

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2012

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending June 29, 2012

Tank Farms: The contractor determined that a heater could malfunction and damage a hose used to transfer waste, and this scenario constituted a Potential Inadequacy in the Safety Analysis (PISA) (see Activity Report 6/22/12). This non-safety heater is normally used to prevent the line from freezing. The contractor is evaluating means to address the PISA, but the likely solution will be to remove conservatism in the calculation of the maximum temperature of the hose if the heater control malfunctioned.

The contractor declared another PISA this week when they discovered an error in a calculation that supported the justification of continued operations (JCO) for the waste transfer system components during low-temperature conditions (see Activity Report 11/4/11). The error in the thermodynamic calculation resulted in some short pipe sections freezing faster than previously assumed. This change may require a shorter periodicity of the surveillance required for the JCO.

Plutonium Finishing Plant (PFP): The overhead crane in the Plutonium Reclamation Facility (PRF) was taken out of service when the control cable festoon trolley came off its track. The crane is essential in the removal of pencil tanks in the PRF canyon and has failed several times during the last few years.

Prior to the crane failure, the site rep observed improved communications between the PRF crane operator and other workers that were moving size-reduced pencil tanks from the PRF canyon to the pencil tank overpacks (PTOs). The improved communications is a corrective action for an event that could have permanently damaged the crane (see Activity Report 4/20/12). The site rep noted that the procedure for loading material into the PTO did not describe all the steps required to safely complete the task. The contractor agreed and will revise the procedure.

618-10 Burial Ground: The project is continuing their recovery actions from the drum fire that occurred earlier this month (see Activity Report 6/8/12), and last Friday, they started stabilizing and inspecting the contents of that drum. The drum was transported from the drum punch facility to a burial ground trench and an excavator was used to open it and slowly remove the contents. As anticipated, as some of the material was removed, it ignited and was quickly covered (in about six seconds) with several feet of sand by the excavator operator. An air monitor in the trench, roughly 30 feet away, measured a small increase in contamination, but none of the monitors outside the work zone had indications of elevated readings. This week, the project held more meetings to discuss the stabilization process and they are considering revisions to the work package, such as expanding the isolated zone, using thermal imaging, and spraying a mist of water downwind (not on the drum) to reduce a potential spread of contamination.

Waste Treatment Plant (WTP): The Office of River Protection announced that efforts to re-baseline the Pretreatment and High Level Waste facilities will be delayed while testing and resolution of the technical issues are pursued. This is consistent with the contractor's announcement last week concerning the "Step Back" initiative that will divert a significant amount of project resources toward correcting the mounting problems.