

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 13, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 13, 2010

Plateau Remediation Contractor: The contractor declared a TSR violation when they discovered they had exceeded the allowable source strength control limit for an outside storage area at T-Plant. Twice in June, the location of drums was entered into the tracking database incorrectly. Identification data on these drums was scanned into a handheld device at the Central Waste Complex (CWC) and the drums were subsequently shipped to T-Plant. After T-Plant scanned the current location of the drums into the database, CWC workers downloaded the information from their handheld devices. The delay in entering the CWC data caused the tracking system database to incorrectly indicate the drums were still at the CWC. The database information is used to verify dose equivalent curie limits are not violated, but because the location of these drums was incorrect, these drums were not included in the inventory at T-Plant. Facility management entered the limiting condition of operation and immediately removed drums from the zone to get below the curie limit. The project is investigating the causes, extent of condition, and required corrective actions.

The contractor determined the undetected pressurization that resulted in a drum lid being blown off a drum at T-Plant constituted an unreviewed safety question (USQ) (see Activity Report 8/6/10). The contractor's investigation determined the most plausible cause was that the acidic vapors inside the drum caused the plastic liner and lid to self-seal forming a barrier in the vent path. This seal was not structurally strong but was enough to allow the pressurization of the drum because the steel drum was in close contact with the liner and thereby reinforced it. The USQ determined that the probability of occurrence of deflagration events had increased and the margin of safety had been reduced.

Contractor senior management told the site rep that in addition to the recurring ORPS report noted in last week's Activity Report, they are investigating other potential problem areas, including improper use of temporary power and the waste shipping issues noted above.

Plutonium Finishing Plant (PFP): For the second time in a week, workers failed to comply with pre-determined actions for upset conditions involving supplied air respirators (see Activity Report 8/6/10). This week a worker, not wearing any respiratory protection, momentarily entered a confinement tent controlled as an airborne radiation area (ARA) so he could provide a "traveler air line" for another worker who was experiencing minor discomfort. Due to poor communications, the worker believed there was an emergency condition that warranted entering the ARA even though there were emergency air lines staged in the tent. As a result of this repetitive error, the contractor has suspended the use of all work using supplied air lines. More detailed corrective actions are being developed and will likely include additional training, drills for upset conditions when supplied air respirators are in use, and changes that will improve communications between workers inside and outside the confinement tent.

Tank Farms: The site rep met with the emergency preparedness manager to discuss enhancements to emergency response procedures as well as post-event assessment procedures. The contractor completed 23 drills last month, a major increase from past practices, and they expect to conduct more drills in preparation for the DOE annual assessment of ISMS.