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from the Savannah River Site

Status of Facility Decommissioning Removal Site Evaluation Report/ Engineering Evaluation and Cost Analysis Documents

To date, DOE-SR has identified three facility decommissioning projects that require use of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) non-time-critical removal action process. The process requires that a Removal Site Evaluation Report/Engineering Evaluation and Cost Analysis (RSER/EE/CA) documents be developed to communicate decommissioning alternatives and the analysis used to select the Department's preferred alternative. The RSER/EE/CA documents are presented to regulators and other stakeholders in order to solicit feedback on the preferred alternative.

As was detailed in the Environmental Bulletin Vol 17, No. 2, the RSER/EE/CA for 211-3F Waste Truck Unloading Shed has completed the regulator comment and review process as well as the public comment and review period. No public comments were received. The Action Memorandum was issued on January 9, 2006 to document the selection of the preferred alterative and includes a responsiveness summary that addresses comments received from the United States Environmental Protection Agency, Region 4 (EPA-4) and South Carolina Department of Health and Environmental Control (SCDHEC). Decommissioning activities are ongoing and anticipated to be completed this quarter.

The RSER/EE/CA for 221-1F A-Line has completed the regulator comment and review process as well as the public comment and review period. No public comments were received. The Action Memorandum is being developed and will be issued in May 2006.

The RSER/EE/CA for the 211-F Outside Facilities has completed the regulator comment and review process. The document was transmitted to EPA-4 and SCDHEC on March 23, 2006 with final comments received on May 3, 2006. Following disposition of regulator comments, the document will be forwarded for public review and comment in June 2006.

D&D Receives Pollution Prevention Award

The DOE Office of Environmental Management has selected three SRS Pollution Prevention Award entries among five nationally as Best in Class for 2006. The awards were recently announced by Mark Gilbertson, Deputy Assistant Secretary of Environmental Cleanup and Acceleration at DOE-Headquarters in Washington. Among the three, SRS's Deactivation and Decommissioning (D&D) efforts and resulting waste disposition activities were cited in the Waste/Pollution Prevention category for protecting the environment and avoiding the generation of additional waste during the D&D of 56 buildings in 2005. The creation and use of a standardized waste identification document in D&D, which requires a detailed characterization of materials to be removed and optimizes removal operations and waste disposal, received major credit for helping to avoid $9.3 million in waste disposal costs during the year. One example of using the waste identification process was the detailed characterization and segregation that avoided generation of over 1,900 cubic meters of Low Level Waste from two M-Area reactor fuel fabrication facilities.

Status of D&D Facilities as of March 31, 2006

Key to success of the D&D program is the graded approach to decommissioning based on facility hazards, contaminants, complexity and regulatory agreements. Based upon consideration of these factors, a Facility Decommissioning Evaluation (FDE) is prepared. The simplest decommissioning model used for facilities such as guardhouses or office buildings is identified as the Simple Model. These facilities are demolished to the foundation using conventional demolition techniques.

The next level of complexity, the Integrated Sampling Model, is applied to facilities that may have been exposed to chemical or radiological contamination due to its operational history. This model requires characterization to determine if contamination is present and cleanup is needed.

Facilities with the highest level of complexity are decommissioned as CERCLA non-time-critical removal actions. This process involves development of an EE/CA, conducting community relations activities, and documenting the removal action decision. The EE/CA provides the framework for evaluating alternative decommissioning actions. It identifies the objectives of the decommissioning activity and analyzes the effectiveness, ability to implement, and costs of various alternatives. The EE/CA is available for public review during a 30-day comment period. A notice of availability will be published in local newspapers and the Environmental Bulletin. Following the pubic comment period, the DOE will issue an EE/CA Removal Action Memorandum to document the selected decommissioning action.

Since December 1, 2005, the SCDHEC, EPA-4, and DOE have reviewed the FDEs for the following facilities that are now in various stages of decommissioning.

Simple Model Buildings:

· **717-3S, Lubrication Storage Building** – This facility was built around 1983 as a temporary construction facility during the initial construction phase of S-Area. The facility is a metal sided, metal framed building with curbed concrete containment and has a footprint of approximately 719 square feet. The facility was also used to store gear oil, lube oil, and grease. The facility will be demolished to the curbed concrete containment.

· **221-13F, Control and Alarm Center** – This facility was built in 1979 and housed the security Central Alarm Station, a diesel generator room, and an electrical and instrumentation room containing Input/Output cabinets. The building is a 676 square foot, single-story structure. The facility will be demolished to the building's concrete slab.

· **186-L, Cooling Water Reservoir** – This facility was built in the 1950's and served as a reservoir for cooling water used during normal reactor operation. The building has a footprint of approximately 190,000 square feet, and when in use held approximately 25 million gallons of cooling water. The reservoir depth is approximately 20 feet, of which approximately 15 feet is below grade. The decommissioning end state for this facility is In Situ Disposal.

· **190-L, Cooling Water Pump House** – This facility was built in the 1950's and pumped cooling water from the 186-L Reservoir to the L-Area Complex during normal reactor operation. The building has a footprint of approximately 22,000 square feet and is substantially below grade – the floors of the suction well, pump room, and electrical switch gear room are approximately 15', 12', and 7' below grade respectively. The decommissioning end state for the facility is In Situ Disposal.

· **711-P, Storage Building** - This facility was built in the 1970's as storage for rigging supplies (e.g. wire rope, shackles, slings). Most recently it was used to store water purification equipment. It is a 2,700 square foot, single story, steel framed structure built on a concrete slab. The facility will be demolished to the slab.

· **711-1P, Storage Building** - This facility was built in the 1970's as storage for rigging supplies (e.g. wire rope, shackles, slings). It is a 855 square foot, single story, steel framed structure built on a concrete slab. The facility will be demolished to the slab.

Integrated Sampling Model Buildings:

· **714-6N, Miscellaneous Storage Building** – This facility was constructed in 1952 and provided warehouse space for the storage of contaminated equipment. The metal sided building has a footprint of 16,000 square feet. The facility was also used to house a cladding operation at the south end and was eventually used for the storage of both depleted uranium oxide and low enriched uranium in drums. The facility will be demolished to the slab. Decommissioning waste is likely to consist primarily of sanitary waste which will be sent to the Construction and Demolition Landfill and the Three Rivers Landfill and hazardous waste will be to E-Area facilities on Site awaiting final disposal.

· **211-2F, Control House** – This original 604 square foot facility was built in 1954. In 1956, a 313 square foot addition was added to the east side of the building, and in 1961, a second addition of 210 square feet was added to the east side of the first addition. The facility was originally constructed as a control room for 211-F processes; the first addition provided additional office space, and the second addition provided a new monitoring room. The facility is potentially contaminated from radionuclides as a result of storage of radiologically contaminated personal protective equipment and small tools. The facility will be demolished to the slab. Decommissioning waste is likely to consist primarily of low level radioactive waste which will be disposed of on Site in E-Area.

· **420-D, Concentrator Building** – This facility was constructed in 1954 and was used to concentrate and purify heavy water from Savannah River Site reactors. The facility is a 14,000 square foot steel framed structure with transite walls and roof. The facility

will be demolished to the slab. Decommissioning waste is likely to consist primarily of low level radioactive waste which will be disposed of on Site in E-Area and some hazardous waste which will be sent to E-Area facilities for storage awaiting final disposal.

· **707-2F, Regulated Shops Building** – This facility was constructed in the mid-1950's and added to in the late 1970s as a small shop facility supporting A-Line and the 211-F Outside Facilities. The building is a 2,562 square foot, single-story steel framed structure with transite siding on a concrete slab. The facility has been demolished to the slab. Decommissioning waste consisted primarily of low level radioactive waste which was disposed of on Site in E-Area and some hazardous waste which was sent to E-Area facilities for storage awaiting final disposal.

· **109-R, Purge Water Storage Basin** – This facility was constructed to support R- Reactor operations which began in 1953. Building 109-R is a 240 square foot concrete basin with a removable steel access cover. It was designed with a series of baffles to delay the outflow to the Process Sewer, allowing any short-lived radionuclides time to decay. The decommissioning end state is In Situ Disposal. Decommissioning waste is likely to consist primarily of low level waste which will be disposed of on Site in E-Area.

The following tables summarize decommissioning activities. Table 1 provides decommissioning waste disposal volumes through March 31, 2006 and Table 2 represents the total number of facilities decommissioned and those scheduled through FY 2006.

Table 1: Waste Disposal Volumes through March 31, 2006

Low Level Waste	2,026,500 cu. ft.	On-site
Sanitary Waste	2,824,000 cu. ft	3-Rivers / C&D
Mixed Waste	5,600 cu. ft.	Off-site
Hazardous Waste	6,300 cu. ft.	Off-site
PCB Waste	5,500 cu. ft.	Off-site

Table 2: Facilities Decommissioned & Scheduled through 2006

Facilities Scheduled through 2006

	Demolition Completed	FDE Approved	FDE Pending	Total
Simple Model	149	8	12	169
Integrated Sampling Model	57	6	6	69
EE/CA Model	0	3	0	3
Total	206	17	18	241

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