



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

Status of Greater-Than-Class C Low-Level Radioactive Waste Disposal

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Waste Management Symposia

- Currently there is no disposal pathway for greater-than-Class C (GTCC) low-level radioactive waste (LLRW) or GTCC-like waste.

Congressional Mandate

- Low-Level Radioactive Waste Policy Amendments Act of 1985 (Public Law #99-240)
 - Deems the Federal Government responsible for the disposal of LLRW with concentrations of radionuclides that exceed the limits established by the Nuclear Regulatory Commission (NRC) for Class C radioactive waste (e.g. GTCC LLRW). DOE was the agency that was later assigned that responsibility.
 - Requires disposal of GTCC LLRW at a facility licensed by NRC.

- GTCC LLRW
 - ***A formal, defined waste classification in federal law and regulations.***
 - Generated from Nuclear Regulatory Commission (NRC) or Agreement State licensed activities.
 - The most hazardous class of LLRW as defined by the NRC in 10 CFR 61. Radionuclide concentrations that exceed the limits for Class C LLRW.
 - ...“waste that is not generally acceptable for near-surface disposal... for which form and disposal methods must be different, and in general more stringent, than those specified for Class C waste”.
 - Must be disposed of in a geologic repository, as defined by NRC, unless proposals for disposal in a site licensed pursuant to 10 CFR 61 are approved by the Commission.

- GTCC-Like Waste
 - ***Not a formal waste classification by rule or DOE order; rather, a descriptive category created for purposes of the Final EIS.***
 - DOE owned or generated LLRW or transuranic (TRU) waste with characteristics similar to GTCC LLRW and with no identified disposal path.
 - Primarily non-defense TRU waste from clean-up activities at the West Valley Demonstration Project in New York.

- Waste Inventory

- The combined GTCC LLRW and GTCC-like waste inventory is about 12,000 m³ (420,000 ft³) and contains a total activity of about 160 million curies (MCi).
 - 8,800 m³ (310,000 ft³) or 75% is GTCC LLRW (commercial).
 - 2,800 m³ (99,000 ft³) or 25% is GTCC-like (DOE owned).
- Waste Groups (GTCC LLRW and GTCC-like waste):
 - Group 1: Wastes from currently operating facilities. This includes wastes that are currently in storage or are expected to be generated from these operating facilities.
 - Group 2: Projected wastes from proposed facilities and/or actions. Some of this waste may never be generated.

- Waste Types

- Activated metals: Primarily from commercial nuclear power plants.
 - Most of this waste will not be generated for decades, but represents approximately 98 percent of the total curies.
- Sealed sources: Used in hospitals, industries, and universities throughout the U.S.
- Other waste: From environmental cleanup and Mo-99 production.

- Issued FEIS on February 2016
 - Preferred alternative: land disposal at generic commercial facilities and/or WIPP Geologic Repository.
 - The Final EIS has the potential to enable disposal of the entire GTCC LLW and GTCC-like waste inventory of approximately 12,000 m³.
 - Presently there is no preference among the three land disposal technologies (intermediate-depth borehole, enhanced near-surface trench, and above-grade vault) at generic commercial facilities.
- Energy Policy Act of 2005 requires a Report to Congress prior to Record of Decision
 - The Report to Congress has been drafted and is in concurrence.

Submit Report to Congress



Await Congressional Action



Issue Record of Decision

The Report to Congress will:

- Describe alternatives under consideration
- Identify waste volume, concentration, and other relevant characteristics
- Identify the Federal and non-Federal options for disposal
- Describe actions to ensure safe disposal of identified radioactive wastes
- Describe projected costs
- Identify options for ensuring that the beneficiaries of the activities resulting from the generation of GTCC LLRW bear all reasonable costs of disposing of such wastes
- Identify statutory authority required for disposal of GTCC LLRW

QUESTIONS?