SRS Citizen's Advisory Board

Savannah River Site Citizens Advisory Board

Environmental Remediation &
Waste Management Subcommittee

Meeting Summary
November 27, 1995
Barnwell, S.C.

The SRS CAB's Environmental Remediation and Waste Management (ER&WM) Subcommittee met on November 27, 1995, at 6:30 at the Winton Inn, in Barnwell, South Carolina. Bill Lawless and Kathryn May, Co-chairs of the Subcommittee, opened the meeting with introductions. CAB representatives present included Mr. Lawless, Kathryn May, JoAnn Nestor, Lane Parker, and P.K. Smith. Representatives from the Department of Energy (DOE-SR) included Charlie Anderson (High Level Waste) and Stephen Mackmull (Solid Waste); and from Westinghouse Savannah River Company (WSRC); Clay Jones (SW&ER), Kelly Way (HLW) and Joseph D'Amelio (SW). Ed Berkey, Chairman of the Independent Scientific Peer Review Committee, was present to review the Transuranic (TRU) Waste Retrieval Project findings, and Charles Powers (CRESP) was present. Charles Murphy and Stanley M. Ohlberg attended as members of the public. Charlie Anderson was the Associate Designated Deputy Federal Official.

Mr. Lawless welcomed the attendees, announced the meeting agenda for the evening, and turned the meeting over to Ed Berkey to present a Review of the SRS Waste Retrieval Project, (see attached slides) for the subcommittee prior to the full CAB meeting on the next morning. The presentation was a recap of a previous presentation made to the subcommittee (see November 13, 1995, Subcommittee minutes).

The Independent Scientific Peer Review (ISPR) Team was formed in response to the CAB's recommendation to form a committee to study the issues related to the SRS TRU Waste Retrieval Project and present results to this ER&WM subcommittee. The issues involved proceeding with the planned TRU waste retrieval project or waiting until a treatment technology is available. Tonight's report presents the results of the ISPR research and study.

Dr. Berkey introduced Joe D'Amelio to present background and history of the TRU Waste pads and the present situation. Mr. D'Amelio explained that there are 19 TRU Waste pads sitting out in the Solid Waste Disposal facility. There are three different areas that basically represent three distinct phases of storage; Pads 1-6, Pads 7-13, and Pads 14-19.

Retrieval is focused on pads 2-6. Pad 1 is excluded from retrieval because it contains no 55 gallon drums sitting directly on the pad, but contains all culvert waste. Pads 2-6 were built in the early 70's/ mid 80's. Pads 1-5 are mounded over with a 4-foot soil cover. When the Waste Isolation Pilot Plant (WIPP) was scheduled to open in 1988, SRS placed soil only on the sides of

the waste on Pad 6. There are no 55-gallon drums sitting on pads 7-13. Problems with rainwater intrusion into SRS drums led SRS to a different storage mode, illustrated by pads 14-19.

Pads 2-6 consist of basically a concrete pad 60 feet wide by 150 feet long. As waste arrived in different storage containers, it would be put on a pad. When the pad was full, it would be covered with a foot of soil, which would be covered with a PVC tarp, which would then be covered with three more feet of soil.

Some of the drums are painted; some are galvanized. There is a plastic liner in each drum and each drum has its own lid. All 8800 of the drums involved in this retrieval project are un-vented, presenting the potential of hydrogen gas buildup (these drums contain mostly low activity waste; hydrogen gas generation is a greater concern for Pu238)

Pad 6 contains the drums that would be retrieved first in the project. A soil cover was never put over the top of the drums. The drums can be seen around the perimeter and should be the easiest to retrieve. Once Pad 6 is completed, then Pad 4 drums will be retrieved.

Retrieval plans involve excavating the soil away from the pad and leaving six inches on top of the waste containers. The last six inches would be removed by hand excavation as work moved down the pad, in a contamination controlled environment. The structure would protect the mound from the elements.

Dr. Berkey then reviewed the pertinent facts (see attached slides) and emphasized that only the drums on the oldest pads in which some soil cover has been applied would be retrieved.

Retrieval Project Construction is slated to start in late April or early May 1996. The drums are 50 mils thick and have a projected life span (based on developed models) under soil and exposed to water of 20 years on the average, which would have been 1994.

Dr. Berkey reemphasized that possible treatment technologies will not be available for at least 10-14 years. The life span of the drums is 20 years, therefore, in ten years some drums will be 31 years old. There are attempts in DOE to speed up the technology testing and the CAB is a much needed catalyst to aid this process.

Dr. Berkey cited examples of similar projects at other sites that cost much more when compared with the SRS projected costs for this project. For example, Los Alamos found one pinhole in one drum and is now required by the regulators to retrieve all of the drums. In Idaho, retrieval must be done remotely and will cost around 200 million dollars. Similarly, if we wait for 10 more years, the risk in handling the drums will increase 300%. Mr. D'Amelio also noted that the workers retrieving the wastes will be exposed to greater risks each day the schedule slips.

Mr. Jones noted that, even though Mr. Berkey stated funding was available for the project, SRS is facing funding challenges at this time, and future budgets are uncertain.

P.K. Smith questioned several Federal Repository issues--such as: the repository location, the key players in the Waste Isolation Pilot Plant (WIPP) operation, and a waste acceptance criteria.

Mr. Jones pointed out that SR would be the one to force the issue to ensure SR waste is shipped out. Ms. Smith re-emphasized the need for a waste acceptance criteria policy from WIPP in order to get SR TRU waste off-site. Mr. Jones indicated that a criteria would be established.

After the slides had been shown, Mr. Lawless presented the CAB's draft Transuranic Waste Motion, which was developed after studying the above presentation and determining the role the CAB could take in this situation. After discussion, verbiage clarification, and minor changes, the subcommittee members and public agreed on the main premise of this motion. (see attached).

Charlie Anderson then provided the subcommittee with a dry run of the presentations on High Level Waste issues planned for the full CAB meeting on the 28th. Since the subcommittee has seen, approved, and commented on these presentations during a previous subcommittee meeting, Mr. Anderson was able to proceed quickly through the slides (see attached).

The first presentation of three was entitled "The HLW System Status & Challenges" which contained the following slides:

- Outline
- HLW Management System
- HLW System
- Waste Tank Levels
- HLW System Schedule
- HLW System Status
- HLW System Funding-- illustration of the funding challenge
- Meeting the Challenge

Before presenting the CAB's draft motion, Mr. Lawless re-emphasized WSRC's commitment to the waste removal date. He also reminded the group that the current level of funding provides a challenge that DOE and WSRC are committed to meeting by managing the budget better and smarter and incorporating new technologies and efficiencies.

Mr. Lawless presented the CAB's draft HLW Motion 1, which was developed after studying the above presentation and determining the role the CAB could take in this situation. After discussion, verbiage clarification, and minor changes, the subcommittee members and public agreed on the main Motion 1 premise (see attached).

Mr. Anderson quickly presented the next issue of interest to the CAB: "Additional Glass Waste Storage Buildings" which contained the following slides:

- Outline
- Existing Storage Building Description
- Existing Storage Building Design
- Graphic of the Glass Waste Storage Building
- Future Storage Building Plans

After the presentation, Mr. Lawless presented the CAB's draft Motions 2 & 3, developed after studying the above presentation and determining the role the CAB could take in this situation. After brief discussion , verbiage clarification, and minor changes, the subcommittee members and public agreed on the main premise of Motion 2. (see attached)

The group discussed parts of Motion 3 in detail. The group voiced concern over Yucca Mountain as a Federal Repository, over a federal repository committing to the 2028 date, and over final waste disposition at SR if there is no confirmed permanent repository site. Ms. Smith noted that SR must optimize the GWSB design so SR could store the waste short or long term, if needed.

Mr. Powers suggested that SRS submit a statement in the Yucca Mountain EIS through the current Federal Repository EIS scoping process with the overall goal of making certain the system and DOE-HQ realizes SRS is setting a waste removal deadline. He added that in the meantime, SRS will be prepared to store the waste longer if needed.

After discussion, verbiage clarification, and minor changes, the subcommittee members and public agreed on the main premise of Motion 3. (see attached)

Mr. Anderson next presented an Overview of the HLW Tank Closure, containing the following slides:

- Outline
- Overview of HLW Re-Engineering Effort
- HLW Tank Closure Criteria Development Efforts
- Waste Retrieval and Tank Closure Challenges
- Comparison of the four types of tanks
- Picture of the insides of tanks (5 slides)
- Waste Retrieval and Tank Closure Demonstration

Mr. Lawless presented the CAB's draft Motion 4 (see attached). Much discussion ensued concerning Issue #3. Mr. Jones pointed out that the word "closure" poses a problem and that tank closure criteria may fall under CERCLA. Since discussion is underway to determine when this issue transitions from a Waste Management concern to a Decontamination & Decommissioning/Environmental Restoration concern, SR can not judge if Motion 4, Issue 3 is reasonable.

Mr. Jones suggested the CAB add an issue to this motion urging development of a tank closure plan. Mr. Anderson agreed that the motion could portray the urgency of developing a closure criteria. The subcommittee recognized that this motion needed some additional investigation. They also agreed that, considering time restraints, the full CAB would probably not reach this item in tomorrow's agenda. It was agreed that this motion would be brought before the full CAB (after minor changes) in the January meeting.

Ms. Smith then requested the "non-issues related" Motion 5 which involves including the CAB in celebrating the pouring of the first radioactive canister at DWPF, be dropped by the

subcommittee as an official motion. This proposed motion could be handled more efficiently in a letter to the Manager. The subcommittee members and public agreed with Ms. Smith.

Mr. Lawless then closed the meeting and thanked those attending. These presentations will be made to the full CAB in the morning November 28, 1995.

Note: Meeting handouts may be obtained by calling the SRS CAB toll-free information at 1-800-249-8155.