

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 24, 2008

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending October 24, 2008

H-Canyon: Several new interlocks had been proposed to reduce the frequency of criticality scenarios to extremely unlikely or beyond extremely unlikely. Because of the expected lack of funds to install these engineered controls, the Safety Inputs Review Committee is considering using administrative controls (e.g., sampling, operator response to alarms) instead. It has not been determined whether these monitors or alarms would be safety significant or general service yet. (10/17/08 report)

Saltstone: The contractor submitted a revised Documented Safety Analysis to DOE-SR that addresses all potentially significant sources of flammable vapors that could be released in the vault cells during grout curing, resolving a Site Rep question (8/29/08 report). The analysis now assesses hydrogen generation from radiolysis and releases of Isopar™ L, benzene, toluene, xylene, ammonia, isopropanol, butanol, methanol, and Norpar™ 13. All of these may be present in the salt waste, the dry feed (cement, slag, and fly ash), or anti-foam. The analysis concludes that as long as the organic species concentrations in the feed are limited via the Waste Acceptance Criteria and the fill height in the vault is controlled, a vault explosion remains an incredible scenario at Isopar™ L concentrations less than 11 ppm. Restart of Saltstone operations is now expected in early December.

Solid Waste Management Facility: In order to address Fire Department (FD) response issues, the emergency response maps will clearly reflect gate numbers, gates will be clearly labeled, the facility and FD will determine the expected response and communications process, and a drill will validate the effectiveness of the above actions. (4/4/08 and 10/17/08 reports)

F Tank Farms: The contractor completed hydrostatic testing of the Tank 19 mechanical waste removal system. (10/03/08 report)

Facility Representative (FR) Program: Prompted by Site Rep observations, DOE revised their FR interim qualification card to comply with the DOE standard. They also updated and cleaned up the Waste Disposition Operations Division FR qualification standards. (10/10/08 report)

Whole Body Count Facility: In light of a recent contamination event, the contractor revised their procedure for responding to positive body counts to include Radiological Control Inspector surveys of the customer's skin and clothing where warranted. (10/03/08 report)

Tank 48: A Bechtel/URS Corporate Program Review of the Tank 48 Treatment Project recommended that the decision criteria (e.g., safety and risk) to be used to support the June 2009 business decision (fluidized bed steam reforming vs. wet air oxidation) be developed soon. The team furthermore recommended increasing the focus on all the prerequisites for returning Tank 48 to service rather than primarily focusing on the tetraphenylborate processing.

Tritium Extraction Facility: While performing a lockout in preparation for preventive maintenance on a safety significant tritium air monitor, an operator manipulated the wrong valve, effectively rendering a second additional air monitor inoperable in addition to the one intentionally placed out of service. This was not discovered for several hours until the unit alarmed. However, there was not a complete loss of monitoring in the room as a third air monitor remained operational.