

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 29, 2010

**TO:** T. J. Dwyer, Technical Director  
**FROM:** M. T. Sautman and D. L. Burnfield, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending October 29, 2010

**F/H Laboratory:** The technical basis for the credited 0.2 leak path factor is weak. In a 1995 report, a two sentence justification states that it is “based on the location of the material (on average, far away from pathways to the outside) and on characteristics of the gloveboxes.” The Documented Safety Analysis also references a 1998 Los Alamos leak path factor report for a “similar” laboratory. SRNS is working on a path forward.

**H Area Old Manufacturing:** While an engineer was troubleshooting a breaker, a 1972 relay internally shorted, causing wires to overheat and ignite nearby paper labels and melt plastic. The fire went out on its own soon afterwards. Damage was limited to three relays and some wires.

**Tank 48:** SRR has been evaluating options to address weight and space limitations for the fluidized bed steam reformer (see 5/28/10 report). SRR is recommending that the heat source for the carbon reduction reformer be switched from glycol to an electric heater that would be located outside of secondary confinement. Furthermore, SRR believes space requirements could be further reduced by: 1) replacing the off-gas filter module with a smaller high-temperature filter, 2) reducing the denitration mineralization reformer’s height through the use of nitrogen cooling, and 3) eliminating the bauxite and rod mill grinder. SRR had considered using a catalytic thermal oxidizer, but believes an electric heater would be more readily available and would have fewer impacts on the flowsheet. DOE-SR has requested an independent engineering evaluation before formally changing the design.

**Saltstone:** SRR intends to resume grouting next week under a Management Control Plan (MCP) that provides expectations for oversight by senior management, operating parameters that minimize variability in solids flow, and control of liquid to solids ratio and density of the feed stream through a series of controlled runs. Because SRR completed the Management Self-Assessment (MSA) in early August and the facility has made significant configuration, procedures, training and operational changes in the interim, SRR has decided to delay the start of the contractor organics Operational Readiness Review until November 30. This will allow time for the MSA to repeat several lines of inquiry, assess the effectiveness of previous MSA corrective actions, and exit the MCP.

**Waste Solidification Building:** The site rep walked down the construction site. Including early site construction and long-lead equipment, construction is ~42% complete. NNSA expects the walls to be finished in late 2010.

**Other Site Rep Activities:** The site reps observed the following:

- SRNS replaced the 6500 Ci <sup>60</sup>Co instrumentation calibration source. (See 10/22/2010 report.) The highest dose rates observed in the room were approximately 4200 rad per hour. The site rep observed no significant deficiencies during this operation.
- The SRS Fire Department is conducting their annual live burn training at a nearby county facility. New radiological control inspectors practiced contaminated bunker gear removal.
- The site rep observed a DOE-SR facility representative oral board. The board was thorough and the candidate performed well.
- The site rep conducted a walkdown of Savannah River National Laboratory to examine housekeeping and current radiological protection initiatives. Several improvements were noted.