

PPC 9441.1992(07)

MANAGEMENT OF MIXED WASTE

United States Environmental Protection Agency  
Washington, D.C. 20460  
Office of Solid Waste and Emergency Response

March 31, 1992

Jane Vogt  
Rt. 1, Box 37C  
Naper, Nebraska 68755

Dear Ms. Vogt:

Thank you for your letter of February 19, 1992 regarding the content and management of mixed waste. I have attached guidance and other related mixed waste material referenced in my response to enhance your understanding of commercial mixed waste management.

Your first request is for a detailed list of the "elements" contained in low-level mixed waste. Low-level mixed waste is defined as a waste that meets the definition of low-level radioactive waste (LLW) in the Low-Level Radioactive Policy Amendments Act of 1985 and contains a hazardous waste as defined in regulations issued under the Resource, Conservation and Recovery Act (RCRA) and codified at 40 CFR Part 261. Since Environmental Protection Agency's (EPA) jurisdiction applies to the hazardous component, the information below includes general types of hazardous components most commonly found in low-level mixed waste. Based on earlier reports and from preliminary results from a joint survey issued by Nuclear Regulatory Commission (NRC) and EPA, LLW mixed waste typically consists of the following categories of wastes:

- (1) Organic liquids including cleaning and degreasing solvents, scintillation liquids (which typically contain toluene and xylene as the hazardous component); organic lab liquids; sludges; and other various solvents.
- (2) Oil mixtures used in operation and maintenance activities, such as spent lubricants from radiologically contaminated equipment.
- (3) Heavy metal contaminated wastes such as discarded lead shielding and/or containers, chromium containing ion exchange resins and corrosion inhibitors, and decontamination resins containing cadmium.
- (4) Aqueous corrosive liquids such as those used at nuclear power plants or in industry to clean contaminated containers and as back-flush ion exchange resins.

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Your second request is for a list of entries which produce mixed waste and a list of those entities that hold licenses or permits for the storage of mixed waste. Although the EPA tracks permitted hazardous waste facilities on a national basis, we do not distinctly track hazardous waste facilities that generate or hold storage permits for mixed waste. Therefore, the specific list that you requested is not available. However, I have provided you with information (attached) on the potential universe of mixed waste generators compiled for an EPA mixed waste training course from various reports. You also may try calling individual State hazardous waste agencies and EPA Regional Offices to obtain information on mixed waste producers and mixed waste facilities with storage permits. (See the contact list in the back of your booklet entitled "Low-level Mixed Waste: A RCRA Perspective for NRC Licensees.") For information on licensees that store mixed LLW, you should contact the NRC, which is the agency with the authority over the radioactive component of commercial mixed LLW.

Your next question asks for the amount of mixed waste being held by producers. Currently, we only have rough estimates on the amount of mixed waste that is being generated in the United States. Estimates from past State and industry surveys conclude that mixed waste constitutes between 3 and 10 percent of commercially generated low-level waste which translates roughly to between 45 thousand and 150 thousand cubic feet annually. Because of the lack of specific information on the types and amounts of mixed waste generated, EPA and NRC launched a joint survey of potential commercial mixed waste generators in November 1991. The survey will compile data from 1990 mixed waste management activities, and it is currently in the final stages of collection and analysis. The final report presenting the 1990 annual mixed waste generation rates and the characteristics of mixed waste is expected this summer. Attached is a memo announcing the intent of the survey.

You also asked about the point at which the producers are required to report the amount they are holding. Hazardous waste generators and owners/operators of hazardous waste treatment, storage and disposal facilities (TSDFs) are required to report biennially on their hazardous waste generation and management activities. Generators and TSDFs should provide, as part of the report, a description of the type and quantity of mixed waste managed during the previous calendar year, and the treatment, storage or disposal process practiced, if applicable. For mixed waste generators, this may be the point at which they first report the amount of mixed waste they are holding in storage. Another point at which mixed waste quantities have to be reported is in a hazardous waste permit application. Large quantity generators (i.e., those who generate 1000 kilograms per month of total hazardous waste or more) that store hazardous waste (including mixed waste) over 90 days, are required to obtain a RCRA permit and thus report on the types and quantities of hazardous waste (including mixed waste) they have in storage. Generators who

generate less than 100 kilograms of hazardous waste (including mixed waste) per month are conditionally exempt from the RCRA hazardous waste requirements including reporting.

Your next question asks about the ability of disposal sites for mixed waste produced in the United States. Currently, the only commercial disposal facility that is permitted for certain types of mixed waste is Envirocare of Utah, Inc. Of course, the facility is restricted in the hazardous waste permit as to what types of wastes it can accept, and the facility's current permit would authorize disposal of mixtures that are very low activity, "naturally occurring" or NORM wastes, not the "mixed wastes" defined above. Envirocare, as I understand, is in the process of building their mixed waste disposal cell and is not yet disposing of mixed LLW. To address your question about the current charge per cubic foot, I have attached a General Accounting Office report that discusses (see page 27) estimates for LLW and mixed waste disposal.

The authority to issue a mixed waste disposal permit for the hazardous component lies with EPA and/or a RCRA authorized State with an approved mixed waste program. Depending on the scope of a State's authorized RCRA program, the authority to issue a RCRA permit may lie solely with the State, solely with EPA, or be shared by EPA and the State. Please keep in mind that commercial mixed waste disposal facilities would also have to be licensed by NRC or an NRC agreement State. The attached July 3, 1986 and September 23, 1988 Federal Register notices explain the rationale for requiring States to adopt the authority for mixed waste and what this mixed waste status involves. Mixed waste is not regulated under RCRA in authorized States until the State is specifically approved by EPA for a mixed waste program. Of the 46 States including the District of Columbia that are currently authorized for RCRA programs, 29 also have approval for mixed waste programs.

The same agency with the authority under State and Federal law to site, construct, operate, and regulate a LLW facility can do the same for a mixed waste disposal facility (because mixed waste is a subset of LLW). However, additional agencies (EPA or an authorized hazardous waste agency) may regulate the mixed waste disposal facility, because of the direct authority over the hazardous component of mixed waste.

Finally, you asked if there is any means for a State or Compact to ban mixed waste from outside its State or Compact region from being disposed of within its State or Compact Region. Because mixed waste is a subset of LLW, States and Compacts can impose restrictions under the authority of the Low Level Waste Policy Amendments Act of 1985. Of course, there is room to negotiate with other States and Compacts to accept LLW including mixed LLW from outside their State or compact.

Thank you for your interest in mixed waste regulation. If you have any questions concerning this response, please contact Susan

Jones of my staff at (202) 200-2210.

Sincerely,  
Mike Flynn, Acting Chief  
State and Regional Programs  
Office of Solid Waste

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Attachment  
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February 19, 1992

Suzanne Rudzinski, Chief  
State Programs Branch  
Office of Solid Waste (05-342)  
401 M Street, S.W.  
Washington, D.C. 20460

Dear Ms. Rudzinski:

My questions regarding mixed waste information were referred to you by Mr. Randolph Wood, Director of the Nebraska Department of Environmental Control.

Specifically, I would like a detailed listing of the elements contained in Low-Level Mixed Waste. Also, please supply me with a list of those entities which produce mixed waste as well as those entities which hold licenses or permits for storage of mixed waste.

What amount of mixed waste is being held by producers, and at which point are they required to report the amount they are holding? Where is the mixed waste produced in the United States disposed of? What is the current charge per cubic foot for disposal of mixed waste?

Are there currently any commercial mixed waste disposal permits issued nationally? Who has the authority to issue a permit for disposal of mixed waste? What agency has the authority to site, construct, operate and regulate mixed waste disposal?

Is there any way a State or a Compact can ban mixed waste from outside its State or Compact region from being disposed of within its State or Compact Region?

Finally, please explain what a State does to acquire the status of a RCRA authorized state with mixed waste authorization and what this status means.

I look forward to a prompt response. I have a RCRA Perspective for NRC Licensees Booklet.

Sincerely,

Jane Vogt  
Rt. 1, Box 37C  
Naper, NE 68755

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