DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 10, 2009

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 10, 2009

100K Project: The site rep and project radiological control (rad con) manager walked down the K East Basin D&D area and discussed actions for reducing the exposure to the heavy equipment operators who are retrieving the waste. The planned cumulative exposure has been higher than expected and the highest dose work remains to be completed. The contractor installed additional shielding in the cabs of the heavy equipment and will take other actions, such as installing shielding to decrease the dose coming from the grouted reactor discharge chute and changing the excavation size such that the distance to the high dose areas is increased. The site rep questioned the Richland Operations Office (RL) rad con manager if the use of remote reading dosimeters would permit rad con personnel to more closely monitor worker exposure and determine high- and low-dose areas in real time.

RL issued the Safety Evaluation Report for changes related to criticality safety in the K West Basin. The contractor had identified errors in a Criticality Safety Evaluation Report (CSER) and issued a Potential Inadequacy in the Safety Analysis. The associated positive Unreviewed Safety Questions Determination addressed the dimensions of the settler tube tanks of the Integrated Water Treatment System (IWTS) and assumptions on the size and packing of the fine sludge particles in the tanks. The contractor revised the CSER and added a control for inspecting the IWTS strainers to verify that the screens are still intact, thereby ensuring the size of material sent to the tanks remains within the assumed value.

River Corridor Closure Project: A worker failed to wear a lapel air sampler required by the Radiological Work Permit (RWP) while conducting work inside a high contamination area in a trench at the 100-D/DR Area. Discussions during the fact finding revealed that the pre-evolution briefing was inadequate because it did not review the requirements in the RWP and the briefing was not formally conducted. Another worker questioned if the sampler was being worn but failed to stop the work prior to its completion.

The project is about to start mobilization activities at the 618-10 burial ground. The project will be conducting characterization of the burial ground, but this first phase is just to clear the area, level the soil, and set up trailers. The burial ground is in a somewhat isolated location and will not have normal phone service. The site rep questioned if the cell phones being planned for use during emergency response had been checked to ensure they are operable. The project committed to verify they have adequate emergency communications and other emergency response equipment available from the start of work activities.

Waste Treatment Plant (WTP): The contractor briefed the site rep on design modifications to the High Level Waste melters to account for seismic and thermal loading. The project completed a coupled seismic calculation and a thermal analysis, which resulted in the need to add vertical stiffeners and additional horizontal restraints.

Plateau Remediation Contract: DOE started the ISMS Phase I assessment. The team leader for the assessment is one of the few people on the team that does not work for RL.