

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 18, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending September 18, 2009

This week the staff held a teleconference with NNSA Headquarters, NNSA site office and LANL personnel concerning the restart plans, safety basis and readiness evaluation for the Weapons Engineering Tritium Facility.

Chemistry and Metallurgy Research (CMR) Building: On Monday, a CMR worker self-identified skin and personal clothing contamination in a non-radiologically controlled office area after handling a legacy material item with no radiological markings. Radiological Control Technicians responded and identified approximately 40,000 dpm alpha on his hand and clothing. In addition, floor surveys indicated contamination in the uncontrolled area. Subsequent worker nasal smears were positive. CMR personnel took appropriate actions to decontaminate the worker and cordon off and control the office area that was contaminated. This worker and another worker that had potentially come into contact with the item were placed on a special bioassay program.

During a chemical inventory walk down, this legacy item was identified in a cardboard box that was labeled precious metal and stored in cold laboratory. To properly secure the precious metal that was not believed to be contaminated, the item was transferred to the appropriate custodian (i.e., the worker that was contaminated). During inspection of the item by this custodian, degradation of the plastic around the item was noted which caused suspicion about the potential for contamination. The custodian appropriately paused his inspection and proceeded to the nearest contamination monitor and self-identified the contamination. CMR management initiated an extent of condition review to walk down other cold laboratory and office areas to identify potentially contaminated legacy items.

Plutonium Facility: This week, Plutonium Facility management declared a TSR violation when an unvented transuranic waste drum was discovered by an NNSA facility representative in the Plutonium Facility basement. This is the third discovery of an unvented container in the facility basement over the past seven months that has resulted in either a TSR violation or declaration of a potential inadequacy of the safety analysis. All three situations were identified by NNSA facility representatives.

In this case, the legacy unvented drum had been re-categorized from low level waste to transuranic waste in January based on new assay data, but the drum had not been labeled or re-barcoded to indicate this change. In response to this event, facility procedures and processes are being revised to ensure safety basis and compliance implications are evaluated when the status of a waste container changes from low level to transuranic. Also, facility management has directed the conduct of a thorough and rigorously documented extent of condition review that will assess all containers in all applicable areas of the Plutonium Facility. This review is intended to differ in scope and formality from ineffective previously conducted extent of condition reviews that focused only on drums that were known to be, or were readily identifiable as, transuranic waste containers (site rep weeklies 6/26/09, 3/6/09).