



Environmental Bulletin

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from the Savannah River Site

Pre-construction fact sheet available for Old F-Area Seepage Basin

The United States Department of Energy, United States Environmental Protection Agency, and South Carolina Department of Health and Environmental Control announce the availability of a Pre-construction Fact Sheet. The Fact Sheet provides background information and describes the remedial options selected for Old F-Area Seepage Basin Operable Unit at the Savannah River Site. The remedial action(s) selected in the Record of Decision is:

1.) Remove the contaminated, chipped vegetation from the site. Remove the top two feet of soil from the effluent ditchline and basin sidewall and place it in the basin. Once in situ grouting has been completed, the chipped vegetation will be placed over the grouted soils, on top of the

first clean, compacted, soil-fill layer. A low permeability engineered soil cover will be constructed over the basin area to eliminate the risk of radiation exposure and minimize potential future impacts to the groundwater beneath the basin.

2.) Institutional controls and grouting will be used as selected remedies for the waste process sewer line. Institutional controls will consist of site-use and site-clearance permits as well as access controls to the pipeline and associated manholes. Signs will be posted at the waste unit to indicate that the area was used to dispose of waste material and contains buried waste.

The pipeline manholes will be grouted to restrict access and eliminate the risk of exposure.

3.) To effect adequate protection of the

groundwater, the selected remedy for groundwater is institution of a monitoring well network between the basin and the down gradient stream and initiation of groundwater sampling.

The Pre-construction Fact Sheet for the Savannah River Site's (SRS) Old F-Area Seepage Basin operable unit is available at these locations:

* DOE Public Reading Room at the Gregg-Graniteville Library at the University of South Carolina-Aiken campus in Aiken, SC

* Thomas Cooper Library Government Documents Department at USC in Columbia, SC

* Reese Library at Augusta State University in Augusta, GA

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

SRS to prepare EIS for closure of High-Level Waste Tanks

A Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for Closure of High-Level Waste (HLW) Tanks at the Savannah River Site was published in the Federal Register on December 29, 1998 (63FR17628). The NOI states that DOE proposes to close the HLW tanks to protect human health and the environment and to promote safety. DOE's preferred alternative is to remove the residual waste from the tanks to the extent technically and economically feasible, and then to fill them with a reducing grout to bind up residual waste and a structural material to prevent collapse of the tanks. DOE proposes to close these tanks and their associated waste handling equipment in accordance

with the Industrial Wastewater Closure Plan for F- and H-Area High-Level Waste Tank Systems, prepared by DOE and approved by the South Carolina Department of Health and Environmental Control (SCDHEC). In closing the tanks, DOE will comply not only with the Closure Plan, which is required by Industrial Wastewater Permits that SCDHEC issued to DOE, but also with the applicable requirements of DOE Orders, including DOE 5820.2A (Radioactive Waste Management). DOE invites comments on the scope of the EIS.

Public meetings will be held from 2-4 pm and 6-8 p.m. January 14 at the North Augusta Community Center, 101

Brookshire Drive, North Augusta, SC and again on January 19 at the Holiday Inn Coliseum, 630 Assembly Street, Columbia, SC.

Comments may be mailed to the address below or sent by fax, voice mail, or electronic mail. Written comments on the scope of this EIS should be sent to:

Andrew Grainger, NEPA Compliance Officer, Savannah River Operations Office, U. S. Department of Energy, Building 742-A, Room 185, Aiken, South Carolina 29802, Attention: Tank Closure EIS.

The toll-free 24-hour voice mail (local and nationwide): 800- 881-7292; E-mail: nepa@srs.gov.

Melt and Dilute and Conventional Processing:

Savannah River Site's Preferred Alternatives For DOE-owned Spent Nuclear Fuel

The Department of Energy has proposed using a combination of new and old technologies to manage spent nuclear fuel at the Savannah River Site (SRS). The decision is contained in the SRS Spent Nuclear Fuel Management Draft Environmental Impact Statement (DEIS), released on December 24, and will be subject to public comment before a final decision is made.

The Department is recommending use of a new technology - "melt-and-dilute" as the preferred alternative for managing the bulk (about 90 percent by volume) of the spent fuel at the SRS. The DEIS also recommends conventional processing as the preferred alternative for a small amount (about 3 percent by volume) of the spent fuel as needed to ensure timely health and safety protection with an adequate margin of safety. The DEIS also recommends that the small amount of non-aluminum-based spent fuel assigned to SRS be repackaged and dry stored. The document evaluates the potential environmental impacts of a variety of alternative methods for safely and efficiently managing the spent fuel at the SRS so that it can be placed in a "road-ready" form for safe disposal in a federal repository.

The new melt and dilute technology is one of the simplest destructive treatments for aluminum-based spent nuclear fuel and satisfies the Department's objective and preference to select a non-chemical separation-based technology. With this technology, DOE would melt aluminum-based spent fuel and blend down any highly enriched uranium to low enriched uranium using depleted uranium that is currently stored at SRS. This material would be cast into ingots and the ingots would be loaded into stainless-steel canisters about 10 feet tall and about 2 feet in diameter. The canister would be placed in dry storage at SRS pending shipment to a federal geological repository. Additionally, this new technology provides significant waste reduction of high-level waste, low-level waste and transuranic waste compared to conventional processing.

To execute this preferred alternative, DOE would construct a melt and dilute facility in the existing 105-L Building at SRS and build a dry-storage facility near the building. The melt and dilute operations could begin in late 2005 and would continue as least through 2035.

As a result of evaluations in this EIS, DOE plans to make the following decisions:

- * To select the appropriate treatment or packaging technology to prepare aluminum-based spent nuclear fuel that DOE has scheduled for management at SRS for ultimate disposition.

- * To determine whether DOE should construct or operate new facilities or modify existing facilities to store, treat, or package aluminum-based spent nuclear fuel at SRS for its ultimate disposition.

To determine whether DOE should repackage and dry store stainless steel and zirconium-clad spent nuclear fuel, in addition to higher actinide targets. The quantity of material included in this EIS consists of approximately 68 metric tons of heavy metal. The 68 metric tons is comprised of:

- * 20 metric tons of aluminum-based spent nuclear fuel at SRS
- * 28 metric tons of aluminum-based spent nuclear fuel from foreign and domestic research reactors to be shipped to SRS through 2035
- * 20 metric tons of stainless and zirconium-clad spent nuclear

fuel and some programmatic material stored at SRS for repackaging and dry storage pending off-site shipment

The public comment period extends through February 8, 1999. The Department will hold two public meetings, with two sessions each, to discuss the Draft EIS and receive comments. The meetings will be held Thursday, January 28, 1999, at the Holiday Inn Coliseum, 630 Assembly Street, Columbia, SC and on Tuesday, February 2 at the North Augusta Community Center, 495 Brookside Drive, North Augusta, SC. The first session begins at 1 p.m. and the second begins at 6 p.m.

In addition to the public meetings, comments may be submitted in writing to Andrew R. Grainger, NEPA Compliance Officer, Savannah River Site, Building 742-A, Room 185, Aiken, South Carolina 29802; verbally by calling (800) 881-7292; or electronically to nepa@srs.gov.

Secretary Richardson announces new missions

In December 1998, Secretary Richardson chose the use of TVA reactors for producing tritium over construction of a new linear accelerator at the Savannah River Site (SRS) and designated TVA's Watts Bar and Sequoyah reactors as the preferred facilities. Tritium created in those reactors would be extracted from tritium production targets in a new facility to be built at SRS.

Richardson's decision followed an extensive review of the regulatory, cost, proliferation, environmental, technical and national security issues associated with each option. Secretary Richardson's decision fulfills the Department's 1995 commitment to select between a commercial light reactor and a linear accelerator as the primary source of tritium by the end of 1998. Consistent with the Department's dual track strategy for tritium production, the linear accelerator option has been designated as a backup technology. The Department will complete key research and development milestones for the accelerator, but will not complete construction.

In addition, the Secretary named SRS as the preferred site for building and operating a pit disassembly and conversion facility. This decision means that SRS will now be responsible for all activities related to the disposition of surplus weapons plutonium. SRS is already the preferred alternative for mixed oxide (MOX) fuel fabrication and plutonium immobilization.

The facility would be used to disassemble nuclear weapons components (pits) and convert the recovered plutonium metal to an oxide form suitable for either MOX fuel or immobilization.

Savannah River was selected because the site has extensive experience with plutonium processing. In addition, co-location of the pit disassembly facility with other existing or planned facilities at the site could provide some savings in infrastructure.

As currently planned, the facilities are to be designed and constructed in the 2000-2004 time frame, with operations to begin in 2005. Construction and operation are contingent on Russia's plutonium disposition plans.

Current NEPA actions affecting SRS

• **Accelerator for Production of Tritium (APT) (DOE/EIS-0270)**, The Secretary has selected the Commercial Light Water Reactor (CLWR) as the primary tritium production technology with APT as backup. Publication of the final EIS is expected during the February - March time frame.

• **Tritium Extraction Facility (TEF) (DOE/EIS-0271)**, The Secretary has selected the CLWR as the primary tritium production technology with APT as backup. Publication of the final EIS is expected during the February - March time frame. The TEF will be built at Savannah River Site to Support the CLWR option.

• **Rocky Flats Plutonium Residues and Scrub Alloy (DOE/EIS-0277)**, The final EIS was issued on August 28, 1998 (63 FR 46006). The first ROD was issued December 1, 1998 (63 FR 66316). The second ROD will be issued 1st quarter, 1999.

• **SRS Spent Nuclear Fuel (DOE/EIS-0279)**, The draft EIS was issued December 24, 1998. The public meetings are scheduled for January 28, 1999 in Columbia, SC and February 2, 1999 in North Augusta, SC.

• **DOE Waste Management (DOE/EIS-0200)**, Multiple RODs will be issued. Planned RODs are HLW storage and LLW/LLMW, early 1999.

• **Closure of High Level Waste Tanks at SRS (DOE/EIS-0303)**, The NOI was issued December 29, 1998 (63FR71628). The public scoping meetings are scheduled for January 14, 1999 in North Augusta, SC and January 19, 1999 in Columbia, SC.

• **Surplus Plutonium Disposition (DOE/EIS-0282)**, Public comments are being addressed and the final EIS is being prepared. The expected issue date for the final EIS is January 1999 with a ROD one month later.

• **Wetland Mitigation Bank Program (DOE/EA-1205)**, The public comment period was extended to accommodate the receipt of SC and local stakeholder comments. A decision (FONSI or EIS) is expected in early 1999.

• **Par Pond Dam Repair Project (DOE/EA-1285)**, The NOI to prepare this EA was sent to the states of South Carolina and Georgia on December 8, 1998. A decision (FONSI or EIS) is expected in mid 1999.

EA -- Environmental Assessment

EIS -- Environmental Impact Statement

FONSI -- Finding of No Significant Impact

NOI -- Notice of Intent

ROD -- Record of Decision

For more information:

Jim Moore
Westinghouse Savannah
River Company
Building 742-A
Aiken, SC 29808
1-800-249-8155
jim02.moore@srs.gov

Need NEPA documents?

Andrew R. Grainger

U.S. Department of Energy
Savannah River
Operations Office

Building 742-A, Rm. 185
Aiken, S.C. 29802
E-mail: nepa@srs.gov
Phone:
1 (800) 881-7292

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

Jim Moore

WSRC

Bldg. 742-A

Aiken, S.C. 29808

(800) 249-8155

jim02.moore@srs.gov

Muriel Cooney

WSRC

Public Relations

(803) 725-0268