

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 13, 2011

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 May 13, 2011

Operational Issues:

- At SWPF a worker was hit on the back of the head when a 55 pound piece of steel fell approximately 5 feet and struck the worker's hardhat. The site evacuated the worker to one of the local hospitals where emergency room personnel evaluated him and allowed to return to work the next day. The steel, which is used to hold concrete forms together apparently, was not anchored correctly. The piece of steel also hit another worker, who received first aid for cuts.
- At Saltstone, an inadequately supervised trainee inadvertently turned off the breathing air to a worker wearing a plastic suit. The qualified operator did not observe which valve the trainee closed. The trainee did not repeat back the valve number to close, did not attend the pre-job briefing, and had not attended training on the operation of breathing air manifolds.
- At F-Canyon, a worker in a plastic suit lost breathing air when the breathing hose connection to the suit separated. The suit appears to have a manufacturer's defect. The vendor of the suit is changing their assembly procedure and quality assurance checks to prevent recurrence. At SRS the workers are checking the suits to ensure the connection is correctly assembled before donning the suit.

Tank 48: Because of budget shortfalls, DOE has requested SRR to recommend changes to the current Tank 48 treatment execution strategy up to and including project lay-up or suspension.

Tritium Emergency Preparedness: The site rep observed training provided to operations, radiological protection, and maintenance shift workers on seismic hazards and actions to take during and after an earthquake. The site rep also observed a training exercise where personnel from several tritium facilities had to respond to the damage from a simulated 6.6 Richter scale event. The exercise illustrated some of the challenges involved with prioritizing response actions and integrating the response of multiple facilities. This was the first stage of several seismic training drills and exercises planned for this year. (See 2/25/11 and 3/18/11 reports).

Plutonium Disposition: DOE approved a termination of safeguards for certain plutonium materials that are not suitable as feed for mixed oxide fuel. This material can be blended, packaged, and shipped directly to the Waste Isolation Pilot Plant.

F/H Laboratory: While SRNS personnel were manipulating valves to restore steam to systems following a planned steam outage, they heard a loud banging noise. They concluded that a globe valve should be replaced. (See 4/29/11 report). Mechanics removed and disassembled the valve. No significant degradation of the valve internals was observed. The cause of the event remains undetermined.

Performance Indicators: The site rep attended SRNS briefings regarding the use of statistical process control (SPC). SPC, developed by Shewhart and made famous by Deming, allows one to monitor processes statistically to determine where best to expend resources for process improvement. Their use in processes that have distinct measureable output has been a valuable tool for decades. At a minimum, the use of SPC to improve processes that are dependent upon knowledge based systems or disparate systems requires diligence and long term dedication for any value to be gained.