

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 14, 2014

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending November 14, 2014

Corrective Action Management–Nuclear Criticality Safety: In their December 6, 2013, response to the Board, NNSA highlighted a corrective action associated with the revitalization of the institutional Nuclear Criticality Safety Committee (NCSC). The response states that a goal of the NCSC is to “provide the necessary oversight to ensure issues are properly addressed and provide continual improvement of the program.” The LANL Director signed a new charter for the NCSC in March 2014 (see 3/28/14 weekly). The revitalized NCSC held their fifth monthly meeting this Thursday. Discussions included labeling requirements and a proposed revision to the infraction severity levels. The NCSC also discussed scheduling their first semi-annual briefing to the LANL Director, establishing a replacement external member, conducting the first operational walk-down, and beginning a review of the completion and effectiveness of corrective actions. Separately, the NCSC continues to work on developing their procedures, annual operations plan, and quarterly schedule.

Plutonium Facility–Nuclear Criticality Safety: On Wednesday, Plutonium Facility management reported to the Field Office that the plutonium metal turnings in excess of 500 g had been repackaged into water resistant containers in two of the three glovebox locations (see 7/4/14 weekly). This brings these locations into compliance with the Field Office approved Justification for Continued Operations.

Plutonium Facility–Safety Systems: In the facility, there are currently at least two glovebox lines containing windows with significantly degraded transparency. In one location associated with plutonium-238 operations, the opacity resulted years ago from an operator’s mistaken use of hydrofluoric acid for window cleaning. In the other location, the installed window glass appears to be incompatible with the chemical dissolution operations housed inside. The opacity of these windows prevents effective periodic visual inspection of these locations (e.g., combustible loading, criticality compliance, maintenance). Within both lines, only one glovebox in the second line remains in active service. Operations personnel are working to schedule window replacements.

Weapons Engineering Tritium Facility (WETF): This week, WETF management declared a Technical Safety Requirement (TSR) violation due to issues encountered during the conduct of the third and final 31-day monitoring period of Oxygen Monitoring System (OMS) performance (see 8/29/14 weekly). First, during re-assembly of an OMS cell housing for the Tritium Waste Treatment System (TWTS), a clamping screw broke off rendering the system inoperable. During the successive repair and testing, personnel failed to realize that delays had caused the required periodicity to be exceeded for the TSR surveillance on the OMS associated with the Tritium Gas Containment System (TGCS). When operations personnel discovered this discrepancy, they entered the appropriate Limiting Condition for Operations. During the critique facility personnel discussed issues with the processes used to control system operability when performing surveillances, operator confusion caused by the complexity of safety basis and procedure interaction, and tracking TSR completion. A causal analysis will be performed to better understand and fix these issues.

Plutonium Facility–Safety Basis: Last week, LANL submitted a revision of the Plutonium Facility safety basis to the Field Office for review and approval. Changes included increasing the material-at-risk (MAR) limits outside of the Plutonium Facility but within the boundaries of Technical Area 55 protected area to allow operation of the Transuranic (TRU) Waste High Efficiency Neutron Counter. LANL notes that although the MAR limits are increased, as the process to assay and ship TRU waste offsite is implemented, there will be a net reduction in MAR inventory at Technical Area 55 as a result. Additionally, the MAR limit for confinement pressure vessels stored outside of the Plutonium Facility has been reduced due to recent shipments of the vessels from the facility.