

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 16, 2001

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending March 16, 2001

Plutonium Finishing Plant (PFP): Mr. Sautman had meetings with Dave Van Leuven, Scott Sax, and Pete Knollmeyer to discuss recent conduct of operations issues at PFP. The Site Rep believes that PFP managers need to clarify their conduct of operations expectations. Increasing the management presence in the field would help ensure these expectations are fulfilled and understood by the workers. In addition, too much energy is being spent by the contractor and Department of Energy personnel arguing whether several recent incidents meet the criteria for a reportable occurrence or criticality nonconformance. The emphasis needs to be on determining the root causes and developing effective corrective actions. Confusion over furnace tray spacing limits in a conveyor also led to the declaration of a criticality nonconformance this week. (1-C)

Tank Farms: A corrosion expert review of AY-101 concluded that condensation corrosion alone may not be responsible for all the damage since the primary tank exterior wall appears to be more corroded than the secondary tank. Condensation pitting was observed in the interior primary tank upper shell and roof. Since condensation products will have a lower pH than the tank solutions and can be aggressive to carbon steel, she recommended further examination of pits on the inside tank surface at previous and current liquid height levels. (1-C)

Spent Nuclear Fuel Project (SNFP): During closure and removal of the 5th Multi-Canister Overpack (MCO), operators in the K-West Basin incorrectly performed portions of the procedure. When this situation was observed by the quality assurance inspector, the operators returned the equipment configuration to the state before the out of sequence work was performed and restarted work. These actions were performed without the notification or approval of facility management. The repeated occurrences during MCO operations continue to heighten concerns with conduct of operations in this facility.

While processing this MCO in the Cold Vacuum Drying Facility operators identified that the MCO bulk water drain was not occurring as expected. The operations staff put the system into a safe condition and investigated the cause (one of the MCO process ports had not been properly opened). While recovering from this condition, a software error incorrectly reinitiated processing causing an abnormal pressure in the MCO. This exceeded a setpoint in the safety class instrumentation control (SCIC) system which halted the processing program and activated the safety class helium purge system. During subsequent recovery attempts, an additional processing software error was identified as well as procedure adequacy problems. Except for procedural compliance problems with the initial alarm response to the SCIC trip, the facility responded to the multiple abnormal events in a formal and disciplined manner before resuming processing. (3-A)