

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 4, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending May 4, 2007

K Basins Closure (KBC): Richland Operations Office (RL) directed Fluor Hanford, Inc. (FHI) to lower the process temperature and pressure used in the sludge treatment project. The purpose of this is to ensure that the off-site accident consequences are below the evaluation guideline in DOE STD-3009 and the number of safety-class components is minimized. RL also revised their previous direction and will permit the blending of floor and canister sludge with the sludge from the settler tanks prior to treatment. It is expected that mixing the two sources of sludge will preclude the formation of a stiff solid noted during testing (see Hanford Activity Report 4/6/07).

Waste Treatment Plant (WTP): The Project Safety Committee (PSC) serves a role as internal safety oversight but all their weekly meetings were cancelled this year. The roles and responsibilities are described in the Preliminary Safety Analysis Report and include reviewing authorization basis documents "as they apply to radiological, nuclear, and process safety, and providing recommendations to senior project management as appropriate." The site reps questioned if the PSC still had a role in safety oversight considering the lack of periodic meetings. The project responded that the main role of the PSC was reviewing and concurring with authorization basis amendment requests (ABARs) and only one ABAR affecting the safety requirements was generated this year. Their response also asserted that the project now has a relatively stable set of nuclear safety requirements. This week, the PSC met to discuss its role and was directed by the Deputy Project Manager to develop a list of proposed activities that promote ownership of the oversight process such as addressing external review findings, reviewing administrative controls and assisting in resolution of technical issues relating to nuclear safety.

Office of River Protection (ORP): ORP is conducting a study of the business cases for tank waste treatment systems to identify comparative advantages, disadvantages, and risks for each case. There are 12 cases composed of combinations of low activity waste (LAW) treatment options, such as starting the WTP LAW facility early, bulk vitrification, rotary filtration, and cesium ion exchange. Metrics have been written to categorize the options on the basis of cost, schedule, technical risk, technology readiness level, and programmatic risk. Results will be used by EM-1 to formulate a response for near-term Hanford program and technology funding requests. This study is planned to be completed in June 2007.

Solid Waste Operations Complex (SWOC): Two low-level waste drums had higher than expected concentrations of volatile organic compounds (VOCs), including one at the lower flammability limit (LFL) and one at 35 percent LFL. The drums were not vented and were being opened in T Plant to fill the void spaces. Procedures did not require these drums to be vented because they were packaged after September 1988 when new procedures were implemented that should have identified specific drums that require venting. All operations to fill voids in low-level drums are stopped while the situation is evaluated. A positive unreviewed safety question determination is expected.