



**Savannah River Site
Citizens Advisory Board**

**Recommendation 210
SRS Non-drummed TRU Waste**

Background

The Savannah River Site (SRS) has two principal types of legacy Transuranic (TRU) waste, debris waste contaminated with Pu-238 and debris waste contaminated with Pu-239. The TRU waste can also be divided into waste that is stored in 55-gallon drums and waste that is stored in large boxes. All of SRS TRU waste is mainly heterogeneous debris waste that consist of job control waste, which includes protective clothing, rags, tools, equipment, piping, and gloveboxes used during the processing of plutonium and other nuclear materials. Originally, the SRS TRU waste inventory consisted of 11,650 cubic meters, roughly half of this was originally in 30,000 55-gallon drums and the other half in approximately 3,000 non-drummed waste containers of varying sizes (Ref. 1).

To date almost half (14,500 drums) of the low activity (principally Pu-239) drummed waste has been shipped to the Waste Isolation Pilot Plant (WIPP). The remaining low activity drummed wastes are to be shipped by November 2006. Before the remaining high activity (principally Pu-238) drummed waste and non-drummed waste can be shipped, new technologies and methods are needed for performing large container assay and X-ray and limited intrusive repackaging for large containers and high-activity drums. The WIPP certification equipment for non-drummed waste is expected to arrive at SRS in late FY05. This \$6.5 million project is expected to be operational in FY07.

Further, even if this waste is certified and ready for shipment, shipment cannot occur until NRC certification of the TRUPACT-III shipping container is received. Current projections put the TRUPACT-III certification occurring in FY08.

Comment

It is conceivable that the TRUPACT-III certification could occur earlier than FY08. In a companion recommendation, the SRS CAB has recommended that the TRUPACT-III be available for use by October 2007 or earlier. Since SRS has already begun to initiate a pilot project to repackage non-drummed waste (2 black boxes repackaged in F-Canyon and 3 black boxes repackaged in E-Area), existing non-drummed waste is ready and is already waiting for WIPP certification and the TRUPACT-III shipping containers (Ref. 2). Plans are to have another 15 boxes of wastes prepared by the end of FY05. Thus, at least 20 boxes will be ready well before the WIPP certification equipment is operational in FY07. WIPP certification for non-drummed TRU waste represents a bottleneck that alone can prevent SRS from meeting its milestone to remove all legacy TRU wastes from SRS by 2009/2010.

The SRS CAB is hopeful that the TRUPACT-III certification will occur earlier than expected but is concerned that the bottleneck will occur. The SRS CAB acknowledges that a lot of work needs to be accomplished (equipment needs to be certified, operators need to be licensed to operate the equipment, and WIPP needs to be prepared to receive the non-drummed wastes). However, if DOE places the necessary emphasis and resources on the certification process, the SRS CAB believes that non-drummed certification can be expedited and an inventory of certified non-drummed TRU waste can be ready and approved to be shipped to WIPP as soon as the NRC TRUPACT-III certification is received.

Recommendation

The SRS CAB makes the following recommendations:

1. DOE accelerate the non-drummed certification process so that an approved program for

- TRUPACT-III package certification is in place well before October 2007.
2. SRS continue to repackage non-drummed TRU waste so a supply of packages prepared for TRUPACT-III certification and shipment is ready before October 2007.

References

1. TRU Waste Disposition, presentation to the WM Committee by Bert Crapse, February 15, 2005.
2. Citizens Advisory Board Recommendation No. 201 (adopted November 16, 2004), "Repackaging of TRU Waste Black Boxes".
3. Transportation of TRU Waste – Packaging, Characterization, and Shipping Limitations, presentation to the WM Committee by Phil Gregory, Packaging Manager, Washington TRU Solutions, February 15, 2005.

Agency Responses

[Department of Energy-SR](#)