



SRS Citizens Advisory Board

Nuclear Materials Management Subcommittee

Meeting Record

January 26, 1998

Holiday Inn Ocean Front, Hilton Head, SC

The Citizens Advisory Board (CAB) Nuclear Materials Management (NMM) Subcommittee met Monday, January 26, 2 - 8:30 p.m. at the Holiday Inn Ocean Front, Hilton Head, South Carolina. Subcommittee Chair Tom Costikyan presided. Board members present included, Ed Tant, Beaurine Wilkins, Brendolyn Jenkins, Mary Elfner, and Karen Patterson. Board facilitator Walt Joseph also attended. DOE-SR representatives were Gerri Flemming, Associate Deputy Designated Federal Official for the Department of Energy (DOE) and Don Bridges, invited speaker from DOE-SR Material and Facility Stabilization (MFS) Division. Donna Martin and Clay Jones attended from Westinghouse Savannah River Company. Camilla Warren and Laurie Hunt attended from Region IV of the Environmental Protection Agency and Lynn Waishwell attended from CRESP. Public attendees were Wade Waters, Cynthia Gerrard and Michael Shapiro.

Introduction

Costikyan opened the meeting by referring to the CAB's January 1997 recommendation on the scope of the Rocky Flats Plutonium Residue Environmental Impact Statement of supporting, with caution, the transfer of some nuclear materials from Rocky Flats to SRS for stabilization. He then introduced Don Bridges, DOE-SR MFS Division, to provide the subcommittee a presentation on Rocky Flats preferred alternative to send three types of materials to SRS for stabilization in F canyon.

Bridges said that as the director of the SRS nuclear material stabilization and stewardship program, he is responsible for interacting with other sites to develop safe, timely and cost effective stabilization of excess materials. For the day's presentation, Bridges said he would begin with a brief status of the SRS stabilization program, discuss the nature of SRS and Rocky Flats interaction since the 1960s and finally, identify the Rocky Flats material under consideration for stabilization at SRS.

SRS Stabilization Program

Bridges said it was important for the subcommittee to first receive a status of SRS's stabilization program before discussing the potential of bringing additional materials to SRS. Bridges prefaced the stabilization discussion by explaining how SRS's historical mission of producing tritium and plutonium ceased with the end of the Cold War and that many nuclear materials were

left in mid-cycle of the production process. DOE then had a responsibility to stabilize these excess materials for long term storage and ultimate disposition.

In 1994, an independent safety oversight agency called the Defense Nuclear Facilities Safety Board (DNFSB) evaluated the situation and recommended that DOE immediately stabilize some at risk materials within three years and stabilize the remaining materials within eight years. Each site identified by the DNFSB as having at risk material then began addressing the "94-1 Recommendation".

Bridges said the SRS program has been successful by completing 26 out of 43 milestones and is on schedule for completing the remaining milestones by 2003. Bridges then provided a schedule showing the various stabilization activities planned for F and H canyons, as well as a graph indicating proven and potential improvements in the stabilization schedule due to a phased canyon strategy approved by Secretary Pena in 1997. Bridges emphasized that the SRS stabilization program was top priority and is currently on schedule.

Costikyan asked if stabilizing Rocky Flats material at SRS would extend the life of the canyons. Bridges said there would only be a small impact of a few months associated with the F Canyon purex process.

Rocky Flats and SRS Interaction

Bridges said interaction between the Rocky Flats site located near Denver, Co, and SRS historically focused on SRS's recycling and scrap management support for the DOE complex. Rocky Flats manufactured weapons components for nuclear weapons from plutonium produced at SRS. During the manufacture of the components, however, a considerable amount of the materials ended up as impure scrap and much of the material was shipped back to SRS for recycle by chemical separation in the canyons. Bridges said scrub alloy, sand, salt and crucibles, and plutonium contaminated with americium were normally shipped to SRS to be recycled.

With U.S. weapons production no longer needed, DOE has decided to close as many sites as possible for safety and budgetary reasons, Bridges emphasized. To efficiently close the site, Rocky Flats was required to produce an environmental impact statement (EIS) to identify how materials would be stabilized and where it would be shipped for storage and final disposition. Bridges said the decisions will be made using information from the Draft EIS on Management of Certain Plutonium Residues and Scrub Alloy Stored at Rocky Flats. Several options in the EIS include stabilizing and storing material at Rocky Flats, processing material at Rocky Flats for disposal at the Waste Isolation Pilot Plant in Carlsbad, New Mexico and stabilizing the material and turning it over to DOE's excess weapons material disposition program.

Materials Identified for Potential Stabilization at SRS

Bridges said the amount of materials Rocky Flats has listed as preferred for stabilization at SRS includes the following:

- Scrub Alloy: 700 kilograms of bulk material consisting of 200 kilograms of plutonium

- Plutonium Fluoride Residues: 315 kilograms of bulk material consisting of 142 kilograms of plutonium
- Sand, Slag and Crucibles residue: 3061 kilograms of bulk material consisting of 132 kilograms of plutonium.

Bridges explained the amount of material involved in the preferred alternatives was a small fraction of the SRS inventory. For example, it would probably represent 200 or 300 more cans of stabilized plutonium, the amount that would fit into a portion of the meeting room.

Mary Elfner, CAB member, asked Bridges to describe the "bulk" material that constituted the plutonium residues and explain how the bulk material would be dispositioned. Bridges said the bulk material was scrap material such as aluminum and other metals that remained from the manufacture of plutonium weapons components. Since the materials could not be economically recycled, they would go into the SRS's high- and low-level waste management system.

Concerning potential impact of shipping the materials to SRS, Bridges again said there would be little impact to existing SRS stabilization work. He added that stabilization would occur in F canyon within the period before it is scheduled to stop operating. Bridges also said Al Alm made a commitment in the phased canyon strategy approach, to fund the stabilization of Rocky Flats material.

Why Process Rocky Flats Material at SRS?

Bridges said processing of some Rocky Flats material at SRS is being considered as a preferred route is because SRS historically recycled the material and is the only facility in the DOE complex with large-scale plutonium stabilization capabilities. In addition, the canyons are currently operating to stabilize the SRS materials and Bridges said excess capacity exists for the stabilization of additional materials while they remain operable through 2003. Bridges concluded with the reason for preferred stabilization at SRS by saying the final product of the canyons is acceptable for DOE's Material Disposition Program.

Concerning the disposition program, Costikyan stated DOE has already identified immobilization and mixed oxide (MOX) as the disposition route for excess plutonium. Bridges confirmed his statement and emphasized again that material from canyon operations are suitable for either MOX or immobilization.

Preferred Alternatives in the Rocky Flats EIS Affecting SRS

Talking specifically to the EIS, Bridges said Rocky Flats is recommending that only 10 percent of the materials be shipped to SRS for stabilization. Most of materials can be stabilized at Rocky Flats without using chemical processing. About five percent is recommended to be shipped to Los Alamos.

Costikyan asked if the processing at Los Alamos was chemical processing. Bridges said the material would be stabilized at Rocky Flats for shipment with a heat and packaging process, and then sent to LANL for chemical processing.

The final disposition of the material involves either sending material to WIPP or stabilizing and storing the material until the DOE MD program begins immobilization and MOX activities, Bridges explained. Immobilized plutonium will be included in high-level waste canisters and sent to a national repository. Higher grade plutonium will be used to make MOX fuel for commercial reactors. The used or "spent" fuel elements from the MOX program would then be shipped directly to the repository.

Material shipped to SRS and stabilized in the canyons would be stored in a vault (called the Actinide Packaging and Storage Facility, APSF), until the disposition program begins. Bridges added that the new state of the art vault will have storage capability to store the Rocky Flats materials. Transportation and processing of the material would occur during the 1998 to 2004 time frame.

Costikyan said it appears the plutonium from Rocky Flats will be stored until the disposition program begins. He added that the CAB has seen the type of robust storage containers DOE uses to store the plutonium for an interim period of 50 years.

In conclusion, Bridges said Rocky Flats intends to issue a final EIS by March 1998 and a Record of Decision 30 days later. He emphasized that he is confident SRS can handle the small amount of Rocky Flats material safer, faster and cheaper for the nation.

Subcommittee Discussion

Ed Tant, CAB member, asked if anything will be left at Rocky Flats once DOE decides to close the site. Bridges said DOE is determined to move all of the materials from Rocky Flats. At one time, Bridges said a storage facility was proposed for construction but DOE canceled the project because of its commitment to close the site.

Costikyan asked if Rocky Flats stakeholders know DOE is desperately trying to close Rocky Flats and if they supported the efforts. Bridges said most of the communities and politicians seem to strongly support closing the site, although there is likely some support by employees of keeping it open.

Mary Elfner asked if the public knew some of the material would go to SRS and what was the perception.

Lynn Waishwell, CRESA, said she would check the results of a recent future use study conducted by her organization in the area around Rocky Flats.

Camilla Warren, EPA, said the public likely is supportive of closing Rocky Flats because it is a liability. Bridges added that DOE is prefacing all decisions at Rocky Flats with the fact it will be closed.

Costikyan then said if the material needed to be shipped to SRS and chemically processed so that Rocky Flats could be closed for safety and economic reasons, the CAB should provide a

supportive statement at its earliest opportunity. Additionally, he said DOE would likely face an extreme dilemma if SRS was not available to stabilize the Rocky Flats materials.

Tant added it would be good for DOE for the community to acknowledge that the material left the state and is now coming back for safe stabilization and disposition.

Eflner said she needed clarification on the various discussions of processing. For example, was the process at Rocky Flats the same process used at SRS? Bridges said the processes are different in that the material identified to stay at Rocky Flats would be vacuumed and the salts distilled. Bridges said Rocky Flats personnel had also considered dilution of the material to get the plutonium content low enough for acceptance at WIPP. The dilution process was not considered because the plutonium content was too high and a huge quantity of material would result using up storage capacity at WIPP.

Eflner then asked how would she answer the press if they called and wanted to know why the material should come to SRS for stabilization. One suggestion was to include reasons for supporting the transfer of material to SRS in the recommendation as a supporting argument. Eflner agreed that good, clear reasons are important to ensure people do not think the material is coming to SRS simply for economic benefit and because it is a poor, rural area.

Costikyan said it would be commendable for the CAB to look at the situation from a national point of view. Warren added that the material at Rocky Flats is facing security situations and that citizens in other states should also be concerned the material is in stable form. Stabilizing the material is the right thing to do, Warren said. She added that DOE's decision to stabilize excess nuclear materials and dispose of the material in a federal repository is a protected decision (Storage and Disposition of Weapons Useable Fissile Materials ROD, January 1997)

Recommendation Development

The subcommittee agreed to structure the recommendation by developing a statement to support the SRS-specific preferred alternatives in the Rocky Flat DEIS. For clarity, the group suggested adding background paragraphs to begin the recommendation and provide supporting arguments at the recommendation's conclusion.

Meeting handouts may be obtained by calling 1-800-249-8155.