

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 13, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending November 13, 2009

Low Level Waste Operations: While performing sorting and segregation operations for mixed and low level waste on Monday, a continuous air monitor (CAM) alarmed indicating airborne contamination. Workers responded appropriately and exited the area. Subsequent surveys found that one worker had contamination on his lab coat and positive nasal smears. Surveys of the area and analysis of the CAM filter paper indicated uranium contamination levels in the range of 250 to 1000 dpm per 100 cm².

This year, LANL began a campaign to disposition approximately 20 legacy metal crates that contain mixed and low level waste. The Integrated Work Document (IWD) and Radiological Work Permit (RWP) used for the legacy campaign had been developed for activities involving a different waste stream. Respiratory protection was required for the initial opening of waste crates; however, if initial surveys indicate no contamination, respirator protection was not required for subsequent sorting and segregation activities. For the legacy campaign, the IWD and RWP were not re-evaluated to ensure work controls were appropriate for the hazards associated with this new activity. Corrective actions identified by LANL management include re-evaluation of the process and work controls specific to the legacy waste campaign and evaluation of triggers that would drive changes in work scope to receive an appropriate level of review to ensure hazards are adequately captured and controlled.

Radioactive Liquid Waste Treatment Facility (RLWTF): This week, RLWTF experienced another failure of the low level waste tubular ultrafilter unit when a plastic connection assembly failed, releasing contaminated water to the room. This is the third event in the last 13 months caused by the same failure mode. A plastic curtain, installed after the last failure in June, mitigated water spray and prevented equipment damage. However, three workers were in the vicinity when the failure occurred. Exit surveys of the workers found no personnel contamination and nasal swipes were negative. Recovery efforts to decontaminate the room, inspect the tubular ultrafilter unit and isolate affected portions of the system completed this week (site rep weekly 6/12/09).

Also, work continues to address pre-start findings from the recently completed Laboratory Readiness Assessment for transuranic waste processing operations in RLWTF's Room 60/60A. One pre-start finding requires physical modifications to change the sprinkler head configuration for a section of the facility's fire suppression system. This work may complete in time to support resumption of transuranic liquid processing this calendar year (site rep weekly 11/6/09).

Transuranic Waste Operations: This week, the NNSA site office provided comments to LANL on draft hazard and accident analyses reviewed to support the upcoming submittal of a rule-compliant Area G Basis for Interim Operations. As part of their 64 total comments, the site office noted that safety management programs had been selected over engineered controls or specific administrative controls (SAC) for some accident scenarios without adequate justification. Also, some SACs were found to lack specificity in control limits or did not have well defined technical bases to support explicitly identified limits.