UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9347.1-02

MEMORANDUM

SUBJECT: Policy for Superfund Compliance With the RCRA Land Disposal Restrictions

FROM: Jonathan Z. Cannon
Acting Assistant Administrator

TO: Regional Administrators, Regions I-X

Purpose

To transmit the Superfund policy for complying with the RCRA land disposal restrictions (LDRs) at Superfund sites.

Background

CERCLA section 121(d) requires on-site Superfund remedial actions to comply with Federal, and more stringent State, environmental requirements that are determined to be applicable or relevant and appropriate requirements (ARARs). Section 121 also identifies six ARAR waivers: 1) interim remedy; 2) greater risk to human health and the environment; 3) technical impracticability; 4) equivalent standard of performance; 5) inconsistent application of State standard; and 6) Fund-balancing.

With regard to Superfund removal actions, the current NCP requires on-site removal actions to comply with Federal ARARs to the extent practicable, considering the exigencies of the situation. The preamble to the proposed NCP contains guidance on how to determine whether compliance is "practicable."

On-site removal and remedial actions must comply with substantive aspects of both applicable and relevant and appropriate requirements. Off-site removal and remedial actions must comply with both substantive and administrative aspects of applicable requirements only.

The RCRA land disposal restrictions are a potential ARAR for Superfund actions. As you may know, OERR is developing a guidance document to assist the Regions in complying with the LDRs. Although several issues must be resolved

before this guidance is issued, this memorandum will summarize one of the major issues that has been decided, namely, how to determine whether the LDRs are "applicable" to a Superfund response action. This policy will be discussed in greater detail in the guidance document.

Objective

In order to assist Regional removal and remedial staff in making current site decisions about the LDRs, this memorandum will explain: 1) how to determine when the LDRs are "applicable" to a Superfund removal or remedial action, and 2) the Superfund approach for complying with the LDRs when they are determined to be applicable. (This memorandum does not address how to make "relevant and appropriate" determinations.)

Implementation

Section A below explains how site managers (OSCs, RPMs) should determine whether the LDRs are "applicable" to a Superfund response action. Section B explains how Superfund intends to comply with the LDRs when they are determined to be applicable.

A. Application of the LDRs to CERCLA response actions

To determine if the LDRs are applicable to a given response action at a Superfund site, the site manager must answer three questions. The answer to each question must be "yes" for the LDRs to be applicable.

1. Does the CERCLA action constitute "placement"?

The LDRs are triggered as applicable requirements by "placement" of restricted RCRA hazardous wastes in land-based units.[1] Placement occurs when wastes are land disposed (or placed) in land-based RCRA units, such as landfills, surface impoundments, waste piles, and land treatment facilities. Placement does not occur if wastes are moved within a unit or are left in place (e.g., capping, in-situ treatment, consolidation within a unit). Placement does occur when wastes are moved from one unit and placed in another unit. For example, if wastes from a CERCLA site are disposed at an off-site landfill, this action constitutes placement.

However, the concept of a RCRA unit may be less useful for uncontrolled hazardous waste sites, which often involve widespread and dispersed contamination. Therefore, to assist in defining when placement occurs for on-site disposal at Superfund sites, the Agency has developed the concept of an

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[1] Several LDR requirements (the storage restrictions, dilution prohibition, and off-site notification requirements, in particular) are triggered when restricted wastes are generated, or picked up, rather than when the wastes are "placed." However, the major LDR restrictions discussed in the remainder of this memorandum are triggered only if wastes are "placed."

"area of contamination" (AOC). An AOC is delineated by the extent of continuous contamination, although one AOC may contain varying types and concentrations of contamination. For example, a waste pit with the surrounding contaminated soil is one AOC and may be viewed as a single "unit," e.g., a single landfill. For the purposes of the LDRs, therefore, AOCs are equivalent to RCRA units.

Movement of waste within the AOC does not constitute placement, but movement of waste out of the AOC into another unit will trigger placement. Placement would occur if wastes from different AOCs are consolidated into one AOC or if wastes are removed and treated outside the AOC and returned to the same or a different AOC. Placement would also occur if wastes are excavated from the AOC, placed in an incinerator or tank located within the AOC, and then redeposited into the AOC, because the incinerator and tank are considered separate units from the AOC.

2. Is the CERCLA waste also a RCRA hazardous waste?

The LDRs are applicable only to RCRA hazardous wastes (i.e., listed and characteristic wastes identified under §261). However, not all wastes at Superfund sites are RCRA hazardous wastes. Therefore, the site manager must decide if it is reasonably ascertainable, within the scope of the Superfund site investigation, that the CERCLA waste is also a RCRA hazardous waste. Reasonable efforts must be used to collect the information needed to determine if a waste is a RCRA listed or characteristic waste. (It is expected that current data collection efforts at Superfund sites should be sufficient for this purpose.) The site manager should have affirmative evidence (e.g., manifests, records, knowledge of process) to demonstrate that the Superfund waste is a RCRA hazardous waste for the LDRs to be potentially applicable.

To determine whether a CERCLA waste is a RCRA characteristic waste, site managers may test the waste or use their knowledge of the properties of the waste. To determine if a waste is a listed waste, sampling alone will not be sufficient. The RCRA listing descriptions will generally require that the site manager have knowledge about the source of the waste (for example, did the sludge on site result from a wastewater treatment operation?) or its prior use (e.g., was the waste unused when it was discarded?).

If the site manager determines that the site waste is a RCRA hazardous waste, he/she must also determine if that waste is a "California list" waste. The California list wastes are a distinct category of RCRA hazardous wastes regulated under the LDRs. The LDR regulations describe the California list wastes and they will be discussed in the forthcoming guidance document.

3. Is the RCRA waste restricted under the LDRs at the time of placement?

The land disposal restrictions are being phased in for the RCRA hazardous wastes over a period of time. Attachment 1 presents the LDR statutory deadlines established by section 3004 of the 1984 RCRA amendments. A RCRA waste becomes a restricted waste under the LDRs on its statutory deadline, or earlier if EPA chooses to promulgate treatment standards for a waste prior to this deadline. Note that after May 1990, all RCRA hazardous wastes (that were

listed or characteristic as of the 1984 RCRA amendments) will be restricted under the LDRs.

To determine if the LDRs are applicable, site managers should determine if the RCRA waste will be restricted under the LDRs at the time the waste is to be placed.

To summarize Section A, the LDRs are applicable when three conditions are met: 1) the CERCLA action constitutes placement, 2) the CERCLA waste is a RCRA hazardous waste, and 3) the RCRA waste is restricted at the time of placement. If these conditions are met, the CERCLA action must comply with the LDRs, unless an ARAR waiver is granted (remedial actions) or compliance with the LDRs is determined not to be "practicable" (removal actions).

B. Superfund compliance with the LDRs

Section B briefly describes the different types of LDR requirements and provides an overview of the Superfund approach for complying with these LDR requirements when they are determined to be "applicable." Section B describes only the major LDR restrictions; the upcoming guidance document will give a complete description of all LDR provisions.

1. Summary of the major LDR requirements

When a waste becomes "restricted" on its statutory deadline (or possibly earlier), one of four types of restrictions will take effect:

Treatment standard (§268.40-43) - The RCRA amendments direct EPA to promulgate treatment standards for all RCRA hazardous wastes by the statutory deadlines. To date, most of the standards set by EPA are concentration levels that must be achieved prior to land disposal. (The regulations specify whether a total waste analysis or the Toxicity Characteristic Leaching Procedure (TCLP) must be used to measure the concentration levels.) For concentration-based treatment standards, any technology may be used to achieve these standards. However, in limited cases, EPA has also promulgated a specific technology as a treatment standard, or has established a "no land disposal" treatment standard where a waste was no longer generated, no longer being land disposed, or was capable of being totally recycled.

National capacity extension (§268.30-33) - When EPA sets a treatment standard for a waste, it must also determine if there is sufficient capacity available nationwide to treat the waste to that standard. If not, EPA may grant a nationwide capacity extension for the waste for up to two years. During the extension, the waste does not have to meet the treatment standard. However, if waste that does not meet the standard is disposed in a landfill or surface impoundment, the receiving unit must meet the RCRA §3004(o) minimum technology requirements (e.g., double liner, leachate collection system, ground water monitoring). Because of these limitations on disposal, wastes are still considered "restricted" during national capacity extensions.

Attachment 2 highlights the national capacity extensions that EPA has granted to date for CERCLA soil and debris wastes that are contaminated with RCRA restricted wastes.

Soft hammer (§268.8) - If EPA fails to set a treatment standard for a First or Second Third waste on the statutory deadline, the soft hammer goes into effect automatically. The soft hammer places two requirements on the disposal of wastes in landfills and surface impoundments: 1) the receiving unit must meet the RCRA minimum technology requirements, and 2) the generator must demonstrate and certify that he has investigated treatment options for the waste, and, where treatment is practically available, that the waste has been treated using the best practically available treatment method. The soft hammer remains in effect until EPA sets a treatment standard for the waste, or until the hard hammer falls in May 1990, whichever comes first.

Hard hammer (RCRA §3004(g)(6)(C)) - If EPA fails to set a treatment standard for a solvent, dioxin, or California list waste by the statutory deadlines for these wastes, or for any "Third" waste by May 1990, the hard hammer falls. The hard hammer prohibits all land disposal of the affected waste.

Compliance with RCRA and the LDRs may also be obtained through several options other than meeting the restrictions above. It is important to note that these options constitute compliance with RCRA; they do not require an ARAR waiver under CERCLA.

A Treatability Variance (§268.44) is available when a treatment standard has been set for a waste. The variance can be used where, because the site manager's waste is significantly different from the waste used by EPA to set the treatment standard, the standard cannot be met or the BDAT technology is inappropriate. The variance can be granted either administratively, for a particular waste at a particular site, or through a rule-making procedure, which establishes a new nationwide waste category and associated treatment standard.

An Equivalent Treatment Method Petition (§268.42) can be used where a treatment standard is a specified technology, but the site manager can demonstrate that another technology can achieve an equivalent measure of performance.

A No-Migration Petition (§268.6) can be used as an alternative to any of the four restrictions above. The site manager must demonstrate that there will be no migration of hazardous constituents above health-based levels from the disposal unit or injection zone for as long as the waste remains hazardous.

Delisting (§260.20 and §260.22) can be used as an alternative to any of the four restrictions above, when the RCRA hazardous waste is a listed waste. The site manager must demonstrate that: 1) the waste does not meet any of the criteria under which the waste was listed, and 2) other factors

(including additional constituents) would not cause the waste to be hazardous.

2. Superfund approach for complying with the LDR requirements

The present Superfund approach for complying with the LDRs when they are applicable requirements is illustrated below:

CASE A: CERCLA liquid or sludge wastes that are also RCRA restricted hazardous wastes

CERCLA liquid or sludge	+	RCRA restricted hazardous waste	+	Placement	=	LDR is applicable. Must comply (unless CERCLA ARAR waiver is granted). If the LDR restriction is a treatment standard, evaluate whether it can be met. If not, determine if a Treatability Variance or other RCRA option is appropriate.

CASE B: CERCLA soil or debris wastes that contain RCRA restricted hazardous wastes

CERCLA soil or debris	+	RCRA restricted hazardous waste	+	Placement	=	LDR is applicable. Must comply (unless CERCLA ARAR waiver is granted). If LDR restriction is a treatment standard, will generally be appropriate to seek a Treatability Variance. Other RCRA options may also be appropriate.

CERCLA response actions often address waste matrices, such as contaminated soil and debris, that are different from the RCRA industrial wastes used to set the LDR treatment standards. Therefore, the Agency is undertaking a rulemaking that will set LDR treatment standards specifically for contaminated soil and debris. Until that rulemaking is completed, site managers should use the data collected during the removal and remedial site investigations to support a Treatability Variance for soil and debris where necessary. As part of this interim approach, the Agency is developing specific guidance for obtaining a Treatability Variance for soil and debris, which establishes alternate treatment levels or methods for soil and debris.

If you have further questions, you may call the Headquarters Superfund Regional Coordinators, Carolyn Offutt of the CERCLA program (FTS 475-9760), or Michaelle Wilson of the RCRA land disposal restrictions program (FTS 382-4770).

Attachments

cc: Regional Counsel, Regions I-X
Director, Waste Management Division, Regions I, IV, V, VII, and VIII
Director, Emergency and Remedial Response Division, Region II
Director, Hazardous Waste Management Division, Regions III and VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
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Superfund Branch Chiefs, Regions I-X
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Bettie Van Epps, OERR Document Coordinator

Attachment 1

LDR STATUTORY DEADLINES

RCRA HAZARDOUS WASTE	STATUTORY DEADLINE*
Spent solvent wastes (F001-F005)	November 8, 1986
Dioxin wastes (F020-F023 and F026-F028)	November 8, 1986
California list wastes - Any RCRA hazardous waste; and - Liquid (except for HOCs); and - Exceeds statutory prohibition level for certain cyanides, metals, corrosives, PCBs or HOCs	July 8, 1987
CERCLA/RCRA corrective action soil and debris (Solvent-containing, dioxin-containing, and California list wastes only)	November 8, 1988
First Third wastes (listed RCRA hazardous wastes)	August 8, 1988
Second Third wastes (listed RCRA hazardous wastes)	June 8, 1989
Third Third wastes (listed and characteristic RCRA hazardous wastes)	May 8, 1990
New RCRA wastes (any RCRA hazardous waste listed or identified under RCRA 3001 after November 8, 1984)	Within 6 months of listing or identification**

* These dates are statutory deadlines in HSWA. On this date, some type of LDR restriction will apply (i.e., treatment standard, minimum requirement during national capacity extension, soft hammer, hard hammer). However, the Agency also has the authority to restrict a waste earlier than its statutory deadline. Currently, the Agency is planning to restrict certain Third Third wastes in the June 1989 Second Third rule, so individual regulations must be checked.

** If EPA misses the 6 month deadline, the waste will not be restricted under the LDRs because HSWA contained no hammer provisions for newly identified wastes.

Attachment 2

LDR NATIONAL CAPACITY EXTENSIONS FOR CERCLA SOIL AND DEBRIS

Waste Category	Statutory Deadline	Treatment Standard Effective Date
Solvent (F001-F005)	November 8, 1988	November 8, 1990*
Dioxin (F020-F023 and F026-F028)	November 8, 1988	November 8, 1990*
California list (HOCs)	November 8, 1988	November 8, 1990*
First Third:		
Wastes where BDAT is incineration	August 8, 1988	August 8, 1990*
Wastes where BDAT is other than incineration	August 8, 1988	August 8, 1988**
Soft hammer wastes - treatment standard not set; must meet soft hammer restrictions as of 8/8/88	August 8, 1988	N/A

* The effective date is based on the granting of a national capacity extension. During the capacity extension, the soil and debris do not have to meet the promulgated treatment standards. However, if soil or debris that does not meet the standard is disposed in a landfill or surface impoundment, the receiving unit must meet the RCRA minimum technology requirements (double liner, leachate collection system, ground water monitoring).

** Except for K048-K052 and K071, which were granted capacity extensions until August 8, 1990.