DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 26, 2018

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: J.W. Plaue and D. Gutowski
SUBJECT: Los Alamos Activity Report for Week Ending January 26, 2018

Plutonium Facility–Conduct of Operations. Last week, Plutonium Facility personnel entered the appropriate limiting condition for operations after they were informed that they had potentially exceeded the material-at-risk limit for the radiography tunnel. Workers removed a non-credited tantalum can containing a non-certified heat-source plutonium component from a certified container. Once removed from the certified container, the material no longer benefited from the reduced damage ratio and they exceeded the material-at-risk limit for the area. Operators returned the can with the component to the certified container in about an hour after acknowledging the error. During the fact-finding, management noted that special attention should be paid to non-standard configurations. They also restricted radiography of non-standard configurations of heat-source plutonium.

Plutonium Facility–Nuclear Criticality Safety. On Tuesday, Plutonium Facility personnel conducted a fact-finding for a potential process deviation concerning a High Reactivity Unit (HRU). Criticality safety engineers use the HRU term for fissionable material items that are intended as part of a nuclear explosive, but do not meet the requirements of their defined term Pu in Pit. HRUs require specific authorization prior to movement and a unique item description code in the safeguards database. While planning a future work activity, workers noted the presence of a HRU that was incorrectly coded in the database and was not covered in the criticality safety posting. In this case, the posting was generated prior to the origin of the HRU term and the unit appears to have been missed during the initial HRU coding roll-out. Fact-finding participants determined the need to perform an extent of condition and strengthen training regarding HRUs.

Plutonium Facility–Equipment Deactivation. Plutonium Facility personnel are moving forward with plans to remove the solution that became stuck in a transfer line (see 1/19/2018 report). They are adjusting the valve lineup for the vacuum transfer system with the intent of providing more motive force to move the solution out of the transfer line. NNSA Field Office senior management walked-down the sending and receiving process rooms, as well as the transfer line with Plutonium Facility management. During the walk-down, NNSA Field Office personnel suggested the need for additional sampling of the solution. Subsequently, Plutonium Facility personnel plan to take samples to augment their characterization, which is based on process knowledge and sample data taken last summer. They plan on reattempting the vacuum transfer with a new valve lineup prior to receiving the new sample data.

Area G–Safety Basis. On Monday, the EM Field Office transmitted to LANL management comments related to the revised Evaluation of the Safety of the Situation (ESS) for the continued safe storage of the Flanged Tritium Waste Containers that have potentially explosive headspace mixtures of oxygen and hydrogen isotopes (see 10/13/2017 report). They requested a resubmittal of the ESS that address the comments at their earliest convenience.

Environmental Management. On Wednesday, the EM Field Office notified their new contractor, Newport News Nuclear BWXT-Los Alamos, to proceed with transition activities.