



# Environmental Bulletin

Volume 14, Number 11  
June 9, 2003

*from the Savannah River Site*

## **Proposed Plan Announced For R-Area Reactor Seepage Basins / 108-4R Overflow Basin Operable Unit**

The United States Department of Energy (DOE), the United States Environmental Protection Agency (EPA), and the South Carolina Department of Health and Environmental Control (SCDHEC) have reviewed the risks associated with the R-Area Reactor Seepage Basins (RRSB) / 108-4R Overflow Basin Operable Unit (OU) at the Savannah River Site (SRS) and are recommending the preferred alternative. The Preferred alternative for the RRSB is the installation of a reinforced concrete intruder barrier system with granite monuments extended over the Principal Threat Source Material (PTSM) and inside the boundary fence, and excavation of all contaminated process and sewer lines and associated soils above PTSM levels outside of the boundary fence with disposal on site under the intruder barrier system. Groundwater contamination will be addressed by a mixing zone. Land use control will be instituted to control unauthorized access to the area.

The RRSB consists of six unlined basins, process sewer lines, and an abandoned sanitary sewer system, consisting of a sanitary sewer line and a sanitary discharge lagoon located in the abandoned construction staging area north of the R-Reactor building (105-R). The RRSB is located north of the R-Reactor and straddles the boundary between the Upper Three Runs (UTR) and Lower Three Runs (LTR) watersheds. All six basins were constructed between June 1957 and March 1958 and received an estimated 5 million gallons of purge water from the R-Reactor disassembly basin. A non-routine discharge due to a calorimeter test failure in 1957 released approximately 2700 curies (Ci) of radionuclides primarily to Basin 1 with Basins 2-5 receiving a lesser amount. Primary radionuclides present were strontium-90 (Sr-90) and cesium-137 (Cs-137). The abandoned process sewer line extends from the R-Reactor disassembly basin to Basins 1 and 6. A sanitary sewer system was breached during the construction of Basins 1 and 5 and received some contaminated water discharged to the basins.

Basins 1-5 were all deactivated and backfilled by 1960. Basin 6 was deactivated in 1964 and backfilled in 1977. In addition, between 1960 and 1963, clay dikes and caps were constructed around Basin 1 and northwest of Basin 3 to contain lateral movement of radionuclides and reduce infiltration.

The 108-4R overflow basin was constructed to collect overflow from two adjacent underground storage tanks within a vault (108-3R) that stored diesel fuel for standby generators in the R-Reactor. The 108-4R overflow basin did not receive contaminated water from the R-Reactor disassembly basin and has been backfilled to grade and a grass cover established.

The public comment period is scheduled for June 9, 2003 to July 8, 2003. Comments on the Proposed Plan are requested by July 8, 2003. Upon completion of the public comment period, a Responsiveness Summary will be prepared which addresses public comments. The Responsiveness Summary will be made available with the Record of Decision, and will be sent to each person who submits comments.

Copies of the Proposed Plan are available in the administrative record, which also contains the Remedial Investigation/Feasibility Study (RI/FS) report for these units. The administrative record is available in the information repositories listed below:

- US DOE Public Reading Room at the Gregg-Graniteville Library at the University of South Carolina-Aiken campus in Aiken, SC; and
- Thomas Cooper Library Government Documents Department at the University of South Carolina in Columbia, SC.

Hard copies of the Proposed Plan are available at the following:

- Reese Library at Augusta State University in Augusta, GA; and

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## Current NEPA Actions Affecting SRS

- ***Disposition of Scrap Metals Programmatic Environmental Impact Statement (EIS) (DOE/EIS-0327)***

This Programmatic Environmental Impact Statement (PEIS) will evaluate alternatives for disposition of scrap metals from DOE sites that may have been in radiological areas. The disposition options to be analyzed include continuation of the suspension on unrestricted release of metals for recycling, unrestricted release of scrap metals for recycling, and disposal. The Notice of Intent (NOI) for this PEIS was issued on July 12, 2001. A public scoping meeting was held on July 31, 2001, in North Augusta, SC. The draft PEIS is scheduled to be available during June 2003 and the final PEIS is projected for September 2003.

- ***Supplemental PEIS on Stockpile Stewardship and Management for a Modern Pit Facility (DOE/EIS-0236-S2)***

This PEIS will evaluate alternative sites (Los Alamos National Laboratory, Nevada Test Site, Pantex Plant, Waste Isolation Pilot Plant, and Savannah River Site) for a Modern Pit Facility, to provide the capability to manufacture plutonium pits for the United States nuclear weapons stockpile. This PEIS will be followed by a site-specific EIS to address the impacts of construction and operation of the Modern Pit Facility at the selected site. The NOI for this PEIS was issued on September 23, 2002. A local public scoping meeting was held on October 29, 2002, in North Augusta, SC. The draft PEIS has been released for public comment and is available at <http://www.mpfeis.com>, the SRS area public scoping meeting is scheduled in North Augusta, SC on July 7, 2003, the final PEIS is projected for March 2004, and the record of decision (ROD) is scheduled for April 2004.

- ***Supplement Analysis (SA), Changes Needed to the Surplus Plutonium Disposition Program (DOE/EIS-0283-SA1)***

The SA evaluates the impacts of making Plutonium (Pu) feed for the Mixed Oxide Fuel Fabrication Facility from

approximately 6.5 metric tons of Pu materials originally intended for Immobilization. The SA explains how these impacts have been addressed in the Storage and Disposition PEIS (DOE/EIS-0229) and the Surplus Plutonium Disposition EIS (DOE/EIS-0283). On April 24, 2003, an amended ROD (68 FR 20134) was issued and updates will not appear here in the future.

- ***Supplement Analysis (SA), Disposition of Certain Nuclear Materials (DOE/EIS-0220-SA4)***

The SA evaluates the impacts of disposing of certain materials, including cobalt-60 and thulium-170, as waste, and provides the basis for determining if this existing EIS should be supplemented, a new EIS should be prepared, or no further NEPA documentation is required. The SA compares the materials and the proposed disposal of the materials, to the materials and disposal technologies evaluated in the SRS Waste Management EIS (DOE/EIS-0217) and the Interim Management of Nuclear Materials EIS (DOE/EIS-0220). The determination and related SA will be made available to the public for information. An amended ROD will be prepared as appropriate. The SA is scheduled to be available during June 2003.

- ***Natural Resources Management Activities at SRS (DOE/EA-0826)***

DOE prepared an Environmental Assessment (EA) in 1993 to analyze the potential environmental impacts of continued management of SRS natural resources. Based on the analyses in the EA, DOE determined the proposed action was not a major Federal action significantly affecting the human environment within the meaning of NEPA, and issued a Finding of No Significant Impact (FONSI). In 2000, DOE issued a revised FONSI that determined implementation of a revised red-cockaded woodpecker Management Plan would have impacts no greater than those described in the 1993 EA. DOE now proposes a second revised FONSI which will address minor differences between the 1991 and the next version of the SRS Natural Resources Management Plan (NRMP). The NEPA review is on hold until the next version of the NRMP is finalized.

## SRS CAB Makes Recommendations To DOE

The SRS CAB met May 19-20 at the Hyatt Regency in Savannah, Ga. The following four recommendations were adopted unanimously following in-depth presentations and discussions.

### Recommendation 161- Passive Treatment of F/H Area Groundwater

The SRS CAB recommends the three agencies support the shutdown of the F and H Area extraction/reinjection system and in a cooperative effort, ensure that the passive alternatives meet remediation standards and schedules. It also requests that SRS, with SCDHEC concurrence, permanently shut down the system as soon as possible to allow the groundwater system to return to natural conditions before beginning construction of passive treatment systems.

### Recommendation 162-High Level Waste (HLW) Accelerated Sludge Removal

The Board asks SRS to accelerate the implementation of the "Waste on Wheels" (WOW) process, a portable sludge removal system that can be moved from tank to tank, and report on the progress of the acceleration to lower the costs and risks as soon as the information becomes available. It also asks SRS to characterize the annulus waste and evaluate the need for annulus cleaning in HLW Tank 5 and to provide a schedule for development of a plan to demonstrate the WOW process and present the plan by November 19, 2003.

### Recommendation 163- High Activity Transuranic (TRU) Waste Packaging

The CAB recommends that DOE accelerate shipments of high activity TRU waste from SRS by expediting the design, certification and fabrication of the TRUPACT III shipping containers. These containers must be designed to alleviate the hydrogen gas concerns. These shipping containers are needed as soon as possible and should be available to allow the first shipment of high activity TRU waste to be compatible with the Performance Management Plan shipping schedule of FY05. The recommendation also addresses expeditious certification of the Arrow Pak shipping containers and asks DOE to continue to investigate hydrogen "getters."

### Recommendation 164- Waste Isolation Pilot Plant Non-Compliant Item Waste Acceptance Criteria

A recommendation that by November 19, 2003, DOE-Headquarters, working with DOE-SR and DOE-Carlsbad, de-

velop a path forward that will eliminate non-compliant items and or reduce the number of drums that are opened, sorted and segregated because of non-compliant items. The Board also asks DOE-SR to ensure the path forward also significantly reduces or eliminates the need to remove the non-compliant items in the large containers of TRU waste at SRS and helps to expedite the removal schedule for this waste stream.

The recommendations were formally transmitted to DOE, South Carolina Department of Health and Environmental Control (SCDHEC) and the U. S. Environmental Protection Agency (EPA) as appropriate.

### **Upcoming 2003 Citizens Advisory Board Meetings July 21 – 22**

**Adams Mark, Columbia, SC**

To apply for membership to the SRS Citizens Advisory Board or to be added to our mailing list for notification of all committee meetings, please call 1-800-249-8155.

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### **Proposed Plan Announced ...**

- Asa H. Gordon Library at Savannah State University in Savannah, GA.

Comments on the Proposed Plan modification should be sent to:

SCDHEC

Attn: John Litton, P.E., Director

Division of Hazardous and Infectious Waste Mgt.

Bureau of Land and Waste Management

2600 Bull Street

Columbia, SC 29201

(803) 896-4000

Comments on the Proposed Plan and requests for public meetings may be sent to:

Jim Moore

Westinghouse Savannah River Company

Savannah River Site

Building 742-A

Aiken, SC 29808

1-800-249-8155

jim02.moore@srs.gov

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## The SRS Environmental Bulletin

For more information on this or other  
environmental and compliance activities  
at SRS, please contact:

Jim Moore	Lyddie Broussard
Westinghouse	Westinghouse
Savannah River Co.	Savannah River Co.
Aiken, S.C. 29808	Aiken, S.C. 29808
(800) 249-8155	Public Involvement
e-mail: jim02.moore@srs.gov	(803) 725-7169

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Aiken, S.C. 29808

