

Office of Solid Waste



# Environmental Fact Sheet

## Delisting Petitions and the Petition Review Process

### Introduction

#### *What is delisting?*

Delisting is a rulemaking procedure by which facilities, if successful, are relieved of the obligation to handle specific wastes as hazardous in accordance with the Resource Conservation and Recovery Act (RCRA). EPA defined these wastes as hazardous by listing them in the Code of Federal Regulations (40 CFR §261, Subpart D). In some cases, however, a specific facility might generate a waste that does not exhibit any hazardous characteristics for which the waste was listed and does not present a hazard to either human health or the environment for any other reason. Therefore, to avoid placing an unnecessary regulatory burden on such facilities, RCRA regulations provide a petition process for case-by-case exclusions or "delistings" of specific wastes from the hazardous waste lists.

#### *How does a facility obtain a delisting?*

Under 40 CFR § 260.20 and 260.22, facilities may petition EPA to delist (or exclude) a specific waste from the hazardous waste regulations. The general procedures for delisting a hazardous waste are described in a guidance manual (see adjacent box). A delisting generally applies to only the specific waste generated at the facility and does not apply to wastes from any other facility. Under RCRA, states authorized to administer a delisting program in lieu of the federal program also may

exclude wastes from hazardous waste regulations. Facilities that manage their wastes in states with delisting authorization should petition the state for an exclusion rather than EPA. Even in unauthorized states, EPA encourages petitioners to contact state authorities to determine what procedures might be necessary for delisting under state laws. A facility may treat its waste as nonhazardous only after EPA or an authorized state grants a final exclusion.

#### *What are the different types of exclusions?*

A *standard exclusion*, requiring no conditional testing, is granted when a petition demonstrates that the waste meets the delisting criteria and that variability of the waste is not of concern. A *conditional exclusion* is granted when the waste being generated is expected to be highly variable in composition. Such exclusions typically establish

delisting levels for key waste constituents and require the facility to test the waste periodically to ensure the waste remains nonhazardous. An *upfront exclusion* is a special form of conditional exclusion granted for a waste that is not yet generated. In this type of exclusion the petitioner demonstrates that the waste will meet the delisting criteria based on preliminary treatability studies (e.g., pilot plant data). For upfront exclusions, the petitioner typically performs extensive verification testing once the full-scale process is operational to ensure delisting levels are obtained.

### An Overview of the Petition Review Process

#### *Draft sampling and analysis plans*

EPA encourages facilities to contact EPA's Office of Solid Waste

### Guidance Manual

A step-by-step manual is available to assist petitioners in preparing and submitting a delisting petition. The manual is entitled *Petitions to Delist Hazardous Waste: A Guidance Manual*, EPA/530-R-93-007. Copies of the manual are available through the National Technical Information Service (703-487-4650), as publication number PB 93-169 365.

For further information on submitting a delisting petition or draft sampling and analysis plan to EPA, contact the Delisting Section, Office of Solid Waste, at 202-260-4770/6946 or at the address below:

U.S. Environmental Protection Agency  
Delisting Section  
Office of Solid Waste  
(Mail Code OS-333)  
401 M Street, SW.  
Washington, DC 20460



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(OSW) for assistance in their petition efforts before submitting a formal petition. In order to minimize repetitive EPA requests for information and review of incomplete information, petitioners should submit draft sampling and analysis plans prior to waste characterization efforts. Early discussions with OSW about the nature and extent of information that should be included in a petition also are useful.

## Successful Petitions

The majority of excluded wastes are metal-bearing wastes (such as F006 and F019 wastewater treatment sludges and treated K061 electric arc furnace dusts). Historically, only 15 to 20 percent of submitted delisting petitions have been granted. However, any treatment residual that meets current BDAT levels usually will be a good delisting candidate.

### Petition review process

EPA's review process for delisting petitions consists of the following major steps: (1) a completeness check and a request for additional information needed, (2) a technical evaluation of the waste analysis and process data, (3) a proposal of a decision in the *Federal Register*, and (4) a review of public comments and promulgation of a final decision. If a petition is incomplete, EPA will request further information. EPA typically will dismiss petitions from further review if a petitioner does not provide a complete petition. A petitioner may submit a new petition after collecting the missing information. Once EPA has evaluated a complete petition, it proposes a decision to grant or deny the petition. EPA must publish proposed decisions in the *Federal Register* and invite public comments before granting or denying the petition. The final notice contains EPA's response to public comments, the final decision, and

regulatory language amending 40 CFR §261, Appendix IX, for delisted wastes. Because delisting is a rule-making process, it typically takes about two years for a formal petition to make it through EPA's review process and for a final rule to be published in the *Federal Register*. EPA usually reviews delisting petitions in chronological order based on the date of receipt. Therefore, if a backlog of petitions develops, some delistings decisions might be delayed. Recently, however, EPA has been successful in significantly reducing the backlog.

## Petition Information Requirements

The petitioner's guidance manual noted earlier provides details on the information needed for delisting and assists interested facilities in submitting a credible and complete petition. Generally, a complete petition includes the following information:

- A detailed description of the manufacturing and treatment processes generating the petitioned waste and the volume of waste generated.
- A discussion of why the waste is listed as hazardous and a description of how the waste is managed.
- A discussion of why samples collected in support of the demonstration are thought to represent the full range of variability of the petitioned waste.
- Results from the analyses of a minimum of four representative samples of the petitioned waste for:
  - Applicable hazardous waste characteristics (ignitability, corrosivity, or reactivity).
  - Total and leachable concentrations of all hazardous constituents likely to be present in the petitioned waste. For example, the constituents listed in the

Toxicity Characteristic (TC) typically are among the constituents required (see 40 CFR §261.24).

- Total oil and grease content.
- Chain-of-custody records and quality control (QC) data for all analytical data. Appropriate QC procedures are described fully in Chapters 1 and 4 and in each test method of EPA publication SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (Third Edition)*. Analyses are expected to conform to the standards of SW-846.
- A statement signed by an authorized representative of the facility certifying that all information is accurate and complete.
- Ground-water monitoring information, if the petitioned waste has been disposed of in a land-based hazardous waste management unit. Ground-water monitoring data might not be required in some cases, therefore the petitioner should consult the guidance manual and EPA if unsure. The petitioner may resubmit data already collected in response to existing RCRA regulations or cite existing reports submitted to EPA that provide the necessary data.

See the guidance manual for a more detailed description of what information EPA usually requires and the appropriate sampling and analysis procedures.

## Technical Review

### EPA's use of modeling tools

EPA often evaluates the potential hazards of waste through the use of appropriate fate and transport models. These models calculate possible exposure to hazardous chemicals that might be released from petitioned wastes after disposal, based on a reasonable, worst-case management scenario. A key exposure route of concern is

ingestion of contaminated ground water. To evaluate this concern, the Agency typically relies on leachate data as determined by an appropriate leaching test (e.g., the Toxicity Characteristic Leaching Procedure [TCLP] used in the TC; see 40 CFR 261.24). The leachable concentrations and the estimated waste volume then are used as inputs to an appropriate fate and transport model, for example, EPA's Composite Model for Landfills (EPACML), to predict the constituent concentrations in the ground water at a hypothetical exposure point. The output of this model, the dilution/attenuation factor (DAF), represents the reduction in contaminant concentration expected to occur during transport through soil and ground water, from the leachate release point (bottom of the landfill) to an exposure point (receptor well). The DAF is calculated by dividing the contaminant concentration in the leachate leaving the landfill by the concentration at the receptor well. Exposure-point concentrations derived from the DAFs typically are compared to drinking water standards or other EPA health-based levels. The leachate from small waste volumes undergoes greater dilution/attenu-

ation than leachate from larger waste volumes, because larger volumes release greater amounts of leachate into the ground water. Table 1 provides a listing of some of the DAFs generated using the EPACML for annual waste volumes ranging from 1,000 to 300,000 cubic yards per year. As an example of how the DAFs in Table 1 are used in

the delisting process, EPA would use a DAF of 15 from Table 1 for 100,000 cubic yards of waste generated annually and the health-based level in Table 2 for arsenic (0.05 ppm) to calculate a delisting level for this constituent in the TCLP test of 0.75 ppm (e.g., 15 x 0.05 ppm). (See the *Federal Register* notice published on July 18, 1991, 56 FR 32993,

**Table 2. Health-Based Levels for Selected Hazardous Constituents**

Compounds	HBL (ppm)
Arsenic	0.05
Barium	2
Benzene	0.005
Benzo(a)pyrene	0.0002
Bis(2-ethylhexyl)phthalate	0.006
Cadmium	0.005
Carbon Tetrachloride	0.005
Chlorobenzene	0.1
Chromium	0.1
Cyanide	0.2
1,2-Dibromo-3-chloropropane	0.0002
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,2-Dichloropropane	0.005
1,1-Dichloroethylene	0.007
Ethylbenzene	0.7
Hexachlorobenzene	0.001
Lead	0.015
Mercury	0.002
Nickel	0.1
PCBs	0.0005
Pentachlorophenol	0.001
Selenium	0.05
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane	0.2
Trichloroethylene	0.005
Vinyl chloride	0.002
Xylenes	10

**Table 1. EPACML DAFs**

Waste Volume (cubic yards/yr)	Dilution Attenuation Factor (DAF)
1,000	100
1,500	90
2,000	79
4,000	57
6,000	48
8,000	43
10,000	36
25,000	24
50,000	19
100,000	15
200,000	13
300,000	12

for more details on the use of the EPACML in delisting evaluations.)

### *Health-based levels*

The health-based levels used by EPA in delisting decision-making are updated periodically in order to stay consistent with the latest drinking water standards (e.g., Maximum Contaminant Levels, or MCLs), risk information, and toxicological data. Table 2 gives some delisting health-based levels currently used by OSW for selected constituents. An up-to-date list of health-based levels of the constituents of concern is normally contained in the RCRA public docket for the latest delisting rulemakings.

The list is available from OSW upon request. Also, a large number of EPA-verified health-based levels are available through EPA's Integrated Risk Information System (IRIS). (For more information on accessing IRIS, contact the IRIS User Support Group at 513-569-7254.)

### *Agency's evaluation of ground-water monitoring data*

As noted above, petitions to exclude wastes contained in land-based waste management units should include ground-water monitoring information relevant to the unit(s) in which the petitioned waste is managed. If the data indicate that the waste in question has

caused ground-water contamination, EPA may deny the petition. How EPA may use ground-water monitoring data in delisting is described in a *Federal Register* notice (October 12, 1989; 54 FR 41930).

### *Spot-check program*

EPA may conduct announced or unannounced spot-checks at some facilities in order to verify the petition information and data submitted and to generate analytical data of its own to resolve ambiguities in the petitioner's data. A spot-check visit to a selected facility may be initiated before finalizing a petition decision or after granting an exclusion.

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