

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 19, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending January 19, 2007

Washington Closure Hanford (WCH): The project conducted a company-wide, one-day, safety stand-down to address two recent events: falsification of compaction records at the Environmental Restoration Disposal Facility (ERDF) and the release of tritium outside of a radiologically controlled boundary at burial grounds by B Reactor.

In mid-December, it was discovered that some of the compaction records at ERDF were missing. It was subsequently determined that the records had been falsified for more than a year. It is currently believed that the falsified records were done by only one worker who had the primary responsibility for this task. The compaction testing is conducted in a radiologically posted area with access control but the dates when results were recorded did not have corresponding access control log entries. The Richland Operations Office (RL) was notified of this issue last week.

Tritium contamination was spread outside the radiological buffer area (RBA) at the 118 B/C burial ground. A subcontractor of a subcontractor for WCH was preparing gas cylinders retrieved from the burial ground for disposal at ERDF. They drilled into an aluminum gas cylinder to obtain a gas sample. The gas cylinder was believed to be vented and purged. Samples from the bottle indicated that there was tritium in the headspace. The workers took smears to check for surface contamination in the area but had to wait for the results because there was no means to measure for tritium surface contamination at the work location. The smears taken last Friday were counted on Monday when it was learned that the tritium contamination levels were above the limits of the radiological work permit. Additional surveys inside and outside the RBA were performed on Monday. On Tuesday, when results from Monday's surveys were completed, it was learned that tritium surface contamination had been spread as far as a trailer half a mile away from the work area. The highest level reported was at the RBA boundary and was 517,000 dpm/100cm². Potentially contaminated personnel and vehicles were isolated until it was confirmed that they were not contaminated. Bioassays are being performed on potentially exposed personnel. Assistance from SRS has been provided.

The site reps discussed the continuing safety problems on the project with senior RL management. Corrective actions are being developed in conjunction with the ongoing gathering of facts and management of the clean-up efforts. The WCH president, Pat Pettiette, has been replaced by Chuck Spencer, who will be the acting president until RL approves the change.

Waste Treatment Plant (WTP): The site rep attended a follow-up meeting of the External Flowsheet Review Team (EFRT). During the two-day meeting, the team reviewed some of the plans to address the 28 issues raised during their initial review a year ago and were also tasked to evaluate design changes being considered to increase plant throughput and reduce mission life. Most of the changes being considered are to the separation equipment in the Pretreatment Facility. A one-quarter (1/4) scale integrated test stand is being designed to test the separation process and evaluate changes that could enhance capacity. A preliminary schedule indicates the test stand will be ready for testing with waste simulant by the end of this year.