



SRS Citizens Advisory Board

Old Radioactive Waste Burial Ground Focus Group

Meeting Summary

November 8, 2000
Aiken Federal Building
Aiken, SC

The Citizens Advisory Board (CAB) Old Radioactive Waste Burial Ground (ORWBG) Focus Group met on Wednesday, November 8, 2000, at the Aiken Federal Building, Aiken, SC. Topics of discussion included Long Term Stewardship Perspectives at Other DOE Sites, Independent Scientific Peer Review (ISPR) status – work completed, Deep Borrowing Animals and Roots Completion of Closure of ORWBG, Status of Work at ORWBG and Draft Final Report – Section Reviews. Those in attendance were:

CAB Members

Karen Patterson
Bill Willoughby
Wade Waters
Bill Lawless

Stakeholders

Lee Poe
Todd Crawford
Jerry Devitt

DOE/Contractors

Phil Prater, DOE
George Mishra, DOE
Elmer Wilhite, WSRC
Ed McNamee, BSRI
Sonny Goldston, BNFL
Jim Moore, WSRC

Lee Poe, Technical Lead, welcomed those in attendance and offered an apology from Jimmy Mackey for being unable to attend the meeting.

ISPR Status – Work Completed:

Lee Poe stated that in order to close out the contract that the CAB had with the ISPR team, it would be beneficial to have the Focus Group confirm that the ISPR work was complete. Mr. Poe stated that he felt the ISPR had done a good job and had provided a useful tool that was already in use. Mr. Poe stated the ISPR report was being attached to the Focus Group letter of disagreement on CAB recommendation #106. The Focus Group agreed the contact with the ISPR team was complete.

Long Term Stewardship Perspectives at Other DOE Sites:

Due to personal problems, Rod Rimando, DOE, was unable to attend the meeting. This presentation will be rescheduled for the next ORWBG Focus Group meeting on December 6, 2000.

Deep Borrowing Animals and Roots Completion of Closing of ORWBG:

Elmer Wilhite, WSRC, stated that both deep borrowing animals and roots were analyzed in the Performance Assessment (PA). The cover over the ORWBG consisted of a series of layers of natural material approximated as follows:

Top soil	0.2 meters
Backfill soil	0.8 meters
Gravel	0.3 meters
Clay	0.8 meters
Backfill soil	0.9 meters
Total	3.0 meters estimated minimum

A combination of two species of bamboo was considered as the final vegetation layer. These bamboo species keep out plant and animal intrusion. This bamboo grows about 6 to 8 feet tall, has very shallow roots, keeps pine trees out due to its shade and will thrive in this environment. The only animal intrusion of concern was the Florida Harvester Ant. This ant generally only burrows down about two meters. However, five percent of the burrows can be deeper. In looking at the 100-meter buffer zone that would be the area of demarcation for the E-Area low-level waste disposal system, any material coming to the surface due to the five-percent was considered inconsequential.

Status of Work at ORWBG:

Mr. Poe requested that Mr. McNamee give an update on the work being done for the interim action at the burial ground and the CMS/FS. Ed McNamee stated the last meeting with the regulators for reviewing milestones was in September. Discussions had been suspended until mid-November. Mr. McNamee could not advise the Focus Group if progress could or would be made on milestone agreement. The issue is the nature of the cover system. The Department of Energy (DOE) and the Environmental Protection Agency (EPA) feel that a cover system with a permeability of 10^{-5} or 10^{-6} centimeters/second range should be adequate. The South Carolina Department of Health and Environmental Control (SCDHEC) feels that a Resource Conservation and Recovery Act (RCRA) permeability cap of 10^{-7} centimeters/second or greater is more appropriate. The modeling doesn't show that there is a substantial difference in effect of the covers, therefore the driver becomes the cost. SCDHEC feels that since they can't really be sure what is in the burial ground that a more robust remedy ought to be used. The soil cover would be approximately \$2 million while the cap would be approximately \$8 million. There was discussion about what the Focus Group or citizens could do to help the decision along. Phil Prater, DOE, suggested that DOE and WSRC be given some time to work on resolving the differences.

Mr. McNamee stated the interim action was proceeding. The dam was built and the impoundment is currently about one-half full. The Environmental Assessment was prepared on the basis that the dam would be there for five years. It is expected that it will take 50 years to reach the drinking water standard, so the interim action or dam may remain longer than the five years. When questioned whether this pond of water would have the same problems as L Lake that can't be drained, Mr. McNamee stated that there is some difference. L Lake would drain down if water were not pumped in. For the pond in the interim action, the pond only covered one acre and there is a natural source of water. L Lake also has the problem with eagle nests that won't occur at this pond.

Mr. McNamee brought up a point on the pump and treat process called the spike rebound effect. After several years of pump and treat, the water may look clean so the pumps are stopped. After further monitoring, the contaminated water comes back and the pumps have to be restarted. This is caused by the difference in porosity of clay versus sand. Contaminant that moves into the sand is easy to get out, however, contaminant that moves into the clay is harder to get out. The water looks clean because the water in the sand is clear. However, once the pumps are stopped, the contaminant seeps back out of the clay and moves back into the sand.

Mr. Poe asked how the site plans to evaluate the effectiveness of the interim action. Mr. McNamee said they were reviewing that at this time. Mr. McNamee suggested that they come back at the next meeting and offer some suggested approaches.

Draft Final Report – Section Reviews:

Mr. Poe stated that he had not received many sections of the draft Final Report and that an effort needed to be made to complete these sections.

Mr. Poe stated that the modifications to the outline suggested by the Focus Group at the last meeting had been incorporated. He stated that he thought Jim Cook, WSRC, was working on adjusting the spread sheet times to make them easier to understand.

Mr. Poe stated that he had been looking at the erosion factor on the ORWBG. He said in about 2,000 years the top of the buried waste will be exposed assuming the erosion rate of 1.4 mm/year which is used in the Corrective Measures Study/Feasibility Study for intruder analysis. In about 5,000 years, erosion will be down to the bottom of the waste. Mr. Poe suggested that one of the recommendations from the Focus Group could be to do something to drop the erosion rate. He stated that related to appendix G, there might be a requirement that in the Land Use Control Assurance Plan something is done to control the erosion.

Bill Lawless made the suggestion that on Karen Patterson's section appendix E, Human and Environmental Exposures from Stream Contamination that the Focus Group might want to look at the worse case scenario on the health effects where the seep line enters Fourmile Branch. There was no conclusion reached but there was concern about this approach.

Other Discussion:

Mr. Poe stated that the media had raised the issue about there being ten times more plutonium buried around the DOE complex than had originally been claimed. Mr. Poe's concern was what effect this information would have on the Focus Groups work at the ORWBG. Elmer Wilhite stated that he had tracked down the report and would get a copy to the Focus Group members. He stated that the media report was inaccurate. The National Academy of Sciences (NAS) has reviewed this issue two different times and has stated the last thing anyone should want to do is to dig up the waste. It appears that the buried plutonium has a substantially higher fraction of the total curies (i.e., buried TRU plus TRU in storage for shipment to WIPP) than was previously thought. The results of the news articles are that DOE will once again ask the NAS to review the plutonium issue.

There was discussion on the migration of contamination at Yucca Flats and the Nevada Test Site. Mr. Waters stated that the migration of contaminants was moving faster than originally predicted. This is bringing a great deal of concern to the citizens at these locations.

Adjourn:

Mr. Poe stated that the next meeting was on Wednesday, December 6, 5:00 p.m. at the Aiken Federal Building. Topics of discussion will be the Long Term Stewardship Perspectives at Other DOE Sites, Evaluation Methods to Determine Effectiveness of Interim Action, and Draft Final Report – Section Status.

With no other comments, the meeting was adjourned.

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