SRS Citizen's Advisory Board

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Facility Disposition and Site Remediation Committee

Aiken Federal Building, Aiken, SC
2/10/04

The SRS Citizens Advisory Board (CAB) Facility Disposition and Site Remediation Committee (FD&SR) met on Tuesday, February 10, 5:00 PM, at the Aiken Federal Building, Aiken, SC. The purpose of the meeting was to discuss and receive updates on the SRS Site Monitoring Program and the Statement of Basis/Proposed Plan for the R-Area Burning/Rubble Pits and Pile.

Attendance was as follows:

CAB Members
-Perry Holcomb
Jerry Devitt
Wendell Lyon
-Murray Riley
-Harold Rahn
-Mary Drye

Stakeholders
Peter Gilchrist
Lee Poe
Rob Parey^
Philip Zapp^
Rick McLeod*
Lee Poe
Sam Booher
Frank Carl

DOE/Contractors
Mary Windmiller, DOE
Alice Doswell, DOE
Paul Sauerborn, WSRC
Teresa Haas, WSRC
Karen Hooker, DOE
Les Germany, DOE
Bruce Schappell, BSRI
Jim Moore, WSRC
DeLisa Bratcher, DOE
Michele Wilson, WSRC
David Hoel, DOE
Pete Fledderman, WSRC
Gail Whitney, DOE
Terry Bland, WSRC
Gary Stasie, BSRI

Regulators
Jim Hardeman, GDNR
Myra Reece, DHEC
Rob Pope, EPA
Chuck Gorman, DHEC
*CAB Technical Advisor
-FD&SR committee members
+Facilitator
^Press

Perry Holcomb, Chair, opened the meeting at 5:00 p.m. and welcomed those in attendance. In addition, Mr. Holcomb recognized Ms. Mary Drye, a CAB member as the new FD&SR Committee Vice Chair.

FD&SR Committee meeting schedule review:
Paul Sauerborn presented the schedule, which listed items the ER committee will be reviewing for 2004. Mr. Sauerborn stated that should anyone in the public have an item relevant to the ER

committee scope to please notify him in order that he have those items reviewed and approved by the chairman of the FD&SR committee for future presentations.

R-Area Burning/Rubble Pits and Rubble Pile (RBRP) and (RRP)Operable Unit Statement of Basis/Proposed Plan:
Bruce Schappell stated the purpose of the presentation was to present the proposed remedy for the RBRP and RRP in order to receive any public comments while the public comment period was open. The public comment period runs from January 7th to February 20th, 2004. Mr. Schappell explained that within the operable unit were sub units as follows:

- Burning Rubble Pits
- 131-R Closed Pits
- 131-1R Open Pits
- Perimeter area around pits
- Rubble Pile
- Wetlands
- Groundwater

The description of the above sub units are as follows:

- Burning Rubble Pits
- Two units side by side 230 feet long by 30 feet wide
- 131-R is covered and 131-1R remains uncovered
- Risk Assessment identifies Ecological, Human Health and Contaminant Migration risks requiring action
- There is no Principal threat Source Material (PTSM) present in the Pits
- Monuments are at each end of the covered unit. No radiological hazards were discovered during characterization.
- Perimeter Area around Pits
- No contaminants were identified in the soils surrounding the Burning/Rubble Pits
- There are no problems warranting action in the perimeter soils
- Rubble Pile
- Located approximately 1000 feet southeast from the Burning/Rubble Pits
- Miscellaneous Rubble and debris deposited over approximately ¾ acre
- Pile ranges in height from 2-3 feet in depth
- Friable Asbestos is scattered throughout the pile area
- Risk Assessment identifies Ecological, Human Health and Contaminant Migration risks requiring action (Metals)
- There are no PTSM present in the Pile
- Groundwater
- No contaminants were identified above the maximum contaminant levels in the groundwater
- There are no problems warranting action in the groundwater
- Wetlands
- No contaminants were identified in the soils of the wetlands area
- There are no problems warranting action in the wetland

Mr. Schappell pointed out the following remedial objectives:

- Burning/Rubble Pit
- Protect current and future industrial workers at the RBRP from exposure to contaminated soils at concentrations that exceed target risk levels
- Prevent exposure of ecological receptors to waste materials
- Prevent contaminant migration of VOC's and metals residing in the RBRP soils from impacting the groundwater above established regulatory limits
- Rubble Pile
- Protect current and future workers at the RRP from exposure to contaminated soils, material, and Friable Asbestos at concentrations that exceed target risk levels for industrial workers
- Prevent exposure of ecological receptors to waste materials
- Prevent contaminant migration of metals residing in the Rubble Pile from impacting the groundwater above established regulatory limits

Mr. Schappell stated the Remedial Action Alternatives as follows:

- Burning/Rubble Pit and Pile
- No further action ($49,000- shared with the Pile)
- Separate Low Permeability cover systems with institutional controls ($610,000)
- Move Non-RCRA Hazardous material from Pile and place on the Pit Area. Install Low Perm Cover over combined material. Ship the RCRA Hazardous Material to an approved disposal Facility ($760,000)

In summary, the Unit Characterization and Risk Assessment was completed with the preferred alternative to place non-RCRA Hazardous Material from the Rubble Pile on the Pit Area and install a Low Permeability cover over the consolidated soils, maintain institutional controls, and ship the RCRA Hazardous Materials to an approved disposal facility. The Preferred alternatives are protective of human health and environment and concurred with by SCDHEC, EPA and DOE.

Sam Booher asked what watershed was involved with this operable unit. Mr. Schappell responded the Lower Three Runs was the effected watershed. Bill Lawless asked about PTSM, and the response from Mr. Schappell was any material that would expose an individual to a risk of 10 to the minus 3 fro carcinogenic risk or a Hazard Factor of 3 for non-carcinogenic risks. Rick McLoed asked if institutional controls might be the long term remedy. Mr. Schappell stated that after the cleanup indications would look favorable for institutional controls.

SRS Environmental Monitoring Program:
Jim Heffner stated that this talk is to show the history of the program, Effluent monitoring, environmental surveillance and program results. Mr. Heffner pointed out that the SRS has a long history of environmental monitoring activities, including a comprehensive environmental monitoring program gaining knowledge of release types and quantities resulting in a clear understanding of dose impacts to the public. Mr. Heffner stated the purpose of Environmental Monitoring is as follows:

- Characterize and quantify contaminants
- Demonstrate compliance with applicable standards
- Calculate radiation exposures to the public
- Asses the effects, if any, on the local environment

Mr. Heffner pointed out that baseline studies were conducted in 1951-1952 by DuPont and the U.S. Department of Health, Education and Welfare. Also, in 1951 work was conducted by the Academy of Natural Sciences of Philadelphia, and in 1953 the Savannah River Site formally started its own Environmental Monitoring Program.

The Environmental Monitoring Program answered to the following:

- State and Federal Regulations
- Clean Air Act
- Clean Water Act
- Hazardous Waste Regulations (RCRA)
- Landfill Regulations
- DOE Orders
- Environmental Monitoring Plan
- Best Management Practices

Mr. Heffner explained the importance of knowing the difference between Environmental Monitoring and Environmental Surveillance. Environmental Monitoring is defined as the collection of samples or data from the point at which a facility discharges liquid or gaseous releases to the environment. Environmental Surveillance is defined as the collection of samples of air, water, soil, foodstuff, biota, and other media – or of data – from the ambient environment. The Monitoring Program is designed to review:

- Radionuclide knowledge via
- Process knowledge
- Movement through the environment
- Any health impacts
- Sample Locations
- through exposure pathways

Mr. Heffner pointed out that the Critical Contaminant – Critical Pathway Analysis guides the monitoring program, with many factors being considered, including:

- Facility operation
- Types of releases and release paths
- Exposure pathways
- Present and future health & environmental impacts

At this point in the presentation Mr. Heffner turned the meeting over to Pete Fledderman. Mr. Fledderman indicated that there were several types of samples taken at the SRS, such as the following:

- Ambient air
- Rainwater
- Surface water
- Drinking water
- Food products
- Deer and Hogs
- Fish
- Soil
- Sediment
- Vegetation
- Groundwater

In the radiological category the site conducts an Enhanced Tritium Monitoring (ETM) Program, which is designed to provide timely notification to downriver consumers of significant changes in the river's tritium levels. This effort is accomplished in a three step process:

- measure tritium concentrations at onsite stream locations
- calculate river concentrations
- and notify downstream if Savannah River is projected to exceed a 5,000 picocuries/liter concentration (one-fourth the Drinking Water Standard)

Mr. Fledderman spoke of a Quality Assurance (QA) and Quality Control (QC) Program in place at SRS, which ensures that field sampling, laboratory analysis, and data management and review yield results that are:

- precise
- accurate
- reasonable

Field QA/QC ensures representative samples and accurate data through field calibration, consistency of measurement (time and spatial), and audits. Laboratory QA/QC ensures accurate result through standards and calibration, blanks, duplicates and spikes, inter-lab comparison, external QA programs, certification, and audits. Data QA/QC ensures reasonableness of data, identifies samples for investigation through data trending, data consistency (radionuclide ratios) and transport pathways, release/flux calculations, and comparison with external agencies.

Mr. Fledderman stated that all results of the Program are reported annually in the SRS Site Environmental Report, and noted the 2002 report is out and available to the public. In addition, the 2003 report is being prepared at this time.

Program verification is conducted in the following ways:

- South Carolina and Georgia maintain independent environmental monitoring programs
- Other organizations also conduct environmental monitoring near SRS (Georgia Power – Plant Vogtle, and City of Savannah)

- Continuous communication with regional monitoring organizations via semiannual meeting were they conduct analytical and data comparisons, and discuss monitoring programs and issues
- Varied active participants include SCDHEC, GDNR, GPC, SRS, DOE, EPA,Savannah, Beaufort-Jasper, Chem-Nuclear

The SRS monitoring results for 2002 airborne and liquid releases, as well as all potential radiation doses from the site were well below applicable regulatory standards. Additionally, the total radiation dose to the public living near SRS is well below DOE's 100-millirem/year standard.

Harold Rhan asked about the background found in deer below the Savannah River. Mr. Fledderman directed Mr. Rhan to the monitoring report where that information would be found. Jim Hardeman (GDNR) stated that the information gathered by the SRS in their monitoring program was very good, and Myra Reece (SCDHEC) stated the same confidence in the reports from the State of South Carolina. Mr. McLeod asked if there are any studies of other influences on the SRS. Mr. Heffner stated there were none that he was aware of at this time. Wendell Lyons asked about the status of the elevated tritium detected in wells located in Burke County, Georgia. Mr. Heffner stated that originally it was thought the tritium came from deep wells implying a contaminated aquifer. Upon further investigation, the tritium was found in surface water migrating down the well, which was improperly constructed. This produced the effect that the deep aquifer had been contaminated. In addition, the United States and Georgia geological survey conducted a study to determine to what extent tritium from the SRS had migrated under the Savannah River into Georgia. Sam Booher suggested that since both S.C. and Ga. conduct river basin studies, that both states conduct them at the same time and similar locations.

Public Comments:
Bill Lawless commended Mr. Holcomb for conducting a very productive and meaningful meeting, and expressed his thanks to DOE, SCDHEC, EPA and GDNR for their participation.

Mr. Holcomb adjourned the meeting at 7:00 p.m.

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