

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 27, 2001

TO: K. Fortenberry, Technical Director

FROM: D. Grover and M. Sautman, Hanford Site Representatives

SUBJ: Activity Report for the Week Ending July 27, 2001

Plutonium Finishing Plant (PFP): The Readiness Assessment for packaging plutonium oxide with the bagless transfer system was completed this week. Pre-start findings addressed the periodic lid deflection program and how the startup plan covered the transition to full unrestricted operations with oxides. Afterwards, Mr. Sautman met with PFP analytical laboratory personnel to discuss several concerns with the loss-on-ignition procedure that had not been identified by the RA team. These issues addressed sample exposure times to humid air, sample cross-contamination, analysis of uranium, and acceptance criteria for the standard. While laboratory personnel were already addressing some of these issues informally, the procedure as written did not prevent a couple situations that could bias moisture measurements. In addition, an internal assessment of the PFP Laboratory software quality assurance (QA) program found software QA plans were not established, no independent verification/validation of software applications, inadequate configuration control, and inadequate test documentation for software changes. The assessment's scope included software used for moisture measurements.

In the Plutonium Reclamation Facility (PRF), operators cut cooling system piping that supposedly had never been put in service. This job was performed with minimal contamination controls and no surveys were taken after any of the pipe cuts, even though enough water spilled out to fill several buckets. Contamination was found on the last worker surveying out. When additional contamination was found on the other workers' shoes and a shirt in the locker room, an extensive survey program was put in place to determine the extent of contamination spread. Subsequent surveys found high contamination on multiple floors of PRF and there is the potential for an uptake since an air sample taken afterwards measured 12 DAC. The contamination appears to be associated with the metal shavings rather than the liquid. This is yet another example of an accident where there is a significant release of contamination involving a breach of a supposedly noncontaminated system with minimal controls. (III-A, 1-C)

Tank Farms: The Technical Safety Requirement Administrative Control for the Chemistry Control Program requires that activities to restore the chemistry concentrations shall be completed in accordance with the Recovery Plan. During a recent review, the staff expressed concern that this might be missed for the AY-102 nitrite addition due to a delay in the approval of a baseline change request (BCR). The Site Rep was informed this week that the Office of River Protection (ORP) will be authorizing CH2M Hill Hanford Group to start preparations for the nitrite addition prior to approval of the BCR. (III-A)

cc: Board Members