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EPA

A Guide to Delisting of RCRA Wastes for Superfund Remedial Responses

Office of Emergency and Remedial Response
Hazardous Site Control Division 0S-220

Quick Reference Fact Sheet

On-site CERCLA remedial response actions must comply with the substantive requirements of the Resource Conservation and Recovery Act (RCRA) when they are determined to be applicable or relevant and appropriate requirements (ARARs). RCRA requirements are applicable for CERCLA responses involving the treatment, storage, or disposal of RCRA wastes (or when disposal of the waste being addressed under CERCLA occurred after November 19, 1980). Delisting a RCRA waste (and thus removing it from regulation under RCRA Subtitle C) is one option available to site managers for addressing wastes or treatment residuals containing hazardous constituents in low concentrations (i.e., at or near health-based levels). **This guide discusses the circumstances under which delisting wastes may be appropriate and the procedures for delisting a RCRA hazardous waste as part of a Superfund remedial response.** (For additional information, please see Petitions to Delist Hazardous Wastes: A Guidance Manual (Office of Solid Waste and Emergency Response, April 1985 EPA/530-SW-85-003).)

BACKGROUND

There are two types of RCRA waste that are subject to RCRA Subtitle C hazardous waste requirements: listed and characteristic. Listed wastes are regulated under Subtitle C until they have been delisted, at which time they may be disposed of in a Subtitle D facility. Delisting requires a demonstration that a listed RCRA hazardous waste, or a mixture containing listed hazardous wastes, no longer meets any of the criteria under which the waste was listed and no other factors are known that would make the waste hazardous. Delisting applies only to listed wastes, mixtures containing listed wastes, or residuals derived from treatment of a listed waste. Characteristic hazardous wastes do not have to be delisted in order to be eligible for management in a Subtitle D facility, but may simply be rendered "non-characteristic" (i.e., treated to no longer exhibit any of the characteristics outlined in 40 CFR Part 261, Subpart C), or meet the Land Disposal Restriction (LDR) treatment standards.

For on-site CERCLA remedial response actions, delisting of RCRA wastes is accomplished by incorporating the substantive requirements of 40 CFR 260.20 and .22 into the remedial process. For off-site CERCLA response actions, the administrative requirements of 40 CFR 260.20 and .22 must also be met.

WHEN TO CONSIDER DELISTING

Site managers may want to consider delisting when planning CERCLA response actions that will address materials contaminated with RCRA listed waste in low concentrations (including treatment residuals that, despite treatment, remain listed wastes under the derived-from rule [40 CFR 261.3(c)(2)]). If site managers believe that these materials pose no significant threat to ground water and that management in a Subtitle D solid waste disposal facility (to prevent direct contact) would be fully protective of human health and the environment, delisting as a potential option should be evaluated. Unless listed wastes can be delisted, management of these materials must be in accordance with Subtitle C (i.e., clean closure or landfill closure with an impermeable cap, or a hybrid closure where RCRA closure requirements are relevant and appropriate).

BASIS FOR DELISTING

Under RCRA, once sufficient data are collected on the waste, and its potential fate and transport, models (see **Highlight 1**) are run to evaluate the dilution and attenuation of constituents at a hypothetical receptor well. The calculated concentrations of constituents at the hypothetical receptor well must at least meet the health-based levels used for delisting decisions for the waste to be successfully delisted. (**Table 1**, inserted in this fact sheet, contains the maximum allowed concentrations (MACs) for specific constituents based on the current health-based levels (10^{-6} risk) developed by the Office of Solid Waste for delisting decisions.)

During site characterization and the development of the baseline risk assessment, if analyses indicate that minimal risks are posed by identified RCRA listed wastes, (i.e., they are already at or near delisting levels) site managers should consider management options involving the delisting of wastes. Delisting evaluations should be made early in the RI/FS process, thus allowing the requirements and disposal options associated with delisting to be factored into the detailed analysis of remedial alternatives. For delistings at CERCLA sites, OERR recommends that site managers use the same

Highlight 1 - MODELS USED BY THE OFFICE OF SOLID WASTE TO JUSTIFY DELISTING PETITIONS

The recently promulgated toxicity characteristic leaching procedure (TCLP) is used to measure the leaching potential of selected inorganic and organic constituents (55 FR 11798, March 29, 1990). For some organics, the **Organic Leachate Model (OLM)** (see 51 FR 41084-100, November 13, 1986) may be used to estimate the leaching potential of these constituents. The OLM is based on data from leaching tests performed on wastes with organics. Data generated from the TCLP (and possibly the OLM) are used in the appropriate models to determine whether the waste will pose a threat to human health and the environment.

EPA uses an appropriate model, such as the VHS model, to estimate the ability of an aquifer to dilute the leachate toxicants and predict toxicant levels at a receptor well. (See 50 FR 48846, November 27, 1985 for a complete description of the VHS model.) The predicted levels of toxicants from the VHS model are then compared to health-based levels used in delisting decision-making (e.g., MCLs, RfDs) for those compounds, in an effort to evaluate hazard potential.

analytical tests and models as the Office of Solid Waste to analyze and predict the potential fate and transport of waste constituents and to substantiate a delisting request.

In certain cases, pathways other than ground water may present a greater concern, or site conditions are such that use of other or additional models (e.g., air models, 51 FR 41084, November 13, 1986) may be appropriate. Because the delisting determination is waste-specific, site managers should document why a particular model is being used.

If results from treatability studies conducted during an RI/FS indicate that treatment will attain delisting levels, these data may serve as the basis for approving a delisting demonstration. When site-specific treatability study data are not available, data from the application of technologies to similar wastes may be used to assess the likely effectiveness of the treatment processes and to demonstrate that a particular waste would be rendered non-hazardous and justify a delisting. If there are technically sound reasons to believe that delisting levels can be attained, site managers still may seek to delist the wastes, but should specify another option for disposal of the material (i.e., Subtitle C disposal) if delistable levels are not attained.

As outlined in the NCP (55 FR 8756, March 8, 1990), only the substantive requirements of delisting must be met for on-site CERCLA responses. The delisting may be granted when the Regional Administrator signs the ROD. For off-site actions, the Office of Solid Waste and Emergency Response (Contact: Assistance Branch (OS-343) 382-4206) makes delisting decisions. The formal RCRA administrative process for delisting would not apply, however, to non-contiguous CERCLA facilities meeting the criteria to be treated as one site and to which the on-site permit exemption extends (see NCP, 55 FR 8690-1, March 8, 1990).

DEMONSTRATING COMPLIANCE

Verification testing may be required following treatment of the wastes to confirm that delisting levels are attained. Verification testing may require: collection of samples generated from treatment systems; analysis of samples for total and TCLP leachate concentrations of inorganic and organic constituents, and any other RCRA characteristics (as appropriate)[1]; and analysis of any other information relevant to the delisting that may not have been anticipated at the time that the original decision document was signed. The specific demonstrations required may vary based on process- or waste-specific conditions at the site. [NOTE: An appropriate testing frequency of treatment residuals will need to be established during the design phase for a period long enough to represent the variability of the delisted material.] All data from verification testing must be collected using the appropriate QA/QC procedures (such as those contained in the site's Quality Assurance Project Plan (QAPP) prepared during the RI/FS scoping or remedial design process).

Waste to be delisted must be managed as hazardous until it has been analyzed in accordance with the sampling and analysis requirements established at the time of delisting, and it has been determined that delisting levels have been attained. Therefore, temporary storage of waste residuals will be necessary in some cases until sampling results are received. RCRA storage requirements that are ARAR must be met (or a waiver justified) during this period for remedial actions.

DOCUMENTING A WASTE DELISTING

Although compliance with the RCRA administrative delisting requirements are not required as part of an on-site CERCLA remedial response, compliance with the substantive requirements of delisting must be documented in the appropriate CERCLA documents. Since off-site CERCLA responses must comply with both substantive and administrative requirements, site managers must follow the formal delisting petition process (40 CFR 260.20 and .22) when hazardous wastes or waste residuals are to be delisted for management off-site. This includes Office of Solid Waste review, or State review for those States that have adopted the delisting program at least equivalent to the Federal program, publication of a proposed notice in the Federal Register, an opportunity for public comment, and publication of the final rule in the Federal Register. The Office of Solid Waste's goal

[1]Note that for any responses expected to take place prior to the TCLP effective date, the EP Toxicity test may apply.

Table 1: Maximum Allowed Concentrations

Maximum allowed concentrations (MACs) are back-calculated from the VHS model, using a minimum waste volume of 8000 cubic yards. (Lower waste volumes will result in higher MACs. If the waste contains <0.5% solids, then the leaching procedures cannot be performed. In that case, the total constituent concentrations should be compared to the MACs. These MACs represent the maximum concentrations below which a constituent would "pass" the VHS model, and thus, the waste would be considered a candidate for delisting. These MACs are to be used only as guidance for delisting, not for cleanup levels.

The MACs listed here are based on use of the VHS model and the current health-based levels used for delisting decision-making. If a different model is used and/or if a health-based level changes, then the calculated MAC will also change. The MACs listed here for organic constituents are based on OLM leachate values. In the near future, petitioners may be required to measure organic constituent leaching using the TCLP. (Thus, TCLP leachate data will replace OLM calculated data in the VHS model.) Therefore, if the TCLP is used in place of the OLM for organic constituents, then the TCLP leachate value would be compared to the MAC level listed in the table for liquids.

The numbers shown in the table are given in exponential form. The notation XE+YY is equivalent to X x 10^{YY}. For example: 5.170E+02 is equivalent to 5.170 x 10^{2} or 517.0
3.785E-04 is equivalent to 3.785 x 10^{-4} or .0003785.

Chemical	MAC for Solids (ppm)	MAC for Liquids (mg/L)	Chemical	MAC for Solids (ppm)	MAC for Liquids (mg/L)	Chemical	MAC for Solids (ppm)	MAC for Liquids (mg/L)
Acetone	5.170E+02	2.524E+01	2-sec-Butyl-4,6-dinitrophenol	1.348E+02	2.524E-01	1,2-Dichlorobenzene	4.999E+03	3.785E+00
Acetonitrile	6.231E+00	1.262E+00	Cadmium	6.309E-02	6.309E-02	1,3-Dichlorobenzene	4.790E+04	1.893E+00
Acetophenone	9.049E+03	2.524E+01	Carbon disulfide	1.277E+04	2.524E+01	1,4-Dichlorobenzene	2.650E+02	4.732E-01
Acrolein	1.181E+00	3.15E+00	Carbon tetrachloride	1.408E+00	3.155E-02	3,3'-Dichlorobenzidine	5.656E-02	5.047E-04
Acrylamide	Treat. Tech	Treat. Tech	Chloral	2.840E+00	4.416E-01	Dichlorodifluoromethane	1.063E+05	4.416E+01
Acrylic Acid	3.382E+02	1.893E+01	Chlordane	1.924E+01	1.262E-02	1,1-Dichloroethane	1.140E-02	2.524E-03
Acrylonitrile	3.785E-04	3.785E-04	p-Chloraniline	4.741E+01	6.309E-01	1,2-Dichloroethane	3.717E-01	3.155E-02
Aldicarb	1.253E+00	6.309E-02	Chlorobenzene	1.526E+02	6.309E-01	1,1-Dichloroethylene	1.270E+00	4.416E-02
Aldrin	1.351E-03	1.262E-05	Chlorobenzilate	4.312E+02	4.416E+00	cis-1,2-Dichloroethylene	2.973E+01	4.416E-01
Allyl Alcohol	9.025E+00	1.262E+00	p-Chloro-m-cresol	1.327E+02	1.262E+00	trans-1,2-Dichloroethylene	3.641E+01	6.309E-01
Aluminum Phosphide	6.309E-02	6.309E-02	Chlorodibromomethane	7.825E+02	4.416E+00	Dichloromethane	2.324E-01	3.155E-02
Aniline	2.236E-01	3.785E-02	Chloroform	4.968E-01	3.785E-02	2,4-Dichlorophenol	4.329E+01	6.309E-01
Anthracene	7.701E+01	1.262E-02	Chloromethyl methyl ether	Decomposes	2.524E-05	1,2-Dichloropropane	6.995E-01	3.155E-02
Antimony	6.309E-02	6.309E-02	2-Chlorophenol	4.412E+01	1.262E+00	1,3-Dichloropropene	5.946E-03	1.262E-03
Arsenic	3.155E-01	3.155E-01	Chromium	3.155E-01	3.155E-01	Dieldrin	1.292E-03	1.262E-05
Barium	6.309E+00	6.309E+00	Chrysene	1.516E+01	1.262E-03	Diethyl phthalate	4.795E+05	1.893E+02
Benzene	8.879E-01	3.155E-02	Cresols	1.257E+03	1.262E+01	Dimethoate	3.377E-01	4.416E-02
Benzidine	1.262E-06	1.262E-06	Cyanide	4.416E+00	4.416E+00	7,12-Dimethylbenz(a)anthracene	3.743E-03	6.309E-06
Benz(a)anthracene	9.999E-02	6.309E-05	Cyanogen	1.435E+02	6.309E+00	2,4-Dimethylphenol	1.248E+01	1.262E-01
Benzo(a)pyrene	3.867E-02	1.893E-05	Cyanogen bromide	1.893E+01	1.893E+01	2,6-Dimethylphenol	2.829E-01	1.262E-02
Benzo(b)fluoranthene	1.643E-01	1.262E-04	2,4-Dichlorophenoxyacetic			3,4-Dimethylphenol	1.224E+01	2.524E-02
Benzo(k)fluoranthene	7.790E+02	2.524E-02	acid (2,4-D)	1.069E+02	6.309E-01	Dimethyl phthalate	9.232E+06	2.524E+03
Benzyl chloride	5.432E-03	1.262E-03	DDD	5.982E-01	6.309E-04	Dinitrobenzene (meta)	1.317E+00	2.524E-02
Bis(2-chloroethyl)ether	1.893E-04	1.893E-04	DDE	9.902E-01	6.309E-04	4,6-Dinitro-o-cresol	5.127E+01	2.524E-01
Bis(2-chloroisopropyl ether)	2.234E+03	6.309E+00	DDT	3.109E+00	6.309E-04	2,4-Dinitrophenol	2.296E+01	4.416E-01
Bis(2-ethylhexyl)phthalate	4.210E+01	1.893E-02	Dibenz(a,h)acridine	6.554E-02	1.893E-05	Dinitrotoluene	1.164E-03	3.155E-04
Bromodichloromethane	7.546E+02	4.416E+00	Dibenz(a,h)anthracene	7.318E-03	4.416E-06	Di-n-octyl phthalate	3.441E+04	3.785E+00
Bromomethane	3.606E+01	3.155E-01	1,2-Dibromo-3-chloropropan	1.048E-02	1.262E-03	1,4-Dioxane	2.021E-02	1.893E-02
Butyl benzyl phthalate	6.375E+04	5.678E+00	Di-n-butyl phthalate	2.521E+05	2.524E+01	Diphenylamine	1.232E+04	5.678E+00

Table 1: Maximum Allowed Concentrations (cont.)

Chemical	MAC for Solids (ppm)	MAC for Liquids (mg/L)
1,2-Diphenylhydrazine	6.976E-04	2.524E-04
Disulfoton	8.561E-01	6.309E-03
Endosulfan	1.983E+01	1.262E-02
Endrin	1.004E+00	1.262E-03
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	Treat. Tech	Treat. Tech
Ethyl benzene	4.984E+03	4.416E+00
Ethyl ether	2.598E+04	1.262E+02
Ethylene dibromide	6.078E-04	3.155E-04
Ethylene oxide	6.309E-04	6.309E-04
Fluoranthene	2.971E+04	1.262E+00
Fluorene	1.048E+01	1.262E-02
Formic Acid	3.523E+04	4.416E+02
Glycidylaldehyde	7.510E-02	6.309E-02
Heptachlor	3.345E+00	2.524E-03
Heptachlor epoxide (alpha, beta, gamma isomers)	8.346E-01	1.262E-03
Hexachlorobenzene	2.619E-01	1.262E-04
Hexachlorobutadiene	5.139E+00	3.155E-03
Hexachlorocyclopentadiene	8.283E+03	1.262E+00
Hexachloroethane	2.956E+00	1.893E-02
Hexachlorophene	3.131E+03	6.309E-02
Hydrazine	6.309E-05	6.309E-05
Hydrochanic acid (Hydrogen cyanide)	4.416E+00	4.416E+00
Hydrogen sulfide	6.309E-01	6.309E-01
Indeno(1,2,3,cd)pyrene	2.970E+01	1.262E-03
Isobutanol	8.244E+03	6.309E+01
Isophorone	1.345E+04	4.416E+01
Lead	Under consideration by EPA	
Lindane	1.513E-01	1.262E-03
Maleic anhydride	Soluble	2.524E+01
Maleic hydrazide	9.263E+04	1.262E+02
Mercury	1.262E-02	1.262E-02
Methacrylonitrile	1.479E-01	2.524E-02
Methanol	5.552E+03	1.262E+02
Methomyl	2.743E+02	5.678E+00
Methoxychlor	2.633E+04	6.309E-01
Methyl chloride	8.255E+03	2.524E+01
Methyl chlorocarbonate	1.543E+04	2.524E+02
Methyl ethyl ketone	3.838E+02	1.262E+01
Methyl isobutyl ketone	1.641E+03	1.262E+01
Methyl methacrylate	1.301E+05	1.893E+01
Methyl parathion	1.351E+01	5.678E-02
Naphthalene	5.738E+05	6.309E+01
Nickel	Under consideration by EPA	
Nitric oxide	2.524E+01	2.524E+01
Nitrobenzene	6.557E+00	1.262E-01
Nitrogen dioxide	2.524E+02	2.524E+02
N-Nitroso-di-n-butylamine	2.088E-05	3.785E-05
N-Nitrosodiethanolamine	6.309E-05	6.309E-05
N-Nitrosodiethylamine	1.262E-06	1.262E-06
N-Nitrosodimethylamine	5.611E-06	4.416E-06
N-Nitrosodiphenylamine	1.166E+01	4.416E-02
N-Nitroso-n-propylamine	3.155E-05	3.155E-05
Nitrosopyrrolidine	1.262E-04	1.262E-04
Pentachlorobenzene	2.284E+03	1.893E-01
Pentachloronitrobenzene	7.216E-01	6.309E-04
Pentachlorophenol	2.917E+03	1.262E+00
Phenanthrene	1.398E+01	1.262E-02
Phenol	2.051E+04	1.262E+02
m-Phenylenediamine	1.108E+01	1.262E+00
Phenyl mercury acetate	4.289E-01	1.893E-02
Phosphine	5.803E+00	6.309E-02
Phthalic anhydride	5.788E+05	4.416E+02
Polychlorinated biphenyls	1.223E+01	3.155E-03
Pronamide	5.459E+04	1.893E+01
Pyrene	4.076E+05	6.309E+00
Pyridine	3.364E+00	2.524E-01
Selenious acid	6.309E-01	6.309E-01
Selenium	6.309E-02	6.309E-02
Selenourea	No Solubility	1.262E+00
Silver	3.155E-01	3.155E-01
Strychnine and salts	9.332E+00	6.309E-02
Styrene	2.343E+00	3.155E-02
1,2,4,5-Tetrachlorobenzene	5.603E+01	6.309E-02
1,1,2,2-Tetrachloroethane	5.832E-03	1.262E-03
Tetrachloroethylene	3.430E+00	3.155E-02
2,3,4,6-Tetrachlorophenol	2.992E+03	6.309E+00
Tetraethyl dithiopyrophosphat	6.425E+01	1.262E-01
Tetraethyl lead	1.652E-03	2.524E-05
Thallium	1.893E-02	1.893E-02
Thiourea	1.262E-04	1.262E-04
Thiram	1.918E+03	1.262E+00
Toluene	1.173E+04	1.262E+01
Toluene-2-6-diamine	2.888E+03	3.785E+01
Toxaphene	7.909E+01	3.155E-02
2,4,5-TP (Silvex)	9.905E+00	6.309E-02
Tribromomethane (Bromoform)	9.642E+02	4.416E+00
1,2,4-Trichlorobenzene	1.217E+04	4.416E+00
1,1,1-Trichloroethane	2.229E+02	1.262E+00
1,1,2-Trichloroethane	2.315E-02	3.785E-03
Trichloroethylene	1.146E+00	3.155E-02
Trichlorofluoromethane	8.474E+04	6.309E+01
2,4,5-Trichlorophenol	2.101E+04	2.524E+01
2,4,6-Trichlorophenol	3.536E-01	1.262E-02
2,4,5-Trichlorophenoxyacetic	1.698E+03	2.524E+00
1,2,3-Trichloropropane	1.399E+02	1.262E+00
1,1,2-Trichloro-1,2,2-trifluoroethane	1.002E+09	6.309E+03
sym-Trinitrobenzene	5.572E-01	1.262E-02
2,4,6-Trinitrotoluene	3.993E-01	6.309E-03
Vanadium pentoxide	4.416E+00	4.416E+00
Vinyl chloride	1.822E-01	1.262E-02
Warfarin	3.159E+01	6.309E-02
Xylene (mixed)	2.177E+05	6.309E+01

is to propose and finalize delistings within 24 months from the time a complete petition is received.

RI/FS Report

The substantive requirements for delisting a RCRA hazardous waste should be documented in the RI/FS Report. In the Detailed Analysis of Alternatives chapter of the FS Report, a general discussion of why delisting is warranted should be included in the description of each alternative for which a delisting is contemplated. Where the remedial alternatives involving treatment are expected to result in a residual that may be delisted, this discussion should also specify the concentrations of each waste constituent expected to remain after treatment. The specific information that should be included in an RI/FS report for on-site and off-site CERCLA remedial actions is presented in **Highlight 2.** (The more specific and detailed information, such as relevant waste analysis data from sampling, should be placed in an appendix to the report.) Under the "Compliance with ARARs" Criterion, as part of the Description of Alternatives section, site managers should identify those wastes or waste residuals to be delisted, and managed under Subtitle D instead of Subtitle C.

Proposed Plan

The intent to delist wastes should be stated in the Description of Alternatives section of the Proposed Plan. Because the Proposed Plan solicits public comment on all of the remedial alternatives, and not just the preferred option, the intent to delist wastes on-site or to obtain a delisting petition for off-site wastes should be identified for all alternatives for which such an approach is planned. This opportunity for public comment on the Proposed Plan fulfills the requirements for public notice and comment on delisting petitions required under 40 CFR 260.20(d). **Highlight 3** provides sample language for the Proposed Plan.

Record of Decision

Sample language for the Description of Alternatives section of the ROD is shown in **Highlight 4.** The documentation provided in the ROD should be a brief synopsis of the information in the FS report. In the Description of Alternatives section, as part of the discussion of major ARARs for each remedial alternative, site managers should include a statement (as was done in the FS report) that explains why delisting is justified. A statement should

Highlight 2 - DOCUMENTATION FOR RI/FS REPORT FOR DELISTING
(Detailed Analysis of Alternatives Chapter)

ON-SITE:

- Description of Remedial Alternatives
- Detailed Description of the Treatment Process being used to render the waste non-hazardous (e.g., operating parameters)
- Waste and Treatment Residual Characterization
  - EPA Hazardous Waste Number(s)
  - Complete Description of the Waste (e.g., matrix, percent solids, pH)
  - Waste Management Information (e.g., current and proposed management, techniques, flow diagrams)
  - Description of Constituents present (identification, concentrations)
- Relevant Sampling and Testing Information[1] (e.g., TCLP test results)
- Data on Representative Samples for the Listed Constituents and a Discussion of Why the Waste is Non-Hazardous. Include a statement that the samples are representative of constituent concentrations in the waste, and discuss modelling results.
- CERCLA on-site response actions need not meet administrative procedures of other environmental statutes. The RI/FS and ROD process are substitutes for the administrative procedures in the delisting process. The substantive requirements remain the same (55 FR 8756 -57, March 8, 1990).

OFF-SITE (in addition to elements required for off-site petition):

For off-site delisting petitions, the documentation requirements listed for on-site actions should be extracted from the RI/FS report and combined with the following information found below. The information should be incorporated with the on-site information into a 40 CFR 260.20 petition and a copy of the petition should be referenced and attached to the RI/FS report.

- Petitioner's name and address
- Identification of on-site contact person, if different from above
- Description and location of site
- Statement of the petitioner's interest in the proposed action

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[1] Appropriate sampling information may be contained in the Superfund Quality Assurance Project Plan (QAPP) and, therefore, not specifically repeated in the RI/FS Report. Where appropriate, however, information on relevant sampling procedures should be referenced in this section when discussing the basis for delisting.

Highlight 3: SAMPLE LANGUAGE FOR THE PROPOSED PLAN

Description of Alternatives section:

Under this alternative, the [waste/treatment residuals] will be delisted (i.e., shown to be non-hazardous wastes) and thus will no longer be subject to RCRA Subtitle C hazardous waste regulations. The [wastes/treatment residuals] will be managed in accordance with the RCRA Subtitle D (solid waste) requirements (and/or state solid waste disposal requirements).

Evaluation of Alternatives section, under "Compliance With ARARs":

The [wastes/treatment residuals] will be delisted in [Enter number] of [Enter total number of alternatives]. The RCRA Subtitle D (solid waste) closure requirements, rather than Subtitle C requirements, will be ARARs for these [wastes/treatment residuals].

Community's Role in Selection Process:

The Proposed Plan seeks comment on the delisting of the [waste/treatment residuals and models] for each alternative for which delisting is proposed.

Highlight 4: SAMPLE LANGUAGE FOR THE RECORD OF DECISION

Description of Alternatives section:

Because existing and available data and the results of modeling demonstrate that the [waste/treatment residuals] will not be hazardous (i.e., do not contain hazardous constituents in levels that are hazardous and do not exhibit a hazardous characteristic), they will be delisted. Therefore, the RCRA Subtitle C requirements are not ARARs. These [wastes/treatment residuals], however, will be managed as solid wastes under RCRA Subtitle D [and State of {name} solid waste disposal requirements under {citation}]. This delisting is justified on the basis of [results from treatability testing/other basis]. This delisting satisfies the substantive requirements of 40 CFR 260.20 and .22.

If testing of the waste during the remedial action shows that the necessary levels are not being attained for delisting these wastes, they will be managed as Subtitle C hazardous wastes and the applicable or relevant and appropriate requirements under Subtitle C will be met.

also be included explaining that the waste was delisted under CERCLA, therefore RCRA's substantive requirements have been met.

In the Statutory Determinations section, under the "Compliance with ARARs" finding, site managers should indicate that the wastes will be delisted.

Unless treatability studies conducted in the RI/FS indicate that a technology's performance is reasonably certain, the ROD should address how to handle wastes that do not achieve delistable levels. If waste residuals cannot be delisted, a contingency plan will be implemented. Where the contingency implemented differs significantly from that discussed in the ROD, the ROD must be amended or an Explanation of Significant Differences (ESD) issued (NCP §300.435(c)(2)). Where the contingency implemented does not significantly differ from that discussed in the ROD, it may be advisable to issue an ESD or fact sheet to inform the public of these actions.

The Comparative Analysis section of the ROD should discuss contingent remedies in a level of detail that is adequate to explain the contingency (so that the public has an ample opportunity to review the contingency). The Selected Remedy section should establish the parameters of both the selected and contingent remedies and provide the criteria by which the contingency remedy would be implemented. The Statutory Determinations section should demonstrate how either remedy would fulfill CERCLA section 121 requirements.