SRS Citizen's Advisory Board

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Environmental Restoration Committee Meeting Summary

North Augusta Community Center
North Augusta, SC
June 17, 2003

The Citizens Advisory Board (CAB) Environmental Restoration Committee held a meeting on June 17, at the North Augusta Community Center, North Augusta, S.C. The purpose of the meeting was to discuss and receive updates on Carolina Bays at SRS, R-Reactor Seepage Basins/108-A Overflow Basin Proposed Plan, and the SRS Integrator Operable Unit Program. Those in attendance were:

CAB Members	**Stakeholders**	**DOE/Contractors**
Perry Holcomb*	Russ Messick	Donald Horton, WSRC
Leon Chavous	Sam Booher	Ron Malanowski, WSRC
Murray Riley	Lourie Booher	Paul Sauerborn, WSRC
Harold Rahn*	Don Siron, SCDHEC	Teresa Haas, WSRC
Mary Drye*		Walt Kubilius, WSRC
Gerald Devitt		Amit Gaughly, BSRI
Jean Sulc		Wade Whitaker, DOE
Darryl Nettles*		Les Germany, DOE
Donna Antonucci*		Bruce Schappell, BSRI
DeAnne Smoak		deLisa Bratcher, DOE
William Lawrence		Whit Gibbons, SREL
Dorene Richardson*		Steve Harper, SREL
		Ria Tsaliagos, SREL

* Members of the ER Committee

Perry Holcomb, Chair, opened the meeting at 6:00 p.m. and welcomed those in attendance. Introductions followed.

ER Committee meeting schedule review:
Paul Sauerborn explained the schedule that listed those items that the ER committee has seen to date and those items which it will be reviewing for the balance of 2003. 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 ER committee.

How productive can a restored Carolina Bay be?
Whit Gibbons wants to credit the following people that assisted in the research found in the

presentation and they are Steve Harper, Rebecca Sharitz, Ria Tsaliagos, David Scott and J.D. Williams. Mr. Gibbons stated that the Carolina Bays at the Savannah River Site are doing well and with the latest changes in the weather with increased rain the amphibians in the bays are back in great numbers.

Mr. Gibbons credited the latest restoration study, which included 16 bays, plus 4 controls and 4 reference bays. Some of the challenges the project faced was the drought of 2000 through 2002, the delays in logging, ditch closures and burning. The expectation of wetlands vegetation is that the herps will return after drought ends.

Mr. Gibbons stated that the two bays he wanted to report on today are Rainbow bay and Ellenton bay. At Rainbow bay in the last 25 years he reported the following statistics:

- 530,000 amphibians have been captured
- 42,000 reptiles captured
- 26 amphibian species recorded
- 40 reptile species recorded
- Breeding population sizes: thousands of some species up to 8,000 adults in a single night during breeding migrations with 10,000 to 12,000 metamorphosizing Juveniles in a night

Mr. Gibbons stated that the other bay he wanted to address was Ellenton bay. He stated that there has been remarkable recovery of this bay in a very short period of time, February through May of 2003. Some notable facts are:

- 273,000 amphibian captured
- 410 reptile captured
- 22 amphibian species recorded
- 29 reptile species recorded

Mr. Gibbons concluded by stating that the bays at SRS are recovering as evidenced by the statistical facts as presented for both Rainbow bay and Ellenton bay.

Sam Booher stated that he is an officer of the Georgia chapter of the Sierra Club and that he personally appreciates the encouraging work being conducted at the SRS by the Savannah River Ecology Laboratory. Mr. Booher also asked in addition to the 16 bays currently being restored, what about the other 100 plus bays still remaining on the SRS site. Mr. Gibbons stated that in one year from now we should have a path forward on the balance of the bays. Murray Riley asked if people know what to look for in a Carolina bay? Mr. Gibbons stated that there is a very good outreach program that brings the bay information to civic groups and others regarding the bays and their importance. Donna Antonucci asked how would a researcher know if a certain animal had been counted before and Mr. Gibbons stated that in the case of some salamanders, the researcher might clip one of its toes off which leaves a tell tale sign should the animal be captured in the future.

R-Reactor Seepage Basin (RRSB) 108-4R Overflow Basin Operable Unit (OU)
Proposed Plan:

Bruce Schappell stated that he is here today to offer the proposed plan for the RRSB and 108-4R Overflow Basin, which is currently out for public comment. Mr. Schappell provided the history, as follows:

- A non-routine discharge due to a test failure in 1957 released approximately 2700 curies of radionuclides primarily to basin 1
- Basins 2 through 6 were constructed between November 1957 and March 1958 to handle the large volume of contaminated water
- Basins received an estimated 5 million gallons of purge water from the R-Reactor Disassembly Basin
- Basins 1 through 5 were all deactivated and backfilled by 1960
- In 1964, basin 6 was deactivated and subsequently backfilled in 1977
- In 1996, the backfilled Reactor Seepage Basins were covered with clean soil and an asphalt cover was installed

Mr. Schappell stated that the RRSB has 6 sub units identified as follows:

1. Seepage Basins 1 through 6
2. Abandoned Process Sewer Line
3. Abandoned Sanitary Sewer Line
4. Surface water and sediments
5. RRSB Groundwater
6. 108-R Overflow Basin

The constituents of concern (COC) for the RRSB are cesium 137, strontium 90, americium 241, plutonium 239/240, plutonium 238, and cobalt 60. In conducting the sub unit assessment Mr. Schappell made the following statements:

- Seepage basins contain elevated levels of radioactive contamination (5x10-7 maximum health risk) warranting action
- The abandoned process sewer lines contain elevated level of radioactive contamination warranting action
- Contaminated sanitary sewer lines contain elevated level of radioactive contamination warranting action
- Surface water and sediments have no human health or ecological COC's warranting action
- RRSB Groundwater has elevated strontium 90 activities exceeding the Drinking Water Standard, posing a problem warranting action
- 108-4R Overflow Basin has no human health or ecological COC's warranting action

Mr. Schappell stated the Remedial Action Objectives as follows:

- Seepage Basin:
    - minimize transport of soil contaminants to groundwater
    - prevent industrial worker exposure to contamination
    - treat principal threat source material as practicable

- Abandoned Process Sewer Lines
    - prevent industrial worker exposure to pipelines
    - treat principal threat source material as practicable

- Sanitary Sewer System
    - prevent industrial worker exposure to sanitary sewer lines and subsurface soil contaminants
    - prevent industrial worker exposure to contaminated vegetation
    - prevent future transfer of subsurface soil contaminants through vegetation uptake
    - treat principal threat source material as practicable

- Groundwater
    - prevent industrial worker exposure to groundwater contaminated above Drinking Water Standards
    - minimize the spread of groundwater contamination and prevent discharge of contaminated groundwater to surface water

In terms of the preferred alternatives in the proposed plan, the following is offered:

- Reinforced concrete intruder barrier system
- Excavate process lines outside the boundary fence with disposal on unit
- Mixing zone with institutional controls

Mr. Schappell stated the following proposed schedule:

- Proposed plan public comment period ends July 8,2003
- Submittal of Rev.0 Record of Decision (ROD) July 22, 2003
- Signed Rev. 1 ROD February 18, 2004
- Remedial Action Start March 4, 2005

Rick McLeod asked why this reactor seepage basin proposed plan included the groundwater, when all the others did not include groundwater. Mr. Schappell stated that the groundwater in the area is very slow to move and the strontium plume has not moved very far from its original location, so the groundwater will be part of the proposed plan. William Lawrence asked why could you wait until 2005 to start remedial action. Mr. Schappell stated that the historical data supports waiting until 2005, based on the slow movement of the plume.

Integrator Operable Units (IOUs) Status and Upd
ate: Ron Malanowski stated the objectives of his presentation were to provide status/update of the IOU program, present IOU early action fact sheet, and demonstrate IOU geographic information system (GIS) tools.

Mr. Malanowski presented the following schedule status for all 6 IOUs:

- Steel Creek
    - Phase I - 9/99
    - Phase II - 5/00
    - Phase III - 2/19
    - ROD - 1Q23
- Savannah River/Swamp
    - Phase I - 4/00
    - Phase II - 5/01
    - Phase III - 4Q33
    - ROD - 3Q37
- Fourmile Branch
    - Phase I - 11/00
    - Phase II - 8/01
    - Phase III - 1Q19
    - ROD - 4Q22
- Lower Three Runs
    - Phase I - 6/01
    - Phase II - 11/01
    - Phase III - 1Q22
    - ROD - 3Q25
- Pen Branch
    - Phase I - 1/02
    - Phase II - 6/02
    - Phase III - 3Q16
    - ROD - 1Q20
- Upper Three Runs
    - Phase I - 8/02
    - Phase II - 1/03
    - Phase III - 3Q30
    - ROD - 1Q34

Mr. Malanowski stated that the above information was taken directly out of the current Federal Facility Agreement schedule and is subject to change.

Mr. Malanowski stated that a Savannah River Site Early Action Fact Sheet has been developed and realeased to the public. Mr. Malanowski indicated that an early action may be warranted if contaminant levels indicate unacceptable risks. The Phase II evaluations performed on Steel Creek and Fourmile Branch IOUs identified unacceptable human health risk levels, hence the Fact Sheet that identifies cesium contamination in the soil and sediment along the onsite sections of the stream.

Mr. Malanowski introduced Gerald McLane and Susan Dyer who would explain by showing examples, how the GIS operates. They stated that this project and tools were developed to provide the following:

- to display and assist in the understanding of the data and information

- to automate the "data crunching"
- to allow for "what if"
- to display the results of the evaluations
- to become a living communication tool

Mr. McLane and Ms. Dyer provided many examples of how data from the GIS could help in presenting a picture of many different items that effect the SRS. The following are some of those being reviewed:

- Contaminant Sources and Migration Pathway Analysis
- All existing sample locations
- Proposed sampling and tracking sampling efforts
- Benchmark evaluation tool
- Benchmark query tool with a specific analyte option
- Statistical summary tool
- Summary report tool
- Analyte scatterplot tool
- Create a theme by sample media tool
- Ecology view
- Ecology view and threatened, endangered & sensitive species list
- Habitat map and Aerial photos
- Wildlife survey
- Land use maps

Ms. Antonucci asked how available the GIS information was to the public. Mr. Malanowski stated that the information could be easily accessed if an individual had the appropriate software, which costs approximately $1,500. Mr. Mcleod indicated that the IOU Phase II schedule dates appear to be changing and what is the cause for those changes. Mr. Malanowski stated that there is a 2-year periodic report that is generated that could show any schedule changes and the drivers of the change. Mr. McLeod asked if the accelerated cleanup program would change the IOU program. Paul Huber responded by stating it would bring an earlier decision.

Public Comments: There were no public comments.

Mr. Holcomb adjourned the meeting at 8:10 p.m.

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