

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 31, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending January 31, 2003

Waste Treatment Plant: Bechtel National Inc. implemented their consultant's recommendation to perform late revibration of the concrete as discussed in last week's report. The Site Rep observed this activity being performed for a series of wall placements at the Pretreatment Facility. (III-A)

Tank Farms: The Site Rep observed testing of the Mobile Retrieval System (MRS), which is part of the C-104 Waste Retrieval Project, at the Cold Test Facility (CTF). This system consists of an In-Tank Vehicle (ITV) and an articulating mast with a vacuum conveyance system. The ITV, basically a robotic crawler, moves the kaolin waste surrogate with a plow blade and water jet toward the vacuum, which can be maneuvered throughout the tank. The ITV can fit through a 30" riser and is decontaminated with water jets and an ultrasonic cleaning system attached to the riser. The system performed well during the waste mobilization and loss of power recovery tests observed. This hydraulic system, originally designed for the oil industry, is built to meet ignition control requirements. CH2M Hill Hanford Group (CHG) is considering using the MRS for the upcoming C-106 waste retrieval as well as possibly adding oxalic acid. The Site Rep has been discussing what the appropriate readiness review for this retrieval is with both CHG and Office of River Protection (ORP). While no decision has been made, the Site Rep and site personnel are discussing the possibility of performing an Operational Readiness Review (ORR) that would cover retrievals using the MRS in general followed by very focused reviews of tank-specific issues. The CTF could be used to increase the realism of the ORR dry runs. Meanwhile, CHG has spent the last two weeks unsuccessfully trying to free the C-106 heel jet pump by using cranes, hydraulic wedges, and oils. CHG will be making another attempt using a modified hydraulic method with some vibration equipment.

ORP is pursuing a cost reduction initiative where individual single-shell tanks will be evaluated to determine if the source term estimated to be released in an accident would allow the tanks to be reclassified as less than Hazard Category II. (Currently the entire tank farm is considered Hazard Category II). ORP is also seeing if the portions of the Canister Storage Building that would store immobilized high-level waste could be similarly categorized. (I-C, III-A)

T Plant: Following the work control issue with the crane discussed in last week's report, T Plant instituted a 72-hour safety stand down for all nonessential operations. After further evaluation of the occurrence, this stand down has been extended for all medium and high risk work while a recovery plan is developed and implemented to address the underlying problems which led to the occurrence. The Site Rep. discussed the evaluation of the occurrence with the facility manager and identified that while the critique acknowledged that work planning problems may have existed, no evaluation of the job hazard analysis for the work had been performed (although this is a planned recovery action). The lack of feedback which would be provided by this evaluation could result in an inadequate analysis of the root causes of the event and complicate the facility management's efforts to improve conduct of work. (I-C)