

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 2, 2006

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending June 2, 2006

Mr. W. Linzau was off-site the entire week observing operations at the Savannah River site.

Tank Farms: The site rep observed operations in various areas of the tank farms, including the responses to alarm conditions in the control room of the 242-A evaporator and the Waste Feed Operations (WFO) Shift Manager's office. The site rep noted that the response to observed alarm conditions was not always in strict compliance with the alarm response procedures, such as notifying the WFO shift manager when an alarm was received. Unexpected alarms were not always recorded when they were received. The site rep also noted that the analysis kit used to verify that chemicals being added to waste tanks were non-acidic, a Technical Safety Requirement (TSR) administrative control, was only good to pH 14, but the chemical being added had a pH of 14.3 (super-caustic). This over-ranging of the tester apparently resulted in one of the colors on the test strip being different from those on the test comparison chart. The site reps plan a broader review of the conduct of operations in the tank farms during the week of June 12.

The site rep observed the addition of caustic, eight molar sodium hydroxide, to single-shell tank (SST) S-112. The caustic was added to ensure that double-shell tank SY-102 remains within required chemistry ranges when waste from S-112 is retrieved to SY-102. A TSR change was approved last week to address the addition of caustic to an SST. The caustic addition was made to S-112 rather than directly to SY-102 in an attempt to retrieve more waste from the SST. Tank S-112 appears to be nearing the limits of technology for retrieval using modified sluicing.

K Basin Closure: The prerequisites for the K East to K West Basin Hose-In-Hose Integrated Acceptance Test were completed this week. Fluor Hanford, Inc. (FHI) engineering and operations personnel approached the verification of the lengthy list of prerequisites in a cautious and deliberate manner. The FHI Quality Assurance organization also performed a thorough review of selected construction documents before determining that test prerequisites were met. There has been a significant presence by the Richland Field Office facility representatives during the test preparations.

A Potential Inadequacy in the Safety Analysis (PISA) was declared because the process bay doors in the Cold Vacuum Drying Facility (CVDF) are thinner than the thickness calculated to prevent a wind-blown missile (2 x 4 inch plank weighing 15 pounds traveling at 50 mph) from penetrating the facility and potentially damaging safety-related equipment. The CVDF has not been used to process spent nuclear fuel in more than a year but more multi-canister overpack containers will require processing in the CVDF. This issue will also have to be resolved before the CVDF can be used to treat the sludge from the K Basins.