



SRS Citizens Advisory Board

Environmental Remediation and Waste Management Subcommittee

Meeting Summary

November 2, 1999
Federal Building
Aiken, SC

CAB Members

Brendolyn Jenkins
Jimmy Mackey
Tom Costikyan
Barbara Murphy
Karen Patterson*
Earnest Marshall
Bill Lawless*
Kathryn May*

Stakeholders

Todd Crawford
Greg Peterson
Mike French
Perry Holcomb
Eugene Rollins
Lee Poe
Jerry Devitt
Peter Gray
Russ Messick
Bob Overman

DOE/Contractors

Ron Malanowski, WSRC
Thomas Johnson, DOE
Jerry Nelsen, DOE
Kim Wierzbicki, BSRI
Julie Petersen, DOE
Gerri Flemming, DOE
Mary Flora, WSRC
Paul Sauerborn, WSRC
Gerry Stejskal, WSRC
Gerald McLane, BSRI
Sonny Goldston, WSRC
Kelly Way, WSRC
John Reynolds, DOE
Larry Ling, DOE
Ronald Sauls, BSRI

Regulators

None

* Denotes ER&WM Subcommittee Member

Public Comments: Jimmy Mackey opened the meeting with introductions and requested public comments. Being none, Mr. Mackey proceeded with the meeting.

CAB Recommendation Status Review: Karen Patterson presented her review of the status of CAB recommendations as follows: Recommendation 67 (Disposal of Low Level Radioactive Waste from SRS CERCLA Site in Trenches of SRS Low Level Waste Disposal Facility) was directed to EPA and SCDHEC, requesting them to state the criteria under which SRS could dispose of CERCLA waste in E Area. SCDHEC responded that they did not see the need to evaluate the CERCLA disposal in E Area until DOE "pursued a site-wide strategy to dispose of radioactive contaminated soils for CERCLA units...". EPA has not responded to the recommendation. Ms. Patterson suggested that the CAB continue to consider this motion as pending and at the November meeting request that EPA prepare a response so that we can move the recommendation out of the pending category.

Recommendation 68 (SRS Seepage Basin Contaminated Soils Disposal) supports the disposal of SRL seepage basin soils at a commercial off-site disposal facility. As this action has not occurred, Ms. Patterson suggested that the CAB consider this motion as open and request updates until the soil is disposed of and the basins closed.

Recommendation 72 (Waste Management Programmatic Environmental Impact Statement) provides DOE with the CAB's position on the complex-wide decisions for the disposal of low-level and mixed waste. Ms. Patterson stated that because the Waste Management Programmatic EIS LLW and MLLW Records of Decision have not been released by DOE, the recommendation should remain open.

Recommendation 88 (High Level Waste Tank Closure Environmental Impact Statement) requests that DOE work with the NRC to expedite the NRC Incidental Waste ruling for the SRS high-level waste tanks. NRC has not yet issued that ruling, Ms. Patterson suggested that the recommendation remain open, and that the CAB request DOE to present the NRC ruling to the Board as soon as possible after it is received, at which time the recommendation can be closed.

Yucca Mountain Environmental Impact Statement: Gene Rollins, of Dave Molner and Associates, provided a presentation on the two no action alternatives included in the Yucca Mountain Draft Environmental Impact Statement (EIS). He noted that the public comment period on the draft EIS would last through February 9, 2000. Mr. Rollins said this EIS was different from many others in that there is only one proposed action. In addition, more emphasis is placed on the no action alternative, which in this case includes two no action scenarios.

Rollins explained that the no action alternatives evaluate the impacts of leaving the spent nuclear fuel (SNF) and high level waste at the facilities where it was generated. Of the total 77 facilities currently storing the material, 72 are commercial nuclear facilities and five are DOE facilities. He said the goal was to use realistic assumptions to avoid overestimation of impacts from no action, even though future activities are uncertain. Mr. Rollins added that the same methods used to analyze long-term repository performance were used to allow for an "apples to apples" comparison between the proposed alternative and the no action alternative.

Two no action scenarios were considered. Scenario 1 dealt with material staying in place for 10,000 years with institutional control maintained throughout that time. Assumptions included repairing the onsite storage facilities after 50 years, then rebuilding of facilities every 100 years thereafter. Data for the calculations were taken from Nuclear Regulatory Commission (NRC) documents of storage facilities currently operating. Other data such as dry storage canister degradation were taken directly from work conducted for the proposed action. Groups considered in the impact were the nearby public, storage facility workers and workers at nearby nuclear power plants.

Scenario 2 deals with the loss of institutional control, Mr. Rollins said. The impacts of the first 100 years are the same as Scenario 1, with institutional control. However, institution control ceases in 2116 and degradation occurs, beginning with seepage of rainwater in below-grade dry storage vaults. Impacts calculated after 2116 were conducted with a process model.

Mr. Rollins said the no action analysis was conducted for five different regions in the U.S. and all of the sites storing SNF represented an identical hypothetical site. Drinking water pathways and exposed populations were considered. As the data were analyzed, the various failure regions for concrete storage casks on land surfaces were identified. For example, degradation of storage casks could occur within 75 years in the upper Northeast such as Maine, while degradation would not occur for 600 years or more in some areas in the western U.S. The primary failure of casks would result from freezing/thawing and chloride penetration in the South. Danger of earthquakes was not considered in the analyses because the storage facilities are seismically designed.

Issues with below ground facilities such as the SRS high level waste glass storage building occur if a roof were to collapse. Analyses suggested the water would fill the storage area, just as water would fill a bathtub. Estimates of when rainwater would enter a storage canister were calculated by region. Failure rates ranged from 500 years for the high-level waste stored in below ground storage at SRS to 5,400 years for above ground storage of commercial spent nuclear fuel in the Northwest. Once water enters storage containers, the primary concerns become drinking water paths.

Brendolyn Jenkins asked why drinking paths were not included for the coastal areas in the east. Mr. Rollins said scientists could not estimate populations downriver due to agricultural impacts to the river water. Three drinking water pathways were excluded because DOE did not want to overestimate no action impacts, he added. Lee Poe said salt water is not included because it cannot be converted to drinking water.

Concerning cladding of spent nuclear fuel, Rollins said credit for the aluminum or stainless steel cladding of some of the SNF was not considered. He added, however, that most of the SNF was cladded in zirconium, which is very corrosion resistant.

In summary, Rollins said that most of the impacts of the no action alternatives were actually quite small, with 3,300 latent cancer fatalities over 10,000 years estimated for the scenario of no institutional control. The radiation dose varies per region due to population size and degradation of the casks due to weather and climate.

Mr. Mackey, asked about the possibility of a change in climate. Rollins said the concern was raised but it was decided to assume the weather, climate and population do not change.

Bill Lawless, said 3,300 deaths compared to no deaths if the material was in Yucca Mountain was important. Discussion continued on the reality of the final numbers of estimated deaths. Rollins emphasized that the no action alternatives were proposed by DOE, they simply provide baseline information and methods of comparisons. Lawless said the message the CAB should convey is that they want Yucca Mountain to open.

Mr. Gray asked that he be allowed to read a letter he composed in regard to the shipment of waste to Yucca Mountain. The Subcommittee agreed to allow him to speak as a public comment. Mr. Gray expressed his deep concern that the utilities with their strong lobby groups would

manage to change the law (NWPA-82) to financially reduce their portion of the fees for their nuclear waste generation, and let the taxpayers pick up the tab.

Issues: Is the estimate of mortality deaths for no action too low.

Actions: Submit Pete Gray letter to Yucca Mountain DEIS as a formal comment. Develop a recommendation for the January full CAB meeting.

Special note: Pete Gray letter is available by calling Paul Sauerborn WSRC at (803) 725-0665 or e-mail paul.sauerborn@srs.gov

Salt Processing Project and Tank 19 Closure: John Reynolds gave a brief status of the Salt Processing project. Mr. Reynolds indicated that during the month of November a recommendation would be prepared and reviewed. In December the proposal would be sent to Headquarters.

Larry Ling stated a schedule was developed to determine feasibility of accelerating the Tank 19 closure. The South Carolina Department of Health and Environmental Control was informed of the feasibility study and supports early closure. Mr. Ling noted that the Tank Closure Environmental Impact Statement is currently in DOE Headquarters. Currently there is no money in the 2001 budget for Tank 19 closure, but SR and HQ are working closely to identify and obtain necessary funding.

Issue: ER/WM Subcommittee requested the Tank 19 Closure schedule as soon as possible.

Action: Mr. Ling to call Mr. Lawless regarding schedule availability.

SRL Seepage Basin Action: Ron Socha presented a brief status of the SRL Seepage basin actions describing both current and future actions. Mr. Socha indicated that the chipped vegetation had been packaged and shipped to the on-site slit trenches for disposal, and that the contaminated soils are to be packaged for offsite shipment beginning in December time frame. Mr. Lawless was concerned that not all the soils would be shipped at one time. Mr. Socha indicated that the plan was to still pursue all soils shipping at the same time.

Issue: ER/WM Subcommittee concerned that all soils would not ship during the course of Fiscal Year 2000.

Action: ER/WM Subcommittee may develop a motion for the full CAB meeting November 16.

Integrator Operable Unit (IOU) status: Thomas Johnson presented an update of the IOU process. Mr. Johnson indicated that the DOE, SCDHEC and EPA have agreed to the IOU program/process and on September 30, 1999 the Steel Creek IOU work plan was submitted to the regulators for review and approval. Mr. Johnson stated that the benefits of the IOU concept includes:

- Agreed-to common sense "Big Picture" approach
- Near term protection of human health and environment
- Focus on early action in IOUs
- Integration of the IOU and OU program

- Need for reprioritization of OUs
- Effective use of resources and budget

Mr. Johnson indicated that one system that helps in the process of the IOU program is the Geographic Information System Project. Gerald McLane demonstrated the GIS noting it was a comprehensive tool that can be used to determine characterization needs, as well as unit and area characteristics. An individual from the public endorsed the value of the GIS and its future use as a tool in the development of other work plans for the remaining IOUs. In Mr. McLanes demonstration he identified the systems ability to look in detail at the following:

- Waste Units
- Outfalls
- Particle tracking
- Existing sampling
- Benchmark
- Proposed sampling locations

Mr. Johnson continued his presentation and presented the Fiscal Year 2000 scope for IOUs:

- Steel Creek comment resolution
- Steel Creek field start
- Savannah River/swamp IOU work plan
- Fourmile Branch IOU scoping

Todd Crawford commended Mr. Johnson on the update, and in particular the electronic GIS project demonstrated by Mr. McLane.

Mr. Mackey asked for any other public comments. There being none the meeting was adjourned.

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