

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 9, 2011

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending December 9, 2011

Staff members M. Forsbacka, T. Hunt, J. MacSleyne, and J. Troan, and outside expert D. Boyd were on-site to review radiological work planning and practices at the Plutonium Finishing Plant.

Tank Farms: The Office of River Protection (ORP) approved changes to the safety basis that will restore the double-shell tank ventilation systems to their previous safety-significant (SS) status. The system restorations to SS is in response to a Board letter dated August 5, 2010, and a subsequent review by DOE Headquarters personnel, but the upgrade will not be completed for several years. The contractor identified a significant number of planned improvements to the systems so that it will comply with DOE standards for new SS equipment rather than being “grandfathered” as it was in the past. ORP directed the contractor to implement the first step, new TSR controls, but this is not required until 2013. ORP accepted the contractor’s position that they cannot restore the key active component, the fans, to SS now because the contractor has not completed commercial-grade dedication of the spare parts. The site rep believes the TSR controls will provide an improved safety posture but questions if the time to implement them is excessive. Furthermore, ORP should have directed the contractor to treat the system as SS, such as using qualified replacement parts and safety-grade maintenance processes, until the systems are fully restored to SS in several years.

Plateau Remediation Contractor (PRC): The contractor completed a management assessment (MA) of the maintenance and work control programs at the Waste and Fuels Management Project. The initial purpose of the review was to verify that requirements and processes are effectively implemented after the consolidation of the various facility maintenance organizations into one central organization. The scope of the review was expanded to include evaluation of issues noted in the Board’s recent letter on conduct of maintenance at the Waste Encapsulation and Storage Facility (WESF) (see Activity Report 10/21/11). This team noted that processes and procedures are in place and followed but are not implemented consistently and in some cases are inefficient. The team also noted that some maintenance personnel were not required to complete safety basis training and that a number of the work packages reviewed had steps and data tables that provided less than adequate instruction. These and other issues found during this MA are consistent with the findings in the Board’s letter and will be used to develop an action plan to correct deficiencies and institute process improvements.

Building 324: The project completed its evaluation of remediation methods for the contaminated soil found under B-Cell. A year ago, the project deployed radiological detectors under the cell that measured radiation readings as high as 8,900 Rad/hour due to leaks of strontium and cesium (see Activity Report 11/19/10). The project selected a method that will involve retrieving the soil through the floor of B-Cell and using the existing facility to provide confinement and shielding. The retrieved soil would then be grouted into either C- or D-Cell. The demolition plan for the building includes removing the cells as monoliths which would allow the thick walls of the cells to work as shielding during the delivery of the monolith to the on-site low level landfill. The details of this approach will be developed by subcontractors, but the prime contractor will stipulate the safety requirements as part of the request for proposals.