SRS Citizen's Advisory Board

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Nuclear Materials Committee Meeting

Aiken Federal Building, Aiken, SC
February 23, 2004

The SRS Citizens Advisory Board (CAB) Nuclear Materials Committee (NMC) met on Monday, February 23, 5:00 PM, at the Aiken Federal Building, Aiken, SC. The purpose of this meeting was to discuss Plutonium Safe Storage and Surveillance, and to receive public comment.

Attendance was as follows:

CAB Members	**Stakeholders**	**DOE/Contractors**
- Gerald Devitt	Carl Mazzola	Sachiko McAlhany, DOE
- Perry Holcomb	Dennis Baker	Gerri Flemming, DOE
- Jean Sulc	TaTerrance Hopkins	Larry Davis, BWXT-SRC
- Bill Willoughby	Lee Poe	John Dickenson, WSRC
- William Lawrence	Mike French	David Burke, WSRC
Harold Rahn	Russ Messick	Teresa Haas, WSRC
Murray Riley	Don Orth	Lyddie Broussard, WSRC
- NM committee members	* Rick McLeod	
*CAB Technical Advisor		

Welcome and Introduction Jerry Devitt, NMC Chair, welcomed the group at 5:00 PM, requested that each attendee introduce themselves and their affiliation. He announced that Karen Patterson had agreed to become the Vice Chair of this committee, but was out of town and unable to attend the evening's meeting. He told the committee that plutonium issues at SRS continue to be of concern and introduced David Burke as the evening's speaker.

Plutonium Safe Storage and Surveillance, David Burke, WSRC, Operations Business Unit
Mr. Burke thanked the committee for the opportunity to speak to them and reminded them of the past presentations where the committee had received information on plutonium (Pu) packaging and storage issues. He opened this presentation with a recap of the major differences between the functional capabilities of the K Area Material Storage (KAMS) and 235-F facilities. He identified these two facilities as the designated Pu storage facilities at SRS. He explained that while both facilities could be used for the receipt, shipment, and storage of Pu, containers would not be opened in KAMS due to ventilation constraints. He contrasted the KAMS system with the ventilation of 235-F, which utilizes a sand filter. The sand filter system in 235-F is very similar to the systems used by the SRS canyon facilities. According to Mr. Burke, if the integrity of a Pu package was found to be suspect, it could be safely opened and inspected in 235-F without a release to the environment.

Mr. Burke explained that the specifications for Pu packaging, storage, and surveillance are defined in a DOE Standard 3013 (DOE-STD-3013). As the committee had been told in the past, the Pu is first placed in a safe and stable form through a stabilization process. The resulting form may be a metal button or an oxide powder. Mr. Burke described in detail the process by which the Pu is placed into a bagless transfer can. This can is then placed into an outer can. For material that is sent to KAMS, the 3013 nested cans are placed into a shipping container which meets the Department of Transportation (DOT) standard known as a DOT certified 9975 storage package. He said the material shipped to 235-F will remain in 3013 cans but will not require 9975 storage packages unless the material were to be shipped to another location.

Mr. Burke stated the DOE-STD-3013 requires that a surveillance program be established for the 3013 containers and the 9975 shipping packages. He explained that the standard requires a surveillance to be performed initially at the packaging location and then on an on-going basis at the designated storage location.

The surveillance program for 9975 shipping packages is unique to SRS, according to Mr. Burke, because SRS is the only site that is using 9975 shipping packages as part of an interim storage program. He went on to say the techniques used to implement the 9975 surveillance program will be focused primarily on two of the shipping package components, the pressure vessel O-ring seals and the Celotex insulation. Accordingly, the program is designed to identify any degradation of these materials.

Mr. Burke explained the various techniques that are used to implement the 3013 surveillance program including radiography, weight measurements, and health physics smears. He characterized the standard as one that uses a common sense approach to determine if any lid deflection, water intrusion, or increased radiation levels could be detected through the various non-destructive examination techniques. The surveillance standard also calls for the use of metallography. As the program is fully implemented, a random selection of containers will be opened to determine if there is evidence of hydrogen generation or corrosion. He explained that there is also a small-scale shelf life program managed by one of the DOE laboratories, which will be used to augment the knowledge base of the storage program.

At the current time, workers in FB-Line are stabilizing and packaging Pu in 3013 containers and performing the initial surveillance techniques on containers. The surveillance program for the ongoing storage is being finalized at this time according to Mr. Burke. The implementation of the ongoing surveillance program for Pu in storage is scheduled to begin February 2005 in 235-F.

Mr. Burke fielded numerous questions about the surveillance program and the determination of how packages would be selected for random sampling. Mr. Burke concluded his presentation with a discussion of how the surveillance program would be applied throughout the DOE complex. He referenced a decision tree that was to assist in the determination of which cans should be included in the destructive examination sample to ensure it included any at risk cans.

Public Comment
Mr. Devitt asked for any other public comment and with none, he then adjourned the meeting at 6:25 PM.

For additional information or meeting handouts, call 1-800-249-8155.

Follow-Up Actions
None