



Recommendation No. 130

September 26, 2000

Mound TRU Waste Shipments to SRS

Background

The Mound site (located near Cincinnati, Ohio) currently has 150 cubic meters of TRU (Pu-238) waste. This DOE site is scheduled for closure in 2004 and DOE is currently discussing with the South Carolina Department of Health and Environmental Control (SCDHEC) the transfer of this waste (and the potential for another 150 cubic meters of TRU waste from decontamination and decommissioning activities at Mound) to SRS. Mound has a Department of Transportation (DOT) exemption for shipment of fissile and non-fissile transuranic waste in ATMX/OHOX railcars until May 2002. As part of the current proposed initiatives to transfer the Mound waste to SRS, SRS would not receive any waste from Mound until SRS ships a greater volume of waste to Waste Isolation Pilot Plant (WIPP). This amount could be up to twice (600 cubic meters) the volume coming from Mound but the final amount has not been established. (Ref. 1)

Under current transportation requirements, the Mound waste stream can not go directly to the WIPP without some assay, sorting, segregating, and repackaging (to comply with the use of TRUPACT II containers). Consolidating this activity at SRS, which has a similar TRU waste stream, can save considerable taxpayer money and allow Mound to close on schedule. Plus, the total volume of Mound waste is small compared to the total Pu-238 waste volume at SRS and with only a fraction of the activity level (500,000 curies at SRS versus 900 curies for Mound waste).

The Savannah River Site (SRS) Citizens Advisory Board (CAB) has been aware of the possibility of consolidating Pu-238 waste from sites with small inventories for some time (Ref. 2). In 1997, the SRS CAB was receptive to the idea of consolidating and treating TRU waste at SRS provided that DOE had a definite schedule for treatment and shipment of SRS Waste to WIPP and funding was available for an assay, sorting, segregating, and repackaging facility (Ref. 3).

Comment

Currently, the first SRS TRU waste shipment to WIPP is expected to begin by March 30, 2001 with 4 shipments in FY01 and 12 shipments in FY 2002, and an undetermined accelerated schedule beyond 2002 (Ref. 4). In order for DOE to meet its proposed Mound waste transfer (more SRS TRU waste will be shipped to WIPP than received from Mound), the current TRU waste shipment schedule would need to be accelerated. In actuality, the process will be iterative in nature with SRS shipping TRU waste to WIPP then receiving a shipment of TRU waste from Mound. What is important to the SRS CAB is the fact that an additional volume of TRU waste (up to 600 cubic meters) will be removed from SRS and the State of South Carolina more quickly than originally planned and at no cost to SRS.

To accomplish this accelerated schedule, assistance will be required to characterize the additional volume of SRS TRU waste going to WIPP. This can be accomplished either by using mobile characterization vendors (already approved by WIPP) at SRS or by using a-yet-to-be established central characterization facility at WIPP. This central characterization facility is currently proposed as part of a modification to the WIPP permit. The SRS CAB's preference is to see the central characterization facility at WIPP. Both cost and safety issues would be reduced at SRS if such a facility becomes available.

As stated in Recommendation # 47, the SRS CAB would like DOE to institute an accelerated schedule for removing TRU wastes from SRS. This could happen if the Nuclear Regulatory Commission (NRC) approved the proposed modifications to the transportation regulations or if DOE developed an alternative treatment technology for high activity Pu-238 waste at SRS (Ref 5). The SRS CAB would like assurances that the transportation regulations will be modified or that DOE has a plan/program for treating the high activity Pu-238 waste at SRS.

In addition, the SRS CAB is concerned that the contents of the Pu-238 waste containers from Mound

be accurately identified. The contents will not be verified by SRS for at least 10 years (until the Pu-238 processing facility is built). The SRS CAB would like a quality control program initiated at Mound that provides verification that the contents of the Mound containers are accurate. Furthermore, the SRS CAB believes Mound should not only provide funds for the shipment of its Pu-238 waste to SRS but also share in the cost for the resulting accelerated TRU waste shipments to WIPP.

Recommendation

Due to the considerable taxpayer savings, the relative low risk, and the use of funding external to SRS for the activity, the SRS CAB recommends that DOE-SR accept the TRU waste shipments from Mound as long as the following conditions are met:

1. DOE receives approval to ship more TRU waste volume from SRS than received from Mound. The SRS CAB preference is to see at least twice the volume.
2. DOE provides non-SRS funding to not only transfer the Mound waste to SRS but to fund all activities necessary to accelerate SRS TRU waste shipments to WIPP.
3. DOE should explain its long-range plan and program for high activity Pu-238 waste treatment/processing at SRS and identify where it can accelerate the program. DOE should continue to work with NRC to change the transportation regulations.
4. DOE mandates waste inventory validations, certifications, and assurances from Mound.
5. DOE ensures that safe packaging and transportation requirements as specified by DOT certification are followed for all Mound waste shipments into South Carolina.
6. SCDHEC follow the Statement of Principles as guidance concerning its decision to allow the transfer of waste into SRS.

References

1. Mound Transuranic (TRU) Waste, presentation to the CAB WM Committee by Dale Ormond, August 22, 2000.
2. Record of Decision from the Waste Management Programmatic Environmental Impact Statement, January 20, 1998.
3. Citizens Advisory Board Recommendation No. 47 (adopted November 18, 1997), "Environmental Management Integration and some SRS Specific Recommendation".
4. Transuranic (TRU) Waste Update, presentation to the CAB WM Committee by Dale Ormond, August 22, 2000.
5. Alternative Treatment Technology for PU 238 Waste Forms, presentation to the CAB WM Committee by Brent Daugherty, August 22, 2000.

Agency Responses

[Department of Energy-SR](#)