

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 10, 2006

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending February 10, 2006

K Basins Closure Project: A Potential Inadequacy in the Safety Analysis (PISA) and a criticality nonconformance were declared because five pieces of fuel found in the K East Basin had a higher enrichment than that allowed in the current version of the safety basis. Additional attention to developing adequate compensatory actions may be warranted because for the second time in a week, the initial compensatory actions after an event were determined to be less conservative than required. Facility management had authorized workers to follow the normal process if additional suspect fuel was found, including moving the suspect fuel, even though a criticality nonconformance was declared. A management directive was subsequently issued that required that any newly found suspect fuel must be left undisturbed with safe no-work boundaries posted until the safety basis, procedures, and process standard are revised.

Plutonium Finishing Plant (PFP): The site reps attended a critique of an event in which samples containing fissile materials were mistakenly brought into the 232-Z scrubber cell. Bringing fissile materials into Building 232-Z is prohibited by the criticality prevention specification (CPS). The samples brought into the facility were two 250-ml samples of standing water from a floor drain. Because the CPS did not consider any below-grade areas and the drain was below grade, the two samples were considered to be from outside the facility. The workers were aware that bringing fissile material into the facility was not allowed but did not realize the drain line was outside the facility. Sampling of the drain was included in the sampling plan but the plan did not receive the required review from the criticality safety representative. The samples had very little activity. A number of apparent causes were identified, including a failure to recognize and then implement the limitations of the CPS.

An external review of the criticality safety program (CSP) was performed at the request of the Richland Operations Field Office because of the large number of nonconformances identified in PFP buildings in January. The report from the review notes that the program does not have the necessary rigor to ensure that it is adequately implemented and deficiencies found during audits and assessments are not given sufficient management attention.

The detailed inspections of the facility implementation of the CSP were completed this week (see Hanford Activity Report 2/3/06). The inspection identified a substantial number of discrepancies between criticality safety requirements and the actual field conditions.

Waste Treatment and Immobilization Plant (WTP): A team led by the Army Corps of Engineers continued their independent review of the WTP design. This week's review focused on the structural load path of the High Level Waste and Pretreatment facilities. During the out-briefing, the team discussed a number of items that would be reviewed further and expressed that the Summary Structural Report was useful in their efforts.