

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 13, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending April 13, 2007

Tank Farms: The maximum normal operating level of waste in double-shell tank (DST) AP-108 was increased to 454 inches from the prior maximum operating level of 416 inches. The successful leak testing for this change included raising the waste level to 458 inches.

The AP-108 transfer pump motor used to lower the level back to 454 inches tripped during startup due to over current. After contacting operations management and engineering, four attempts to restart the pump were made within about 15 minutes. The site rep questioned repeated attempts to start the pump without allowing the motor to cool. The contractor is evaluating if repeated starts of the transfer pump is an appropriate practice.

K Basins Closure: The hazards analysis for using divers to expedite the efforts to clean up the basins commenced this week. A representative for the diving contractor was on site to participate in this analysis. The results from this analysis should be completed in about a month.

It is estimated that approximately two-thirds of the sludge in K East has been transferred to K West. The project determined that the Hose-in-Hose booster station pumps were eroding at an unexpected location. Additional erosion monitoring equipment was installed.

Washington Closure Hanford: Contaminated equipment was found outside a controlled radiological area at the 100 N Reactor complex. The contamination was discovered by workers that demonstrated a good questioning attitude during a walkdown of an outside equipment storage area. During an extent of condition survey, a flat bed trailer that was moved from 100 H Reactor years ago indicated 1,184,000 disintegrations per minute beta contamination on the inside of a wheel rim. This legacy contamination is often due to wasp nests (mud dauber nests) that are constructed of contaminated soil moistened during remediation.

The site rep observed acceptance testing for a drum penetrating device planned to be used during remediation of burial ground 618-7. The device is designed to protect workers from possible deflagration during drum venting operations. The device is basically a steel enclosure with HEPA ventilation, a drum punch, and a hopper on top that contains sand that can be released onto a drum that has indications of fire.

Plutonium Finishing Plant: A potential criticality nonconformance was identified this week during an extent of condition review for discrepancies noted at the Solid Waste Operations Complex (see Hanford Activity Report 3/16/07). An assertion made in the Criticality Safety Evaluation Report related to fissile density for contaminated equipment was incorrectly applied to other waste materials stored in standard waste boxes (SWBs). Double contingency requirements are still in place and the stored SWBs are still considered criticality incredible.