



## **SRS Citizens Advisory Board**

### **Nuclear Materials Committee**

#### **Meeting Summary**

January 22, 2001  
Hilton Oceanfront Resort  
Hilton Head Island, SC

---

The Savannah River Site Citizens Advisory Board (SRS CAB) Nuclear Materials (NM) Committee held a meeting on Monday, January 22 to hear discussion on the Defense Nuclear Facilities Safety Board (DNFSB) Recommendations 94-1/2000-1 and to hear an update on F Canyon operations.

#### **CAB Members**

Tom Costikyan\*  
Ken Goad\*  
Jean Sulc\*  
Brendolyn Jenkins\*\*  
Bill Willoughby\*\*

#### **Stakeholders**

Chuck Keilers, DNFSB

#### **DOE/Contractors**

Sachiko McAlhany, DOE  
Roy Schepens, DOE  
George Mishra, DOE  
Donna Martin, WSRC

\*Committee members

\*\*Committee members not present

#### **Nuclear Material Stabilization Program**

Tom Costikyan, CAB NM chair, opened the meeting and stated that the evening be used to informally review presentations and provide input for DOE and DNFSB presentations planned for the full CAB the following day.

#### **DOE Progress toward Recommendation 94-1/2000-1**

Sachiko McAlhany, Program Manager, DOE-SR Material and Facility Stabilization (MFS), presented information dealing with DOE's commitment to completing milestones listed in the DNFSB Recommendation 2000-1. McAlhany said one of the biggest steps toward completion of the 2000-1 milestones is the fact that Westinghouse Savannah River Company (WSRC) has been heavily incentivized in a new contract to accelerate the program and execute work safely.

McAlhany listed the following 2000-1 commitments already completed on schedule.

- Resumed Bagless Transfer System Operations, 6/00
- Began Packaging and Stabilization Project Conceptual Design, 7/00
- Resumed residue dissolving in HB-Line, 9/00
- Completed H Canyon Phase 3 restart, 6/00
- Began Highly Enriched Blend Down project detail design, 10/00

One commitment overdue is the signing of the DOE/Tennessee Valley Authority (TVA) agreement to blend down HEU. McAlhany said a signed agreement was not necessary for the project design to begin (in October). She emphasized that the HEU would have to be blended down regardless of whether it would be sent to TVA or if it remained in storage at SRS. In addition, blending down the HEU would free up much needed storage space in H Canyon.

McAlhany then reviewed the remaining materials to be stabilized as well as what has been stabilized to date. (See Slide presentation). Items included stabilization of plutonium solutions, dissolving SRS Reactor Spent Nuclear Fuel, stabilizing plutonium residues, plutonium repackaging. McAlhany said DOE is incentivizing WSRC to accelerate the plutonium repackaging. WSRC may speed up work on 235-F to install a long-term plutonium packaging and stabilization line and evaluate methods to conduct packaging and stabilization in FB-Line.

Chuck Keilers, DNFSB site representative, said that although stabilizing the HEU was the DNFSB's top priority, concerns also centered around the cancellation of the Actinide Packaging and Storage Facility (APSF) and the lack of a backup plan.

Tom Costikyan asked if the concern over the repackaging dealt with a less than robust storage container. Keilers said the plutonium metals and oxides do not meet DOE's standard 3013 packaging that consists of an inner can and an outer can for storing plutonium. He also pointed out that DOE's schedule to repackage the material extended to 2008, a four- to six-year delay from its original commitment.

McAlhany emphasized that the plutonium repackaging may now be accelerated by two years as a result of incentives in the new contract to operate SRS. Roy Schepens, Assistant Manager, DOE MFS, also pointed out that the bagless transfer was being successfully used for inner packaging of the highest risk material.

In other progress towards the DNFSB Recommendation 2000-1, DOE will "refresh" or clean the 50,000 gallons of HEU and transfer the solutions from a single walled tank to a more seismically qualified tank. DOE will also soon decide on the site to produce plutonium-238. Once that decision is made, neptunium stored at SRS will be shipped to the selected production site for feed material following stabilization to an oxide form.

Concerning americium/curium, McAlhany said the project is 50 percent complete although problems with the in-cell equipment contractor and qualification of the product to the national geologic repository have emerged.

#### DNFSB comments on DOE's Progress on Recommendation 94-1/2000-1

Keilers opened the DNFSB discussion with a focus on the two categories of materials of concern that are listed in DNFSB's Recommendation 94-1. The Board said DOE should stabilize materials representing imminent hazards within three to five years and the remaining materials should be stabilized within eight years. Keilers said DOE made good progress on those imminent hazard materials, but progress slowed on the material in the "eight year" category. In the latest DNFSB Recommendation, 2000-1, the Board said the proposed stabilization schedule was unsatisfactory. McAlhany responded by explaining that the schedule in many cases showed a range of time for completion (2006-2008 for example) of a project.

Keilers said DOE did accomplish substantial risk reduction from 1994 –2001. However, the risk reduction for the materials remaining becomes less as stabilization is delayed. According to the latest schedule, Keilers said delays from three to eight years occur from the original stabilization schedule set in 1995.

Ken Goad, CAB, asked if TVA was holding up stabilization of the HEU. Schepens said DOE is proceeding with the project because the HEU must be blended down whether it is shipped to TVA or remains at SRS. Keilers acknowledged that DOE was moving forward although the DNFSB has concerns that TVA and its contractors will not be ready to take the material when DOE completes the blend down.

Concerns with americium/curium stabilization delays revolve around problems with design delays and subcontractor problems. Keilers said these issues could impact the cost of project that in turn would affect the schedule. DOE is also expected to qualify the product for a geologic repository. McAlhany said DOE-SR personnel have started discussions with Yucca Mountain personnel.

Dealing with stabilization of plutonium, metal and oxides, Keilers said he is cautiously optimistic about accelerating stabilization by making modifications in FB Line.

### Canyon Utilization

McAlhany said chemical separation activities in F Canyon are scheduled to be completed by the end of the fiscal year 2002. One reason for the early shutdown is because no feed will be remaining to continue operations. DOE will conclude a report in January 2001 that will identify all of the materials that could potentially use the canyons for stabilization. Once the study is completed, McAlhany said SRS will assess the impacts to H Canyon as the backup or if it would be more advantageous to process materials in F Canyon.

Keilers said the DNFSB has several concerns with the use of the canyons. The DNFSB does not believe complex-wide survey of materials possibly needing the canyon for stabilization is complete. The Board also questions why DOE would suspend F Canyon operations although canyon activities (americium/curium) will last through 2006. The DNFSB believes the canyon should be used if it is not shutdown. McAlhany said there are cost savings in keeping the canyon operational yet not use the processing capabilities.

*Copies of meeting handouts may be obtained by calling 1-800-249-8155.*