DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 20, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: E. Freeman, D. Gutowski, and J. Kemp, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending December 20, 2024

Area G–Safety Basis: On Tuesday, the Environmental Management Field Office instructed N3B to immediately redirect resources from the TA-54 Area G documented safety analysis (DSA) implementation to support the Flanged Tritium Waste Container (FTWC) venting project, and to submit an extension request for any justifications for continued operations (JCO) impacted by the delay in the DSA implementation. DOE approved the Area G DSA in November this year (see 11/15/2024 report). DOE will provide further guidance in the future on prioritization of work activities for N3B in 2025 and beyond and how to proceed with the implementation of a DSA for Area G that is consistent with DOE Standard 3009-2014.

Flanged Tritium Waste Containers (FTWCs): The current Basis for Interim Operations for Area G covers the venting of FTWCs in conjunction with two Triad safety basis addenda supporting container transit and activities at the Weapons Engineering Tritium Facility. The newly approved DSA does not support the venting activity. With the delay in implementation of that DSA, the NNSA and Environmental Management Field Offices are evaluating venting of the FTWCs at Area G in 2025 pending minor safety basis changes to update pressure calculations as well as regulatory approvals from outside agencies. The field offices are evaluating the steps needed to perform this activity including what type of readiness review is needed. The Federal Readiness Assessment for FTWC venting was at the end of 2020 (see 11/13/2020 report) and an additional formal demonstration for a federal team took place in September 2022 (see 9/9/2022 report).

Plutonium Facility–Safety Basis: On Thursday, Triad personnel concluded that the potential inadequacy of the safety analysis related to boiling liquid expanding vapor explosions (BLEVE) in Technical Area 55 constituted a positive unreviewed safety question (see 12/13/2024 report). The determination states that other initiators beyond fuel pool fires should be considered when determining the frequency of a BLEVE event of the non-flammable cryogenic gases.

Plutonium Facility–Work Planning: Last Monday, workers removed a temporary cap on a pneumatic line serving a glovebox door and caused a contamination spread. The cap was installed on a previous shift to allow downstream work on the pneumatic line. The capped line subsequently became pressurized when a separate group of workers actuated an unsecured air control valve. When workers completed the downstream work, they removed the cap releasing pressurized air and contaminated oil. No skin contaminations occurred; however, the event resulted in contamination of personal protective equipment (PPE) and areas in the laboratory room. Workers successfully decontaminated the room over the next couple of days. This is the second incident involving glovebox door control systems in December (see 12/6/2024 report). Several weaknesses in work planning contributed to the incident, including inadequate position control of the valve and insufficient coordination between multiple groups of workers through the work planning and authorization process.