DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 24, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending December 24, 2004

Waste Treatment Plant: In addition to the letter sent to Bechtel last week (see 12/17/04 report), the Office of River Protection directed Bechtel to halt all additional placements of concrete in the Pretreatment Facility and suspend project overtime. This is a result of a preliminary shear wave velocity profile analysis which indicates that the Hanford site response in the frequency range of 4 to 10 Hz is actually 20 to 40% greater than that of data from California sites, which had been assumed to represent the soils at Hanford. Work at the Low Activity Waste Facility, Analytical Laboratory, and Balance of Plant Facilities is not affected.

Bechtel issued a stop work to a subcontractor performing weld repairs on the Pretreatment pit vessels. Based on pieces of used weld rods that have been found, it appears that carbon steel weld rods were used to perform welds on stainless steel tanks. Determining the extent of this problem is complicated by the fact that these affected welds were often first pass TIG welds that have since been covered up.

Tank Farms: When operators started the retrieval of S-102 waste, a leak detector alarmed. It was discovered that a dilution supply hose was not connected to the retrieval pump, which allowed raw water to spill. It is not known whether the hose was ever connected or not, but the construction work package indicated that the hose had been connected. This issue was not identified during operations acceptance testing, because while the hose had been tested up to a nearby isolation valve, they did not actually flow water through the hose into the tank. Retrieval operations this week were marred by low specific gravities and waste flow rates, possibly due to plugging of the pump suction screen. Operators and engineers are trying to resolve this.

K Basin Closure Project (KBC): The project decided that the batch filling of the Large Diameter Container (LDC) with North Load Out Pit Sludge had reached a point where sludge filling was no longer accumulating adequately during repeated cycles. The level indication for the LDC shows approximately 0.75 m^3. Efforts are underway to disconnect the system and prepare the cask for shipment to T Plant. The cask trailer will be weighed prior to shipment as a check of the sludge content. Following this, the project will try to fill another LDC using lower flow rates in the hopes of reducing filter clogging and not allowing sludge to dry on the filters, potentially hindering the filter backflushes. If this revised approach is not successful the project will likely abandon future efforts with this system and retrieve and treat the sludge with the remainder of the basin sludge.

Cc: Board Members