



## **SRS Citizens Advisory Board**

### **Waste Management Committee**

#### **Meeting Summary**

October 9, 2002  
Aiken Federal Building  
Aiken, SC

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The SRS Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Wednesday, October 9, 2002, at the Federal Building in Aiken, SC. The purposes of the meeting were to hear a presentation on Waste Removal and Tank Closure; discuss a recommendation review; and hear public comment. Attendance was as follows:

#### **CAB Members**

Bill Willoughby  
Jerry Devitt  
Perry Holcomb  
Murray Riley  
Meryl Alalof  
Judy Barnett

#### **Stakeholders**

Lee Poe  
Bill McDonell  
Mike French  
Karen Patterson  
Chuck Foster  
Richard Herold  
Rick McLeod, CAB Tech.  
Advisor  
Albert Symonds  
Leon Chavous  
William Palphigm  
Jack Lantz

#### **DOE/Contractors**

Helen Belencen, DOE-SR  
George Mishra, DOE-SR  
Sonny Goldston, WSRC  
Bill Spader, DOE-SR  
Virginia Kay, DOE-SR  
Bob Hinds, WSRC  
Colin Austin, BSRC  
Kelly Way, WSRC  
Helen Villasor, WSRC  
Neil Davis, WSRC  
Jim Cook, WSRC  
Steve Piccolo, WSRC

#### **Regulators**

None

Bill Willoughby welcomed those in attendance and then updated the group on several issues.

1. Recent misleading newspaper articles. His feeling is that the Citizen's Advisory Board (CAB) should not respond with a letter to the editor or a guest editorial as "the CAB". Mr. Willoughby emphasized that there is no reason that a CAB member couldn't make an individual comment as a concerned citizen. He also saw no reason that the CAB itself could not provide factual information to the public. All of the newspaper articles were provided to the attendees.
2. Information regarding an Emergency Preparedness Exercise planned by Columbia County in Georgia was announced and will involve TRUPACT II transporters from the Waste Isolation Pilot plant in Carlsbad, NM.
3. South Carolina Department of Health and Environmental Control (SCDHEC) has given SRS regulatory approval for start up of the paper pelletizer and a pre-trial burn for 90 days.

Mr. Willoughby then asked for introductions. Chuck Foster, perspective CAB member, was present and introduced himself. Mr. Willoughby asked if anyone had public comment.

Lee Poe asked to make a public comment and was recognized by Mr. Willoughby. Mr. Poe voiced his concern with the newspapers recently printing the articles on the waste that Savannah River Site (SRS) is

leaving in the waste tanks. Mr. Poe asked that the CAB correct the inaccuracies that are in the newspapers. He believes that the press implies that SRS is putting concrete in the tanks over the waste. Mr. Poe explained that Savannah River's (SR) waste removal and tank closure make sense, but he emphasized that the public doesn't understand. He outlined the content of each of the misleading articles, which have been appearing since early summer.

Mr. Poe told the group that with each flurry of articles, he had asked that someone at the site correct the errors. The citizens need a central number, or clearinghouse, to answer their questions and alleviate their concerns. He would like to see DOE sponsor this type of program. He thought perhaps the CAB could write a recommendation for SR to provide a clearinghouse where the press and the public could go for information.

Mr. Poe went on to say that he doesn't think a single letter to the editor would do any good. He would hope that each member present at the WM meeting would write letters to the editors to correct erroneous information. He suggested that the WM Committee sponsor an Educational Workshop or Forum to deal with these types of issues. In the very least, he suggested that everyone present write letters to the local newspapers.

Virginia Kay, DOE, told the group that the DOE Office of External Affairs (OEA) handles these types of situations. She emphasized that this office maintains open communication with reporters from all of the local newspapers. She told the group that someone from OEA calls the reporters when major events occur and talks to them at length. OEA also sends out news releases and encourages the press to call on them if there are any questions. She added that the reporters may or may not choose to use the OEA resources available to them.

When Karen Patterson questioned the failure of the WM Committee to write a letter as a united front, Mr. Willoughby replied that a letter from the committee might do more harm than good. He referenced a recent CAB member's letter to the editor and the negative response that ensued.

Mr. Piccolo, HLW Vice president, intimated that one of the best ways to combat the articles is to use public groups, such as Citizens for Nuclear Technology Awareness (CNTA) to force publication of facts and to get the correct message to the public.

Mr. Willoughby asked if it would do any good for the WM committee to hold an informational workshop. Mr. Holcomb would like to see issues that are this controversial have the endorsement of the entire CAB. He thought it would behoove the WM committee to write letters and to say we are concerned citizens. Ms. Patterson said that the CAB chair could encourage attendance at the meetings.

Much discussion, debate, and suggestions followed. Mr. Devitt encouraged the group not to confuse the public even further with a deluge of facts. Mr. French leaned toward the educational committee providing a workshop. Mr. Piccolo did issue words of caution. He asked that the group remain cognizant of the information battles, the relationship with state politics, and the lawsuit. SRS is in a favorable position now with public, and he would hate to see that position compromised.

Ms. Alalof asked that this topic be added to the agenda for the October 22 CAB meeting. It was decided that the agenda for that meeting was set, and that this topic would be held for a later (November) meeting.

### **Recommendation Review**

Bill Willoughby opened the Recommendation Review by noting that on August 6, a review of the open and pending CAB recommendations pertaining to the Solid Waste Division (SWD) had been conducted. Jerry Devitt moved to close CAB Recommendations 27, 126, 133, 136, 142, 148 and 153, and Perry

Holcomb seconded the motion. With a unanimous vote, these seven recommendations were closed. Recommendations 143, 146 and 152 remain pending.

Mr. Willoughby then explained that a recommendation letter referencing Recommendation 152 (requesting written assurance that the FY03 date to dispose of the legacy aqueous PUREX waste is a firm commitment) had been prepared to send to DOE-SR. However, Mr. Willoughby said that based on information he had just received on a signed Performance Based Incentive (PBI) between DOE-SR and WSRC, sending the letter would be moot. Rick McLeod said that even if the letter were not going to be sent, the PBI would not meet the requirements to close Recommendation 152. Sonny Goldston asked if the official record of the evening's meeting would not suffice as assurance that the FY03 date would be met; however, Mr. McLeod, who is the CAB's technical advisor, said that a written confirmation was preferred. Other members of the committee agreed with Mr. McLeod. In conclusion, Mr. Willoughby decided not to send the letter to DOE-SR, but to keep the recommendation pending.

### **Waste Removal and Tank Closure**

Neil Davis, Waste Removal Program Manager, discussed the status of the SRS tank closure program, regulatory requirements, and closure plans for tanks 18 and 19.

Mr. Davis provided background on the tanks and the Federal Facilities Agreement (FFA) that requires closure of the 24 non-compliant tanks in accordance with a schedule. These tanks are non-compliant because they do not have secondary containment.

Mr. Davis told the group that SR is going after the highest risks first and does not intend to put fresh waste in old style tanks.

Mr. Davis outlined and explained the tank closure requirements that SR must meet--Clean Water Act, Safe Drinking Water Standard, and DOE Order 435.1.

The Clean Water Act applies to surface waters (streams, lakes, etc.) and is designed to protect aquatic life and human health. Tank 19 meets and exceeds all the Clean Water Act requirements. The Safe Drinking Water Standard is designed to protect groundwater in the tank farm that out crops at the local creek. Compliance with these requirements is determined by modeling the migration of contamination in the closed waste tanks through the groundwater until it outcrops at Four-Mile Creek. A theoretical man is assumed to live at the creek, eat fish from the creek, and drink water from the creek. The theoretical man can receive no more than 4 mrem/year of radiation exposure. The proposed closure of Tank 19 will meet and exceed all of the Safe Drinking Water Standard requirements.

Ms. Barnett expressed a concern about the drinking water in Jackson and stated that something has to be done to make the drinking water safe.

Mr. Davis told the group that numerous samples were obtained throughout the tanks. On Tank 19, samples were taken from any waste that looked different in terms of color or texture. SR spent \$150,000 to drill a hole in the tank top just to get a sample of one spot in the tank. Four samples showed that the tank waste had been mixed and the materials evenly deposited on the tank bottom.

Mr. Davis showed the beta gamma dose and alpha concentration at the time of peak. Tanks 17, 19, and 20 are well below what an average tank could contribute. The peak dose would occur hundreds or thousands of years in the future and the tanks will be below the limit.

Mr. Davis explained the DOE order 435.1 requirements. There are three criteria in 435.1 that must be met. He explained Criteria 1, 2, and 3.

Criteria 1: Remove key radionuclides to the extent technically and economically practicable.

In Tank 19, HLW quantified everything that was done. The first step was bulk waste removal, performed in the mid-1980's. Four large waste removal batches were used to remove almost 1,000,000 gallons of waste with 33,000 gallons of waste remaining in a heel on the tank bottom. A heel removal campaign was performed during 1999-2000. A total of 46 heel removal batches were performed to remove 18,000 gallons of waste with 15,000 gallons remaining.

Most of the remaining waste is zeolite, which is an ion exchange resin used to adsorb radioactive cesium-137. It is extremely difficult to stir and pump zeolite out of the tank. The cesium will have decayed to virtually nothing before it reaches the Point of Compliance due to its short half-life.

Several technologies were evaluated for zeolite removal. However, all were expensive, all introduced excessive water and/or incompatible chemicals to the process, all involved increased radiation exposure to the workers, and all detracted from working on other higher risk tanks. To try to remove this zeolite heel was not cost effective. Leaving the heel in place produced negligible impact to environment. Therefore, WSRC adopted the position that the criteria had been met. The Department of Health and Environmental Control should have no problem approving the closure module.

Ms. Patterson asked if SR were included in the lawsuit. The suit that the Natural Resource Defense Council (NRDC) has brought forth requests SR stop tank closure activities until the suit is resolved. Mr. Spader answered that SR is continuing with plans and schedules until the case is heard in court. Mr. Davis added that SR has forwarded their waste removal/tank closure schedule to DOE and DHEC and efforts are being made to resolve the case on a schedule that supports closure of Tank 19 per the FFA.

Criteria 2: Residual waste must be in a solid physical form and must not exceed NRC Class C requirements for Low Level Waste. The criteria states that the waste can be encapsulated, mixed or alternated. SR is using the alternate and has never claimed mixing even though some mixing is known to occur. The reducing grout surrounds and treats the residual waste and keeps it from moving.

Criteria 3: Closed tank must meet performance objectives.

These objectives are all aimed at worker and intruder protection and SR meets these criteria.

Mr. Davis explained the various grout and concrete mixtures that are poured into the tanks to close them. The grout is a very robust grout. It flows like paint and forms a nice even layer. Tanks 17 and 20 were closed using three distinct grout layers with the bottom layer having reducing properties intended to treat the waste to retard migration into the groundwater. SR is proposing that all layers have the same reducing properties for Tanks 18 and 19.

Mr. Davis explained that there are limits to how thick each lift of the pours can be. Concrete tends to shrink because water bleeds out of it; however, this grout produces very little bleed water. There are 5-7 points where the grout is poured. HLW begins by adding the grout down low and tries to keep it uniform as it is added. There is some mixture there, but there is no way to quantify that.

Mr. Davis continued. Only the bottom reducing grout is used in the calculation to meet the Class C requirement.

Regarding the Closure Plans, the state has expressed that SR may close tanks in the future differently from how Tanks 17 and 20 were closed. Mr. Davis stated that Tanks 18 and 19 would be closed in the same manner and using the same groundwater model as Tanks 17 and 20 with the one exception of having reducing properties in all three layers of grout. This is expected to save time and exposure to

personnel and money. The money saved with the new closure techniques will allow other tanks to be cleaned out faster.

Mr. Davis concluded his presentation with a status of Tank 18. The construction of the waste removal equipment is about 95% complete.

### **Public Comment**

At this point, Mr. Willoughby asked for public comment. He asked for feedback and a path forward on the focused public comment on the newspaper articles. He suggested that, as individuals, we could write letters to the editor and ask them to cover the issues fairly and more objectively. We could also suggest they contact OEA (803-725-2889 or 1-800-249-8155) with questions.

Mr. McDonell commented that the HLW program has been very "heads up". It is accomplishing objectives in a way that is helpful. He believes that the HLW group is one group that has been handled proficiently.

Mr. French asked that the next meeting address problems with press misinformation.

Mr. Willoughby adjourned the meeting at 8:30 p.m.

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