DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 15, 2010

TO: T. J. Dwyer, Technical Director
FROM: D. L. Burnfield and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending January 15, 2010

F- Tank Farms: At a pre-job briefing, a camera crew was incorrectly told to use a Radiological Work Permit that only applied to Contamination/Radiation areas to remove camera equipment from two tank risers. However, the hut around the second riser had been upgraded to a High Contamination/Airborne Radioactivity/Radiation area as a result of tank sampling work last week (see 1/8/10 report). The Radiological Control Organization (RCO) person giving the briefing had not reviewed the most recent radiological survey map beforehand. Two members of a camera crew and a RCO inspector entered the hut without reading the radiological posting at the hut entrance. In addition, they did not notice that they crossed over two step-off pads and passed a respirator bin although they were only wearing a single pair of anti-contamination clothing. After the job was complete, a RCO staffer realized the mistake and additional surveys were performed. Luckily, none of the air samplers measured any airborne radioactivity during the activity and measured contamination levels in the specific work area were within normal Contamination Area limits. This is the third event in ~4 months where workers visiting a facility did not read the radiological posting, entered an area with inadequate personnel protective equipment, and did not realize their mistake. (See 9/11/09 and 11/20/09 reports). SRR personnel are being briefed on recent lessons learned.

H-Tank Farms: Approximately 880 gallons of waste was transferred from the 3H Evaporator pot to Tank 30 before it was intended. Operators tried to sparge the pot contents using skill-of-the-craft to open a gang valve to supply air to a lance, but they inadvertently manipulated the air gang valve that lowers the pot level via a lift line instead. When they received an evaporator pot low level alarm, the operators assumed the waste volume decreased due to cold air. The alarm was announced as "expected" and the Alarm Response Procedure was not initiated. The operators noticed the pot level had dropped ~14 inches during the 15-minute agitation, but did not initially attribute this to a transfer. Only after the Shift Operations Manager realized what happened did the operators consult their Abnormal Operating Procedure. The transfer had no adverse effect to waste chemistry since Tank 30 was the eventual destination for the waste.

Transuranic Waste: The Site Reps observed riggers unload seven wooden boxes from a large steel box (LSB) inside H-Canyon. The workers' activities reflected lessons learned from the first box. (See 12/18/09 report). Long metal poles were used to shift boxes to allow chokers to be attached under the box rather than having workers stand on the box and rock it or push it with their legs. No one was observed standing on a box while the crane shifted a box. The Site Rep also observed workers mockup how they would sample and dewater a LSB at the Solid Waste Management Facility.

Safety: Sparks, from cutting rebar, ignited a small acetylene leak. The leak occurred on the stem between an acetylene cylinder and the shutoff valve. The fire watch, monitoring the operation, shut the valve and thus extinguished the flame. The workers had previously covered the oxygen and acetylene bottles with a fire blanket to minimize the hazard; but the sparks had ricocheted under the blanket. Parsons conducted an extent of condition inspection on all acetylene cylinders and found that each cylinder with a double nut configuration leaked near the top nut when the shutoff valve was open. Contractor personnel tagged out the faulty cylinders and notified the acetylene supplier who reclaimed the leaky cylinders and began an investigation to determine the cause. The Site Rep verified that SRNS took the appropriate actions to notify all site contractors of the potential problem. No one was injured because of this event.