

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 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 June 20, 2008

Massie, Rozek, and outside expert Yeniscavich were at SRS to review high-level waste tank integrity.

Quality Assurance (QA): DOE directed WSRC to propose corrective actions after an investigation identified major QA issues at a vendor who provides significant equipment to several SRS nuclear facilities (see 2/15/08 report). However, DOE concluded that the WSRC response did not contain sufficient justification or actions to authorize additional procurement activities with this supplier or provide an adequate basis to ensure ongoing procurements will result in quality products being delivered. Furthermore, an audit last week by WSRC and DOE identified several significant findings. For instance, the vendor was purchasing materials from non-qualified suppliers for nuclear/safety related components and NQA-1 requirements were not being adequately flowed down to the vendor's suppliers. As a result of the findings, the supplier was removed from the qualified suppliers list and work was suspended on current purchase orders. In addition, a Potential Inadequacy in the Safety Analysis was declared at the Tritium Extraction Facility because the quality of welds in the extraction furnace module was uncertain. Since the safety-significant furnace module structure is credited to protect the furnace from impact and load drop events (see 12/7/99 Board letter), a compensatory measure was established to prevent the overhead crane from operating in the vicinity of the extraction furnaces while the furnaces are being heated.

Modular Caustic Side Solvent Extraction Unit (MCU): The pores of the Decontaminated Salt Solution coalescer media were found to contain an aluminum hydroxide compound, amorphous nitrate, and stainless steel and rust debris. Possible causes of the first two are still under investigation. MCU resumed operations this week after being shut down for several weeks.

Defense Waste Processing Facility: A small amount of melter feed was inadvertently "poured" to the melter during a surveillance activity when a process air bypass valve was opened more than directed by the procedure.

Savannah River National Laboratory: During an entry into a hazardous area – a confined space, high radiation area, high contamination area, and airborne radioactivity area – a person wearing a powered air purifying respirator and two pairs of coveralls began to have trouble breathing and was transported to site medical in an ambulance after being surveyed for contamination with field instruments. Later, widespread minor contamination was discovered on the skin and clothing of two other people exiting the area. After the person came back to the facility after being cleared by site medical personnel, he was resurveyed using a PCM-1B, and 10,000 dpm beta-gamma (probe) was found on the top of both of his shoes. This discovery triggered additional radiological surveys (e.g., of the ambulance), and nothing was detected. While appropriate levels of planning and management review went into this operation, excessive levels of contaminated dust in the area was not anticipated, which led to the selection of personal protective equipment that in hindsight, was not adequate.

Chemical Cleaning: Oxalic acid additions to tank 5 were completed and the transfer of the dissolved sludge may begin this weekend. In addition, oxalic acid additions to tank 6 began.