ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 257, 261, and 271

[FRL–5209–4]

RIN 2050–AE11

Criteria for Classification of Solid Waste Disposal Facilities and Practices; Identification and Listing of Hazardous Waste; Requirements for Authorization of State Hazardous Waste Programs

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing revisions to the existing Criteria for solid waste disposal facilities and practices. The proposed revisions would establish specific standards for non-municipal solid waste disposal facilities that receive conditionally exempt small quantity generator (CESQG) wastes. EPA is also proposing revisions to regulations for hazardous wastes generated by CESQGs. Today's proposal will clarify acceptable disposal options under Subtitle D of the Resource Conservation and Recovery Act (RCRA) by specifying that CESQG hazardous waste may be managed at municipal solid waste landfills subject to part 258 and at non-municipal solid waste facilities subject to the facility standards being proposed today.

The Agency is obligated to issue this proposal by Section 4010(c) of RCRA, and is issuing it today in partial settlement of a lawsuit brought by the Sierra Club to enforce the statutory mandate. The Agency generally believes that the facilities subject to today's proposal present a relatively small risk when compared to other conditions or situations, and that in a time of limited resources, EPA prefer to address higher priorities first. However, to satisfy its statutory and judicial obligations, today's proposal will clarify acceptable Subtitle D disposal options for non-municipal solid waste facilities that accept CESQG hazardous wastes. EPA has worked with the States, in their capacity as co-regulators, in developing standards that are flexible and efficient. To that end, EPA is proposing only the minimum standards described by the statute, and is offering maximum flexibility for states and facilities in meeting those standards. Indeed, in addition to proposing a flexible scheme modeled after the current part 258 Standards for municipal solid waste facilities, EPA is seeking comment on an option which would set a performance standard—that covered facilities be operated in a manner that is protective of human health and the environment. Under this approach, States would have maximum flexibility in developing standards appropriate to facilities under their jurisdiction.

DATES: Comments on this proposed rule must be submitted on or before August 11, 1995. Both written and electronic comments must be submitted on or before this date.

ADDRESSES: Commentors must send an original and two copies of their comments to: RCRA Information Center (5305), U.S. Environmental Protection Agency, 401 M Street, SW. Washington, D.C. 20460. All comments must be identified by docket number F–95–NCEP FFFFF. An original and two copies of Confidential Business Information (CBI) must be submitted under separate cover to: Document Control Officer (5305), Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street, SW. Washington, D.C. 20460.

Public comments and relevant documents are available for viewing in the EPA RCRA Information Center (RIC), located in Room M2616, at the EPA address above. The RIC is open for viewing from 9 to 4 Monday through Friday, except federal holidays. The public must make an appointment to review docket materials. Call (202) 260–9327 for appointments. Materials may be copied for $0.15 per page.

FOR FURTHER INFORMATION CONTACT: For specific information on aspects of this proposed rule, please contact Paul Cassidy of the Industrial Solid Waste Branch of the Office of Solid Waste at 1–703–308–7281. For a paper copy of the **Federal Register** notice or for general information, please contact the RCRA Hotline at 1–800–424–9346 or at 1–703–412–9810.

SUPPLEMENTARY INFORMATION:

Official Record for Proposed Rule

Both the **Federal Register** notice and the supporting material will be available in electronic format on the Internet system through the EPA Public Access Server @ gopher.epa.gov. The official record for this proposal, as well as the public version available through Internet will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into printed paper form as they are received and will place the paper copies in the official record, which will include all comments submitted directly in writing. The official record for this rulemaking is the paper copy maintained at the address in **ADDRESSES**.

Electronic Filing of Comments

Comments may also be submitted electronically by sending electronic mail to RCRA-Docket @epamai.epa.gov. All electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments also will be accepted on disks in Wordperfect 5.1 file format or ASCII file format.

1. Through Gopher: Go to: gopher.epa.gov. From the main menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Finally, choose ''Office of Solid Waste''.

2. Through FTP: Go to: ftp.epa.gov.

Login: anonymous

Password: Your Internet Address

Files are located in /pub. All OSW files are in directories beginning with ''OSW''.

3. Through Telnet: Go to: gopher.epa.gov. Choose the EPA Public Access Gopher. From the main (Gopher) menu, choose ''EPA Offices and Regions.'' Next, choose ''Office of Solid Waste and Emergency Response (OSWER).'' Then, choose ''Office of Solid Waste.''

4. Through MOSAIC: Go to: http://www.epa.gov. Choose the EPA Public Access Gopher. From the main (Gopher) menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Finally, choose ''Office of Solid Waste''.

5. Through dial-up access: Dial 919–558–0335. Choose EPA Public Access Gopher. From the main (Gopher) menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Finally, choose ''Office of Solid Waste''.

Supporting Documents

All of the main and secondary supporting documents that were used in the development of this proposal have been placed in the docket. EPA is making the main supporting documents (listed below) available in electronic format on the Internet System through the EPA Public Access Server at gopher.epa.gov. A paper copy of these main supporting documents is available for purchase through the National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. The phone number at NTIS is (703) 487–4650.

Main Supporting Documents

1. Background Document for the CESQG Rule, U.S. EPA, 1995, PB95–208930.

2. Damage Cases: Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by ICF, February 1995, PB95–208922.

3. Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by ICF, February, 1995, PB95–208906.

4. List of Industrial Waste Landfills and Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by Eastern Research Group, September 30, 1994, PB95–208914.

5. Generation and Management of CESQG Waste, U.S. EPA, Office of Solid Waste, Prepared by ICF, July 1994, PB95–208898.

6. Cost and Economic Impact Analysis of the CESQG Rule, Prepared by ICF, February, 1995, PB95–208948.

How to Access the Net

1. Through Gopher: Go to: gopher.epa.gov. From the main menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Next, choose ''Office of Solid Waste''. Then, choose ''Non-Hazardous Waste—RCRA Subtitle D''. Finally, choose ''Industrial''.

2. Through FTP: Go to: ftp.epa.gov.
Login: anonymous
Password: Your Internet Address
Files are located in directories/pub/gopher. All OSW files are in directories beginning with ''OSW''.

3. Through MOSAIC: Go to: http://www.epa.gov. Choose the EPA Public Access Gopher. From the main (Gopher) menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Next, choose ''Office of Solid Waste''. Then, choose ''Non-Hazardous Waste—RCRA Subtitle D''. Finally, choose ''Industrial''.

4. Through dial-up access: Dial 919–558–0335. Choose EPA Public Access Gopher. From the main (Gopher) menu, choose ''EPA Offices and Regions''. Next, choose ''Office of Solid Waste and Emergency Response (OSWER)''. Next, choose ''Office of Solid Waste''. Then, choose ''Non-Hazardous Waste—RCRA Subtitle D''. Finally, choose ''Industrial''.

Preamble Outline

I. Authority

These regulations are being proposed under the authority of sections 1008, 2002 (general rulemaking authority), 3001(d)(4), 4004 and 4010 of RCRA, as amended. Section 3001(d)(4) authorizes EPA to promulgate standards for generators who do not generate more than 100 kilograms per month of hazardous waste. Section 4010(c) directs EPA to revise Criteria promulgated under sections 1008 and 4004 for facilities that may receive hazardous household wastes (HHW) or small quantity generator (SQG) hazardous waste.

II. Background

A. Current Solid Waste Controls Under the Resource Conservation and Recovery Act (RCRA) Non-Hazardous Waste Management: Municipal Wastes

As added by the Hazardous and Solid Waste Amendments (HSWA) of 1984, section 4010(c) requires that the Administrator revise the existing part 257 Subtitle D Criteria used to classify facilities as sanitary landfills or open dumps by March 31, 1988, for facilities that may receive household hazardous waste or hazardous waste from small quantity generators. The required revisions are those necessary to protect human health and the environment and which take into account the practicable capability of such facilities. At a minimum, the revised Criteria must include ground-water monitoring as necessary to detect contamination, location restrictions, and provide for corrective action, as appropriate.

On October 9, 1991, EPA promulgated revised Criteria for Solid Waste Disposal Facilities accepting household hazardous wastes. These revisions fulfilled the part of the statutory mandate found in RCRA section 4010 for all facilities that receive household hazardous wastes. (Any facility receiving any household waste is subject to the revised Criteria, which were relocated at 40 CFR part 258 for purposes of clarity). Revisions to the part 257 Criteria for other Subtitle D disposal facilities that may receive conditionally exempt small quantity generator (CESQG) hazardous wastes were delayed as the Agency had little information concerning the potential or actual impacts that these types of facilities may have on human health and the environment. CESQGs are those that generate no more than 100 kilograms of hazardous waste or no more than one kilogram of acutely hazardous waste in a month and who accumulate no more than 1000 kilograms of hazardous waste or no more than one kilogram of acutely hazardous waste at one time.

B. Sierra Club Lawsuit

The Sierra Club, on October 21, 1993, filed suit against the EPA in the United States District Court for the District of Columbia, seeking to compel the EPA to promulgate revised Criteria for nonmunicipal facilities that may receive small quantity generator hazardous waste.

As a result of the October 21, 1993 lawsuit, the EPA and the Sierra Club reached agreement on a schedule concerning revised Criteria for non-municipal facilities that may receive

CESQG wastes. This schedule requires that the EPA Administrator sign a proposal by May 15, 1995 and a final rule by July 1, 1996. Today's proposed amendments to 40 CFR parts 257 and 261 respond directly to the Sierra Club challenge to EPA's revised Criteria for MSWLFs.

III. Summary of Today's Proposed Regulatory Approach

Today's proposal would add the statutory minimum requirements for non-municipal solid waste disposal facilities that receive CESQG hazardous waste. Any non-municipal solid waste disposal facility that does not meet the proposed requirements may not receive CESQG hazardous waste. Sections 257.5 through 257.30 are being proposed to address the facility standards for owners/operators of non-municipal solid waste disposal facilities that receive CESQG hazardous wastes. The requirements being proposed in §§ 257.5 through 257.30 are substantially the same as the statutory minimum requirements developed for 40 CFR part 258. The location restrictions are proposed to be effective 18 months after publication of the final rule while the ground-water monitoring and corrective action requirements are proposed to be effective 24 months after publication of the final rule.

The Agency decided to use the previously promulgated MSWLF Criteria in part 258 as the basis for today's proposal for a number of reasons. The Agency believes that the part 258 Criteria are being used as mandatory standards by some States for non-municipal solid waste disposal facilities. Furthermore, additional States are incorporating as mandatory requirements standards that are substantially similar to the part 258 Criteria. The Agency also believes that the part 258 Criteria, particularly the ground-water monitoring and corrective action requirements, are an appropriate set of performance standards and minimum requirements that can be applied at non-municipal solid waste disposal facilities that receive CESQG hazardous waste to protect human health and the environment. In addition, EPA is requesting comment on an alternative approach which is solely a performance standard without the national minimum requirements in part 258.

Today's proposal also amends the existing language of § 261.5 clarifying acceptable Subtitle D management options for CESQGs. The existing language in § 261.5, paragraphs (f)(3) and (g)(3) allows for a CESQG hazardous waste to be managed at a hazardous waste facility (either in interim status or permitted), a reuse or recycling facility, or a non-hazardous solid waste facility that is permitted, licensed, or registered by a State to manage municipal or industrial waste. Today's proposal would continue to allow CESQG waste to be managed at a hazardous waste facility or at a reuse or recycling facility. Today's proposal, however, will require that if CESQG waste is managed in a Subtitle D disposal facility, it must be managed in a MSWLF that is subject to part 258 or a non-municipal solid waste disposal facility that is subject to the facility standards being proposed in §§ 257.5 through 257.30.

A complete discussion of the rationale of today's proposed approach, specifics of the proposed changes, and related issues is presented in Reference #1.

As previously discussed, today's proposal responds to both the statutory language in RCRA section 4010(c) and to the Sierra Club lawsuit. In responding initially to the statutory language of section 4010(c), EPA elected to regulate municipal solid waste landfills first, due to the comparatively higher risks presented by these types of facilities. As will be discussed later in today's preamble, the subject of today's proposal—non-municipal solid waste disposal facilities that receive CESQG waste—presents a small risk relative to risks presented by other environmental conditions or situations. Given this lower risk, the Agency would have elected not to issue this proposal at this time. In a time of limited resources, common sense dictates that we deal with higher priorities first, a principle on which EPA, members of the regulated community, and the public can agree. The Agency requests comment from members of the public and regulated community on whether they agree with the Agency's position that this rulemaking is a low priority.

However, given the D.C. Circuit's reading of RCRA section 4010(c), *Sierra Club* v. *EPA*, 992 F.2d 3337, 347 (D.C. Cir. 1993), and the schedule established as a result of the litigation initiated by Sierra Club in district court, the Agency believes it must issue this proposal now (although there are higher priorities within the Agency). Faced with having to issue this proposal for a class of facilities that do not generally pose risks as high as municipal solid waste landfills, the Agency is proposing alternatives that address only the statutory minimum requirements in an attempt to reduce the economic burden on the regulated community.

IV. Characterization of CESQG Waste, Industrial D Facilities That May Receive CESQG Wastes, and Existing State Programs Related to CESQG Disposal

A. CESQG Waste Volumes, Generators, and Management

In preparation for this rulemaking, EPA sought to characterize the CESQG universe. EPA examined several national, state, and local studies that contained information on CESQGs, and summarized this information into five categories: (1) Number of establishments, (2) waste volumes, (3) major waste generating industries, (4) major waste types, and (5) waste management practices. All of this information is contained in Reference #2. Reference #7 also presents an earlier comprehensive overview of the CESQG universe. The Agency is interested in receiving data on the current management practices for CESQG wastes likely to be covered by this rulemaking.

B. Facilities That May Receive CESQG Waste

1. Manufacturing Industries With On-Site CESQG Disposal

The first type of facility that may receive CESQG waste is a manufacturing facility that co-disposes its industrial non-hazardous process waste on-site with its CESQG hazardous wastes.

The Agency's 1987 ''Screening Survey of Industrial Subtitle D Establishments'' was used as the starting point in the Agency's evaluation of the number of potential establishments that operated land-based units for their industrial non-hazardous waste (Reference#3). The Screening Survey projected that only 605 establishments managed their CESQG waste on-site in a land-based unit (605 establishments represents approximately 5% of the total 12,000 establishments that managed industrial waste on-site in land-based units).

The Agency has conducted meetings and conference calls with some industries to ascertain the current status of CESQG hazardous waste generation and management. The results of those meetings and conference calls are summarized in Reference #1.

In regard to industrial waste facilities, the Agency believes that on-site co-disposal of industrial wastes with some amount of CESQG waste is a very limited practice. The Agency believes that industrial waste disposal facilities that may still be disposing of CESQG waste on-site, will elect to send their CESQG waste off-site to a municipal landfill, a hazardous waste landfill or

off-site for treatment or recycling. These options would be cheaper for industrial waste facilities vs. continuation of CESQG on-site disposal and compliance with today's proposed standards (i.e., ground-water monitoring and corrective action).

The Agency wishes to emphasize that this proposal does not change the manner in which waste is determined to be hazardous. Generators of wastes have an obligation to determine through testing or their knowledge of the waste if a waste is a hazardous waste (40 CFR 262.11). The generator must then determine if any hazardous waste he generates is regulated hazardous waste, or conditionally exempt small quantity generator hazardous waste (40 CFR 261.5).

The Agency is requesting comment on the prevalence of manufacturing industries that manage CESQG hazardous wastes on-site along with volume estimates. The Agency is also interested in obtaining comments on the Agency's assumption that on-site disposal of CESQG hazardous waste at industrial waste facilities has decreased overall and will not continue in the future.

2. Commercial Off-Site Facilities

The second type of facility that in some cases receive CESQG waste is a commercial off-site facility that disposes of only industrial non-hazardous wastes with some amount of CESQG hazardous wastes being co-disposed at the facility. Based on information from the groups listed below, the Agency estimates that there are only 10–20 commercial off-site facilities that receive only non-hazardous industrial wastes. (Off-site commercial facilities that receive household hazardous waste are subject to the part 258 Criteria.) However, in meetings with the Environmental Industry Associations (EIA) (formerly known as the National Solid Waste Management Association) and Browning Ferris Industries, the Agency was told that as a general matter CESQG disposal is prohibited at these 10–20 facilities as a result of permitting conditions and due to decisions at the corporate level of the individual companies not to accept CESQG waste.

3. Construction and Demolition Landfills

The last group of facilities that receive CESQG wastes are construction and demolition waste landfills. The Agency's List of Construction and Demolition Waste Landfills estimates approximately 1900 construction and demolition waste facilities. These construction and demolition landfills dispose of construction waste and demolition debris (which generally refers to waste materials generated as a result of construction, renovation, or demolition). Many types of wastes are disposed of in construction and demolition landfills, such as metals, wood, concrete, dry wall, asphalt, rocks, soil, plastics, pipes and glass. Construction and demolition landfills may also receive CESQG hazardous waste materials, which could include things such as paints, adhesives, and roofing cements. Although the general term ''construction and demolition waste'' is used to describe all wastes generated in construction, renovation, and demolition activities, the specific types of waste generated are a direct result of the type of project. Construction of a new house, demolition of old buildings as part of a restoration of a downtown area, renovation of an old office building, and new highway construction all result in different types of construction and demolition waste materials being generated.

The report entitled ''Construction Waste and Demolition Debris Recycling . . . A Primer'' divided construction and demolition waste activities into five categories. These five categories and the typical construction and demolition waste materials associated with each category are presented below:

Roadwork Material: Mostly asphalt, concrete (with or without reinforcing bar), and dirt

Excavated Material: Mostly dirt, sand, stones (sometimes contaminated with site clearance wood waste and buried pipes)

Building Demolition: Mainly mixed rubble, concrete, steel beams, pipes, brick timber and other wastes from fittings and fixtures

Construction/Renovation: Mixed waste including wood, roofing, wall board, insulation materials, pieces of duct work and plumbing

Site Clearance: Mostly trees and dirt with the potential for some concrete, rubble, sand and steel

Some construction and demolition waste facilities may be subject to the requirements being proposed today. Construction and demolition waste facilities that receive wastes that are CESQG hazardous wastes will have to comply with the proposed changes in §§ 257.5 through 257.30.

CESQG hazardous wastes generated in construction, renovation, and demolition are most likely to be specific chemicals or products used in these activities. Listed below are typical examples of wastes generated by construction and demolition activities that may be CESQG wastes, if the wastes are hazardous and are generated under the CESQG limits (<100 kg per month, or less than 1 kg per month of acute hazardous waste):

- Excess materials used in construction, and their containers. Examples: adhesives and adhesive containers, leftover paint and paint containers, excess roofing cement and roofing cement cans.
- Waste oils, grease, and fluids. Examples: machinery lubricants, brake fluids, engine oils.
- Waste solvents or other chemicals that would fail a characteristic or that are listed as a hazardous waste that are removed from a building prior to demolition (e.g., ignitable spent solvents, spent acids or bases, listed spent solvents (F001–F005), or listed unused commercial chemical products that are to be discarded).

General construction and demolition debris (e.g., rubble from building demolition) would typically be hazardous waste only if it exhibits one of the four characteristics of hazardous waste: ignitability, corrosivity, reactivity, or toxicity (see subpart C of 40 CFR part 261). To determine if such debris is hazardous, the generator should use knowledge of the waste or test to determine if a representative sample of the waste exhibits any of the characteristics. See 40 CFR 262.11. See also Chapter nine of ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'' (SW–846), Third Edition, on how to develop a sampling program. As an example, if a building is demolished, the generator should use his knowledge concerning the building debris, or test a representative sample of the building debris, to see if the building debris exhibits a characteristic of hazardous waste.

Prior to demolishing a building, the owner or the demolition company may choose to remove components of the building that contain concentrated constituents of concern such as lead pipe, lead flashing, mercury containing thermostats and switches, or mercury-containing lamps (light bulbs). This may be done for purposes of avoiding concern that the entire demolition rubble may exhibit the characteristic of toxicity, for recycling and resource conservation, or as required by state or local law. For purposes of resource conservation, the Agency encourages removal of items that may be cost-effectively recycled or reused. It should be noted that any removed items should be managed in compliance with applicable requirements, including, if the items exhibit characteristics, the

requirements for CESQGs or the full hazardous waste regulations. Also note that some such items may be, in the future, covered under streamlined ''universal waste'' regulations that would minimize the applicable regulatory requirements. (See final ''universal waste rule,'' 60 FR 25492, May 11, 1995.)

Literature that was evaluated by the Agency and summarized in Chapter 2 of the Agency's report ''Construction and Demolition Waste Landfills'' identify a number of wastes that are referred to using such terms as ''hazardous,'' ''excluded,'' ''unacceptable,'' ''problem,'' ''potentially toxic,'' or ''illegal.'' It is not necessarily true that all of these wastes meet the definition of ''hazardous'' under Subtitle C of RCRA, but they provide an indication of the types of wastes that may be present in the construction and demolition waste stream that are considered by others to be a potential problem.

A construction and demolition waste generator should contact their State Solid Waste Program for their guidance or rules concerning the types of construction and demolition wastes that the State considers to be hazardous.

C. Existing State Programs

1. State Requirements Pertaining to Management of CESQG Hazardous Wastes

Since the existing controls governing the disposal of CESQG waste are under the Subtitle C program (i.e., § 261.5), State requirements must be at least as stringent as the Federal requirements. States may however establish more stringent controls for CESQGs within their jurisdiction. Some States require that CESQGs obtain a hazardous waste ID number while other States require CESQGs to use a manifest for off-site transportation. Some States require that all or some portion (e.g., those with liquid industrial and ignitable wastes) of CESQG waste be managed at only permitted Subtitle C facilities. States that require that CESQG waste be managed at only Subtitle C facilities would prohibit CESQG disposal in a municipal, non-hazardous industrial, or construction and demolition waste landfill.

2. State Requirements for Construction and Demolition Facilities

EPA conducted a study to determine the current regulatory standards for construction and demolition facilities that are applicable on a State level. State regulatory standards for construction and demolition facilities vary State-by-State and are generally not as detailed nor environmentally stringent as State standards for municipal solid waste landfills. Furthermore, States apply standards more frequently to off-site construction and demolition waste facilities vs. on-site construction and demolition waste facilities. In general, the EPA study focussed on the number of State programs that had requirements for the statutory minimum components specified in RCRA section 4010(c). The numbers, discussed below, correspond to the number of States that impose the requirement or standard on off-site construction and demolition waste facilities. Generally, a smaller number of States impose requirements on on-site facilities.

The most common location restrictions that States apply to C&D facilities relate to airports and bird hazards, wetlands and floodplains. A majority of the States (35) have restrictions applicable to construction and demolition facilities being located within the 100-yr. floodplain. Twenty-five (25) States have location restrictions pertaining to construction and demolition disposal facilities in wetlands. Similarly, 21 States have location restrictions for some or all construction and demolition facilities pertaining to airports and bird hazards. Fewer States have adopted location restrictions pertaining to seismic impact zones, fault areas, or unstable areas.

With regard to ground-water monitoring and corrective action, 29 States require some or all construction and demolition facilities to monitor ground-water and 22 States have corrective action requirements. For those States that impose ground-water monitoring requirements, most States have requirements that are substantially less stringent than the Municipal Solid Waste Landfill Criteria (part 258). With regard to those States that impose corrective action requirements, States usually require that either the permit applicant submit a corrective action plan with the permit or require the facility owner/operator to submit a plan after a release to ground water is detected.

V. Discussion of Today's Regulatory Proposal

A. Non-Municipal Solid Waste Disposal Facilities That Receive CESQG Hazardous Waste

This rule applies to non-municipal solid waste disposal facilities that receive CESQG hazardous waste, and the rule would provide that only such facilities which meet the requirements in §§ 257.5 through 257.30 ''may receive'' CESQG waste, as required by RCRA section 4010(c). Any non-municipal solid waste disposal facility that does not meet the proposed requirements may not receive CESQG hazardous wastes. The non-municipal units that are subject to this rule are surface impoundments, landfills, land application units and waste piles that receive CESQG waste for storage, treatment, or disposal. This is based on the existing applicability of part 257 to all solid waste disposal facilities (40 CFR 257.1(c)). Disposal is defined at § 257.2 to mean ''the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waster, including ground waters.'' This is also the statutory definition of ''disposal'' in RCRA section 1004(3). The definition covers any placement of waste on the land whether it is intended to be temporary or permanent.

B. Decision to Impose or Go Beyond the Statutory Minimum Components

RCRA section 4010(c) requires that these revised Criteria must at a minimum include location restrictions, ground-water monitoring as necessary to detect contamination, and corrective action, as appropriate. The part 258 Municipal Solid Waste Landfill Criteria went beyond the statutory minimum requirements (see 56 FR 50977) and included the following additional requirements: Operational requirements, design standards, closure and post-closure care requirements and financial assurance standards. The Municipal Solid Waste Landfill Criteria went beyond the statutory minimum components for a variety of reasons. Some of these reasons included:

—163 case studies that revealed ground-water contamination at 146 MSWLFs, along with 73 MSWLFs that had documented cases of surface water contamination,

—29 documented cases of uncontrolled methane releases at MSWLF causing fires and explosions at 20 of the 29 facilities,

—A high percentage of National Priority List (NPL) sites were MSWLFs (184 sites out of 850 as of May 1986), and

—A belief, based on risk modelling, that some MSWLFs presented unacceptable risks to human health.

Taken together, these problems demonstrated a pattern of recurring problems and potential hazards associated with MSWLFs best addressed by requiring a comprehensive set of facility standards.

Today's proposal imposes only the statutory minimum components for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes. Based on the data reviewed below, the Agency believes that these facilities do not pose risks that would warrant more comprehensive facility standards.

1. Construction and Demolition Waste Facilities

The Agency analyzed existing leachate and ground-water monitoring data, and damage cases associated with construction and demolition waste management to assess potential risks associated with construction and demolition waste disposal facilities. Landfill leachate sampling data and ground-water monitoring data were collected from states and from general literature provided to the Agency by the National Association of Demolition Contractors (NADC).

a. Construction and Demolition Leachate. EPA evaluated representative construction and demolition waste leachate values (''Construction and Demolition Waste Landfills''). (This data was compiled by NADC). Leachate sampling data for 305 parameters sampled for at one or more of 21 construction and demolition landfills were compiled into a database.

Of the 305 parameters sampled for, 93 were detected at least once. The highest detected concentrations of these parameters were compared to regulatory or health-based ''benchmarks,'' or concern levels, identified for each parameter. Safe Drinking Water Act Maximum Contaminant Levels (MCLs) or Secondary Maximum Contaminant Levels (SMCLs) were used as the benchmarks if available. Otherwise, health-based benchmarks for a leachate ingestion scenario were identified; these were either reference doses (RfDs) for non-carcinogens, or 10^{-6} risk-specific doses (RSDs) for carcinogens. Benchmarks were unavailable for many parameters because they have not been studied sufficiently.

Of the 93 parameters detected in C&D landfill leachate, 25 had at least one measured value above the regulatory or health-based benchmark. For each of these 25 parameters, the median leachate concentration was calculated and compared to its benchmark. The median value was first calculated among the samples taken at each landfill, and then across all landfills at which the parameter was detected. Due to anomalies and inconsistencies among the sampling equipment used at different times and at different landfills, non-detects were not considered in determining median values; i.e., the non-detects were discarded before calculating both individual landfill concentration medians and medians across landfills. Thus, the median leachate concentrations represent the median among the detected values, rather than the median among all values. The median concentration among all values would in most cases have been lower than those calculated here.

Based on (1) the number of landfills at which the benchmark was exceeded and (2) a comparison between the median detected concentration and the benchmark, seven parameters emerge as being potentially problematic. The Agency identified this list of 7 potentially problematic parameters by eliminating from the original list of 25 parameters any parameter that was only detected at one landfill (this was determined to be not representative) and, furthermore, eliminating any parameter whose median concentration did not exceed the benchmark value for that parameter. The 7 potentially problematic parameters are as follows:

1,2-Dichloroethane
Methylene chloride
Cadmium
Iron
Lead
Manganese
Total dissolved solids

The benchmark values for three of the parameters (total dissolved solids, iron, and manganese) are secondary MCLs (SMCLs). Secondary MCLs are set to protect water supplies for aesthetic reasons, e.g., taste, rather than for health-based reasons. The remaining 4 constituents, their calculated medians, and health-based benchmark values are as follows:

Constituent	Median concentration	Health-based values	
		Value	Source
1,2-Dichloroethane	19 µg/l	5 µg/l	MCL.
Methylene chloride	15.2 µg/l	5 µg/l	10^{-6} RSD.
Cadmium	10.5 µg/l	5 µg/l	MCL.
Lead	55 µg/l	15 µg/l	Action level.

The next step in evaluating the significance of these constituent concentrations is to apply an exposure model to develop a relationship between the constituent concentration in the environment at an assumed exposure point and the constituent concentration in the waste. This is because constituents released from a waste undergo a variety of environmental fate and transport processes that result in exposure point concentrations that are lower than levels in the waste stream or in leachate.

The Agency assumed a dilution attenuation factor (DAF) of 100 for the fate and transport analysis. The value of 100 was selected based on the development of the Toxicity Characteristic (40 CFR 261.24). The DAF is an estimate of the factor by which the concentration is expected to decrease between the waste management facility and a hypothetical downgradient drinking water well. A multiplier of 100 corresponds to a cumulative frequency close to the 85th percentile from the EPACML simulations used to support the TC rule. In other words, in this exposure scenario, an estimated 15 percent of the drinking water wells closest to unlined municipal landfills could have contaminated concentrations above MCLs. Dividing the calculated median concentration by the DAF of 100 and comparing the new concentration allows for an estimate as to whether the new concentration will exceed the health-based value at an exposure point. In using the DAF of 100, the resulting new concentrations are all below their respective health-based values. The resulting concentrations as compared to the health-based values are presented in the table below.

Constituent	Median concentration divided by DAF of 100	Health-based value
1,2-Dichloro-ethane.	.19 µg/l	5 µg/l
Methylene chloride	.152 µg/l	5 µg/l
Cadmium	.105 µg/l	5 µg/l
Lead	.55 µg/l	15 µg/l

b. Construction and Demolition Damage Case Analysis. EPA conducted

a study (''Damage Cases: Construction and Demolition Waste Landfills'') to determine whether the disposal of C&D debris in C&D landfills has led to the contamination of ground or surface water or damages to ecological resources. All of the damage case information EPA evaluated came from existing information in State files and literature sources. EPA was able to identify only 11 C&D landfills with evidence of ground water or surface water contamination. EPA found no documented evidence of existing human health risks or ecosystem damages at construction and demolition landfills and little documented evidence of off-site contamination.

When the Agency reviewed existing sources of data for C&D damage cases, the Agency reviewed existing Superfund databases (NPL), contacted EPA regional representatives, 32 States, county environmental Agencies, and existing studies or reports providing background information on C&D facilities and damages.

When EPA searched for C&D damage cases, several criteria were used to identify where the damages could reasonably be associated with construction and demolition facilities and construction and demolition waste disposal. First and foremost, the Agency sought to identify C&D facilities that accepted predominantly C&D wastes. Landfills that had received significant quantities of municipal waste, non-hazardous industrial waste, or hazardous waste in the past were excluded from consideration. Additionally construction and demolition sites located near other facilities or leaking underground storage tanks that could reasonably be the source of contamination were excluded as possible C&D damage cases. Lastly, there needed to be documented evidence of contamination at the C&D site.

The 11 damage cases that the Agency has identified are from New York, Virginia, and Wisconsin. Virginia and Wisconsin have required groundwater monitoring since 1988 at C&D facilities. The facilities in New York were among 9 C&D sites investigated due to public concerns about possible hazardous waste disposal and potential human health and environmental impacts.

A study of the 11 C&D sites revealed on-site ground-water contamination at all of the facilities and surface water contamination at 6 of the 11 sites, with the main contaminants being metals and other inorganics. At 3 of the 11 facilities, sediment contamination was also detected. Although most of the contamination associated with these damage cases occurred on-site, 2 of the eleven facilities did have off-site contamination (both facilities had sediments and surface water contamination occurring off-site).

Although most of the 11 sites were monitored for a wide range of organic and inorganic constituents, virtually all of the contamination was associated with inorganics. Constituents that exceeded State ground-water protection standards or Federal drinking water criteria most frequently were manganese (9 sites), iron (8 sites), total dissolved solids (6 sites), lead (5 sites), magnesium (4 sites), sodium (4 sites), pH (3 sites) and sulfate (3 sites). The other 8 constituents that were detected in ground water at these 11 sites were detected at only one or two sites.

For the 6 sites that had surface water contamination, the constituents that exceeded State surface water standards or Federal Ambient Water Quality Criteria most frequently were iron (4 sites), zinc (3 sites), lead (2 sites), and copper (2 sites). The other 5 constituents that were detected in surface water at these 6 sites were detected only once. No fish kills or other observable impacts on aquatic life were reported in any of the references that the Agency reviewed.

A look at the most frequently detected constituents in ground water or surface water reveals that of the 10 constituents, 7 are a concern due to SMCLs; only lead, magnesium, and sodium are not. Magnesium was found to exceed only an applicable State standard by a factor of 4 times, while sodium was found to exceed an applicable State standard by a factor of 14. Lead was found in ground water to exceed the Federal action level at the tap (15 μg/l) by a factor of 6. Lead was also found in surface water to exceed the established Federal Ambient Water Quality Criteria by a factor of 16 to 300 (although for the higher factor the reported value of lead in the surface water was ''estimated'').

c. Construction and Demolition Ground-Water Monitoring Data. Limited ground-water monitoring data suggests that a similar set of parameters that are detected in C&D leachate and that appear in damage cases associated with C&D facilities are also detected in ground water. Based on the limited ground-water data, only 19 parameters had a maximum value exceeding a health-based benchmark. Of these 19 parameters, 8 exceeded a secondary MCL (TDS, sulfates, Ph, manganese, chlorides, iron, copper, and aluminum). For the remaining 11 parameters, 5 are organics (Bis(2-ethylhexyl) phthalate, methylene chloride, tetrachloroethene, 1,2,4-trichlorobenzene, and 1,1,1-trichloroethane), 5 are inorganics (arsenic, cadmium, lead, mercury, and nickel), and 1 is a conventional parameter (nitrate). Only one constituent (cadmium) exceeded its health-based value by an order of magnitude. Some constituents had a maximum ground-water value just exceeding its health-based value. It is important to remember that when looking at the limited ground-water monitoring data what is being discussed in this paragraph are maximum levels; additional sampling events for these constituents resulted in lower levels or non-detects.

d. Conclusions for Construction and Demolition Facilities. While the data on construction and demolition waste landfills are limited, the Agency has reached some conclusions. Based on evaluation of the data analyzed above, individual construction and demolition waste facilities may have caused limited damage to ground water and surface water and potentially, may pose a risk to human health and the environment. Individual C&D facilities may also affect usability of drinking water due to aesthetic impacts. However, the Agency believes that C&D facilities, in general, do not currently pose significant risks and that individual damage cases are limited in occurrence. The small number of damage cases and the leachate concentration data reviewed above support these conclusions. Ground-water monitoring and corrective action at these facilities will ensure that any releases and potential risks at individual facilities will be identified and corrected in a timely fashion to protect human health and the environment. Location restrictions will ensure that non-municipal solid waste disposal facilities that receive CESQG waste will be located in acceptable areas, thereby, providing further protection of human health and the environment. Because construction and demolition waste facilities, in general, do not currently pose significant risk, the Agency has concluded that the statutory minimum requirements will ensure protection of human health and the environment.

2. Off-Site Commercial Landfills

As for the 10–20 commercial off-site facilities that accept only industrial wastes, the Agency understands that corporate policy has been to subject these types of facilities to stringent environmental controls. In addition, State regulations also apply to these types of facilities. A facility of this type generally employs a liner, has closure and post-closure care requirements and financial assurance standards. These

State and corporate controls go beyond the statutory minimum controls and therefore the Agency believes that there is no need, on the Federal level, to impose additional standards beyond the statutory minimum.

3. Request for Additional Data and Comments Concerning Statutory Minimum or More Comprehensive Facility Requirements

The leachate and ground-water monitoring data and the damage cases analyzed represent a small number of facilities relative to the construction and demolition facility universe. The Agency solicits any additional data concerning C&D facilities to further assess the potential risks they may pose, as well as additional data on commercial industrial solid waste facilities or other types of facilities that may be subject to today's proposal.

The Agency also requests comment on whether the requirements being proposed today should go beyond the statutory minimum components. Requirements beyond the statutory minimum components could include all or any of the following components: Operational criteria, design standards, closure and post-closure care requirements, and financial assurance standards. The Agency is requesting that commentors provide data that documents the need to go beyond the statutory minimum components. The Agency is also requesting that commentors be specific as to whether any additional controls should be identical to the part 258 Criteria for municipal landfills or should require a different standard and what that standard should be.

C. Decision to Establish Facility Standards Under Part 257 and Revisions to Part 261

The Agency proposes today to establish facility standards for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes. Section 4010(c) states that the Agency should revise the existing part 257 Criteria for facilities that ''may receive'' CESQG waste. Clearly, today's proposal responds to the statutory language. The Agency is proposing to establish facility standards, in a separate section of part 257, for non-municipal solid waste disposal facilities that receive CESQG hazardous waste. By providing that only those facilities meeting the new standards ''may receive'' CESQG waste, the Agency believes it will satisfy the statutory mandate of RCRA section 4010.

The Agency is also proposing revisions to the language in § 261.5 (Special requirements for hazardous waste generated by conditionally exempt small quantity generators). These revisions will clarify the types of acceptable treatment, storage, or disposal facilities that can be used to manage CESQG hazardous waste while making it clear that CESQGs are responsible for ensuring that their CESQG hazardous wastes destined for storage, treatment, or disposal are sent to acceptable facilities. This will help ensure that CESQG waste is not sent to facilities that do not meet the new part 257 regulations (i.e., to facilities that ''may not receive'' CESQG waste. Acceptable facilities are either interim status or permitted Subtitle C facilities; municipal solid waste facilities permitted, licensed, or registered by a State and subject to part 258 or an approved State program; non-municipal solid waste disposal facilities that are permitted, licensed, or registered by a State and subject to the new part 257 regulations or an approved State program; or solid waste management facilities that are permitted, licensed, or registered by a State (i.e., municipal solid waste combustor). EPA encourages CESQGs to consult with their State solid waste agency to determine which facilities are acceptable. Today's proposed changes to § 261.5 make no changes to the provisions allowing CESQGs to send their hazardous waste for beneficial use, reuse, legitimate recycling or reclamation.

D. Request for Comment on the Use of an Alternative Regulatory Approach in Today's Rule

The Agency previously discussed its proposed approach to impose only the statutory minimum requirements on non-municipal solid waste facilities that receive CESQG hazardous waste. The Agency has identified two options for writing the statutory minimum components. One option is to use the part 258 Criteria as the baseline for these requirements. The second option would be to specify general performance standards to be met by facility owners/operators as they implement the standards as well as to guide States in designing new regulatory programs (or revising existing regulatory programs).

There are several reasons why the Agency is considering using the part 258 Criteria. (1) Part 258 Criteria provide sufficient detail so that an individual owner/operator can self-implement them without State interaction in those instances where States do not seek approval of their permitting program as required in RCRA section 4005(c). (2) EPA believes that the national minimum requirements are necessary to collect reliable and consistent ground-water monitoring data and to respond to contamination from the unit. (3) They contain a substantial amount of flexibility that allows approved States to tailor standards to individual and classes of facilities. Also, EPA and State success in accomplishing 42 State program approvals demonstrates that a variety of State approaches are consistent with the part 258 Criteria. As an example, States have established different design standards based on State-specific or site-specific factors that comply with the part 258 criteria. The Agency expects States to likewise use this same flexibility in tailoring their ground-water monitoring programs. (4) Some States have expressed strong support for using 258 standards as the baseline for solid waste disposal facilities that receive CESQG hazardous waste. (5) While some States have standards for non-municipal facilities that are not identical to the 258 standards, the Agency believes there is a strong likelihood that many state programs would be approvable.

Reasons cited in support of using the general performance standard approach include: (1) Although the part 258 standards contain substantial flexibility for States to tailor the programs to their conditions, the part 258 standards put certain limits on State flexibility to design a program tailored to local conditions; (2) The part 258 standards also include certain national minimum requirements (which States can not modify) that EPA promulgated because of the risks posed by MSWLFs. However, since EPA has found that facilities that receive CESQG waste may pose substantially less risk than MSWLFs, these national minimum standards may be overly stringent at certain facilities; (3) In the absence of a significant Federal program, over half of the States have adopted location standards, ground-water monitoring requirements, and corrective action requirements that are significantly less extensive than the part 258 standards. If a State believes that its existing program satisfies the general RCRA performance standard—protects human health and the environment, taking into account the practicable capability of these facilities—it could seek approval of their existing programs and avoid substantial regulatory or legislative changes; and (4) a general performance standard would provide the maximum flexibility for States and owners to adopt new methodologies and technologies (e.g., detecting groundwater contamination from the

surface, not from wells) to meet the standard at the lowest possible cost.

In order to give the regulated community a better idea of how the ground-water monitoring and corrective action requirements could be written using a general performance standard approach, the Agency has developed the following examples of general performance language for each of the main elements of a ground-water and corrective action program.

For § 257.22, ground-water monitoring systems, the regulatory language for the general performance approach could require that the owner/operator install a ground-water monitoring system capable of detecting contamination that would consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water monitoring samples from the uppermost aquifer that represent both the quality of background ground-water and the quality of ground-water passing the point of compliance. However, this section would not specify how the monitoring wells should be cased or the proper depth and spacing of the wells. The part 258 approach establishes the point of compliance for units under today's proposed rulemaking to no more than 150 meters from the edge of a unit boundary. However, a general performance standard could be written to allow states to set the point of compliance at other protective locations. The Agency specifically requests comment on whether a flexible approach to establishing the point of compliance is particularly well suited to low-risk facilities such as those addressed by this rulemaking, and if so, which factors should be considered in making a determination at these facilities.

The Agency also is currently evaluating a performance-based approach to locating the point of compliance for clean-up of releases in the hazardous waste program as part of the corrective action rule development in subpart S of 40 CFR part 264. The states are participating in the subpart S rulemaking as co-regulators. Point of compliance options under consideration include: The unit boundary, the facility boundary, use of a buffer zone and anywhere in the plume of contamination beyond the unit boundary. We are contemplating that the subpart S approach could provide a basis for flexible, site-specific decision making for waste management facilities covered by today's rule.

For § 257.23, ground-water sampling and analysis requirements, the regulatory language for the general performance language could require that the owner/operator establish a ground-water monitoring program that includes consistent sampling and analysis procedures that ensure monitoring results that provide an accurate representation of background ground-water quality and down-gradient ground-water quality. The Agency would also state that the sampling and analysis procedures should also ensure that appropriate sampling and analytical methods are used and that ground-water quality data is based on appropriate statistical procedures. However, the regulatory language would not require that any specific statistical test be used nor would the regulatory language require that general performance standards be met as a condition of using an alternative statistical test.

For § 257.24, detection monitoring program, the regulatory language for the general performance language could require that the owner/operator establish a list of indicator or detection parameters that are monitored for and that enable the owner/operator to detect contamination. The Agency would also state that the monitoring frequency should be determined based on site specific factors and that the owner/operator must also establish a process for assessing any potential contamination, based on the statistical procedures established in § 257.23. However, EPA's regulatory language would not specify any factors that an owner/operator should consider in selecting his/her indicator/detection monitoring parameters nor would the regulatory language specify the site-specific factors that would need to be evaluated by the owner/operator in determining the frequency of monitoring.

For § 257.25, assessment monitoring program, the regulatory language for the general performance standard approach could require that the owner/operator establish a process for assessing any potential contamination based on (1) additional monitoring for hazardous constituents that are expected to be present at the facility and (2) the establishment of background standards and health-based standards for the constituents that are monitored. The Agency would also state that the process must allow for a comparison, based on the statistical procedures established in § 257.23, of those background and health-based standards in order to determine when a health-based standard has been exceeded and to allow for the assessment of corrective measures when it is determined that an exceedance has occurred. However, the regulatory language would not specify any steps that must be complied with as part of the process in assessing the monitoring program.

For § 257.26, assessment of corrective action, the regulatory language for the general performance standard approach could require that the owner/operator assess the potential range of corrective measures that could be used to meet the performance standard established in § 257.27. However, the regulatory language would not list any factors that should be considered by the owner/operator in assessing any potential remedy. It may allow the States flexibility to use a different risk assumption than those in part 258 to establish triggers for corrective action.

For § 257.27, selection of remedy, the regulatory language for the general performance standard approach could require that the owner/operator select the most appropriate remedy that (1) controls the source of releases to the maximum extent possible, (2) attains the health-based standard(s) developed in the assessment monitoring program, and (3) protects human health and the environment. The Agency would also state that the owner/operator would also need to establish a time period for initiating and completing the selected remedy. However, the regulatory language would not list any factors that an owner/operator should consider in selecting the remedy, in establishing a schedule for initiating and completing the remedy, or in deciding that remediation is not necessary.

For § 257.28, implementation of the corrective action program, the regulatory language for the general performance standard approach could require that the owner/operator implement the selected remedy, based on the schedule established in § 257.27, and attain compliance with the health-based standards established in § 257.25. The Agency would also state that the implementation of the corrective action program should include a consideration of interim measures that may need to be considered during corrective action and a consideration of alternative corrective measures if, after implementation of the selected remedy, the health-based standards in § 257.25 are not being achieved. However, the regulatory language would not list any factors that an owner/operator should consider in developing interim measures or in the selection of an alternative remedy.

The Agency believes that the general performance standard approach has some advantages. The approach would offer more flexibility to States to determine how best to run their State program for non-municipal solid waste facilities that receive CESQG hazardous waste, while allowing States to tailor

regulations based on anticipated risks. In the absence of a State program, owners/operators would have to determine how to comply based on risk. However, the Agency is concerned that such a performance standard approach may result in greater uncertainty for owners/operators.

While the Agency has not proposed the general performance standard approach in today's proposal, the Agency believes that the performance standard approach provides some interesting options/advantages for owners/operators and State agencies. Therefore, the Agency is requesting comments on the use of general performance standards in lieu of the approach used in today's proposal.

E. Highlights of Today's Statutory Minimum Requirements for Non-Municipal Solid Waste Disposal Facilities That May Receive CESQG Hazardous Waste

For today's proposed regulatory language, the Agency has used the part 258 Criteria as a baseline. The highlights of the part 258 requirements are presented in this section of today's preamble. The flexibility that was developed for the part 258 Criteria has been incorporated into today's proposal for the location restrictions and the ground-water monitoring and corrective action requirements. The Agency solicits comments from the regulated community on whether these standards would provide sufficient flexibility for construction and demolition waste facilities. Commentors are requested to review the proposal with an eye towards identifying those areas in the proposal that they believe do not contain sufficient flexibility and would unduly hinder or place unnecessary burdens on construction and demolition waste facilities or other facilities potentially affected by the rule. The Agency requests that if commentors identify a provision that is lacking in flexibility, that the commentors clearly identify alternative rule language that provides the necessary flexibility.

1. Applicability and Effective Date

Today's proposal establishes new sections in part 257 (i.e., §§ 257.5 through 257.30) that apply to any non-municipal solid waste disposal facility that receives CESQG hazardous wastes. Today's proposal does not apply to municipal solid waste landfills subject to part 258 or hazardous waste facilities subject to regulations under Subtitle C of RCRA.

Owners/operators of non-municipal solid waste disposal facilities whose facilities do not meet the proposed requirements may not receive CESQG hazardous waste. Owners/operators of such facilities would continue to be subject to the requirements in §§ 257.1–257.4.

Owners/operators of non-municipal solid waste disposal facilities that receive CESQG hazardous waste after the effective date (i.e., 18 months after the date of publication of the final rule in the **Federal Register**) must comply with the requirements in §§ 257.5 through 257.30.

Certain facilities may implement screening procedures to effectively eliminate the receipt of CESQG hazardous wastes. If an owner/operator has a question concerning applicability of the rule, he/she is encouraged to contact his/her State Agency to determine that the screening procedure ensures that the facility does not receive CESQG hazardous waste.

2. Existing Part 257 Requirements

All types of non-hazardous waste facilities, except municipal solid waste landfills, must comply with the current requirements in 40 CFR part 257. In developing today's proposal for non-municipal solid waste disposal facilities that receive CESQG wastes, the Agency decided to retain some of the existing part 257 requirements. Owners/operators of non-municipal solid waste disposal facilities that receive CESQG hazardous waste continue to be subject to the following existing requirements in §§ 257.1–257.4: §§ 257.3–2 (Endangered Species), 257.3–3 (Surface Water), 257.3–5 (Application to food-chain crops), 257.3–6 (Disease), 257.3–7 (Air), and 257.3–8 (a), (b), and (d) (Safety). The Agency saw no reason to eliminate these requirements because non-municipal solid waste facilities have been subject to these requirements since 1979. A non-municipal solid waste disposal facility that becomes subject to the CESQG requirements in §§ 257.5 through 257.30 would no longer be subject to the following existing requirements in §§ 257.1–257.4: §§ 257.3–1 (Floodplains), 257.3–4 (Ground water), and 257.3–8(c) (bird hazards to aircraft) because §§ 257.5 through 257.30 would contain separate standards for each of these areas.

As stated earlier, RCRA section 4010 requires that the Agency establish revised Criteria for non-municipal solid waste disposal facilities that receive CESQG wastes that include, at a minimum, ground-water monitoring, corrective action, and location restrictions. These requirements have been included in new §§ 257.5 through 257.30. Each of these requirements is discussed below and in more detail in Reference #1.

3. Specific Location Restrictions

The requirements in §§ 257.7 through 257.12 will establish location restrictions for any non-municipal solid waste disposal facility that receives CESQG hazardous wastes. The location restrictions are for airport safety, floodplains, wetlands, fault areas, seismic impact zones, and unstable areas. The location restrictions being proposed today for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes are identical to the location restrictions that were promulgated under Part 258 for municipal solid waste landfills. A detailed discussion of the municipal solid waste landfill location restrictions can be found at 56 FR 51042–51049 and in reference #1.

a. Airport Safety

Today's Proposed Language Regarding Airport Safety (§ 257.7)

Today's proposal uses the identical airport safety language that was established for MSWLFs. Today's proposal will require that new, existing, and lateral expansions of non-municipal solid waste disposal facilities that receive CESQG hazardous waste demonstrate that the facility does not pose a bird hazard to aircraft. For existing facilities that become subject to today's rule, only the demonstration requirement is different from the current airport safety standard in § 257.3–8(c). The demonstration requirement is being proposed because today's airport safety requirement is written to be self-implementing and the demonstration documents compliance and may protect the owner/operator from a citizen suit. For new and lateral expansions of non-municipal solid waste disposal facilities, the notification to the FAA and the affected airport is a new provision. This provision is being proposed in order for the Agency to be consistent with existing FAA Order #5200.5A (see Reference #9—page 51043). This FAA Order establishes that any disposal site that attracts or sustains hazardous bird movements from feeding, watering or roosting areas may be incompatible with airport operations.

b. Floodplains

Today's Proposed Language Regarding Floodplains (§ 257.8)

Today's proposal uses the identical language from the MSWLF Criteria. The demonstration requirement for new, existing, and lateral expansions of non-municipal solid waste disposal facilities

is the only change to the existing part 257 language and is being proposed due to the self-implementing nature of today's proposal and to document compliance on the part of the owner/operator.

c. Wetlands

Today's Proposed Language Regarding Wetlands (§ 257.9)

Today's proposal establishes requirements applicable for new and lateral expansions of non-municipal solid waste disposal facilities regarding the siting in wetland locations. These requirements are identical to the requirements established for MSWLFs. The Agency has determined that new and lateral expansions of non-municipal solid waste disposal facilities, similar to MSWLFs, may be sited in wetlands only under very certain conditions. Therefore, the demonstration requirements that are in the MSWLF Criteria are being proposed today. These demonstration requirements will ensure that if a non-municipal solid waste disposal facility needs to be located in a wetland, protection of State water quality standards and protection of the wetland will be achieved. Furthermore, today's proposal is consistent with the Agency's goal of achieving no net loss of the nation's wetlands.

d. Fault Areas

Today's Proposed Language Regarding Fault Areas (§ 257.10)

Today's proposal for non-municipal solid waste disposal facilities that receive CESQG hazardous waste contains a location restriction regarding fault areas. These requirements are identical to the requirements established for MSWLFs. Today's proposal bans the siting of new non-municipal solid waste disposal facilities or lateral expansions of these facilities in areas that are susceptible to faulting (i.e., areas located within 200 feet of a fault that has had displacement in recent times) based on the fault area provision established in part 258. The Agency believes that locating a new facility or lateral expansion in a location that has experienced faulting has inherent dangers. If a facility is located near a fault and displacement occurs, release of solid waste and hazardous constituents will occur. The Agency, however, believes that some flexibility should be incorporated into the proposal for approved States and, as such, today's proposal allows approved States to site a new non-municipal solid waste disposal facility or lateral expansion within 200 feet of an active fault if the owner/operator demonstrates that such an action will be protective of human health and the environment. Existing non-municipal solid waste disposal facilities that receive CESQG hazardous wastes would not be subject to today's proposed fault area restriction.

The Agency requests comments on the necessity of requiring a fault area restriction for new non-municipal solid waste disposal facilities or lateral expansions of these types of facilities that receive CESQG hazardous waste.

e. Seismic Impact Zones

Today's Proposed Language Regarding Seismic Impact Zones (§ 257.11)

Today's proposal for non-municipal solid waste disposal facilities that receive CESQG hazardous waste contains a location restriction regarding seismic impact zones. These requirements are identical to the requirements established for MSWLFs. Today's proposal bans the siting of new non-municipal solid waste disposal facilities or lateral expansions of these facilities in seismic impact zones based on the seismic impact zone provision in part 258. Existing non-municipal solid waste disposal facilities that receive CESQG hazardous wastes would not be subject to today's proposed seismic zone restriction. Seismic activity manifests itself in the form of ground shaking and fracturing. These activities can, like faulting, result in the release of solid waste and hazardous constituents. The Agency has incorporated the flexibility found in the MSWLF Criteria in today's proposal. As such, if owners/operators of new non-municipal solid waste disposal facilities that receive CESQG hazardous waste or lateral expansions of such facilities can demonstrate to the Director of an approved State that the facility and any containment devices used in the construction of the facility are designed to withstand the effects of seismic activity, then such a facility may be located in a seismic impact zone.

f. Unstable Areas

Today's Proposed Language Regarding Unstable Areas (§ 257.12)

Today's proposal for non-municipal solid waste disposal facilities that receive CESQG hazardous waste contains a location restriction regarding unstable areas. These requirements are identical to the requirements established for MSWLFs. Today's proposal applies to existing non-municipal solid waste facilities, new non-municipal solid waste facilities, and lateral expansions of these types of facilities and is based on the unstable area provision in part 258. These facilities that receive CESQG waste must demonstrate that engineering measures have been incorporated into the facility design to ensure that the integrity of the structural components will not be disrupted. The rationale for requiring this location restriction is the same as that provided for fault areas and seismic activity zones: Waste placed in locations susceptible to mass movement or placed in areas with poor foundation conditions can result in the release of solid waste and hazardous constituents. The Agency, therefore, believes that these unstable areas should be avoided and locating in an unstable area should only be allowed after a successful demonstration by the owner/operator that the structural integrity of the facility will not be disrupted.

In summary, six location restrictions are being proposed: airport safety, floodplains, wetlands, fault areas, seismic impact zones, and unstable areas. Existing non-municipal solid waste disposal facilities that receive CESQG hazardous wastes are only required to comply with the airport safety, floodplain, and unstable area location restrictions. New or lateral expansions of non-municipal solid waste disposal facilities that receive CESQG hazardous wastes must comply with all six location restrictions prior to accepting waste for disposal.

EPA is proposing that existing non-municipal solid waste disposal facilities that cannot make the required demonstrations pertaining to airports, floodplains, or unstable areas by 18 months after publication of the final rule must stop receiving CESQG hazardous wastes. This 18-month period is much shorter than the 5-year period that was given to MSWLFs under 40 CFR 258.16. EPA provided five years to MSWLFs because there was concern about capacity shortages if existing owners/operators of MSWLFs had to close in the short term. For this proposal, existing non-municipal solid waste disposal facilities only have to comply with three location restrictions: airport safety, floodplains, and unstable areas. Two of these three restrictions being proposed are technically identical to the existing Part 257 standards that existing non-municipal solid waste disposal facilities have been subject to since 1979 (i.e., airport safety and floodplains). The new requirements for these two location restrictions are the demonstrations documenting compliance with these provisions and a notification to the FAA if a new or lateral expansion of an existing non-municipal solid waste disposal facility wants to site within a five-mile radius

of an airport runway end. The last location restriction applicable to existing facilities is the unstable area restriction. The Agency believes that 18 months is sufficient time for a owner/operator to demonstrate that the integrity of the facility will not be disrupted. Furthermore, the Agency does not believe that capacity concerns apply to the types of facilities that may potentially become subject to today's proposal.

With the effective date 18 months after the date of publication of the final rule, existing non-municipal solid waste disposal facilities that receive CESQG hazardous waste will need to make the necessary demonstrations during this 18-month period. In the event that an existing non-municipal solid waste facility can not make the demonstrations, the existing facility may not receive CESQG hazardous wastes after this 18-month period. If the existing non-municipal solid waste disposal facility fails to make the necessary demonstrations within 18 months and thereafter stops receiving CESQG hazardous waste, it can continue to stay open and operate; however, it must comply with the existing standards in §§ 257.1–257.4 vs. the requirements being proposed today in §§ 257.5 through 257.30.

3. Specific Ground-Water Monitoring and Corrective Action Requirements

The requirements in §§ 257.21–257.28 will establish ground water monitoring and corrective action requirements for any non-municipal solid waste disposal facility that receives CESQG hazardous wastes. Sections 257.21 through 257.28 establish the criteria for determining an acceptable ground-water monitoring system, the procedures for sampling and analyzing ground-water samples, the steps and factors to be used in proceeding from an initial detection monitoring phase, up to, and including corrective action for clean-up of contaminated ground water.

As stated earlier, the ground-water monitoring and corrective action requirements being proposed today for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes are based on the ground-water monitoring and corrective action requirements that were promulgated under part 258 for municipal solid waste landfills. As such the areas of flexibility that exist within the MSWLF Criteria will also apply to non-municipal solid waste disposal facilities that receive CESQG hazardous waste. A detailed discussion of the MSWLF Criteria regarding ground-water monitoring and corrective action requirements can be found at 56 *FR* 51061–51093 and in reference #1.

Today's proposal is substantively identical to the Part 258 MSWLF Criteria. The two areas of difference concern when the ground-water and corrective action requirements become effective and the time period during which ground-water monitoring must be conducted after the active life of the facility. A summary of the applicability of the ground-water monitoring and corrective action requirements and each provision is presented below.

a. Applicability of Ground-water and Corrective Action Requirements

Today's Proposed Language Regarding Applicability of the Ground-Water Monitoring and Corrective Action Requirements (§ 257.21)

Today's proposal establishes ground-water monitoring and corrective action requirements (discussed separately below) for non-municipal solid waste disposal facilities that receive CESQG hazardous wastes. Existing non-municipal solid waste disposal facilities subject to this rule must be in compliance with the ground-water monitoring requirements within 2 years after the date of publication of the final rule. The Agency is proposing a shorter effective date for today's proposal than for the MSWLF Criteria because these ground-water requirements can be phased-in over a much shorter time frame.

The MSWLF Criteria were phased in over a three to five year period based on a lack of qualified well drillers. The Agency has decided on a two year effective date for a variety of reasons. First, 24 States prohibit hazardous waste from being managed in a construction/demolition waste facility (see Chapter 4 Reference #6). Construction and demolition waste disposal facilities in these 24 States will not be impacted because they, under State law, cannot receive hazardous waste. These 24 States account for 1060 of the approximate total of 1900 construction and demolition waste landfills. Further, 8 States require ground-water monitoring and corrective action that is similar to Part 258. These 8 States account for an additional 111 construction and demolition facilities. Therefore, a total of 1,171 construction and demolition waste facilities in 32 States will not be affected by this proposal. A total of 718 construction and demolition waste landfills in 17 States (New Hampshire has no construction and demolition landfills) will be affected after this proposal is finalized. Some States from the remaining 17 States have existing State regulations that allow them to impose ground-water monitoring requirements on a case-by-case basis. There are a total of 5 States that may impose ground-water monitoring requirements at their construction and demolition waste landfills (a total of 84 construction and demolition landfills exist in these 5 States). If only 718 construction and demolition waste owners/operators may have to have ground-water monitoring wells installed, the Agency believes that there are a sufficient number of firms that are qualified to install wells within 2 years.

The Agency is concerned that some States (3 States have a total of 491 construction and demolition waste landfills out of the 718 total that may be affected) may have difficulty in ensuring that all existing non-municipal solid waste disposal facilities that may receive CESQG waste have ground-water monitoring in place within 2 years and has allowed a one-year extension for an approved State. In an approved State, the Director can establish an alternative schedule that allows 50% of existing non-municipal solid waste disposal facilities to be in compliance within 2 years of the final rule and all non-municipal solid waste facilities that receive CESQG waste to be in compliance with the ground-water monitoring requirements within 3 years of the final rule. Similar to the MSWLF Criteria, today's proposal list a series of factors that the Director of an approved State should consider in establishing an alternative schedule.

Today's proposal establishes that the ground-water monitoring program must be conducted through the active life of the facility plus 30 years. Today's proposal does not contain provisions beyond the statutory minimum components and, therefore, no closure or post-closure care standards are being proposed. The Agency believes, however, that ground-water contamination resulting from the operation of a facility may not appear until after the active life of the facility. The Agency is therefore concerned that ground-water monitoring be conducted for some period of time after the active life of the facility. As such, today's proposal establishes the requirement that ground-water monitoring be conducted for 30 years after the active life. The term active life has also been changed from the definition in the MSWLF Criteria. Today's proposal defines active life to be the period of operation beginning with the initial receipt of solid waste and ending at the final receipt of solid waste. In the MSWLF Criteria the term active life was

defined to mean the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with § 258.60 (i.e., closure and post-closure care activities). The change in the definition of the term active life was necessary to reflect the fact that today's proposal does not contain closure or post-closure care requirements.

The Agency selected the 30 year continuance of ground-water monitoring after the final receipt of waste because 30 years is consistent with the period of time that ground-water monitoring is done after the final receipt of waste at MSWLFs. Following the approach that was selected for MSWLFs, the Agency has allowed the Director of an approved State to decrease or increase the 30 year period of time that ground-water monitoring must be done after the final receipt of waste. Any reduction in the period of time may be granted only after a demonstration by the owner/operator that a shorter period of time is sufficient to protect human health and the environment and the Director of an approved State approves such a demonstration.

The Agency requests comments on the 2-year effective date and the 30-year period of time after the active life that ground-water monitoring must be conducted. Commentors should submit data that supports a shorter or longer effective date and data concerning the necessity of the 30-year ground-water monitoring period.

The flexibility that an approved State/Tribal Director has in suspending the ground-water monitoring requirements for MSWLFs has been provided for non-municipal solid waste disposal facilities that receive CESQG hazardous waste in today's proposal (Reference #9, 56 FR 51061–51062). The provision is proposed for the same reason that it was finalized in the MSWLF Criteria. The Agency believes that certain hydrogeologic settings may preclude the migration of hazardous constituents from the non-municipal solid waste disposal facility to the ground-water. This provision is in the applicability section of today's ground-water monitoring requirements.

The Agency is also proposing to provide to approved States the flexibility to determine alternative ground-water monitoring requirements for small, dry non-municipal solid waste disposal facilities that receive CESQG waste. The Agency had previously issued an exemption to small, dry municipal solid waste landfills from some of the requirements in the MSWLF Criteria (Reference #9, 56 FR 50989–50991). Although the D.C. Circuit vacated this exemption in the Sierra Club v. EPA opinion, 992 f.2d at 345, the Court left it to the Agency's discretion to allow for alternative types of ground-water monitoring based upon factors such as size, location, and climate. Concurrent with this proposal, the Agency is proposing that approved States be allowed to determine alternative ground-water monitoring requirements for small, dry MSWLFs. The Agency sees no reason to limit this flexibility to MSWLFs and, therefore, is proposing that approved States may allow alternative monitoring requirements for small, dry non-municipal solid waste disposal facilities that are receiving CESQG waste if the facilities meet the definition of small and dry proposed in § 257.21(i). Additional information concerning the alternative ground-water monitoring requirements for MSWLFs will be published soon in a FR notice.

In order to be considered small, the non-municipal solid waste disposal facility must dispose of less than 20 tons of non-municipal waste daily. The 20 tons per day is proposed in order to be consistent with the small landfill exemption under the municipal solid waste landfill Criteria. However, the Agency recognizes that the size distribution, potential risks, practical capability and other factors differ for these facilities. The Agency is accepting comments on whether this number should be different for non-municipal solid waste facilities.

b. Overall Performance of the Ground-Water Monitoring System

Today's Proposed Language Regarding Ground-Water Monitoring Systems (§ 257.22)

Today's proposal contains the same performance language in the MSWLF Criteria and, as such, will provide owners and operators a performance-based approach to establishment of a monitoring system that will ensure detection of contamination.

Today's proposal continues to allow State Directors the discretion to establish an alternative monitoring boundary and multi-unit monitoring. The establishment of an alternative boundary provides flexibility to owners/operators and in some cases can serve to reduce corrective action costs by allowing the owner/operator the advantage of a limited dilution and attenuation zone. The establishment of multi-unit monitoring allows for local conditions to be taken into account where individual monitoring systems cannot be established.

c. Ground-Water Sampling and Analysis Requirements

Today's Proposed Language Regarding Sampling and Analysis (§ 257.23)

Today's proposal contains the same sampling and analysis procedures that are in the MSWLF Criteria. The sampling and analysis requirements ensure accurate ground-water monitoring results and allow for an accurate representation of both the background ground-water quality and the quality of ground water at the monitoring wells placed downgradient from the facility. Owners/operators need to ensure that consistent sampling and analysis procedures are in place in order to determine if a statistically significant increase in the level of a constituent has occurred indicating the possibility of ground-water contamination.

In the promulgated Criteria for municipal solid waste landfills, the Agency required that ground-water samples not be field-filtered prior to laboratory analysis. (See § 258.53(b)). The preamble discussion for this requirement can be found at 56 FR 51074, October 9, 1991. The Agency has been actively working on the issue of sample filtration due to concerns expressed by some members of the scientific community. The Agency expects to issue, in the near future, a proposal addressing additional flexibility on this issue. This proposal would include any potential revision to the prohibition on field filtering as specified in proposed § 257.23. Thus, any rule language change to the part 258 Criteria on this issue will be addressed in the final rule language for non-municipal solid waste facilities that receive CESQG wastes.

d. Detection Monitoring Program

Today's Proposed Language Regarding Detection Monitoring Requirements (§ 257.24)

Today's proposal establishes the same series of steps for ground-water monitoring as developed in the MSWLF Criteria. The Agency believes that monitoring for a limited set of parameters and determining if there is a statistically significant increase for any of these parameters is an essential first step in evaluating the possibility of a release from a non-municipal solid waste disposal facility that receives CESQG wastes. Today's proposed detection monitoring program contains the same areas of flexibility that exist within the MSWLF Criteria. This flexibility can be used by the Director of an approved State to delete any parameter from appendix I (appendix I

of part 258) where the Director believes that the constituent is not expected to be in or derived from the waste in the unit. Furthermore, the Director of an approved State can establish an alternative list of inorganic indicator parameters for the metals in appendix I of part 258. Also, today's proposal allows the Director of an approved State to allow for annual ground-water monitoring vs. semiannual based on a series of factors spelled-out in the proposal.

e. Assessment Monitoring Program

Today's Proposed Language Regarding Assessment Monitoring Requirements (§ 257.25)

Today's proposal establishes the same assessment monitoring program as in the MSWLF Criteria. The assessment monitoring program is essential in that an owner/operator must determine what constituents have entered the ground water and understand the extent of the contaminated plume to develop an efficient and effective corrective action program. The purpose of assessment monitoring is to evaluate, rather than detect, contamination. The Agency believes that a second phase of monitoring is essential for evaluating the nature and extent of contamination. The Agency also believes that the flexibility that exists in the MSWLF Criteria is sufficient to deal with the types of non-municipal facilities that receive CESQG hazardous waste and has, therefore, retained all of the flexibility in today's proposal.

f. Corrective Action Program

Today's Proposed Language Regarding Corrective Action Program §§ 257.26–257.28)

Today's proposal establishes the same corrective action steps as in the MSWLF Criteria. The steps that have been proposed today are those that are necessary for a successful corrective action program. Today's proposal allows the owner/operator to successfully remediate a ground-water contamination problem in a swift manner yet provides flexibility for selecting and implementing the corrective remedy. The proposed language contains performance objectives that must be considered in the evaluation, selection, and implementation of a remedy. The Agency also believes that the flexibility that exists in the MSWLF Criteria is sufficient to deal with the types of non-municipal facilities that receive CESQG hazardous waste and has, therefore, retained all of the flexibility in today's proposal.

4. Recordkeeping requirements (§ 257.30)

Similar to the recordkeeping requirement contained in the MSWLF Criteria, today's proposal requires that owners/operators of non-municipal solid waste disposal facilities that receive CESQG waste maintain a historical record of the facility. EPA is proposing this requirement to ensure the availability of basic information that will demonstrate compliance with the remainder of today's proposed requirements. Owners/operators would be required to maintain location restriction demonstrations and ground-water monitoring demonstrations, certifications, findings, reports, test results and analytical data in today's proposed operating record.

The goal of today's proposal is to have the owner/operator maintain such demonstrations in a single location that is easily accessible. The Director of an approved State has the flexibility to establish alternative locations for recordkeeping and alternative schedules for recordkeeping and notification requirements.

F. Other Issues Relating to Today's Proposal

1. Owner/Operator Responsibility and Flexibility in Approved States

The regulatory structure of the part 258 MSWLF Criteria is based on an owner/operator achieving compliance through self-implementation with the various requirements while allowing approved States the flexibility to consider local conditions in setting appropriate alternative standards that still achieve compliance with the basic goal of the part 258 Criteria. This flexibility that exists for approved States under part 258 has been retained in today's proposal and can be used by approved States in determining facility specific requirements. Individual areas of flexibility have been discussed in the previous sections detailing today's location restrictions, ground-water monitoring and corrective action requirements.

Owners/operators, due to the self-implementing nature of this proposal, would be required to comply with the promulgated standards, as of the appropriate effective date, regardless of the status of the States approval determination. If an owner/operator is located in a State that has not been approved under Subtitle D, then the owner/operator would have to comply with the promulgated standards, without the benefit of the flexibility allowed to be granted by the Director of an approved State. Owners/operators of non-municipal solid waste disposal facilities located in approved States, that become subject to today's proposed requirements when finalized, may be subject to alternate requirements based on the approved State standards.

2. CESQG's Responsibilities Relating to the Revisions in § 261.5, Paragraphs (f) and (g)

Today's proposal would allow that CESQG waste go to either a hazardous waste facility, a reuse or recycling facility, a municipal solid waste landfill subject to part 258, a non-municipal solid waste disposal facility that is subject to the requirements being proposed in §§ 257.5 through 257.30 or a solid waste management facility that is permitted, licensed, or registered by a State to manage municipal or non-municipal waste. The Agency believes that it is appropriate to establish facility standards for non-municipal solid waste disposal facilities that receive CESQG waste while at the same time specifying acceptable disposal options that are available to CESQGs in order to ensure that their waste is properly managed. The Agency believes that proposing both regulatory changes together clarifies the obligations of both CESQGs and owners/operators of disposal facilities to ensure proper management of CESQG hazardous waste and will lead to better management of these wastes. By regulating the generators, as well as the receiving facilities, today's proposal also helps to fulfill the statutory mandate that only facilities meeting the location, ground-water monitoring, and corrective action requirements (i.e., §§ 257.5 through 257.30) ''may receive'' CESQG waste. See RCRA Section 4010(c).

The Agency does not believe that today's proposed change to § 261.5 will result in a larger obligation for any CESQG. The Agency knows that the majority of CESQG waste is managed off-site. For the CESQG waste managed off-site, recycling is the predominant form of management. The Agency assumes that for the small amount of CESQG waste that is currently being sent off-site to a MSWLF, no additional obligation would be imposed on a CESQG by today's proposal because the MSWLF where the CESQG waste is being sent is subject to part 258. For construction and demolition waste generators who wish to send their CESQG waste to a non-municipal solid waste disposal facility subject to the proposed requirements in §§ 257.5 through 257.30, the only additional obligation would be that associated with a phone call to the appropriate State Agency to determine if the non-

municipal solid waste disposal facility is subject to §§ 257.5 through 257.30 and thus could legally accept CESQG waste. Furthermore, as stated previously, some States require that disposal of CESQG waste occur only at permitted Subtitle C facilities and CESQGs in these States would not face any burden as a result of this rule due to the more stringent State standard that the CESQG is currently subject to. Today's proposal does not change the generator's obligation to first determine if the waste is hazardous and, secondly, to determine if the waste is below the quantity levels established for a CESQG. If a generator is a CESQG, today's proposal continues an existing obligation on the generator to ensure that acceptable management of the CESQG hazardous waste occurs.

A CESQG may elect to screen-out or segregate out the CESQG hazardous wastes from his non-hazardous waste and then manage the CESQG hazardous portion in a facility meeting the requirements of proposed § 261.5(f)(3) and (g)(3). The remaining non-hazardous waste is not subject to today's proposed §§ 257.5 through 257.30; however, it must be managed in a facility that complies with either the part 258 Criteria or the existing Criteria in §§ 257.1–257.4.

On the other hand, a CESQG may elect not to screen-out or segregate the CESQG hazardous waste preferring instead to leave it mixed with the mass of non-hazardous waste. If the CESQG elects this option, the entire mass of material must be managed in a Subtitle C facility or a Subtitle D facility that is subject to part 258 or the proposed requirements in §§ 257.5 through 257.30.

VI. Implementation and Enforcement

A. State Activities Under Subtitle C

1. Hazardous and Solid Waste Amendments to RCRA

Today's proposal changes the existing requirements in § 261.5, paragraphs (f)(3) and (g)(3) pertaining to the special requirements for CESQGs. Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR part 271 for the standards and requirements for authorization). Following authorization, EPA retains enforcement authority under sections 3008, 7003 and 3013 of RCRA, although authorized States have primary enforcement responsibilities.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final authorization administered its hazardous waste program entirely in lieu of EPA administering the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facility which the State was authorized to permit. When, new more stringent, Federal requirements were promulgated or enacted, the State was obliged to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

In contrast, under section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time they take effect in unauthorized States. EPA is directed to carry out these requirements and prohibitions in previously authorized States, including the issuance of permits and primary enforcement, until the State is granted HSWA authorization to do so. While States must still adopt HSWA-related provisions as State law to retain final authorization, the HSWA provisions apply in authorized States in the interim.

The amendments to § 261.5, paragraphs (f)(3) and (g)(3), are proposed pursuant to section 3001(d)(4) of RCRA, which is a provision added by HSWA. Therefore, the Agency is proposing to add the requirement to Table 1 in § 271.1(j) which identifies the Federal program requirements that are promulgated pursuant to HSWA and that take effect in all States, regardless of their authorization status. States may apply for either interim or final authorization for the HSWA provisions identified in Table 1, as discussed in the following section of the preamble.

2. Effect on State Authorizations

As noted above, EPA will implement today's rule in authorized States until they modify their programs to adopt the § 261.5 rule change and the modification is approved by EPA. Because the rule is proposed pursuant to HSWA, a State submitting a program modification may apply to receive either interim or final authorization under section 3006(g)(2) or 3006(b), respectively, on the basis of requirements that are substantially equivalent or equivalent to EPA's. The procedures and schedule for State program modifications for either interim or final authorization are described in 40 CFR 271.21. It should be noted that all HSWA interim authorizations will expire January 1, 2003. (See § 271.24(c) and 57 FR 60129 (December 18, 1992)).

40 CFR 271.21(e)(2) provides that States that have final authorization must modify their programs to reflect Federal program changes, and must subsequently submit the modifications to EPA for approval. The deadline by which the State must submit its application for approval for this proposed regulation will be determined by the date of publication of the final rule in accordance with § 271.21(e). These deadlines can be extended in certain cases (40 CFR 271.21(e)(3)). Once EPA approves the modification, the State requirements become Subtitle C RCRA requirements.

EPA is aware that a number of States have more stringent requirements for the disposal of waste generated by CESQGs. In particular, some States do not allow the disposal of this waste into any Subtitle D landfill. For these States, today's proposed rule would clearly be considered less stringent than the applicable provisions in these States' authorized programs. Section 3009 of RCRA allows States to adopt or retain provisions that are more stringent than the Federal provisions. Therefore, regarding today's proposed rule, EPA believes that States which do not allow the disposal of wastes generated by CESQGs into Subtitle D landfills under their existing authorized Subtitle C program would not be required to revise their programs and obtain authorization for today's proposed rule. Of course this situation would only apply in those cases where a State is not changing its regulatory language. Further, the authorized State requirements in such States, since they would be more stringent than today's proposed rule, would continue to apply in that State, even though today's rule is proposed pursuant to HSWA authority.

For a State to not be required to submit an authorization revision application for today's proposed rule, the State must have provisions that are authorized by EPA and that are more stringent than all the provisions in the new Federal rule. For those States that would not be required to revise their authorization, EPA strongly encourages the State to inform their EPA Regional Office by letter that for this proposed rule, it is not required to submit a revision application pursuant to 40 CFR 271.21(e), because in accordance with RCRA section 3009 the authorized State provision currently in effect is more stringent than the requirements contained in today's proposed rule. Otherwise, EPA would conclude that a revised authorization application is required.

Other States with authorized RCRA programs may already have adopted requirements under State law similar to those in today's proposal. These State

regulations have not been assessed against the Federal regulations being proposed today to determine whether they meet the tests for authorization. Thus, a State is not authorized to implement these requirements in lieu of EPA until the State program modification is approved. Although revisions to 40 CFR parts 257 and 261 are being proposed, for the purpose of authorization under Subtitle C, only the proposed changes to § 261.5 would be assessed against the Federal program. Of course, States with existing standards may continue to administer and enforce their standards as a matter of State law. In implementing the Federal program EPA will work with States under cooperative agreements to minimize duplication of efforts. In many cases EPA will be able to defer to the States in their efforts to implement their programs, rather than take separate actions under Federal authority.

States that submit their official applications for final authorization less than 12 months after the effective date of these standards are not required to include standards equivalent to these standards in their application. However, the State must modify its program by the deadlines set forth in § 271.21(e). States that submit official applications for final authorization 12 months after the effective date of these standards must include standards equivalent to these standards in their applications. 40 CFR 271.3 sets forth the requirements a State must meet when submitting its final authorization application.

B. State Activities Under Subtitle D

States are the lead Agencies in implementing Subtitle D rules. The Agency intends to maintain the State's lead in implementing the Subtitle D program. RCRA requires States to adopt and implement, within 18 months of the publication of a final rule, a permit program or other system of prior approval and conditions to ensure that non-municipal solid waste disposal facilities comply with today's standards. EPA is required to determine whether States have developed adequate programs. States will need to review their existing programs to determine where their programs need to be upgraded and to complete program changes, if changes are necessary. The process that the Agency will use in evaluating the adequacy of State programs will be set forth in a separate rulemaking, the State/Tribal Permit Program Determination of Adequacy. For the purpose of determining adequacy and granting approval under Subtitle D, only the proposed technical changes in §§ 257.5 through 257.30 will be evaluated by the Agency. The State will need to meet other procedural and administrative requirements identified in the State/Tribal Permit Program Determination of Adequacy. The approval process to be used for non-municipal solid waste disposal facilities is the same process that the Agency used for determining the adequacy of State programs for the Municipal Solid Waste Landfill criteria. In States already approved for the part 258 MSWLF Criteria, changes required by this rulemaking will constitute a program revision.

The Agency believes that for many approved States, changes required by this rulemaking will affect the technical criteria only and should warrant limited changes to the approved application. For example, if non-municipal solid waste disposal facilities subject to this rule are already subject to an approved State MSWLF program (i.e., the non-municipal solid waste disposal facilities are currently subject to the part 258 location restrictions, ground-water monitoring, and corrective action), the State may only be required to submit documentation that the non-municipal solid waste disposal facilities are subject to their approved program. States are encouraged to contact their appropriate EPA Regional office to determine the specifics of the approval process.

In States that have not been approved for the MSWLF Criteria, these revisions can be incorporated into an application for overall program approval of part 258 and §§ 257.5 through 257.30. States that currently restrict CESQG disposal to Subtitle C facilities (and States that may choose to adopt that restriction) or approved States which currently restrict CESQG disposal to part 258 municipal solid waste landfills will not need to seek further EPA approval of their Subtitle D program. RCRA section 4005(c)(1)(B) requires States to adopt and implement permit programs to ensure that facilities which receive CESQG waste will comply with the revised Criteria promulgated under section 4010(c). However, the Agency sees no need for approved States that already require CESQG waste to be disposed of in either Subtitle C facilities or facilities subject to the part 258 MSWLF Criteria to adopt and implement a permit program based upon the standards being proposed today.

RCRA section 7004(b)(1) requires the Administrator and the States to encourage and provide for public participation in the development, revision, implementation, and enforcement of this regulation, and once it is promulgated, the State programs implemented to enforce it. EPA provides for public participation by seeking public comment on this proposal and its decisions on whether State programs are adequate under RCRA section 4005(c)(1)(c). In developing and implementing permit programs, States must provide for public participation in accordance with the provisions of 40 CFR part 256, subpart G.

C. Relationship Between Subtitle C and D

Today's proposal has an effective date of 18 months after publication of the final rule for the location restrictions with the ground-water monitoring and corrective action requirements becoming effective 2 years after the date of publication of the final rule. The Agency is proposing that the revisions to § 261.5(f)(3) and (g)(3) have the same effective date as the proposed changes in §§ 257.5 through 257.30 (i.e., 18 months after the date of publication of the final rule). Owners/operators of facilities that receive CESQG hazardous waste will be subject to the requirements in §§ 257.5 through 257.30. CESQGs will be subject to the proposed requirements in § 261.5. Today's proposed 18-month effective date coincides with the period of time that States have, under Subtitle D, to adopt and implement a program to ensure that owners/operators are in compliance with the proposed changes to §§ 257.5 through 257.30.

D. Enforcement

1. Hazardous Waste Enforcement

Today's proposal amends § 261.5, paragraphs (f)(3) and (g)(3), and as such any CESQG who mismanages their CESQG hazardous waste on-site or delivers the CESQG hazardous waste to an inappropriate Subtitle D facility becomes subject to the full set of Subtitle C hazardous waste regulations.

2. Subtitle D Enforcement

States that adopt programs meeting the standards in §§ 257.5 through 257.30 may enforce them in accordance with State authorities. Under RCRA section 7002, citizens may seek enforcement of the standards in §§ 257.5 through 257.30 independent of any State enforcement program. Section 7002 provides that any person may commence a civil action on his own behalf against any person who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order that has become effective pursuant to RCRA. Once the self-implementing provisions in §§ 257.5 through 257.30 become

effective, they constitute the basis for citizen enforcement. Federal enforcement by EPA can be done only in States that EPA has determined have inadequate programs. EPA has no enforcement authorities under Section 4005 in approved States. EPA does, however, retain enforcement authority under section 7003 to protect against imminent and substantial endangerment to health and the environment in all States. A more complete discussion of the Subtitle D enforcement issue can be found in the MSWLF Criteria.

VII. Executive Order No. 12866—Regulatory Impacts Analysis

Under Executive Order No. 12866, EPA must determine whether a new regulation is significant. A significant regulatory action is defined as an action likely to result in a rule that may:

1. Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;
2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in Executive Order 12866.

Pursuant to the terms of the Executive Order 12866, it has been determined that this rule is a ''significant regulatory action'' because it raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

A. Cost Impacts

The Agency estimates that of the total 1900 construction and demolition waste facilities, 718 would be potentially affected. The national annual low-end cost is estimated to be $10.0M. This low-end cost assumes that all CESQG hazardous waste is separated at the point of generation for the construction industry. It assumes there will be no CESQG waste generated by the demolition industry. The CESQG portion is disposed of at hazardous waste facilities while the remaining non-hazardous waste portion is disposed of in non-upgraded construction and demolition waste facilities. The costs include the separation costs at the point of generation, costs of transporting/disposing the hazardous portion at a Subtitle C facility, and the costs of screening incoming wastes at all of the construction and demolition waste facilities. There are hundreds of thousands of construction and demolition sites active in the U.S. each year. EPA assumes that demolition rubble will not be CESQG waste and affected by this rule. Therefore, separation costs are likely to occur only at construction sites and the 3,742 industrial facilities with on-site non-hazardous waste landfills. The Agency requests comment on the labor and capital necessary to conduct separation at these facilities. The Agency also requests comment on how frequently CESQG hazardous waste is currently being separated at construction sites at these industrial facilities. In addition, the Agency requests comment on the transportation costs to bring small amounts of hazardous wastes from construction sites to a treatment and disposal facility.

The national annual high-end cost is estimated to be $47.0M. This high-end cost assumes that generators will not separate out CESQG waste from 30% of construction and demolition wastes and that this fraction will be sent to upgraded construction and demolition waste facilities that elect to comply with today's proposed requirements. Under this scenario, the Agency assumed that most medium to large size construction and demolition waste facilities (162) will upgrade. The costs include separation costs at the point of generation for waste not going to an upgraded landfill, costs of screening incoming wastes at 80% of the affected construction and demolition waste facilities which do not upgrade and costs for 20% of the affected construction and demolition wastes facilities to upgrade. Upgrade costs include ground-water monitoring and corrective action.

This rule allows States and individual owners/operators to choose among compliance options. States and owners/operators may determine that facility screening is a successful method to prevent the receipt of CESQG hazardous wastes. Other States and owners/operators may determine that upgrading is necessary or there is a market for upgraded landfill capacity for generators and, as such, some facilities may upgrade. If more States and owners/operators elect to use screening then the estimated cost of this proposal would be closer to the lower-bound estimate.

The full analysis that was used to determine the range of costs for this rulemaking is presented in the Cost and Economic Impact Analysis of the CESQG Rule.

B. Benefits

The Agency believes that the requirements being proposed for non-municipal solid waste disposal facilities will result in more Subtitle D facilities providing protection against ground-water contamination from the disposal of small amounts of hazardous waste. Today's action will force some non-municipal solid waste disposal facilities to either upgrade and install ground-water monitoring and perform corrective action if contamination is detected, or stop accepting hazardous waste. Today's action will also cause some generators of CESQG wastes to separate out these small quantities of hazardous waste and send them to more heavily regulated facilities (i.e., Subtitle C facilities or MSWLFs). These are the direct benefits of today's proposal, however, additional benefits will be realized due to this proposal.

Today's proposal will ensure that any ground-water contamination that is occurring at facilities that continue to accept small quantities of hazardous waste will be quickly detected and corrective action can be initiated sooner.

To the extent that existing non-municipal facilities that receive CESQG hazardous waste upgrade their facilities to include ground-water monitoring and to the extent that new facilities will be sited in acceptable areas with ground-water monitoring, public confidence in these types of facilities will be increased. Having public confidence increased would result in these types of facilities being easier to site in the future.

VIII. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) of 1980 requires Federal agencies to consider ''small entities'' throughout the regulatory process. Section 603 of the RFA requires an initial screening analysis to be performed to determine whether small entities will be adversely affected by the regulation. If affected small entities are identified, regulatory alternatives must be considered to mitigate the potential impacts. The Agency believes that it is unlikely that any industry will face significant impacts under the low-end scenario.

To help mitigate these impacts, EPA is proposing the minimum regulatory requirements allowed under the statute (which are still protective of human health and the environment). As a result, EPA believes that the lower-

bound scenario, where demolition firms separate-out their CESQG waste and continue to send the non-hazardous portion to landfills not subject to the revised Part 257 standards, is the most likely scenario and that small entities will not be significantly impacted.

The Agency's full analysis of the impacts on small entities can be found in the Cost and Economic Impact Analysis of the CESQG Rule.

IX. Paperwork Reduction Act

The information collection requirements in today's proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork reduction Act, 44 U.S.C. 3501 et seq. Submit comments on these requirements to the Office of Information and Regulatory Affairs, OMB, 726 Jackson Place, NW, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' The final rule will respond to any OMB comments or public comments on the information collection requirements.

X. Environmental Justice Issues

Executive Order 12898 requires Federal Agencies, to the greatest extent practicable, to identify and address disproportionately high adverse human health or environmental effects of its activities on minority and low-income populations.

The Agency does not currently have data on the demographics of populations surrounding the facilities affected by today's proposal (i.e., construction and demolition landfills). The Agency does not believe, however, that today's proposed rule will adversely impact minority or low-income populations. The facilities affected by the proposal currently pose limited risk to surrounding populations (see section V.B.1.d of today's preamble). In addition, today's proposal would further reduce this risk by requiring the affected facilities to either stop accepting CESQG hazardous waste or to begin ground-water monitoring and, if applicable, corrective action.

Thus, today's proposal would further reduce the already low risk for populations surrounding construction and demolition landfills, regardless of the population's ethnicity or income level. Minority and low-income populations would not be adversely affected.

XI. Unfunded Mandates Reform Act

Under section 202 of the Unfunded Mandates Reform Act of 1995 (the Act), Pub. L. 104–4, which was signed into law on March 22, 1995, EPA generally must prepare a written statement for rules with Federal mandates that may result in estimated costs to State, local, and tribal governments in the aggregate, or to the private sector, of $100 million or more in any one year. When such a statement is required for EPA rules, under section 205 of the Act EPA must identify and consider alternatives, including the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. EPA must select that alternative, unless the Administrator explains in the final rule why it was not selected or it is inconsistent with law. Before EPA establishes regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must develop under section 203 of the Act a small government agency plan. The plan must provide for notifying potentially affected small governments, giving them meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising them on compliance with the regulatory requirements.

EPA has determined that the proposal discussed in this notice does not include a Federal mandate that may result in estimated costs of $100 million or more to State, local, or tribal governments in the aggregate, or to the private sector, in any one year. EPA has estimated that the annual costs of the proposed rule on generators of CESQG wastes and those entities which own or operate CESQG disposal facilities, including the private sector, States, local or tribal governments, range from $10.0M to $47.0M.

In addition to compliance costs for those who own or operate CESQG facilities, States will have a cost of developing permit programs or other systems of prior approval to ensure that CESQG facilities comply with the proposal, once it is promulgated. Adoption and implementation of such State permit programs is required under RCRA section 4005(c)(1)(B). 42 USC 6945(c)(1)(B). Forty-two states already have adopted and implemented permit programs to ensure compliance with the MSWLF rule (40 CFR part 258) which EPA has approved as ''adequate.'' The Agency has estimated that the costs for a state to develop an application for approval of an MSWLF permit program to be approximately $15,000. Because these state permit programs already contain ground water monitoring, corrective action, and location standards for MSWLFs that are quite similar to those in this proposal, EPA believes that the additional costs for states to revise their permit programs to reflect the CESQG requirements are not expected to be significant. Also, because of the reduced level of regulatory requirements contained in this CESQG proposal as compared to the MSWLF Part 258 criteria, state costs for preparing applications for approval of a CESQG permit program should be considerably less than that $15,000 figure.

Indian tribes are not required to develop permit programs for approval by EPA, but the Agency believes tribal governments are authorized to development such permit programs and have them approved by EPA. EPA has estimated that it will cost a tribal government approximately $7,000 to prepare an application for approval of a MSWLF program. Because of the reduced regulatory provisions of the CESQG proposal, EPA expects that the costs which a tribal government might face in developing a permit program for CESQG facilities should be less than $7,000.

EPA is also proposing to revise the requirements for generators of CESQG hazardous waste. These amendments to 40 CFR 261.5 (f)(3) and (g)(3) are proposed pursuant to RCRA section 3001 (d)(4), which is a provision added by HSWA. The § 261.5 amendments are also more stringent than current Federal hazardous waste regulations. Subtitle C regulatory changes carried out under HSWA authority become effective in all states at the same time and are implemented by EPA until states revise their programs. States are obligated to revise their hazardous waste programs and seek EPA authorization of these program revisions, unless their programs already incorporate more stringent provisions. The Agency believes approximately 24 states already have more stringent CESQG hazardous waste provisions and would not have to take action because of these regulatory changes. About 26 states would have to revise their hazardous waste programs and seek authorization. States generally incorporate a number of hazardous waste program revisions and seek authorization for them at one time. The Agency estimates the State costs associated with Subtitle C program revision/authorization activity are approximately $7,320 per state. Since this estimate covers several separate program components at one time, the cost for revisions only to § 261.5 in the remaining 26 States would be substantially less.

As to section 203 of the Act, EPA has determined that the requirements being proposed today will not significantly or uniquely affect small governments, including tribal governments. EPA

recognizes that small governments may own or operate solid waste disposal facilities that receive CESQG waste. However, EPA currently estimates that the majority of construction and demolition landfills, which are the primary facilities likely to be subject to any final rule, are owned by the private sector. Moreover, EPA is aware that a number of states already require owners/operators of C&D landfills to meet regulatory standards that are similar to those being proposed today. Thus, EPA believes that the proposed rule contains no regulatory requirements that significantly or uniquely affect small governments.

EPA has, however, sought meaningful and timely input from the private sector, states, and small governments on the development of this notice. Prior to issuing this proposed rule, EPA met with members of the private sector as discussed earlier in the preamble. In addition, EPA met twice with an ''Industrial D'' Steering Committee of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) to discuss the contents of today's proposal. The Agency provided a draft of the proposed rule to the ASTSWMO Steering Committee and incorporated comments that were received.

Finally, included in this proposal is a provision that would allow certain small CESQG landfills which are located in either arid or remote locations and which service small communities to utilize alternative methods of ground water monitoring. Prior to developing this provision, which is also being proposed in a separate notice applicable to small MSWLF facilities that are in arid or remote locations, EPA held a series of public meetings. These meetings were held in June 1994 in Texas, Utah, Alaska, and Washington, DC. EPA received comment from a variety of parties, including States and small governments. Through these meetings and publication of this notice, EPA expects that any applicable requirements of section 203 of the Act will have been satisfied prior to promulgating a final rule.

XII. References

1. Background Document for the CESQG Rule, U.S. EPA, 1995

2. Generation and Management of CESQG Waste, U.S. EPA, Office of Solid Waste, Prepared by ICF, July 1994.

3. Screening Survey of Industrial Subtitle D Establishments, Draft Final Report, U.S. EPA, Office of Solid Waste, Prepared by Westat, December 29, 1987.

4. Construction Waste and Demolition Debris Recycling . . . A Primer, The Solid Waste Association of North America (SWANA), October 1993, Publication #: GR-REC 300

5. List of Industrial Waste Landfills and Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by Eastern Research Group, September 30, 1994.

6. Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by ICF, May, 1995.

7. National Small Quantity Hazardous Waste Generator Survey, U.S. EPA, Office of Solid Waste, Prepared by Abt Associates, Inc., February 1985.

8. Damage Cases: Construction and Demolition Waste Landfills, U.S. EPA, Office of Solid Waste, Prepared by ICF, May, 1995.

9. Solid Waste Disposal Facility Criteria, 56 FR 50977, October 9, 1991

10. Cost and Economic Impact Analysis of the CESQG Rule, Prepared by ICF, 1995.

List of Subjects

40 CFR Part 257

Environmental protection, Reporting and recordkeeping requirements, Waste disposal.

40 CFR Part 261

Hazardous materials, Recycling, Waste treatment and disposal.

40 CFR Part 271

Administrative practice and procedure, Hazardous materials transportation, Hazardous waste, Indian-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Dated: May 15, 1995.

Carol M. Browner,

Administrator.

For reasons set out in the preamble, Title 40 of the Code of Federal Regulations is proposed to be amended as follows:

PART 257—CRITERIA FOR CLASSIFICATION OF SOLID WASTE DISPOSAL FACILITIES AND PRACTICES

1. The authority citation for part 257 is revised to read as follows:

Authority: 42 U.S.C. 6907(a)(3), 6912(a)(1), 6944(a) and 6949(c), 33 U.S.C. 1345 (d) and (e).

2. Sections 257.1 through 257.4 are designated as Subpart A—Classification of Solid Waste Disposal Facilities and Practices.

3. Section 257.1, paragraph (a) is revised to read as follows:

§ 257.1 Scope and purpose.

(a) Unless otherwise provided, the criteria in §§ 257.1–257.4 are adopted for determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment under sections 1008(a)(3) and 4004(a) of the Resource Conservation and Recovery Act (The Act). Unless otherwise provided, the criteria in §§ 257.5–257.30 are adopted for purposes of ensuring that non-municipal solid waste disposal facilities that receive conditionally exempt small quantity generator (CESQG) waste do not present risks to human health and the environment taking into account the practicable capability of such facilities in accordance with section 4010(c) of the Act.

(1) Facilities failing to satisfy either the criteria in §§ 257.1–257.4 or §§ 257.5–257.30 are considered open dumps, which are prohibited under section 4005 of the Act.

(2) Practices failing to satisfy either the criteria in §§ 257.1–257.4 or §§ 257.5–257.30 constitute open dumping, which is prohibited under section 4005 of the Act.

* * * * *

4. Part 257 is amended by adding a new subpart B to read as follows:

Subpart B—Disposal Standards for the Receipt of Conditionally Exempt Small Quantity Generator (CESQG) Wastes at Non-Municipal Solid Waste Disposal Facilities

Sec.

Supart B—Disposal Standards for the Receipt of Confidenfiality Exempt Small Generator (CESQG) Wastes at Non-Municpal Solid Waste Disposal Facilities

§ 257.5 Facility standards for owners/operators of non-municipal solid waste disposal facilities that receive Conditionally Exempt Small Quantity Generator (CESQG) waste.

(a) Applicability. (1) The requirements in this section apply to owners/operators of any non-municipal solid waste disposal facility that receives CESQG hazardous waste, as defined in 40 CFR 261.5. Any owner/operator of a non-municipal solid waste disposal facility that receives CESQG hazardous waste continues to be subject to the requirements in §§ 257.3–2, 257.3–3, 257.3–5, 257.3–6, 257.3–7, and 257.3–8 (a), (b), and (d).

(2) Any non-municipal solid waste disposal facility that does not meet the requirements in §§ 257.7 through 257.12 by [Insert date 18 months after date of publication of the final rule in the **Federal Register**] and the requirements in §§ 257.21 through 257.28 by [Insert date 24 months after date of publication of the final rule in the **Federal Register**] may not receive CESQG hazardous waste. Such a non-municipal solid waste disposal facility continues to be subject to the requirements in §§ 257.1–257.4.

(b) Definitions. Active life means the period of operation beginning with the initial receipt of solid waste and ending at the final receipt of solid waste.

Existing facility means any non-municipal solid waste disposal facility that is receiving CESQG hazardous waste as of the appropriate dates specified in § 257.5(a)(1).

Lateral expansion means a horizontal expansion of the waste boundaries of an existing non-municipal solid waste disposal facility.

New facility means any non-municipal solid waste disposal facility that has not received CESQG hazardous waste prior to [Insert date 18 months after date of publication of the final rule in the **Federal Register**].

State means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, and Indian Tribes.

State/Tribal Director means the chief administrative officer of the State/Tribal agency responsible for implementing the State/Tribal permit program for Subtitle D regulated facilities.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

Waste management unit boundary means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

Location Restrictions

§ 257.7 Airport Safety

(a) Owners or operators of new facilities, existing facilities, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the unit does not pose a bird hazard to aircraft.

(b) Owners or operators proposing to site new facilities and lateral expansions located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).

(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.

(d) For purposes of this section:

(1) *Airport* means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(2) *Bird hazard* means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

§ 257.8 Floodplains.

(a) Owners or operators of new facilities, existing facilities, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.

(b) For purposes of this section:

(1) *Floodplain* means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.

(2) *100-year flood* means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

(3) *Washout* means the carrying away of solid waste by waters of the base flood.

§ 257.9 Wetlands.

(a) Owners or operators of new facilities and lateral expansions shall not locate such facilities in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:

(1) Where applicable under section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that a practicable alternative to the proposed landfill is available which does not involved wetlands is clearly rebutted:

(2) The construction and operation of the MSWLF unit will not:

(i) Cause or contribute to violations of any applicable State water quality standard,

(ii) Violate any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act,

(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, and

(iv) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;

(3) The facility will not cause or contribute to significant degradation of wetlands. The owner/operator must demonstrate the integrity of the facility and its ability to protect ecological resources by addressing the following factors:

(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the facility;

(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the facility;

(iii) The volume and chemical nature of the waste managed in the facility;

(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the waste;

(v) The potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and

(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

(4) To the extent required under section 404 of the Clean Water Act or

applicable State wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and

(5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.

(b) For purposes of this section, wetlands means those areas that are defined in 40 CFR 232.2(r).

§ 257.10 Fault areas.

(a) Owners or operators of new facilities and lateral expansions shall not locate such facilities within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the Director of an approved State that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the facility and will be protective of human health and the environment.

(b) For the purposes of this section:

(1) *Fault* means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(2) *Displacement* means the relative movement of any two sides of a fault measured in any direction.

(3) *Holocene* means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

§ 257.11 Seismic impact zones.

(a) Owners or operators of new facilities and lateral expansions shall not locate such facilities in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State that all containment structures are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.

(b) For the purposes of this section:

(1) *Seismic impact zone* means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 250 years.

(2) *Maximum horizontal acceleration in lithified earth material* means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

(3) *Lithified earth material* means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

§ 257.12 Unstable areas.

(a) Owners or operators of new facilities, existing facilities, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the facility design to ensure that the integrity of the structural components of the facility will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:

(1) On-site or local soil conditions that may result in significant differential settling;

(2) On-site or local geologic or geomorphologic features; and

(3) On-site or local human-made features or events (both surface and subsurface).

(b) For purposes of this section:

(1) *Unstable area* means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terranes.

(2) *Structural components* means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the facility that is necessary for protection of human health and the environment.

(3) *Poor foundation conditions* means those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of the facility.

(4) *Areas susceptible to mass movement* means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the facility, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluction, block sliding, and rock fall.

(5) *Karst terranes* means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

§ 257.13 Deadline for making demonstrations.

(a) Existing facilities that cannot make the demonstration specified in §§ 257.7(a) pertaining to airports, 257.8(a) pertaining to floodplains, or 257.12(a) pertaining to unstable areas by [Insert date 18 months after date of publication of the final rule in the **Federal Register**] must not accept CESQG hazardous waste for disposal.

Ground-Water Monitoring and Corrective Action

§ 257.21 Applicability.

(a) The requirements in this section apply to facilities identified in § 257.5(a), except as provided in paragraph (b) of this section.

(b) Ground-water monitoring requirements under §§ 257.22 through 257.25 may be suspended by the Director of an approved State for a facility identified in § 257.5(a) if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that facility to the uppermost aquifer during the active life of the unit plus 30 years. This demonstration must be certified by a qualified ground-water scientist and approved by the Director of an approved State, and must be based upon:

(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(c) Owners and operators of facilities identified in § 257.5(a) must comply with the ground-water monitoring requirements of this section according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:

(1) Existing facilities and lateral expansions must be in compliance with the ground-water monitoring requirements specified in §§ 257.22–257.25 by [Insert date 2 years after date of publication of the final rule in the **Federal Register**]

(2) New facilities identified in § 257.5(a) must be in compliance with the ground-water monitoring requirements specified in §§ 257.22–257.25 before waste can be placed in the unit.

(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing facilities and lateral expansions to comply with the ground-water monitoring requirements specified in §§ 257.22–257.25. This schedule must ensure that 50 percent of all existing facilities are in compliance by [Insert date 2 years after date of publication of the final rule in the **Federal Register**] and all existing facilities are in compliance by [Insert date 3 years after date of publication of the final rule in the **Federal Register**]. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:

(1) Proximity of human and environmental receptors;

(2) Design of the unit;

(3) Age of the unit;

(4) The size of the unit;

(5) Resource value of the underlying aquifer, including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users; and

(iii) Ground-water quality and quantity.

(e) Once established at a facility, ground-water monitoring shall be conducted throughout the active life plus 30 years. The Director of an approved State may decrease the 30 year period if the owner/operator demonstrates that a shorter period of time is adequate to protect human health and the environment and the Director approves the demonstration.

(f) For the purposes of this section, a qualified ground-water scientist is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in ground-water hydrology and related fields as may be demonstrated by State registration, professional Certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding ground-water monitoring, contaminant fate and transport, and corrective-action.

(g) The Director of an approved State may establish alternative schedules for demonstrating compliance with § 257.22(d)(2), pertaining to notification of placement of certification in operating record; § 257.24(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; § 257.24(c)(2) and (3), pertaining to an assessment monitoring program; § 257.25(b), pertaining to sampling and analyzing appendix II of Part 258 constituents; § 257.25(d)(1), pertaining to placement of notice (appendix II of Part 258 constituents detected) in record and notification of notice in record; § 257.25(d)(2), pertaining to sampling for appendix I and II of Part 258; § 257.25(g), pertaining to notification (and placement of notice in record) of SSI above ground-water protection standard; §§ 257.25(g)(1)(iv) and 257.26(a), pertaining to assessment of corrective measures; § 257.27(a), pertaining to selection of remedy and notification of placement in record; § 257.5–2.8(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and § 257.28(f), pertaining to notification of placement in record (certification of remedy completed).

(h) Directors of approved States may allow any non-municipal solid waste disposal unit meeting the criteria in paragraph (i) of this section to:

(1) Use alternatives to the ground-water monitoring system prescribed in §§ 257.22 through 257.25 so long as the alternatives will detect and, if necessary, assess the nature or extent of contamination from the non-municipal solid waste disposal unit on a site-specific basis; or establish and use, on a site-specific basis, an alternative list of indicator parameters for some or all of the constituents listed in Appendix I (appendix I of part 258 of this chapter). Alternative indicator parameters approved by the Director of an approved State or Tribe under this section must ensure detection of contamination from the non-municipal solid waste disposal unit.

(2) If contamination is detected through the use of any alternative to the ground-water monitoring system prescribed in §§ 257.22 through 257.25, the non-municipal solid waste disposal unit owner or operator must perform expanded monitoring to determine whether the detected contamination is an actual release from the non-municipal solid waste disposal unit and, if so, to determine the nature and extent of the contamination. The non-municipal solid waste disposal unit owner or operator must submit the results from expanded monitoring to the Director of the approved State within 60 days from the time of detection.

(i) If detection indicates that contamination from the non-municipal solid waste disposal unit has reached the saturated zone, the owner or operator must install ground-water monitoring wells and sample these wells in accordance with §§ 257.22 through 257.25.

(ii) If detection indicates that contamination from the non-municipal solid waste disposal unit is present in the unsaturated zone or on the surface, the owner or operator must, within 60 days from the time expanded monitoring is completed, submit for approval by the Director of an approved State adequate corrective measures to prevent further contaminant migration, and where appropriate, to remediate contamination. The proposed corrective measures are subject to revision and approval by the Director of the approved State. The owner or operator must implement the corrective measures according to a schedule established by the Director of the approved State.

(3) When considering whether to allow alternatives to a ground-water monitoring system prescribed in §§ 257.22 through 257.25, including alternative indicator parameters, the Director of an approved State shall consider at least the following factors:

(i) The geological and hydrogeological characteristics of the site;

(ii) The impact of manmade and natural features on the effectiveness of an alternative technology;

(iii) Climatic factors that may influence the selection, use, and reliability of alternative ground-water monitoring procedures; and

(iv) the effectiveness of indicator parameters in detecting a release.

(4) The Director of an approved State can require an owner or operator to comply with the requirements of §§ 257.22 through 257.25, where it is determined by the Director that using alternatives to ground-water monitoring approved under this subsection are inadequate to detect contamination and,

if necessary, to assess the nature and extent of contamination.

(i) Directors of approved States can use the flexibility in paragraph (h) of this section for any non-municipal solid waste disposal facility that receives CESQG waste, if the non-municipal solid waste disposal facility:

(1) Disposes of less than 20 tons of non-municipal waste daily, based on an annual average, and,

(2) Has no evidence of ground-water contamination, and either,

(3) Serves a community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility, or

(4) Serves a community that has no practicable waste management alternative and the non-municipal solid waste disposal facility is located in an area that annually receives less than or equal to 25 inches of precipitation.

(5) Owners/operators of any non-municipal solid waste disposal facility that meets the criteria in paragraph (i) of this section must place in the operating record information demonstrating this.

§ 257.22 Ground-water monitoring systems.

(a) A ground-water monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer (as defined in § 257.21(b)) that:

(1) Represent the quality of background ground water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background ground-water quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Represent the quality of ground water passing the relevant point of compliance specified by the Director of an approved State or at the waste management unit boundary in an unapproved State. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State or at the waste management unit boundary in an unapproved State that ensures detection of ground-water contamination in the uppermost aquifer. The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the facility. In determining the relevant point of compliance the State Director shall consider at least the following factors: The hydrogeologic characteristics of the facility and surrounding land, the volume and physical and chemical characteristics of the leachate, the quantity, quality and direction of flow of ground water, the proximity and withdrawal rate of the ground-water users, the availability of alternative drinking water supplies, the existing quality of the ground water, including other sources of contamination and their cumulative impacts on the ground water, and whether the ground water is currently used or reasonably expected to be used for drinking water, public health, safety, and welfare effects, and practicable capability of the owner or operator. When physical obstacles preclude installation of ground-water monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Director of an approved State that ensures detection of groundwater contamination in the uppermost aquifer.

(b) The Director of an approved State may approve a multi-unit ground-water monitoring system instead of separate ground-water monitoring systems for each unit when the facility has several units, provided the multi-unit ground-water monitoring system meets the requirement of § 257.22(a) and will be as protective of human health and the environment as individual monitoring systems for each unit, based on the following factors:

(1) Number, spacing, and orientation of the units;

(2) Hydrogeologic setting;

(3) Site history;

(4) Engineering design of the units, and

(5) Type of waste accepted at the units.

(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water.

(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(d) The number, spacing, and depths of monitoring systems shall be:

(1) Determined based upon site-specific technical information that must include thorough characterization of:

(i) Aquifer thickness, ground-water flow rate, ground-water flow direction including seasonal and temporal fluctuations in ground-water flow; and

(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: Thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(2) Certified by a qualified ground-water scientist or approved by the Director of an approved State. Within 14 days of this certification, the owner or operator must notify the State Director that the certification has been placed in the operating record.

§ 257.23 Ground-water sampling and analysis requirements.

(a) The ground-water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of ground-water quality at the background and downgradient wells installed in compliance with § 257.22(a). The owner or operator must notify the State Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:

(1) Sample collection;

(2) Sample preservation and shipment;

(3) Analytical procedures;

(4) Chain of custody control; and

(5) Quality assurance and quality control.

(b) The ground-water monitoring program must include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents and other monitoring parameters in ground-water samples. Ground-water samples shall not be field-filtered prior to laboratory analysis.

(c) The sampling procedures and frequency must be protective of human health and the environment.

(d) Ground-water elevations must be measured in each well immediately prior to purging, each time ground water is sampled. The owner or operator must determine the rate and direction of ground-water flow each time ground water is sampled. Ground-water elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in ground-water flow which could preclude accurate determination of ground-water flow rate and direction.

(e) The owner or operator must establish background ground-water quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular ground-water monitoring program that applies to the unit, as determined under § 257.24(a), or § 257.25(a). Background ground-water quality may be established at wells that are not located hydraulically upgradient from the unit if it meets the requirements of § 257.22(a)(1).

(f) The number of samples collected to establish ground-water quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (g) of this section. The sampling procedures shall be those specified under § 257.24(b) for detection monitoring, § 257.25(b) and (d) for assessment monitoring, and § 257.26(b) for corrective action.

(g) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method that meets the performance standards of § 257.23(h). The owner or operator must place a justification for this alternative in the operating record and notify the State Director of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of § 257.23(h).

(h) Any statistical method chosen under § 257.23(g) shall comply with the following performance standards, as appropriate:

(1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(3) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(4) If a tolerance interval or a predictional interval is used to evaluate ground-water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(i) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular ground-water monitoring program that applies to the unit, as determined under §§ 257.24(a) or 257.25(a).

(A) In determining whether a statistically significant increase has occurred, the owner or operator must compare the ground-water quality of each parameter or constituent at each monitoring well designated pursuant to § 257.22(a)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.

(B) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.

§ 257.24 Detection monitoring program.

(a) Detection monitoring is required at facilities identified in § 257.5(a) at all ground-water monitoring wells defined under §§ 257.22(a)(1) and (a)(2). At a minimum, a detection monitoring program must include the monitoring for the constituents listed in appendix I of part 258 of this chapter.

(1) The Director of an approved State may delete any of the appendix I (Appendix I of part 258 of this chapter) monitoring parameters for a unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

(2) The Director of an approved State may establish an alternative list of inorganic indicator parameters for a unit, in lieu of some or all of the heavy metals (constituents 1–15 in appendix I to part 258 of this chapter), if the alternative parameters provide a reliable indication of inorganic releases from the unit to the ground water. In determining alternative parameters, the Director shall consider the following factors:

(i) The types, quantities, and concentrations of constituents in waste managed at the unit;

(ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the unit;

(iii) The detectability of indicator parameters, waste constituents, and reaction products in the ground water; and

(iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(b) The monitoring frequency for all constituents listed in appendix I to part 258 of this chapter, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility plus 30 years. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the appendix I (appendix I of part 258 of this chapter) constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events. The Director of an approved State may specify an appropriate alternative frequency for repeated sampling and analysis for appendix I (appendix I of part 258 of this chapter) constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life plus 30 years. The alternative frequency during the active life shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

(1) Lithology of the aquifer and unsaturated zone;

(2) Hydraulic conductivity of the aquifer and unsaturated zone;

(3) Ground-water flow rates;

(4) Minimum distance between upgradient edge of the unit and downgradient monitoring well screen (minimum distance of travel); and

(5) Resource value of the aquifer.

(c) If the owner or operator determines, pursuant to § 257.23(g) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in appendix I to part 258 of this chapter, or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under § 257.22(a)(2), the owner or operator:

(1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the State/Tribal Director that this notice was placed in the operating record; and

(2) Must establish an assessment monitoring program meeting the requirements of § 257.25 within 90 days except as provided for in paragraph (c)(3) of this section.

(3) The owner/operator may demonstrate that a source other than the unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Director of an approved State and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in § 257.25.

§ 257.25 Assessment monitoring program.

(a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in appendix I of part 258 of this chapter or in the alternative list approved in accordance with § 257.24(a)(2).

(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the ground water for all constituents identified in appendix II of part 258 of this chapter. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete appendix II (appendix II of part 258 of this chapter) analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents. The Director of an approved State may specify an appropriate subset of wells to be sampled and analyzed for appendix II (appendix II of part 258 of this chapter) constituents during assessment monitoring. The Director of an approved State may delete any of the appendix II (appendix II of part 258 of this chapter) monitoring parameters for a unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

(c) The Director of an approved State may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of appendix II (appendix II of part 258) constituents required by § 257.25(b), during the active life plus 30 years considering the following factors:

(1) Lithology of the aquifer and unsaturated zone;

(2) Hydraulic conductivity of the aquifer and unsaturated zone;

(3) Ground-water flow rates;

(4) Minimum distance between upgradient edge of the unit and downgradient monitoring well screen (minimum distance of travel);

(5) Resource value of the aquifer; and

(6) Nature (fate and transport) of any constituents detected in response to this section.

(d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must:

(1) Within 14 days, place a notice in the operating record identifying the appendix II (appendix II of part 258 of this chapter) constituents that have been detected and notify the State Director that this notice has been placed in the operating record;

(2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by § 257.22(a), conduct analyses for all constituents in appendix I (appendix I of part 258 of this chapter) to this part or in the alternative list approved in accordance with § 257.24(a)(2), and for those constituents in appendix II to part 258 that are detected in response to paragraph (b) of this section, and record their concentrations in the facility

operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events. The Director of an approved State may specify an alternative monitoring frequency during the active life plus 30 years for the constituents referred to in this paragraph. The alternative frequency for appendix I (appendix I of part 258 of this chapter) constituents, or the alternative list approved in accordance with § 257.24(a)(2), during the active life shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (c) of this section;

(3) Establish background concentrations for any constituents detected pursuant to paragraphs (b) or (d)(2) of this section; and

(4) Establish ground-water protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The ground-water protection standards shall be established in accordance with paragraphs (h) or (i) of this section.

(e) If the concentrations of all appendix II (appendix II of part 258 of this chapter) constituents are shown to be at or below background values, using the statistical procedures in § 257.23(g), for two consecutive sampling events, the owner or operator must notify the State Director of this finding and may return to detection monitoring.

(f) If the concentrations of any appendix II (appendix II of part 258 of this chapter) constituents are above background values, but all concentrations are below the ground-water protection standard established under paragraphs (h) or (i) of this section, using the statistical procedures in § 257.23(g), the owner or operator must continue assessment monitoring in accordance with this section.

(g) If one or more appendix II (appendix II of part 258 of this chapter) constituents are detected at statistically significant levels above the ground-water protection standard established under paragraphs (h) or (i) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the appendix II (appendix II of part 258 of this chapter) constituents that have exceeded the ground-water protection standard and notify the State Director and all appropriate local government officials that the notice has been placed in the operating record. The owner or operator also:

(1) (i) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(ii) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with § 257.25(d)(2);

(iii) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with § 257.25(g)(1); and

(iv) Must initiate an assessment of corrective measures as required by § 257.26 within 90 days; or

(2) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Director of an approved State and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to § 257.25, and may return to detection monitoring if the appendix II (appendix II of part 258 of this chapter) constituents are at or below background as specified in § 257.25(e). Until a successful demonstration is made, the owner or operator must comply with § 257.25(g) including initiating an assessment of corrective measures.

(h) The owner or operator must establish a ground-water protection standard for each appendix II (appendix II of part 258 of this chapter) constituent detected in the ground-water. The ground-water protection standard shall be:

(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;

(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with § 257.22(a)(1); or

(3) For constituents for which the background level is higher than the MCL identified under paragraph (h)(1) of this section or health based levels identified under § 257.25(i)(1), the background concentration.

(i) The Director of an approved State may establish an alternative ground-water protection standard for constituents for which MCLs have not been established. These ground-water protection standards shall be appropriate health based levels that satisfy the following criteria:

(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);

(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;

(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and

(4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(j) In establishing ground-water protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:

(1) Multiple contaminants in the ground water;

(2) Exposure threats to sensitive environmental receptors; and

(3) Other site-specific exposure or potential exposure to ground water.

§ 257.26 Assessment of corrective measures.

(a) Within 90 days of finding that any of the constituents listed in appendix II (Appendix II of part 258 of this chapter) have been detected at a statistically significant level exceeding the ground-water protection standards defined under § 257.25 (h) or (i), the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in § 257.25.

(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under § 257.27, addressing at least the following:

(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential

remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

(2) The time required to begin and complete the remedy;

(3) The costs of remedy implementation; and

(4) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

(d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

§ 257.27 Selection of remedy.

(a) Based on the results of the corrective measures assessment conducted under § 257.26, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the State Director, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.

(b) Remedies must:

(1) Be protective of human health and the environment;

(2) Attain the ground-water protection standard as specified pursuant to §§ 257.25(h) or (i);

(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of appendix II (appendix II of part 258 of this chapter) constituents into the environment that may pose a threat to human health or the environment; and

(4) Comply with standards for management of wastes as specified in § 257.28(d).

(c) In selecting a remedy that meets the standards of § 257.27(b), the owner or operator shall consider the following evaluation factors:

(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

(i) Magnitude of reduction of existing risks;

(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;

(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;

(v) Time until full protection is achieved;

(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

(vii) Long-term reliability of the engineering and institutional controls; and

(viii) Potential need for replacement of the remedy.

(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

(i) The extent to which containment practices will reduce further releases;

(ii) The extent to which treatment technologies may be used.

(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

(i) Degree of difficulty associated with constructing the technology;

(ii) Expected operational reliability of the technologies;

(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(iv) Availability of necessary equipment and specialists; and

(v) Available capacity and location of needed treatment, storage, and disposal services.

(4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

(5) The degree to which community concerns are addressed by a potential remedy(s).

(d) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d)(1) through (d)(8) of this section. The owner or operator must consider the following factors in determining the schedule of remedial activities:

(1) Extent and nature of contamination;

(2) Practical capabilities of remedial technologies in achieving compliance with ground-water protection standards established under §§ 257.25(g) or (h) and other objectives of the remedy;

(3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

(4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

(5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(6) Resource value of the aquifer including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users;

(iii) Ground-water quantity and quality;

(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent;

(v) The hydrogeologic characteristic of the facility and surrounding land;

(vi) Ground-water removal and treatment costs; and

(vii) The cost and availability of alternative water supplies.

(7) Practicable capability of the owner or operator.

(8) Other relevant factors.

(e) The Director of an approved State may determine that remediation of a release of an appendix II (appendix II of part 258 of this chapter) constituent from the unit is not necessary if the owner or operator demonstrates to the Director of the approved state that:

(1) The ground-water is additionally contaminated by substances that have originated from a source other than the unit and those substances are present in concentrations such that cleanup of the release from the unit would provide no significant reduction in risk to actual or potential receptors; or

(2) The constituent(s) is present in ground water that:

(i) Is not currently or reasonably expected to be a source of drinking water; and

(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the ground-water protection standards established under § 257.25 (h) or (i); or

(3) Remediation of the release(s) is technically impracticable; or

(4) Remediation results in unacceptable cross-media impacts.

(f) A determination by the Director of an approved State pursuant to

paragraph (e) of this section shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the ground-water, to prevent exposure to the ground-water, or to remediate the ground-water to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

§ 257.28 Implementation of the corrective action program.

(a) Based on the schedule established under § 257.27(d) for initiation and completion of remedial activities the owner/operator must:

(1) Establish and implement a corrective action ground-water monitoring program that:

(i) At a minimum, meets the requirements of an assessment monitoring program under § 257.25;

(ii) Indicates the effectiveness of the corrective action remedy; and

(iii) Demonstrates compliance with ground-water protection standard pursuant to paragraph (e) of this section.

(2) Implement the corrective action remedy selected under § 257.27; and

(3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to § 257.27. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

(i) Time required to develop and implement a final remedy;

(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iv) Further degradation of the ground-water that may occur if remedial action is not initiated expeditiously;

(v) Weather conditions that may cause hazardous constituents to migrate or be released;

(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

(vii) Other situations that may pose threats to human health and the environment.

(b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of § 257.27(b) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under § 257.28(c).

(c) If the owner or operator determines that compliance with requirements under § 257.27(b) cannot be practically achieved with any currently available methods, the owner or operator must:

(1) Obtain certification of a qualified ground-water scientist or approval by the Director of an approved State that compliance with requirements under § 257.27(b) cannot be practically achieved with any currently available methods;

(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

(i) Technically practicable; and

(ii) Consistent with the overall objective of the remedy.

(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(d) All solid wastes that are managed pursuant to a remedy required under § 257.27, or an interim measure required under § 257.28(a)(3), shall be managed in a manner:

(1) That is protective of human health and the environment; and

(2) That complies with applicable RCRA requirements.

(e) Remedies selected pursuant to § 257.27 shall be considered complete when:

(1) The owner or operator complies with the ground-water protection standards established under §§ 257.25(h) or (i) at all points within the plume of contamination that lie beyond the ground-water monitoring well system established under § 257.22(a).

(2) Compliance with the ground-water protection standards established under §§ 257.25 (h) or (i) has been achieved by demonstrating that concentrations of appendix II (appendix II of part 258 of this chapter) constituents have not exceeded the ground-water protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in § 257.23 (g) and (h). The Director of an approved State may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of appendix II (appendix II of part 258 of this chapter) constituents have not exceeded the ground-water protection standard(s) taking into consideration:

(i) Extent and concentration of the release(s);

(ii) Behavior characteristics of the hazardous constituents in the ground-water;

(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

(iv) Characteristics of the ground-water.

(3) All actions required to complete the remedy have been satisfied.

(f) Upon completion of the remedy, the owner or operator must notify the State Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of § 257.28(e) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified ground-water scientist or approved by the Director of an approved State.

Recordkeeping Requirements

§ 257.30 Recordkeeping requirements.

(a) The owner/operator of a non-municipal solid waste disposal facility must record and retain near the facility in an operating record or in an alternative location approved by the Director of an approved State the following information as it becomes available:

(1) Any location restriction demonstration required under §§ 257.7 through 257.12; and

(2) Any demonstration, certification, finding, monitoring, testing, or analytical data required in §§ 257.21 through 257.28.

(b) The owner/operator must notify the State/Tribal Director when the documents from paragraph (a) of this section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the State Director or be made available at all reasonable times for inspection by the State Director.

(c) The Director of an approved State can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs

(a) and (b) of this section, except for the notification requirements in §§ 257.7(b) and 257.25(g)(1)(iii).

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTES

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

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

Subpart A—General

6. Section 261.5 is amended by revising paragraphs (f)(3) and (g)(3) to read as follows:

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

* * * * *

(f) * * *

(3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., 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 solid waste and, if managed in a municipal solid waste landfill is subject to part 258 of this chapter;

(v) Permitted, licensed, or registered by a State to manage non-municipal solid waste and, if managed in a non-municipal solid waste disposal facility is subject to the requirements in §§ 257.5 through 257.30 of this chaper; or

(vi) 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) * * *

(3) A conditionally exempt small quantity generator may either treat or dispose of this hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., 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 solid waste and, if managed in a municipal solid waste landfill is subject to part 258 of this chapter;

(v) Permitted, licensed, or registered by a State to manage non-municipal solid waste and, if managed in a non-municipal solid waste disposal facility is subject to the requirements in §§ 257.5 through 257.30 of this chapter; or

(vi) 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.

* * * * *

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

7. The authority citation for part 271 continues to read as follows:

Authority: 42 U.S.C. 8905, 8912(a), and 8926.

8. In § 271.1, paragraph (j), Table 1 is amended by adding the following entry in chronological order by publication date:

§ 271.1 Purpose and scope.

* * * * *

(j) * * *

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Promulgation date	Title of regulation	Federal Register reference	Effective date
*	*	*	*
[Insert date of publication of the final rule in FR].	Revisions to Criteria applicable to solid waste disposal facilities that may accept CESQG hazardous wastes, excluding MSWLFs.	[Insert publication citation of the final rule].	[Insert date 18 months after date of publication in *FR* of the final rule].

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