

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 20, 2007

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending July 20, 2007

K Basins Closure (KBC): The contractor started phase one of the management self-assessment (MSA) for demonstrating readiness for using divers in the K East Basin. The MSA was suspended after Richland Operations Office (RL) questioned the appropriateness of using an MSA to assist in reaching a readiness determination when the MSA is also the means to confirm readiness. Phase one of the MSA included donning dive gear, entry and exit from an uncontaminated settling pond, and then removal of the dive gear, but actions were performed as if the dive had been in the basin. Phase two of the MSA will be completed in the K East Basin, but actual diver entry into the basin water will not be included. Some work plan sections, procedures, and related documentation that will be necessary to perform phase two, such as the radiological work permit, have not been finalized. The operations and most of the interviews planned for phase one were completed prior to the MSA suspension. Oversight of the MSA by a team of RL personnel was good.

The site rep noted that the divers were very confident in their ability to safely dive in the K East Basin and they demonstrated their technical abilities during the dive operation and interviews. However, procedures have not been developed nor have either the divers or the contractor support personnel ever practiced some evolutions, such as safely removing the contaminated dive suit when the diver was using the emergency air supply tank (bail-out bottle). The recently completed Human Performance Improvement review of the dive operations (see Hanford Activity Report 6/29/07) had several recommendations related to the bail-out bottles, but the MSA team identified this specific weakness.

The site rep was briefed by the contractor and RL on the status of the sludge treatment project (STP). The contractor recently concluded that the STP would not be ready for a CD-3 decision in the near future and recommended the project be reclassified as between CD-0 and CD-1. This conclusion was based on recent bench-top test results, experience with the Hose-in-Hose transfer system and other problems. RL accepted the recommendation and directed the contractor to provide a date when they would be ready for CD-1. The contractor's response included first-order estimates for the duration of the activities that will be necessary to prepare a CD-1 package that is consistent with DOE Order 413.3A and draft DOE Standard 1189. The duration of the preparations could be as long as a year.

One of the major problems faced by the contractor during the bulk sludge consolidation in the west bay of the K West Basin was the fouling of the vacuum end effectors and filters with Grafoil® gasket debris. The gaskets are made of graphite and were used to seal the caps on the fuel canisters but were discarded in the basins when the canister lids were removed. Three different designs are being tested to determine the best way to collect the debris without pulverizing it. Next week the contractor plans to deploy the selected system.