

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 24, 2020

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending July 24, 2020

Plutonium Facility–Glovebox Safety: On Tuesday, a glovebox glove failed when a worker was entering the gloves to perform work. One glove and its support ring separated and moved into the interior of the glove box propelled by the worker's arms. The worker followed standard glove breach protocols and remained with his hands in the box until radiological control technicians could assist. There was contamination on the worker's personal protective equipment, but no skin contamination or indications of an airborne release. The glovebox is used for operations with plutonium metal. This is the first known failure of a glove in this manner during operations. The glove in question was installed in May 2019 and has been frequently used. Triad personnel are attempting to determine the cause of the failure.

Safety Basis: On Monday, the NNSA Field Office transmitted to Triad the Board's letter dated July 10, 2020, regarding complex-wide implementation of the potential inadequacy of the safety analysis process. Their transmittal noted the similarity of some aspects of the report with recent NNSA Field Office review comments on Triad's revised Unreviewed Safety Question procedure. They encouraged Triad to consider the information in the Board's report when addressing the field office comments.

Chemistry and Metallurgy Research Building–Safety Basis: On Monday, Triad transmitted a safety basis addendum to the NNSA Field Office and requested its approval. The addendum adds a new specific administrative control for the hot cells that provides an alternative control to protect workers from high radiation fields in the event the current safety-significant interlocks are inoperable. Triad proposed this administrative alternative since spare parts for the existing system are not available, and programmatic use of the hot cells is expected to be completed within a year.

Radioactive Liquid Waste Transuranic Treatment Facility: On Monday, the NNSA Field Office disapproved revision 6 of the safety design strategy for the Transuranic Liquid Waste project pending resolution of comments. Notable comments include the need to: validate the bases for capability given changes to the programmatic mission; validate the preliminary seismic category and limit state determination; develop a confinement strategy; and address DOE-STD-1189 expectations to list major process assumptions. In parallel with this effort, Triad personnel continue to resolve equipment issues needed to make the new Low Level Liquid Waste facility operational following completion of that project in November 2018 (see 1/2/2020 report).

Emergency Management: During the course of the week, lightning appears to have started four small wildland fires in the vicinity of the laboratory. Triad's emergency management personnel monitored the situation, while assets from a number of entities responded and successfully contained the fires. Increased moisture during the latter part of the week has also contributed to a reduced fire danger.