

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 26, 2011

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 26, 2011

Waste Treatment Plant (WTP): The DOE Construction Project Review (CPR) team was on-site this week to evaluate the project, including the resolution of technical issues and the plans for completion of the safety basis. At their exit briefing, the team provided draft comments and recommendations from this review, including: the contractor's nuclear safety group has insufficient personnel to support the current and future work load; the contractor should conduct an extent of condition review to determine which PDSA revisions are not technically supported; the contractor needs to develop a plan that ensures all credited safety functions and functional requirements are flowed down into the design; the contractor must resolve an internal conflict regarding applicability of DOE Standard 3009 and 10CFR830 to commissioning and testing; and ORP needs to address WTP operability issues raised by external organizations. From DOE and contractor presentations to the team and the team's comments, it appears that the project may pursue eliminating the ability to treat the most problematic waste at the start-up of WTP. Rather, they would design the plant to treat the bulk of the waste stored in the tank farms and determine how to treat some of the more difficult waste after operational experience is gained. The team also noted that the WTP and Tank Farm projects for feeding the waste to the WTP are not integrated properly. The team will assemble their draft report next month.

The site rep observed a meeting of the Joint Test Group (JTG) for the ongoing mixing testing. The JTG approved the next series of informational testing that the project is using to scope future NQA-1 testing, which will be used as design input. The test plan approved by the JTG will evaluate the capability for solids removal from a vessel during the pulse jet mixer drive stroke. The contractor wants to determine if pumping the simulated waste during periods when the solids are off the bottom will increase the solids concentration in the transferred waste..

Review of Plutonium Solids in Tank Farms: An independent team reviewed the contractor's draft report on plutonium particles in the tank waste (see Activity Report 7/22/11). The team members concluded that the recently drafted report, as well as one written by WTP contractors in June 2010, were accurate. In addition, the team noted that the authors for both reports were credible, and the new report is based on the best available information.

Tank Farms: Riggers lost control of a heavy load hanging from a crane as it was being lowered into a valve pit, resulting in the 500-pound load swinging like a pendulum over the heads of workers. The riggers regained control of the swinging load and no one was hurt. It is unclear if the cause of the event was equipment and/or human failure, and this question was not asked during the event investigation. The contractor plans to have the information on the crane's black box analyzed to assist in understanding the cause of the event.

618-10 Burial Ground: The site rep attended a project all-hands meeting conducted to refocus the burial ground workforce on safety principles, including the importance of good conduct of operations, the dangers of scope creep, and the need to properly identify hazards. The project completed revising procedures and they are planning to restart normal operations next week with the exception of bottle remediation (see Activity Report 8/12/11).