

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 29, 2008

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending February 29, 2008

Tank Farms: The contractor completed their midpoint assessment of the corrective actions for the S-102 spill. A number of draft findings and observations were discussed during the debrief, including significant deficiencies noted during two drills and ongoing problems with the integration of industrial hygiene into the work processes. The assessment team determined that some corrective actions were prematurely closed. The team noted that the changes in the design process were robust.

Environmental Restoration Disposal Facility (ERDF): The site rep attended the kick-off meeting for the investigation into the causes of last week's abnormal event associated with processing mercury-contaminated soil. The investigation team has a number of people that are independent from the project as well as a representative from the vendor. In addition, the contractor is performing a management assessment of the weaknesses in the emergency response actions.

Waste Treatment Plant (WTP): The site rep attended a contractor design safety meeting on the safety-class ventilation system in the Pretreatment facility. The purpose of the meeting was to review controls for potential hazards to the HEPA filters during normal operations and seismic events. The review of the current design documents led to the conclusion that the ventilation system has adequate controls for hazards during normal operations. The designers determined they needed to investigate if a deficiency existed with the ventilation penetrations that could jeopardize the cascade air flow during the worst case seismic event.

The contractor's Project Safety Committee reviewed trends of design non-conformance to the requirements in the authorization basis documents. The number of non-conformances are decreasing due to efforts to improve the flowdown of requirements, but latent problems, such as the black cell piping issues, are still being identified.

The Office of River Protection instructed the contractor to provide an order-of-magnitude cost estimate to install the third melter in the Low Activity Waste facility.

Solid Waste Operations Center (SWOC): The contractor declared a potential inadequacy in the safety analysis due to a lack of characterization data on drums placed in the trenches prior to 1970. The older specification had limits on fissile material that were in the hundreds-of-gram range, but the actual content of any individual drum is often unclear. The project has placed the affected sections of the burial ground in standby mode and initiated an unreviewed safety question evaluation.

K Basins: The contractor had outside experts review the three alternatives for direct grouting of the containerized sludge. The experts noted that all three approaches are feasible but will require further design to resolve a number of technical challenges. The project plans to conduct a "what-if" review of the three alternatives with final selection of the alternative next month.