



Department of Energy  
Washington, D.C. 20545

APR 14 1980

MEMORANDUM FOR Mr. John B. Martin, Director  
Division of Waste Management  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Your letters of December 5 and 18, 1979, urged the Department of Energy (DOE) to accept licensed transuranic (TRU) waste for retrievable storage now that there is no licensed disposal site for such wastes.

At that time, other potential options had not been fully considered. There have since been a number of discussions between the NRC and DOE waste management staffs. In an April 4 meeting with Bob Browning and others, it was concluded that NRC could work with commercial TRU waste generators and the States to provide for licensed interim storage. This would resolve the immediate issue for the waste generators.

As part of this effort, DOE agreed to provide the enclosed TRU waste packaging criteria which are representative of that now used at DOE sites for retrievable storage of DOE TRU waste. We would propose that NRC eliminate any reference to a specific DOE site when the criteria are sent to the industry. Of course, we cannot guarantee absolutely that the criteria will not be changed. NRC staff stated at the meeting that they would provide to the industry appropriate caveats for application of these criteria.

Some existing TRU waste packages may not meet these representative acceptance criteria. If DOE were to receive commercial TRU waste in the future, DOE and the waste generator could agree on an overpack if some packaging feature did not meet the criteria. If a restricted material is contained in the package, the waste generator may be required to sort and repackage. However, it is recommended that you do not require overpacking, sorting or repackaging of existing packages now. Since the criteria are for retrievable storage needs, less stringent criteria may be applicable if a commercial TRU waste generator were shipping to a DOE site for early treatment to meet repository disposal criteria.

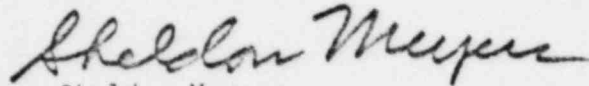
We are continuing to define the charge DOE would eventually levy for ultimate acceptance and disposal of commercial TRU waste. We estimate that the charge would be approximately \$200 per cubic foot. NRC staff stated they would encourage commercial TRU generators to minimize the total volume of TRU waste by (1) decontamination to remove bulk materials from the "TRU category," and (2) volume-reduction techniques.

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When a Federal repository becomes operational we expect to have authority to accept for disposal all TRU waste NRC may identify as requiring such isolation. We will continue working with you on this subject.

For questions related to interim storage of commercial TRU waste, G. Daly (353-4001) in the Division of Waste Products will be the contact with NRC.



Sheldon Meyers  
Deputy Assistant Secretary  
for Nuclear Waste Management

Enclosure

Acceptance Criteria

Packaging criteria to be established would be essentially the same as for DOE waste. The following general criteria would have to be met by each waste generator prior to acceptance by DOE. Final criteria would be formally established and issued by the receiving site:

- a. The following are prohibited: free liquids, pyrophoric materials smaller than 0.25 in. cube, liquid metals, acids, elemental alkaline metals, and explosives.
- b. Liquids must be mixed with absorbants so that liquids will not flow if container is broken.
- c. Combustible waste must be packaged separately, and labeled with a bright green 4-in. triangle on all sides.
- d. Surface contamination must be less than 2,200 d/m/100 cm<sup>2</sup> beta - gamma and less than 220 d/m/100 cm<sup>2</sup> - alpha. Radiation at surface: less than 200 mR/hr.
- e. Packaging must minimize gas buildup. In hydrogenous materials alpha activity must be restricted to  $4 \times 10^5$  nCi/gm waste.
- f. Thermal decay must not exceed 10 watts per package.
- g. Each package must be serialized and marked to maintain identity for at least 20 years.

h.	<u>Acceptable Package</u>	<u>Maximum Gross Weight</u>	<u>Fissionable Material Maximum Content</u>
	DOT 17C 55-Gallon Drum <sup>1/</sup>	800 lb/drum	200 g/drum
	DOT 6M Packaging <sup>1/</sup>	640 lb/drum	500 g/drum
	DOT 7A Steel Box <sup>1/</sup>	3,200 lb/box	60 g <sup>233</sup> U or 100 g <sup>235</sup> U
	DOT 7A Fiberglassed Box	10,000 lb/box	5 g/ft <sup>3</sup> of waste volumetric average and 350 g/box maximum
	DOT 17H 30-gallon Drum <sup>1/</sup>	200 lb/box	100 g/drum

<sup>1/</sup> Some DOE sites require galvanized metal containers.

Representative Acceptance Criteria for Retrieval of Stored TRU Waste

The representative DOE acceptance criteria consist of a summary page and a detailed document, both of which are subject to revision. It is assumed that a large fraction of stored TRU waste will require further treatment before disposal in a geologic repository.

Some existing TRU waste packages may not meet these representative acceptance criteria. If DOE were to physically receive commercial TRU waste in the future, it would be expected that DOE and the waste generator could agree on an acceptable overpack if some packaging feature does not meet the final criteria. However, if a restricted material is contained in the package, the waste generator may be required to sort and repackage. Therefore, it is recommended that overpacking and/or sorting and repackaging should not be done until final DOE acceptance criteria are available.