need to "force" him to comply with regulations.

Total Costs—Under the lower bound assumptions, the first year cost of the regulation is $6.2 million, but the annualized "cost" is a net savings per year of $870,000, because the owner will not have to replace a failed tank. The upper bound only includes the costs of

installing protected tanks for two years, at which time the ban is replaced by new regulations. The first year cost is $6.2 million and the annualized present value over 20 years is $1.1 million. The most likely estimate is zero.

14. Total Cost of the Final Rule

The sum of all the annualized costs ranges from a lower bound of $365 million to $2.1 billion. Table VI-2 shows these annualized costs as well as the first year costs, which range between $1.9 billion and $14.5 billion. Corrective action costs dominate both first year and annualized costs in each scenario. The Agency is soliciting comments on these cost estimates.

TABLE VI-2.—COSTS OF FINAL RULE

Provisions	Lower bound		Upper bound		Most likely	
	First year costs	Annualized FY	First year costs	Annualized FY	First year costs	Annualized FY
Liquids in landfills	$7,419,100	$5,106,663	$14,838,200	$10,213,326	$11,128,650	$7,659,995
Minimum technological requirements	9,675,600	63,473,700	9,675,600	63,473,700	9,675,600	63,473,700
Corrective action [1]	1,831,591,141	279,506,264	14,179,396,623	1,789,394,619	3,765,989,500	475,814,086
Dust suppression	16,440,000	16,440,000	34,930,000	34,930,000	25,685,000	25,685,000
Small quantity generators	332,500	332,500	1,400,000	1,400,000	542,750	542,750
Burning and blending	0	0	166,920	166,920	107,640	107,640
Exposure assessments	1,906,560	176,213	1,906,560	176,213	1,906,560	176,213
Delisting procedures	1,515,000	482,295	1,515,000	482,295	1,515,000	482,295
Hazardous waste exports	2,250	2,250	12,000	12,000	6,563	6,563
Waste minimization	140,980	140,980	2,482,910	2,482,910	204,954	204,954
Financial responsibility	100,400	100,400	240,560,947	240,560,947	9,803,280	9,803,280
Underground storage tanks	6,215,000	(871,076)	6,215,000	1,113,446	0	0
Grand total	1,875,338,531	364,890,189	14,493,099,760	2,144,406,376	3,826,565,497	583,956,476

[1] Cost of corrective action includes the cost of source control for certain facilities.

List of Subjects

40 CFR Part 260

Administrative practice and procedure, Confidential business information, Hazardous waste, Liquids in landfills.

40 CFR Part 261

Hazardous waste, Small quantity generators, Recycling, Delisting.

40 CFR Part 262

Hazardous materials-transportation, Hazardous waste, Imports, Labeling, Packaging and containers, Reporting and recordkeeping requirements, Waste minimization.

40 CFR Part 264

Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Exposure assessments, Corrective action, Security measures, Surety bonds, Liner requirements.

40 CFR Part 265

Hazardous waste, Insurance, Packaging and containers, Corrective action, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

40 CFR Part 266

Burning and blending.

40 CFR Part 270

Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Reporting and recordkeeping requirements, Water pollution control, Water supply, Permit application requirements.

40 CFR Part 271

Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Indians lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Part 280

Underground storage tanks.

Dated: July 8, 1985.

Lee M. Thomas,

Administrator.

For the reasons set out in the Preamble, Title 40 of the Code of Federal Regulations is amended as follows:

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

1. The authority citation for Part 260 is revised as follows:

Authority: Secs. 1006, 2002(a), 3001 through 3007, 3010, 3014, 3015, 3017, 3018, 3019, and 7004, Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6921 through 6927, 6930, 6934, 6935, 6937, 6938, 6939 and 6974).

2. 40 CFR Part 260 is amended by revising § 260.22(a), (c)–(e) to read as follows:

§ 260.22 Petition to amend Part 261 to exclude a waste produced at a particular facility.

(a) Any person seeking to exclude a waste at a particular generating facility from the lists in Subpart D of Part 261 may petition for a regulatory amendment under this section and § 260.20. To be successful:

(1) The petitioner must demonstrate to the satisfaction of the Administrator that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous or an actutely hazardous waste; and

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

* * * * *

(c) If the waste is listed with codes "I", "C", "R", or "E", in Subpart D,

(1) The petitioner must show that the waste does not exhibit the relevant characteristic for which the waste was listed as defined in § 261.21, § 261.22, § 261.23, or § 261.24 using any applicable methods prescribed therein. The petitioner also must show that the waste does not exhibit any of the other characteristics defined in § 261.21, § 261.22, § 261.23, or § 261.24 using any applicable methods prescribed therein;

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be hazardous waste, that such

factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(d) If the waste is listed with code "T" in Subpart D,

(1) The petitioner must demonstrate that the waste:

(i) Does not contain the constituent or constituents (as defined in Appendix VII of Part 261) that caused the Administrator to list the waste, using the appropriate test methods prescribed in Appendix III; or

(ii) Although containing one or more of the hazrdous constituents (as defined in Appendix VII of Part 261) that caused the Administrator to list the waste, does not meet the criterion of § 261.11(a)(3) when considering the factors used by the Administrator in § 261.11(a)(3) (i) through (xi) under which the waste was listed as hazardous; and

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in § 261.21, § 261.22, § 261.23, and § 261.24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(e) If the waste is listed with the code "H" in Subpart D,

(1) The petitioner must demonstrate that the waste does not meet the criterion of § 261.11(a)(2); and

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that additional factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in § 261.21, § 261.22, § 261.23, and § 261.24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

* * * * *

§ 260.22 [Amended]

3. Section 260.22(m) is hereby removed.

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

4. The authority citation for Part 261 continues to read as follows:

Authority: Sections 1006, 2002(a), 3001, and 3002, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended [42 U.S.C. 6905, 6912(a), 6921, and 6922].

5. Section 261.4(b)(1) is revised to read as follows:

§ 261.4 Exclusions.

* * * * *

(b) * * *

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle, if such facility—

(i) Receives and burns only

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

* * * * *

§ 261.5 [Amended]

6. Section 261.5 is amended by redesignating paragraphs (h) and (i) as (i) and (j) respectively.

7. 40 CFR Part 261 is amended by revising § 261.5(b), (f) and (g) and adding (h) to read as follows:

§ 261.5 Special requirements for hazardous waste generated by small quantity generators.

* * * * *

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (h) of this section, a small quantity generator's hazardous wastes are not subject to regulation under Parts 262 through 265 and Parts 270 and 124 of this chapter, and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g) and (h) of this section.

* * * * *

(f) In order for hazardous wastes generated by a small quantity generator of acutely hazardous wastes in quantities equal to or less than those set forth in paragraph (e)(1) or (e)(2) of this section to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 261.11 of this chapter;

(2) The small quantity generator may accumulate acutely hazardous waste on-site. If he accumulates at any time acutely hazardous wastes in quantities greater than those set forth in paragraph (e)(1) or (e)(2) of this section, all those accumulated wastes for which the accumulation limit was exceeded are subject to regulation under Parts 262 through 265 and Parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of § 262.34 for accumulation of wastes on-site begins when the accumulated wastes exceed the applicable exclusion limit;

(3) A small quantity generator may either treat or dispose of his hazardous waste in an on-site facility, or ensure delivery to an off-site storage, treatment or disposal facility, either of which is:

(i) Permitted under Part 270 of this chapter;

(ii) In interim status under Parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under Part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste; or

(v) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation.

(g) In order for hazardous waste generated by a small quantity generator in quantities of less than 100 kilograms hazardous waste during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 261.11 of this chapter;

(2) The small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of this hazardous waste, all of those accumulated wastes for which the accumulation limit was exceeded are subject to regulation under Parts 262 through 265 and Parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of § 262.34 for accumulation of wastes on-site begins for a small quantity generator when the accumulated wastes exceed 1000 kilograms;

(3) A small quantity generator may either treat or dispose of his hazardous waste in an on-site facility, or ensure delivery to an off-site storage, treatment, or disposal facility, either of which is:

(i) Permitted under Part 270 of this chapter;

(ii) In interim status under Parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under Part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste; or

(v) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation.

(h) In order for hazardous waste generated by a small quantity generator in a quantity greater than 100 kilograms but less than 1000 kilograms during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 262.11 of this chapter;

(2) A small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of his hazardous waste, all those accumulated wastes for which the accumulation limit was exceeded are subject to regulation under Parts 262 through 265 and Parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of § 262.34 for accumulation of hazardous waste on-site begins for a small quantity generator when the accumulated wastes exceed 1000 kilograms;

(3) Beginning August 5, 1985, for any hazardous waste shipped off-site, the generator must ensure that such waste is accompanied by a copy of the manifest (EPA form 8700–22) signed by him and containing the following information:

(i) The name and address of the generator of the waste;

(ii) The United States Department of Transportation description of the waste, including the proper shipping name, hazard class, and identification number (UN/NA);

(iii) The number and type of containers;

(iv) The quantity of waste being transported; and

(v) The name and address of the facility designated to receive the waste.

(4) A small quantity generator may either treat or dispose of his hazardous waste in an on-site facility, or ensure delivery to an off-site storage, treatment or disposal facility, either of which is:

(i) Permitted under Part 270 of this chapter;

(ii) In interim status under Parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under Part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste; or

(v) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation.

* * * * *

8. 40 CFR Part 261 is amended by revising the introductory text and adding an OMB control number to the end of the section of § 261.33 to read as follows:

§ 261.33 Discarded commercial chemical products, off-specification species, container residues and spill residues thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded, when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

* * * * *

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050–0047.)

PART 262—STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

9. The authority citation for Part 262 is revised as follows:

Authority: Secs. 1006, 2002, 3002, 3003, 3004, 3005, and 3017, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6906, 6912, 6922, 6923, 6924, 6925, and 6937).

Appendix—[Amended]

10. The Uniform Hazardous Waste Manifest form in the Appendix to Part 262 is revised as follows:

BILLING CODE 6560-50-M

APPENDIX

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* *Form Approved. OMB No. 2000-0404. Expires 7-31-86*

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address | A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone ( )

5. Transporter 1 Company Name | 6. US EPA ID Number | C. State Transporter's ID | D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number | G. State Facility's ID | H. Facility's Phone

GENERATOR

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above | K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name | Signature | *Month Day Year*

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | *Month Day Year*

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | *Month Day Year*

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | *Month Day Year*

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete.

BILLING CODE 6560-50-C

11. The Appendix to Part 262 is further amended by adding the following sentence to Item 16 of the instructions two spaces below the last sentence, and preceeding the Note.

* * * * *

Item 16. Generator's Certification

* * * * *

In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements.

* * * * *

12. Section 262.41(a) is amended by revising (a)(6) and adding (a) (7) and (8) to read as follows:

§ 262.41 Biennial report.

(a) * * *

(6) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.

(7) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.

(8) The certification signed by the generator or authorized representative.

* * * * *

§ 262.50 [Amended]

13. In Section 262.50, existing paragraphs (d) and (e) are redesignated as paragraphs (e) and (f).

14. Section 262.50 is amended by adding a new paragraph (d) and the OMB control number to the end of the section to read as follows:

§ 262.50 International shipments.

* * * * *

(d) Any person exporting hazardous waste identified or listed under this chapter shall file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all such hazardous waste exported during the previous calendar year.

* * * * *

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050–0024.)

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

15. The authority citation for Part 264 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, 3005, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6924, and 6925).

16. 40 CFR Part 264 is amended by adding a new paragraph § 264.1(f)(3) to read as follows:

§ 264.1 Purpose, scope, and applicability.

* * * * *

(f) * * *

(3) To a person who treats, stores, or disposes of hazardous waste in a State which is authorized under Subpart A or B of Part 271 of this chapter if the State has not been authorized to carry out the requirements and prohibitions applicable to the treatment, storage, or disposal of hazardous waste at his facility which are imposed pursuant to the Hazardous and Solid Waste Amendments of 1984. The requirements and prohibitions that are applicable until a State receives authorization to carry them out include all Federal program requirements identified in § 271.1(j).

* * * * *

17. In § 264.18, new paragraph (c) is added to read as follows:

§ 264.18 Location standards.

* * * * *

(c) *Salt dome formations, salt bed formations, underground mines and caves.* The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited, except for the Department of Energy Waste Isolation Pilot Project in New Mexico.

18. 40 CFR Part 264 is amended by revising § 264.70 as follows:

§ 264.70 Applicability.

The regulations in this subpart apply to owners and operators of both on-site and off-site facilities, except as § 264.1 provides otherwise. Sections 264.71, 264.72, and 264.76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources. Section 264.73(b) only applies to permittees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated.

19. In § 264.73, new paragraph (b)(9) and an OMB control number are added to read as follows:

§ 264.73 Operating record.

* * * * *

(b) * * *

(9) A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

(The reporting and recordkeeping requirements contained in paragraph (b)(9) were approved by OMB under control number 2050–0037.)

20. In 40 CFR Part 264, the heading for Subpart F is revised to read as follows:

Subpart F—Releases From Solid Waste Management Units

21. In 40 CFR Part 264, § 264.90 is amended by revising paragraphs (a) and (b) to read as follows:

§ 264.90 Applicability.

(a)(1) Except as provided in paragraph (b) of this section, the regulations in this subpart apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (a)(2) of this section for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.

(2) All solid waste management units must comply with the requirements in § 264.101. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982 (hereinafter referred to as a "regulated unit") must comply with the requirements of §§ 264.91–264.100 in lieu of § 264.101 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The finanical responsibility requirements of § 264.101 apply to regulated units.

(b) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this subpart if:

(1) The owner or operator is exempted under § 264.1; or

(2) He operates a unit which the Regional Administrator finds:

(i) Is an engineered structure,

(ii) Does not receive or contain liquid waste or waste containing free liquids,

(iii) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off,

(iv) Has both inner and outer layers of containment enclosing the waste,

(v) Has a leak detection system built into each containment layer,

(vi) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods, and

(vii) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the the post-closure care period.

(3) The Regional Administrator finds, pursuant to § 264.280(d), that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of § 264.278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this paragraph can only relieve an owner or operator of responsibility to meet the requirements of this subpart during the post-closure care period; or

(4) The Regional Administrator finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the port-closure care period specified under § 264.117. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under this paragraph on assumptions that maximize the rate of liquid migration.

(5) He designs and operates a pile in compliance with § 264.250(c).

* * * * *

22. A new § 264.101 is added to Part 264, Subpart F to read as follows:

§ 264.101 Corrective action for solid waste management units.

(a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

(b) Corrective action will be specified in the permit. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

§ 264.221 [Amended]

23. In § 264.221, paragraphs (c), (d), and (e) are redesignated as paragraphs (f), (g), and (h), respectively.

24. In § 264.221, the introductory text of paragraph (a) is revised to read as follows:

§ 264.221 Design and operating requirements.

(a) Any surface impoundment that is not covered by paragraph (c) of this section or § 265.221 of this chapter must have a liner for all portions of the impoundment (except for existing portions of such impoundments). The liner must be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with § 264.228(a)(1). For impoundments that will be closed in accordance with § 264.228(a)(2), the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be: * * *

* * * * *

25. Section 264.221 is amended by adding paragraphs (c), (d), and (e) to read as follows:

§ 264.221 Design and operating requirements.

* * * * *

(c) The owner or operator of each new surface impoundment, each new surface impoundment unit at an existing facility, each replacement of an existing surface impoundment unit, and each lateral expansion of an existing surface impoundment unit, must install two or more liners and a leachate collection system between such liners. The liners and leachate collection system must protect human health and the environment. The requirements of this paragraph shall apply with respect to all waste received after the issuance of the permit. The requirement for the installation of two or more liners in this paragraph may be satisfied by the installation of a top liner designed, operated and constructed of materials to prevent the migration of any constituent into such liner during the period such facility remains in operation (including any post-closure monitoring period), and a lower liner designed, operated, and constructed to prevent the migration of any constituent through such liner during such period. For the purpose of the preceding sentence, a lower liner shall be deemed to satisfy such requirement if it is constructed of at least a 3-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1×10^{-7} centimeter per second.

(d) Paragraph (c) of this section will not apply if the owner or operator demonstrates to the Regional Administrator, and the Regional Administrator finds for such surface impoundment, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems.

(e) The double liner requirement set forth in paragraph (c) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in § 261.24 of this chapter; and

(2)(i)(A) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this paragraph, the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of paragraph (c) of this section on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such

impoundment will comply with appropriate post-closure requirements, including but not limited to ground-water monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in § 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requrements for facilities with permits under RCRA § 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

§ 264.222 [Removed]

26. Section 264.222 is removed.

§ 264.226 [Amended]

27. Section 264.226(b)(3) is removed, and paragraph (b)(4) is redesignated as (b)(3).

§ 264.227 [Amended]

28. Section 264.227(d)(2)(i) is amended by removing the phrase "or § 264.228(b)(2)."

§ 264.228 [Amended]

29. Section 264.228(b)(2) is removed and paragraphs (b)(3) and (b)(4) are redesignated as (b)(2) and (b)(3), respectively.

30. Section 264.228(d) is removed.

§ 264.252 [Removed]

31. Section 264.252 is removed.

§ 264.253 [Removed]

32. Section 264.253 is removed.

§ 264.254 [Amended]

33. Section 264.254(b)(2) is removed, and paragraphs (b)(3) and (b)(4) are redesignated as (b)(2) and (b)(3), respectively.

§ 264.301 [Amended]

34. Section 264.301 is amended by redesignating paragraphs (c), (d), (e), (f), and (g) as paragraphs (f), (g), (h), (i), and (j), respectively.

35. Section 264.301 is amended by revising the introductory text of paragraph (a) to read as follows:

§ 264.301 Design and operating requirements.

(a) Any landfill that is not covered by paragraph (c) of this section or § 265.301(a) of this chapter must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have: * * *

* * * * *

36. Section 264.301 is amended by adding new paragraphs (c), (d), (e), and (k), to read as follows:

§ 264.301 Design and operating requirements.

* * * * *

(c) The owner or operator of each new landfill, each new landfill unit at an existing facility, each replacement of an existing landfill unit, and each lateral expansion of an existing landfill unit, must install two or more liners and a leachate collection system above and between the liners. The liners and leachate collection systems must protect human health and the environment. The requirement for the installation of two or more liners in this paragraph may be satisfied by the installation of a top liner designed, operated and constructed of materials to prevent the migration of any constituent into such liner during the period such facility remains in operation (including any post-closure monitoring period), and a lower liner designed, operated, and constructed to prevent the migration of any constituent through such liner during such period. For the purpose of the preceding sentence, a lower liner shall be deemed to satisfy such requirement if it is constructed of at least a 3-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1×10^{-7} centimeter per second.

(d) Paragraph (c) of this section will not apply if the owner or operator demonstrates to the Regional Administrator, and the Regional Administrator finds for such landfill, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems.

(e) The double liner requirement set forth in paragraph (c) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in § 261.24 of this chapter; and

(2)(i)(A) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in § 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under RCRA 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

* * * * *

(k) Any permit under RCRA 3005(c) which is issued for a landfill located within the State of Alabama shall require the installation of two or more liners and a leachate collection system above and between such liners, notwithstanding any other provision of RCRA.

§ 264.302 [Removed]

37. Section 264.302 is removed.

§ 264.303 [Amended]

38. Section 264.303(b)(2) is removed, and paragraphs (b)(3), and (b)(4) are redesignated (b)(2) and (b)(3), respectively.

§ 264.310 [Amended]

39. Section 264.310(b)(2) is removed, and paragraphs (b)(3) and (b)(4), (b)(5) and (b)(6) are redesignated (b)(2), and (b)(3), (b)(4) and (b)(5), respectively.

40. Section 264.310(c) is removed.

41. Section 264.314 is amended by revising the introductory text of paragraph (a) to read as follows:

§ 264.314 Special requirements for bulk and containerized waste.

(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:

* * * * *

42. Paragraph (b) of § 264.314 is redesignated paragraph (d), and a new paragraph (b) is added to read as follows:

§ 264.314 Special requirements for bulk and containerized waste.

* * * * *

(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not absorbents have been added) in any landfill is prohibited.

* * * * *

43. Section 264.314 is amended by adding paragraph (e) and an OMB control number to read as follows:

§ 264.314 Special requirements for bulk and containerized waste.

* * * * *

(e) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in § 144.3 of this chapter.)

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050-0037.)

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

44. The authority citation for Part 265 is revised to read as follows:

Authority: Secs. 1006, 2002(a), 3004, 3005 and 3015, Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, as amended (42 U.S.C. 6905, 6912(a), 6924, 6925, and 6935).

45. Section 265.1 is amended by revising paragraph (c)(4) to read as follows:

§ 265.1 [Amended]

* * * * *

(c) * * *

(4) A person who treats, stores, or disposes of hazardous waste in a State with a RCRA hazardous waste program authorized under Subparts A or B of Part 271 of this chapter, except that the requirements of this part will continue to apply:

(i) As stated in paragraph (c)(2) of this section, if the authorized State RCRA program does not cover disposal of hazardous waste by means of underground injection; or

(ii) To a person who treats, stores, or disposes of hazardous waste in a State authorized under Subpart A or B of Part 271 of this chapter if the State has not been authorized to carry out the requirements and prohibitions applicable to the treatment, storage, or disposal of hazardous waste at his facility which are imposed pursuant to the Hazardous and Solid Waste Act Amendments of 1984. The requirements and prohibitions that are applicable until a State receives authorization to carry them out include all Federal program requirements identified in § 271.1(j).

* * * * *

46. In Part 265, Subpart B, a new § 265.18 is added to read as follows:

§ 265.18 Location standards.

The placement of any hazardous waste in a salt dome, salt bed formation, underground mine or cave is prohibited, except for the Department of Energy Waste Isolation Pilot Project in New Mexico.

47. Part 265, Subpart B, is amended by adding a new § 265.221 to read as follows:

§ 265.221 Design requirements.

(a) The owner or operator of a surface impoundment must install two or more liners and leachate collection system in accordance with § 264.221(c) of this chapter, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.

(b) The owner or operator of each unit referred to in paragraph (a) of this section must notify the Regional Administrator at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the receipt of such notice.

(c) Paragraph (a) of this section will not apply if the owner or operator demonstrates to the Regional Administrator, and the Regional Administrator finds for such surface impoundment, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems.

(d) The double liner requirement set forth in paragraph (a) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in § 261.24 of this chapter; and

(2)(i)(A) The monofill has at least one liner for which there is no evidence that such liner in leaking. For the purposes of this paragraph the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of paragraph (a) of this section on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil it is not removed or decontaminated, the owner of operator of such impoundment must comply with appropriate post-closure requirements, including but not limited to ground-water monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in § 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under RCRA § 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of paragraph (a) of this section and in good faith compliance with paragraph (a) of this section and with guidance documents governing liners and leachate collection systems under paragraph (a) of this section, no liner or leachate collection system which is different from that which was so installed pursuant to paragraph (a) of this section will be required for such unit by the Regional Administrator when issuing the first permit to such facility, except that the Regional Administrator will not be precluded from requiring installation of a new liner when the Regional Administrator has reason to believe that any liner installed pursuant to the requirements of paragraph (a) of this section is leaking.

48. Part 265 is amended by adding a new § 265.254 to read as follows:

§ 265.254 Design requirements.

The owner or operator of a waste pile is subject to the requirements for liners and leachate collection systems or equivalent protection provided in § 264.251 of this chapter, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area indentified in the Part A permit application, and with respect to waste received beginning May 8, 1985.

49. Part 265 is amended by adding a new § 265.301 to read as follows:

§ 265.301 Design requirements.

(a) The owner or operator of a landfill must install two or more liners and leachate collection systems above and between such liners in accordance with § 264.301(c) of this chapter, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.

(b) The owner or operator of each unit referred to in paragraph (a) of this section must notify the Regional Administrator at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the receipt of such notice.

(c) Paragraph (a) of this section will not apply if the owner or operator demonstrates to the Regional Administrator, and the Regional Administrator finds for such landfill, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems.

(d) The double liner requirement set forth in paragraph (a) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in § 261.24 of this chapter; and

(2)(i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in § 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under RCRA § 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of paragraph (a) of this section and in good faith compliance with paragraph (a) of this section and with guidance documents governing liners and leachate collection systems under paragraph (a) of this section, no liner or leachate collection system which is different from that which was so installed pursuant to paragraph (a) of this section will be required for such unit by the Regional Administrator when issuing the first permit to such facility, except that the Regional Administrator will not be precluded from requiring installation of a new liner when the Regional Administrator has reason to believe that any liner installed pursuant to the requirements of paragraph (a) of this section is leaking.

§ 265.314 [Amended]

50. Paragraphs (b) and (c) of § 265.314 are redesignated as paragraphs (c) and (e), respectively, and paragraph (d) is reserved.

51. Section 265.314 is amended by revising the introductory text of paragraph (a), and by adding new paragraph (b) to read as follows:

§ 265.314 Special requirements for liquid bulk and containerized waste.

(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:

* * * * *

(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not absorbents have been added) in any landfill is prohibited.

* * * * *

52. Section 265.314 is amended by revising newly designated paragraph (e), adding a new paragraph (f), and adding an OMB control number to the end of the section to read as follows:

§ 265.314 Special requirements for bulk and containerized waste.

* * * * *

(e) The date for compliance with paragraph (a) of this section is November 19, 1981. The date for compliance with paragraph (c) of this section is March 22, 1982.

(f) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in § 144.3 of this chapter).

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050-0037)

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

53. The authority citation for Part 266 continues to read as follows:

Authority: Secs. 1006, 2002(a), and 3004, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6924).

54. In Part 266, Subpart C, the text of 266.23 is redesignated as paragraph (a) and a new paragraph (b) is added to read as follows:

§ 266.23 Standards applicable to users of materials that are used in a manner that constitutes disposal.

* * * * *

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

55. In Part 266, Subpart D is amended by adding § 266.31 as set forth below.

§ 266.31 Prohibitions.

(a) [Reserved]

(b)(1) Except as provided in paragraph (b)(2) of this section, no fuel which contains any hazardous waste may be burned in any cement kiln which is located within the boundaries of any incorporated municipality with a population greater than 500,000 (based on the most recent census statistics)

unless such kiln fully complies with regulations under this chapter that are applicable to incinerators.

(2) This requirement does not apply to petroleum refinery hazardous wastes containing oil which are converted into petroleum coke at the same facility at which such wastes were generated, unless the resulting coke product would exceed one or more of the characteristics of hazardous waste in Part 261, Subpart C.

56. In Part 266, Subpart D, § 266.34 is amended by adding paragraph (d) and adding an OMB control number to the end of the section.

§ 266.34 [Amended]

* * * * *

(d) Labelling. (1) Except as provided in paragraphs (d)(2)–(4) of this section, after February 6, 1985, it shall be unlawful for any person who produces, distributes, or markets any fuel that contains a hazardous waste to distribute or market such fuel if the invoice or the bill of sale fails:

(i) To bear the following statement: "WARNING: THIS FUEL CONTAINS HAZARDOUS WASTE", and

(ii) To list the hazardous wastes contained therein. Such statement must be located in a conspicuous place on every such invoice or bill of sale and must appear in conspicuous and legible type in contrast by typography, layout, or color with other printed matter on the invoice or bill of sale.

(2) This requirement does not apply to fuels produced from petroleum refining hazardous waste containing oil if

(i) Such materials are generated and reinserted on-site into the refining process;

(ii) Contaminants are removed; and

(iii) Such refining waste containing oil is converted along with normal process streams into petroleum-derived fuel products at a facility at which crude oil is refined into petroleum products and which is classified as a number SIC 2911 facility under the Office of Management and Budget Standard Industrial Classification Manual.

(3) This requirement does not apply to fuels produced from oily materials resulting from normal petroleum refining production and transportation practices; if

(i) Contaminants are removed; and

(ii) Such oily materials are converted along with normal process streams into petroleum-derived fuel products at a facility at which crude oil is refined into petroleum products and which is classified as a number SIC 2911 facility under the Office of Management and Budget Standard Industrial Classification Manual.

(4) This requirement does not apply to petroleum refinery hazardous wastes containing oil which are converted into petroleum coke at the same facility at which such wastes were generated, unless the resulting coke product would exceed one or more of the characteristics of hazardous waste in Part 261, Subpart C.

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050–0047)

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

57. The authority citation for Part 270 is revised to read as follows:

Authority: Secs. 1006, 2002, 3005, 3007, 3019, and 7004 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912, 6925, 6927, 6939, and 6974).

58. In Part 270, § 270.10 is amended by revising paragraphs (a) and (c), the paragraph heading of (e), paragraphs (e)(1), (f)(1), (f)(3), adding (j), amending paragraph (e)(4) by adding two sentences to the end and by adding an OMB control number to the end of the section to read as follows:

§ 270.10 General application requirements.

(a) *Permit application.* Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the Director as described in this section and §§ 270.70 through 270.73. Persons currently authorized with interim status shall apply for permits when required by the Director. Persons covered by RCRA permits by rule (§ 270.60), need not apply. Procedures for applications, issuance and administration of emergency permits are found exclusively in § 270.61. Procedures for application, issuance and administration of research, development, and demonstration permits are found exclusively in § 270.65.

* * * * *

(c) *Completeness.* The Director shall not issue a permit before receiving a complete application for a permit except for permits by rule, or emergency permits. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his satisfaction. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in paragraph (j) of this section.

* * * * *

(e) *Existing HWM facilities and interim status qualifications.* (1) Owners and operators of existing hazardous waste management facilities or of hazardous waste management facilities in existence on the effective date of statutory or regulatory amendments under the act that render the facility subject to the requirement to have a RCRA permit must submit Part A of their permit application no later than —

(i) Six months after the date of publication of regulations which first require them to comply with the standards set forth in 40 CFR Parts 265 or 266, or

(ii) Thirty days after the date they first become subject to the standards set forth in 40 CFR Part 265 or 266, whichever first occurs.

* * * * *

(4) * * * Notwithstanding the above, any owner or operator of an existing HWM facility must submit a Part B permit application in accordance with the dates specified in § 270.73. Any owner or operator of a land disposal facility in existence on the effective date of statutory or regulatory amendments under this Act that render the facility subject to the requirement to have a RCRA permit must submit a Part B application in accordance with the dates specified in § 270.73.

* * * * *

(f) *New HWM facilities.* (1) Except as provided in paragraph (f)(3) of this section, no person shall begin physical construction of a new HWM facility without having submitted Part A and Part B of the permit application and having received a finally effective RCRA permit.

* * * * *

(3) Notwithstanding paragraph (f)(1) of this section, a person may construct a facility for the incineration of polychlorinated biphenyls pursuant to an approval issued by the Administrator under section (6)(e) of the Toxic Substances Control Act and any person owning or operating such a facility may, at any time after construction or operation of such facility has begun, file an application for a RCRA permit to incinerate hazardous waste authorizing such facility to incinerate waste identified or listed under Subtitle C of RCRA.

* * * * *

(j) *Exposure information.* (1) After August 8, 1985, any Part B permit application submitted by an owner or operator of a facility that stores, treats,

or dispose of hazardous waste in a surface impoundment or a landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address:

(i) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

(ii) The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under paragraph (i); and

(iii) The potential magnitude and nature of the human exposure resulting from such releases.

(2) By August 8, 1985, owners and operators of a landfill or a surface impoundment who have already submitted a Part B application must submit the exposure information required in paragraph (j)(1) of this section.

(Reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050–0007.)

§ 270.17 [Amended]

59. Section 270.17 is amended by removing paragraph (c), redesignating paragraphs (d), (e), (f), (g), (h), (i) and (j) as (c), (d), (e), (f), (g), (h), and (i) respectively.

60. Section 270.18 is amended by revising paragraph (b) to read as follows:

§ 270.18 Specific Part B information requirements for waste piles.

* * * * *

(b) If an exemption is sought to § 264.251 and Subpart F of Part 264 as provided by § 264.250(c) or § 264.90(2), an explanation of how the standards of § 264.250(c) will be complied with or detailed plans and an engineering report describing how the requirements of § 264.90(b)(2) will be met.

* * * * *

61. Section 270.18 is amended by removing paragraph (d), redesignating paragraphs (e), (f), (g), (h), (i) and (j) as (d), (e), (f), (g), (h) and (i) respectively.

62. Section 270.18 is amended by revising newly designated paragraph (d) to read as follows:

* * * * *

(d) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of § 264.254(a) and (b). This information should be included in the inspection plan submitted under § 270.14(b)(5).

* * * * *

63. Section 270.21 is amended by revising paragraph (h) to read as follows:

§ 270.21 Specific Part B information requirements for landfills.

* * * * *

(h) If bulk or non-containerized liquid waste or wastes containing free liquids is to be landfilled prior to May 8, 1985, an explanation of how the requirements of § 264.314(a) will be complied with;

* * * * *

64. Section 270.30 is amended by revising the first sentence of paragraph (j)(2) to read as follows:

§ 270.30 Conditions applicable to all permits.

* * * * *

(j) * * *

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by § 264.73(b)(9) of this chapter, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, certification, or application. * * *

* * * * *

65. Section 270.32 is amended by revising paragraph (b) to read as follows:

§ 270.32 Establishing permit conditions.

* * * * *

(b) (1) Each RCRA permit shall include permit conditions necessary to achieve compliance with the Act and regulations, including each of the applicable requirements specified in 40 CFR Parts 264, 266, and 267. In satisfying this provision, the Director may incorporate applicable requirements of 40 CFR Parts 264, 266, and 267 directly into the permit or establish other permit conditions that are based on these parts.

(2) Each permit issued under section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment.

* * * * *

66. Section 270.41 is amended by adding a new paragraph (a)(6) to read as follows:

§ 270.41 Major modification or revocation and reissuance of permits.

* * * * *

(a) * * *

(6) Notwithstanding any other provision in this section, when a permit for a land disposal facility is reviewed by the Director under § 270.50(d), the Director shall modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in Parts 124, 260–266, and 270.

* * * * *

67. Section 270.50 is amended by adding a new paragraph (d) to read as follows:

§ 270.50 Duration of permits.

* * * * *

(d) Each permit for a land disposal facility shall be reviewed by the Director five years after the date of permit issuance or reissuance and shall be modified as necessary, as provided in § 270.41.

68. Section 270.60 is amended by adding new paragraphs (b)(3) and (c)(3)(vii) to read as follows:

§ 270.60 Permits by rule.

* * * * *

(b) * * *

(3) For UIC permits issued after November 8, 1984, complies with 40 CFR 264.101.

(c) * * *

(3) * * *

(vii) for NPDES permits issued after November 8, 1984, 40 CFR 264.101.

* * * * *

69. In Part 270, Subpart F, a new § 270.65 is added to read as follows:

§ 270.65 Research, development, and demonstration permits.

(a) The Administrator may issue a research, development, and demonstration permit for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards for such experimental activity have not been promulgated under Part 264 or 266. Any such permit shall include such terms and conditions as will assure protection of human health and the environment. Such permits:

(1) Shall provide for the construction of such facilities as necessary, and for operation of the facility for not longer than one year unless renewed as provided in paragraph (d) of this section, and

(2) Shall provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the Administrator deems necessary for purposes of determining the efficacy and performance

capabilities of the technology or process and the effects of such technology or process on human health and the environment, and

(3) Shall include such requirements as the Administrator deems necessary to protect human health and the environment (including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure, and remedial action), and such requirements as the Administrator deems necessary regarding testing and providing of information to the Administrator with respect to the operation of the facility.

(b) For the purpose of expediting review and issuance of permits under this section, the Administrator may, consistent with the protection of human health and the environment, modify or waive permit application and permit issuance requirements in Parts 124 and 270 except that there may be no modification or waiver of regulations regarding financial responsibility (including insurance) or of procedures regarding public participation.

(c) The Administrator may order an immediate termination of all operations at the facility at any time he determines that termination is necessary to protect human health and the environment.

(d) Any permit issued under this section may be renewed not more than three times. Each such renewal shall be for a period of not more than 1 year.

70. Section 270.70 is amended by revising the introductory text of paragraph (a) and by adding paragraph (c) to read as follows:

§ 270.70 Qualifying for interim status.

(a) Any person who owns or operates an "existing HWM facility" or a facility in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have an RCRA permit shall have interim status and shall be treated as having been issued a permit to the extent he or she has: * * *

* * * * *

(c) Paragraph (a) of this section shall not apply to any facility which has been previously denied a RCRA permit or if authority to operate the facility under RCRA has been previously terminated.

71. Section 270.73 is amended by adding paragraphs (c), (d), (e), and (f) and by adding an OMB control number to the end of the section to read as follows:

§ 270.73 Termination of interim status.

* * * * *

(c) For owners or operators of each land disposal facility which has been granted interim status prior to November 8, 1984, on November 8, 1985, unless:

(1) The owner or operator submits a Part B application for a permit for such facility prior to that date; and

(2) The owner or operator certifies that such facility is in compliance with all applicable ground-water monitoring and financial responsibility requirements.

(d) For owners or operators of each land disposal facility which is in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have a RCRA permit and which is granted interim status, twelve months after the date on which the facility first becomes subject to such permit requirement unless the owner or operator of such facility:

(1) Submits a Part B application for a RCRA permit for such facility before the date 12 months after the date on which the facility first becomes subject to such permit requirement; and

(2) Certifies that such facility is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(e) For owners or operators of each incinerator facility on November 8, 1989, unless the owner or operator of the facility submits a Part B application for a RCRA permit for an incinerator facility by November 8, 1986.

(f) For owners or operators of any facility (other than a land disposal or an incinerator facility) on November 8, 1992, unless the owner or operator of the facility submits a Part B application for a RCRA permit for the facility by November 8, 1988.

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050-0037.)

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

72. The authority citation for Part 271 continues to read as follows:

Authority: Secs. 1006, 2002(a), and 3006 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6926).

73. Section 271.1 is amended by revising paragraphs (a) and (f) and adding paragraph (j) to read as follows:

§ 271.1 Purpose and scope.

(a) This subpart specifies the procedures EPA will follow in approving, revising, and withdrawing approval of State programs and the requirements State programs must meet to be approved by the Administrator under Sections 3006 (b) and (f) of RCRA.

* * * * *

(f) Except as provided in § 271.3(a)(3), upon approval of a State permitting program, the Administrator shall suspend the issuance of Federal permits for those activities subject to the approved State program.

* * * * *

(j) Requirements and prohibitions which are applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste and which are imposed pursuant to the Hazardous and Solid Waste Amendments of 1984 (HSWA) include:

(1) Any requirement or prohibition which has taken effect under HSWA, and

(2) All regulations specified in Table 1.

Note.—See §§ 264.1(f)(3), 265.1(c)(4)(ii), 271.3(a), 271.21(e), and 271.121(c)(3) for applicability.

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Date	Title of regulation	Federal Register reference
1-14-85	Dioxin-Containing Wastes.	50 FR 1978-2006.
July 15, 1985	Codification Rule	50 FR [insert Federal Register, page numbers].

74. Section 271.3 is amended by revising paragraph (a) to read as follows:

§ 271.3 Availability of final authorization.

(a) States approved under this subpart are authorized to administer and enforce their hazardous waste program in lieu of the Federal program, except as provided below:

(1) Any requirement or prohibition which is applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste and which is imposed pursuant to the Hazardous and Solid Waste Amendments of 1984 takes effect in each State having a finally authorized State program on the same date as such requirement takes effect in other States. These requirements and prohibitions are identified in § 271.1(j).

(2) The requirements and prohibitions in § 271.1(j) supersede any less stringent provision of a State program. The Administrator is authorized to carry out each such Federal requirement and prohibition in an authorized State

except where, pursuant to Sections 3006(b) or 3006(g)(2) of RCRA, the State has received final or interim authorization to carry out the particular requirement or prohibition. Violations of Federal requirements and prohibitions effective in authorized States are enforceable under Sections 3008, 3013 and 7003 of RCRA.

(3) Until an authorized State program is revised to reflect the amendments made by the Hazardous and Solid Waste Amendments of 1984 and such program revisions receive final or interim authorization pursuant to sections 3006(b) or 3006(g)(2) of RCRA, the Administrator shall have the authority in such State to issue or deny permits or those portions of permits affected by the requirements and prohibitions established by the Hazardous and Solid Waste Amendments of 1984.

* * * * *

75. Section 271.17 is amended by adding a new paragraph (c) to read as follows:

§ 271.17 Sharing of information.

* * * * *

(c) The State program must provide for the public availability of information obtained by the State regarding facilities and sites for the treatment, storage, and disposal of hazardous waste. Such information must be made available to the public in substantially the same manner, and to the same degree, as would be the case if the Administrator was carrying out the provisions of Subtitle C of RCRA in the State. Interim authorization under § 271.24 is not available to demonstrate compliance with this section.

76. Section 271.19 is amended by adding a new paragraph (f) to read as follows:

§ 271.19 EPA review of State permits.

* * * * *

(f) Notwithstanding the above provisions, EPA shall issue permits, or portions of permits, to facilities in authorized States as necessary to implement the Hazardous and Solid Waste Amendments of 1984.

77. Section 271.21(e)(1)(ii) is removed, paragraph (e)(1)(iii) is redesignated as (e)(1)(ii), and paragraphs (e)(1)(i) and (e)(2) are revised to read as follows:

§ 271.21 Procedures for revision of State programs.

* * * * *

(e)(1)(i) Official State applications for final authorization shall be reviewed on the bases of Federal self-implementing statutory provisions that were in effect 12 months prior to the State's submission of its official application and the regulations in 40 CFR Parts 124, 260–266, 270 and 271 that were promulgated 12 months prior to the State's submission of its official application. Where a State program meets the requirements of section 3006(b) of RCRA and this subpart it may receive final authorization for any provision of its program corresponding to a Federal provision in effect on the date of the State's authorization. For purposes of the Federal requirements identified in § 271.1(j), a State may seek interim authorization under § 271.21 in lieu of final authorization.

* * * * *

(2) Any authorized State program which requires revision because of a Federal program change to this Part or 40 CFR Parts 124, 260–266, or 270 shall be modifed within one year (or two years if a State statutory amendment is required) of the date of promulgation of the Federal regulation. Authorized States shall have one year (two years if a statutory amendment is required) from the effective date of self-implementing RCRA statutory amendments to modify their programs. For purposes of the Federal requirements identified in § 271.1(j), a State may satisfy this requirement for modification by applying for interim authorization under § 271.24 or by revising its program as provided in this section.

* * * * *

78. Part 271 is amended by adding a new § 271.24 to Subpart A to read as follows:

§ 271.24 Interim authorization under section 3006(g) of RCRA.

Any State which is applying for or has been granted final authorization pursuant to Section 3006(b) of RCRA may submit to the Administrator evidence that its program contains (or has been amended to include) any requirement which is substantially equivalent to a requirement identified § 271.1(j). Such States may request interim authorization under Section 3006(g) of RCRA to carry out the State requirement in lieu of the Administrator carrying out the Federal requirement in the State.

79. Section 271.121 is amended by revising paragraphs (a), (c)(3) and (f) as follows:

§ 271.121 Purpose and scope.

(a) This subpart specifies requirements a State program must meet in order to obtain interim authorization under Section 3006(c) of RCRA. A State must meet all the requirements of this Subpart in order to qualify for interim authorization. The requirements a State program must meet in order to obtain final authorization under Section 3006(b) of RCRA are specified in Subpart A. In addition, § 271.138 addresses the availability of interim authorization under Section 3006(g)(2) of RCRA for States with interim authorization under Section 3006(c) of RCRA.

* * * * *

(c) * * *

(3) States meeting the requirements of this Subpart will be allowed to administer a permit program in lieu of the corresponding Federal hazardous waste permit program for each component for which they have received interim authorization, except as provided below:

(i) Any requirement of prohibition which is applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste and which is imposed pursuant to the amendments made by the Hazardous and Solid Waste Amendments of 1984 takes effect in each State having an interim authorized State program on the same date as such requirement takes effect in other States. These requirements and prohibitions are identified in § 271.1(j).

(ii) The requirements and prohibitions in § 271.1(j) supersede any less stringent provision of the State program. The Administrator is authorized to carry out each Federal requirement and prohibition identified in § 271.1(j) in an authorized State except where the State has received interim authorization under Section 3006(g)(2) of RCRA to carry out the particular requirement or prohibition. Violations of Federal requirements and prohibitions effective in authorized States are enforceable under Sections 3008, 3013, and 7003 of RCRA.

(iii) Until an authorized State program is revised to reflect the amendments made by the Hazardous and Solid Waste Amendments of 1984 and such program revisions receive interim authorization under Section 3006(g)(2) of RCRA, the Administrator shall have the authority in such State to issue or deny permits or those portions of permits affected by the requirements and prohibitions established by the Hazardous and Solid Waste Amendments of 1984.

* * * * *

(f) Except as provided in paragraph (c)(3) of this section, upon approval of a State program for a component of Phase II, the Administrator shall suspend the issuance of Federal permits for those activities subject to the approved State program.

* * * * *

80. Section 271.122 is amended by revising paragraph (b)(1) to read as follows and by removing the note which follows (b)(1):

§ 271.122 Schedule.

* * * * *

(b)(1) Interim authorization for Phase I and Phase II expires on January 31, 1986.

* * * * *

81. Section 271.134 is amended by adding a new paragraph (f) to read as follows:

§ 271.134 EPA review of State permits.

* * * * *

(f) Notwithstanding the above provisions, EPA shall issue permits, or portions of permits, to facilities in authorized States as necessary to implement the Hazardous and Solid Waste Amendments of 1984.

82. Part 271 is amended by adding a new § 271.138 to read as follows:

§ 271.138 Interim authorization under section 3006(g) of RCRA.

(a) Any State which, before the date of enactment of the Hazardous and Solid Waste Amendments of 1984, has an existing hazardous waste program which has been granted interim authorization for all components of Phase II may submit to the Administrator evidence that such existing program contains (or has been amended to include) any requirement which is substantially equivalent to a requirement referred to in § 271.1(j) of this chapter. Such States may request interim authorization under section 3006(g) of RCRA to carry out such requirement in lieu of the Administrator carrying out the Federal requirement in the State.

(b) Any such interim authorization under section 3006(g) expires on January 31, 1986, if a State program with interim authorization under section 3006(c) reverts to EPA on that date. See § 271.122(b)(2) of this chapter.

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050–0037.)

83. 40 CFR Part 280 is added as follows:

PART 280—UNDERGROUND STORAGE TANKS

Sec.
280.1 Definition and exemptions.
280.2 Interim prohibition.

Authority: Secs. 9001 and 9003(g) of the Solid Waste Disposal Act, as revised by the Resource Conservation and Recovery Act, as amended [42 U.S.C. 6991 and 6993(g)].

§ 280.1 Definitions and exemptions.

"Person" has the same meaning as provided in Section 1004(15) of the Resource Conservation and Recovery Act, as amended, except that such term includes a consortium, a joint venture, a commercial entity, and the United States Government.

"Regulated substance" means

(a) Any substance defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act, as amended), and

(b) Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

"Release" means any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank into ground water, surface water, or subsurface soils.

"Underground storage tank" means any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is 10 per centum or more beneath the surface of the ground. Such term does not include any

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes,

(b) Tank used for storing heating oil for consumptive use on the premises where stored,

(c) Septic tank,

(d) Pipeline facility (including gathering lines):

(e) Regulated under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et. seq.), or

(f) Regulated under the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, *et. seq.*), or

(g) Which is an intrastate pipeline facility regulated under State laws comparable to the provisions of law referred to in clause (e) and (f) of this definition,

(h) Surface impoundment, pit, pond, or lagoon,

(i) Storm water or waste water collection system,

(j) Flow-through process tank,

(k) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations, or

(l) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the undesignated floor.

(m) Any pipes connected to any tank which is described in paragraphs (a) through (l) of this section.

§ 280.2 Interim prohibition.

(a) Between May 7, 1985 and the effective date of the standards promulgated by the Administrator under section 9003(e) of the Hazardous and Solid Waste Amendments of 1984, no person may install an underground storage tank for the purpose of storing regulated substances unless such tank (whether of single or double wall construction):

(1) Will prevent releases due to corrosion or structural failure for the operational life of the tank;

(2) Is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(3) The material used in the construction or lining of the tank is compatible with the substance to be stored.

(b) Notwithstanding paragraph (a) of this section, if soil tests conducted in accordance with ASTM Standard G57–78, or another standard approved by the Administrator, show that soil resistivity in an installation location is 12,000 ohm-cm or more (unless a more stringent standard is prescribed by the Administrator by rule), a storage tank without corrosion protection may be installed in that location during the period referred to in paragraph (a) of this section.

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