



Savannah River Site Citizens Advisory Board

Recommendation 206

Redirection of 3013 Container Surveillance and Storage Capability

Background

Initial DOE storage plans for plutonium were based on the assumption that planned immobilization and mixed-oxide fuel (MOX) facilities would provide a near-term disposition path for much of the excess plutonium metal, oxide, and scrap. The Actinide Packaging and Storage Facility was cancelled due to a lack of funding and DOE decided to store excess plutonium in existing 50-year-old facilities (Building 105-K and Building 235-F) and use Building 235-F for required container surveillance activities. Congress tasked the Defense Nuclear Facilities Safety Board (DNFSB) to conduct a study of the adequacy of these facilities at the Savannah River Site (SRS) for the storage of defense plutonium and defense plutonium materials in connection with the Department of Energy (DOE) fissile materials disposition program. Although K-Reactor is a 50-year-old facility, the DNFSB considers it to be a robust structure that can be made suitable for extended storage of plutonium. Building 235-F (235-F), also a 50-year-old facility, does not meet all of the current safety standards and, according to DNFSB (Ref. 1), would require substantial upgrades before it is suitable for extended storage of plutonium.

DOE-SR intended to modify the 235-F facility for increased capacity for storing plutonium packaged in accordance with DOE-STD-3013, Stabilization, Packaging, and Storage of Plutonium-Bearing Materials; addition of a plutonium stabilization and repackaging capability; and limited sampling activities. However, New Design Basis Threat (DBT) guidance has been provided to the site, which would result in significant additional security costs if both Building 235-F and 105-K had to meet the requirements of a Category 1 DBT facility due to their plutonium mission. The new DBT was issued in FY2004 and subsequently revised twice. DOE-SR directed WSRC to suspend a portion of the 3013 CSSC project for Building 235-F. DOE-SR also directed WSRC to develop a preconceptual estimate for installing the 3013 surveillance capability in 105-K as well as other related operations to support the requested mission changes. The decision to move the 3013 CSSC from Building 235-F to 105-K was driven by the new security requirements resulting from the revised DBT guidance (Ref. 2).

Therefore, it is now expected that building 235-F will be deinventoried of Category 1 quantities of plutonium by the end of September 2006. This will dramatically reduce the operational and security costs for this facility. The change does not affect the non-destructive examination surveillance (NDE) project, which is expected to be completed in the first quarter of FY 07 in Building 235-F. NDE will continue in 235-F until 105-K is upgraded to support the surveillance activities, which will have a total project cost now at \$32.5 million. Once this capability is available in K-Area all 235-F operations will be terminated.

Comments

Before the 3013 CSSC capability can begin in K-Area, DOE-SR must obtain Congressional approval to allocate the necessary funds to begin the design work. Based on preliminary discussions, the original budget for performing the CSSC design was \$10 million with a construction estimate of \$79 million. This estimate does not include the cost for safety modifications or DBT costs. The revised project, CSSC capability in K-Area, has a preliminary high spot estimate of \$110 million plus DBT modifications that are to be determined. DOE-SR reports that there is considerable cost savings by taking this redirection. The SRS Citizens Advisory Board (CAB) desires to see the actual numbers to support this claim; but, the SRS CAB also realizes that the surveillance requirements of CSSC are needed now to meet the DOE 3013 standard.

Recommendation

The SRS CAB recommends that DOE -SR:

1. Verify the cost estimates for the 3013 CSSC Project in 105-K and provide documentation to demonstrate that there are considerable cost savings over performing these functions in Building 235-F and present this information to the SRS CAB on or before May 26, 2005.
2. Assuming sufficient cost savings can be realized, prepare the necessary documentation to obtain Congressional approval to begin design of the 3013 CSSC Project in 105-K and petition Congress as soon as possible to reallocate these funds.

References

1. Citizens Advisory Board Recommendation No. 196 (adopted July 27, 2004), "Plutonium Shipments and Disposition".
2. Proposed Redirection of the 3013 Container Surveillance and Storage Capability (CSSC) Project, 235-F, presentation to the NM Committee by Sachiko McAlhany, DOE-SR, March 7, 2005.

Agency Responses

[Department of Energy-SR](#)