



**Savannah River Site  
Citizens Advisory Board**

**Recommendation 184  
F-Canyon Deactivation & Post Deactivation**

**Background**

F-Canyon began operations in 1954. This facility used nitric acid dissolution and the PUREX chemical solvent extraction process to separate special nuclear material (e.g., plutonium and uranium) from irradiated reactor targets, and other materials from the DOE complex (Ref. 1).

DOE has evaluated current mission needs and has not identified further materials specifically requiring the unique chemical separation capabilities of F-Canyon. All materials that were known to be suitable for processing in F-Canyon have either been processed or can be processed, if necessary, in H-Area. Therefore, DOE has concluded that the operation of F-Canyon is not required for current or future stabilization, disposition, or Defense Programs needs (Ref. 2).

The F-Canyon Suspension Plan was issued in February 2002 and approved by DOE. The suspension activities included the reduction of hazards (e.g., removal of radioactive materials, flushing vessels, and chemical inventory reductions) and the early planning for total deactivation. In addition, DOE has approved a revision to the Suspension Plan to allow deactivation to begin on a few systems that have been out of service for some time.

SRS issued an F-Canyon Complex Deactivation Project Plan, which provides the scope of work to be performed to deactivate the F-Canyon Complex (Ref. 3). The purpose of deactivation is to reduce risk while providing a seamless transition from operations to a low-cost surveillance and maintenance mode of \$32M/yr. At the completion of deactivation, the facilities will be in a cold, dark, and dry state (called post deactivation) for an undetermined amount of time until decommissioning begins (Ref. 4).

DOE approved the execution of the Deactivation Project Plan on November 25, 2003. This approval allowed the start of deactivation activities but not decommissioning (Ref. 5). Decommissioning involves actions taken at the end of the life of a facility to permanently eliminate any residual hazards and to place the facility in a final end state. Possible end states may include cleanout and conversion for reuse, decontamination and demolition, or entombment.

**Comments**

The SRS Citizens Advisory Board (CAB) supports the F-Canyon Complex Deactivation Project Plan activities. However, the Board has concerns about the length of time deactivation will take. More troublesome to the CAB is the indefinite length of time F-Canyon Complex will remain in Post Deactivation before decommissioning will start. The SRS CAB would like to see progress made toward developing definitive timelines for these activities and does not understand the need for a long time lag before decommissioning can begin. It seems clear to the CAB that entombment is the most practical end state. It makes no sense to remove contaminated equipment from a totally secure place only to bury it in some less secure location. The CAB also believes that the decommissioning of F-Canyon would provide an excellent model for DOE to use in reaching finality with a large, contaminated facility. All lessons learned would be most valuable in the decommissioning of other large, contaminated facilities.

**Recommendation**

Therefore, the SRS CAB recommends that DOE:

1. Develop a realistic timeline and budget to complete deactivation of F-Canyon.
2. Move directly to begin the decommissioning process after deactivation has been completed and bypass the lengthy Post Deactivation phase.
3. Move forward to obtain the necessary approvals for DOE's end state decision to entomb in place F-Canyon and its current equipment.
4. Report semiannually to the SRS CAB on progress made in accomplishing the above.

## **References**

1. Canyon Utilization, presentation to the NM Committee by Sachiko McAlhany, May 20, 2002.
2. F- Canyon Suspension, presentation to the NM Committee by Philip Breidenbach, May 20, 2002.
3. F-Canyon Complex Deactivation Project Plan, Revision 2, July 17, 2003.
4. F-Canyon Complex Deactivation Workshop, Nuclear Materials Committee, January 15, 2004.
5. Letter from Jeffrey Allison, Manager DOE-SR to Robert Pedde, President WSRC, November 25, 2003.

## **Agency Responses**

[Department of Energy-SR](#)