

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 4, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending September 4, 2009

Radioactive Liquid Waste Treatment Facility: Radioactive Liquid Waste Treatment Facility personnel began a management self assessment (MSA), this week, to support resumption of transuranic liquid waste processing activities in Room 60/60A. After several years of work to replace or refurbish Room 60/60A piping and equipment; implement conduct of operations, maintenance, and engineering; and retrain operators, MSA commencement is a key step in reestablishing this critically important waste processing capability. The MSA will be followed by a laboratory readiness assessment prior to restart.

Transuranic liquid waste processing operations were last conducted in 2006. Inability to process this waste has caused a number of Plutonium Facility operations that generate transuranic liquid waste streams to be curtailed. Affected Plutonium Facility activities include the effort to chemically stabilize and recycle legacy plutonium-bearing residues to improve worker safety and to increase the availability of highly constrained vault storage space (site rep weeklies 4/10/09, 11/7/08).

Plutonium Facility: This week, a Technical Safety Requirement (TSR) violation was declared when an NNSA facility representative discovered a loose round sheet in the facility basement that indicated required TSR-level surveillances of HEPA filter differential pressures had not been completed. Plutonium Facility operations center personnel were aware of the missing record for these rounds, but incorrectly believed that their existing review and verification process would have contemporaneously identified and corrected any required rounds that had not been completed. Corrective actions have been identified to strengthen control, accountability, and review of multi-page round sheets.

Transuranic Waste Operations: In early-August, an NNSA site office safety system oversight review of the RANT shipping facility fire suppression system (FSS) identified National Fire Protection Association standard 72 (NFPA 72) code compliance issues that led to a positive Unreviewed Safety Question and associated Justification for Continued Operation (JCO). During transmittal of the assessment results, the site office requested LANL to provide a path forward and schedule to 1) address all findings, 2) increase confidence in the FSS 3) evaluate compliance with TSRs and 4) review extent of condition for issues identified. The LANL response this week noted that a prompt operability determination was completed that concluded the FSS is operable with the compensatory controls identified in the JCO (no additional TSR compliance issues were identified). To improve near-term confidence in the system, LANL is developing a design change to actuate the pre-action valve upon sprinkler head activation (this valve is currently actuated by heat and smoke detectors that are not located in compliance with NFPA 72). To address the extent of condition issues, LANL is evaluating maintenance practices for Environmental and Waste Management Operations, in particular, how deficient conditions identified during maintenance activities are documented and tracked. LANL is also developing a formal return to service process for safety related equipment and will require shift operations manager and system engineer review of completed work packages.