

HTRW Center of Expertise

Environmental Regulatory

Fact Sheet 01-03

Storage, Treatment, Transportation, and Disposal of Mixed Waste; Final Rule

On May 16, 2001, the Environmental Protection Agency (EPA) published a final rule in the Federal Register pertaining to the storage, treatment, transportation and disposal of mixed wastes. The rule was published as 66 Federal Register 27218. The full text can be found at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2001_register&docid=01-11408-filed.pdf It amends 40 CFR Part 266 regarding management of mixed waste.

EXECUTIVE SUMMARY

This final rule minimizes the dual regulation of low-level mixed waste (LLMW), which is currently subject to regulation under both the Resource Conservation and Recovery Act (RCRA) and the Atomic Energy Act (AEA). Two exemptions are provided that would relieve the LLMW from RCRA Subtitle C regulation if the waste were also regulated under the AEA:

- The first provides a conditional exemption from RCRA Subtitle C storage and treatment requirements for LLMW that is regulated under a NRC or NRC Agreement State license provided certain conditions are met.
- The second provides a conditional exemption from RCRA Subtitle C transportation and disposal requirements for LLMW and eligible NARM that is regulated under a NRC or NRC Agreement State license provided certain conditions are met.

APPLICABILITY

The primary effect of this rule will be on generators of low-level mixed wastes that are regulated under a Nuclear Regulatory Commission (NRC) or NRC Agreement State license. Examples of impacted waste streams include Liquid Scintillation Counting wastes. (If the radioactive constituent is Tritium or C-14, it may be disposed of without regard to its radioactivity, however DoD still uses hazardous components in its scintillation cocktails, and often uses other radionuclides.) In addition, other waste streams include various instruments and articles, weapons cleaning materials, industrial waste from Uranium/Thorium machining/welding/cleaning activities, research generated mixed waste, spill residue including contaminated soils from remediation sites, etc. Certain aspects of this rule will also affect installations that generate eligible NARM wastes. Examples of eligible NARM waste would be radium in vehicle dials, contaminated soils at remediation sites, etc. The major impact to USACE projects is expected to be on remediation sites involving radioactive contaminants, such as FUSRAP sites and Installation Restoration sites, and waste from final closure of decommissioned defense nuclear reactors.

DEFINITIONS

Low-level Mixed Waste (LLMW). For purposes of this regulation, LLMW is a waste that contains both low-level radioactive waste and RCRA hazardous waste.

Low-level Radioactive Waste (LLW). For the purpose of this regulation, LLW is a radioactive waste which contains Atomic Energy Act regulated source, special nuclear, or byproduct material, and which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act.

Mixed Waste means a waste that contains both a RCRA hazardous waste and source, special nuclear, or byproduct materials, subject to the Atomic Energy Act of 1954, as amended.

Naturally Occurring and/or Accelerator-produced Radioactive Materials (NARM) means radioactive materials that are not source, special nuclear, or byproduct materials as defined by the AEA, and (1) are naturally occurring, or (2) are produced by an accelerator. NARM is regulated by the states under state law, or by DOE for its own activities under DOE orders, and by DoD for its activities under Component regulations.

Eligible NARM is NARM that is eligible for the transportation and disposal exemption. It is NARM that contains RCRA hazardous waste, meets the waste acceptance criteria of, and is allowed by State NARM regulations to be disposed of at a LLRWDF licensed in accordance with 10 CFR part 61 or NRC Agreement State equivalent regulations.

STORAGE AND TREATMENT CONDITIONAL EXEMPTION AND ELIGIBILITY

The storage and treatment conditional exemption exempts LLMW from the regulatory definition of hazardous waste if the waste is eligible and certain conditions are met.

Eligibility

In order for LLMW to be eligible for the storage and treatment exemption, it must be generated and managed under a NRC or NRC Agreement State license.

Conditions

In order for the LLMW to qualify for the exemption, a generator must:

- Notify EPA that the exemption is being claimed, along with other necessary information.
- Store LLMW in tanks or containers in compliance with the NRC license.
- Store LLMW in tanks or containers in compliance with the compatibility requirements of RCRA.
- Certify that personnel are trained in waste management and incident response.
- Conduct an inventory of stored conditionally exempted LLMW at least annually.
- Inspect stored waste at least quarterly.
- Maintain an accurate emergency plan and provide it to all local authorities responsible for incident response at your facility.

Wastes that are eligible for the exemption and meet the conditions may be stored onsite without triggering the RCRA Subtitle C storage requirements and may be treated onsite without a RCRA Subtitle C permit.

Conditionally exempted LLMW that fails to meet any of these conditions will automatically lose the exemption and immediately become subject to RCRA Subtitle C hazardous waste container and/or tank storage requirements. If the exemption is lost, notification must be made to EPA and the NRC. In addition, if the exemption is lost there are provisions to reclaim the exemption, i.e. reestablish compliance with the initial conditions and notify that the exemption is being reclaimed. EPA retains the authority to terminate an exemption under certain conditions.

Recordkeeping

In addition to those records required by the NRC or NRC Agreement State license, the following records must be maintained at the facility:

- All notifications, return receipts, reports of failure(s) to meet exemption conditions and all records reclaiming the exemption. Records must be maintained for as long as the exemption is claimed and for three years thereafter, or in accordance with NRC requirements, whichever is longer.
- LLMW annual inventories and quarterly inspections. Records must be maintained for three years after the waste is sent to disposal, or in accordance with NRC requirements, whichever is longer.
- Training certifications. Certifications must be maintained for as long as the exemption is claimed and for three years thereafter, or in accordance with NRC requirements, whichever is longer.
- An Emergency plan. Plan must be maintained for as long as the exemption is claimed and for three years thereafter, or in accordance with NRC requirements, whichever is longer.

The period of record retention will generally be the period of storage plus 3 years, unless the materials decays so it is no longer radioactive in storage.

Reentry into RCRA

When the LLMW has met the requirements of the NRC or NRC Agreement State license for decay-in-storage and can be disposed of as non-radioactive, then the conditional exemption no longer applies. On that date the waste is subject to the hazardous waste regulations, and the accumulation time begins.

TRANSPORTATION AND DISPOSAL CONDITIONAL EXEMPTION AND ELIGIBILITY

The transportation and disposal conditional exemption exempts eligible LLMW and eligible NARM waste from the regulatory definition of hazardous waste if the waste meets certain conditions.

Eligibility

In order for LLMW to be eligible for the transportation and disposal exemption, the waste must be a LLMW and meet the waste acceptance criteria of a Low-Level Radioactive Waste Disposal Facility (LLRWDF) and/or be an eligible NARM waste. Eligible NARM waste contains RCRA hazardous waste, meets waste acceptance criteria of, and is allowed by State NARM regulations

to be disposed of at a licensed LLRWDF in accordance with NRC or NRC Agreement State equivalent regulations.

Conditions

In order for the LLMW or eligible NARM waste to qualify for the exemption:

- The eligible waste must meet or be treated to meet the Land Disposal Restriction (LDR) treatment standards in 40 CFR part 268, subpart D. If the waste is treated onsite, the generator must prepare a waste analysis plan.
- The eligible waste must be manifested and transported according to NRC regulations in 10 CFR part 20.2006 and 10 CFR part 1.5 (or NRC Agreement State equivalent regulations).
- The eligible waste must be in carbon steel drums or an equivalent, or a high integrity container as defined by the NRC.
- The exempted waste must be disposed of at a designated LLRWDF.

Prior to the initial shipment of an exempted waste, the generator must provide a one-time notice to EPA stating that the transportation and disposal conditional exemption is being claimed. In addition, the generator must notify the LLRWDF by certified delivery before each shipment of the exempted waste. The generator must have received the return receipt of the notice prior to offsite shipment.

Reentry into RCRA

Any waste that fails to meet these conditions will automatically lose the transportation and disposal conditional exemption and become subject to full RCRA regulation for those activities. If the exemption is lost, notification must be made to EPA. In addition, if the exemption is lost there are provisions to reclaim the exemption. In general, the exemption may be reclaimed after return receipt confirming the loss of the exemption is received by the generator, and compliance with the initial conditions is reestablished, and renotification that the exemption is being reclaimed is made to EPA. EPA retains the authority to terminate an exemption under certain conditions.

Recordkeeping

In addition to those records required by the NRC or NRC Agreement State license, the following records must be maintained at the facility:

- All operating records required under 40 CFR part 264.73 and 265.73 and all LDR testing, tracking and recordkeeping requirements under 40 CFR part 268.7 for three years after the waste is sent offsite for disposal.
- All notifications and return receipts for three years after the exempted waste is sent for disposal.
- All documents related to tracking the exempted waste as required under 10 CFR 20.2006 or NRC Agreement State regulations, including applicable NARM requirements, if the waste is not already subject to the NRC or NRC Agreement State equivalent manifest and transportation regulations.

The Army and USACE record retention requirements are often longer than these minimum periods. The longer periods would govern retention of the records by USACE. See AR 25-400-2, and CECI Memorandum of 10 August 1999 regarding retention of records from environmental projects.

OTHER PROVISIONS

Storage Unit Closure

Interim status and permitted storage units that have only stored LLMW prior to this rule, and will continue to only store LLMW after this rule, are not subject to the RCRA closure requirements, but may need to modify their permits or closure plans for these units.

Loss of Exemptions

EPA states that the primary determination as to whether an exemption is lost will be on whether or not the waste is being safely and protectively managed on a day-to-day basis. The exemptions will not be lost automatically for failure to meet recordkeeping requirements, unless there are recurring or systematic deficiencies.

LLMW Enforcement Policy

EPA intends to allow the existing *EPA Mixed Waste Enforcement Policy* to expire on October 21, 2001. EPA recognizes that states may not have adopted this less stringent rule by that date. States, which do not adopt the rule, have the option of developing an enforcement policy within their state.

Application to DOE Facilities

The storage and treatment eligibility provision requires two prerequisites; the waste must be LLMW and the waste must be generated and managed under a single NRC or NRC Agreement State license. As DOE's LLMW is not NRC regulated, the storage and treatment conditional exemption is not available to DOE. The transportation and disposal exemption is being made available to DOE and has been fashioned to ensure external oversight of DOE waste. Thus, for DOE waste to be conditionally exempted under the transportation and disposal portion of the regulation, the eligible waste must meet RCRA LDR requirements, be disposed of at a NRC or NRC Agreement State licensed LLRWDF, and comply with the NRC or NRC Agreement State equivalent manifest and transportation regulations and meet all other requirements pertaining to the exemption.

Application of Final Rule as CERCLA ARAR

The affect of this rule on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions depends on whether the waste will be managed on or off the CERCLA site. Off-site disposal of CERCLA remediation waste must comply with all conditions of the rule for a generator to take advantage of the exemption provided, including that the waste must be disposed of at a LLRWDF that is licensed by the NRC or a NRC Agreement State, and is in compliance with the 10 CFR part 61 or equivalent State regulations. Off-site rule requirements in 40 CFR 300.440 continue to apply to CERCLA remediation wastes. Mixed waste managed during on-site waste remediation must meet all applicable or relevant and appropriate requirements of Federal or State environmental laws or justify a waiver from those standards. This rule requires that the disposal facility be licensed and overseen by the NRC or NRC Agreement State. On-site CERCLA response action must comply with the substantive provisions

of environmental regulations and standards, but not the administrative provisions. Therefore, no permit or license is required for on-site activities. In accordance with the National Contingency Plan and CERCLA, this regulation is not expected to be an applicable requirement at most CERCLA sites managing LLMW. However, relevant and appropriate determinations are site-specific and these may or may not be deemed relevant and appropriate given site-specific conditions.

Application to CERCLA Cleanup Sites

For remediation sites where the material/waste is licensed by the NRC or NRC Agreement State, these regulations will be helpful in the management of those wastes onsite since the eligible waste could invoke this regulation as an ARAR in lieu of RCRA Subtitle C regulation.

At CERCLA sites where the waste is not licensed by the NRC or an Agreement State, this regulation will be of limited benefit. These wastes would only typically be eligible for the transportation and disposal exemption within the regulations. When transported offsite, these wastes must still meet the LDR requirements of RCRA prior to disposal, be manifested under NRC requirements, and be sent to a NRC or NRC Agreement State licensed LLRWDF. The primary advantage to using the exemption would be in the case where the LLMW contained RCRA-listed wastes. If the wastes were treated on the CERCLA site to meet LDRs, the waste could be disposed of offsite at a licensed LLRWDF in lieu of a mixed waste RCRA permitted and NRC licensed facility.

Another limited advantage would be regulatory relief from RCRA Subtitle C requirements for the construction of an onsite disposal facility. If the waste was eligible and met the conditions of the transportation and disposal exemption, disposal facilities built on CERCLA sites could be constructed to meet NRC requirements in lieu of RCRA Subtitle C requirements. In addition, since the site is a CERCLA site, permits and licenses would not be required for the facility.

EFFECTIVE DATE AND STATE AUTHORIZATION

Authorization for this rule is not automatic, but depends upon State action. In addition, since the provisions are less stringent, states are not required to adopt the final rule. In Alaska, Hawaii, Iowa, Puerto Rico, and the Virgin Islands, where EPA has retained authority for the RCRA program, this rule becomes effective November 13, 2001. In states with current authorization to implement the RCRA mixed waste regulations of 1986 (43 states and one territory), the states will need to amend their regulations to include the new conditional exemption. In the remaining states and territories, authority to administer the RCRA mixed waste regulations must first be sought. The following web site provides state status with respect to mixed waste regulation: http://www.epa.gov/radiation/mixed-waste/mw_pg6.htm