

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 1, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: A. Boussof and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending September 1, 2023

Plutonium Facility–Safety Basis: Last Thursday, Triad submitted to the NNSA Field Office for approval an evaluation of the safety of the situation (ESS) pertaining to the recent positive unreviewed safety question for receipt and processing of large shipments of heat source plutonium (see 7/28/2023 report). The ESS maintains material at risk (MAR) restrictions using the lower of the two MAR limits discussed in the safety basis addendum supporting this activity. However, the ESS proposes that a revised addendum be submitted that analyzes the consequences from the higher of the two MAR limits and uses that as the limit for processing. As this change would increase doses to the public even further beyond the evaluation guideline, NNSA headquarters will need to approve the addendum in addition to the field office to accept that level of risk. The mitigated dose consequences to the public from this operation are already analyzed to range from 495-3175 rem depending on the leak path factor used (see Board Letter 8/11/2022). The Board’s staff expects the new addendum to show an increase upwards of 30 rem. This increase by itself exceeds the evaluation guideline of 25 rem.

Last Monday, Triad transmitted a revised atmospheric dispersion protocol to the NNSA Field Office for concurrence (see 8/4/2023 report). One change in this revision is discussion of an approach to use an alternative distance for collocated worker receptors for existing remote facilities.

Weapons Engineering Tritium Facility–Readiness: The federal team completed the readiness assessment for startup of plutonium coupon studies (see 8/25/2023 report) and briefed their conclusions to contractor personnel. They identified three pre-start findings one of which involved an ambiguity as to whether the technical safety requirements allow coupon operations to take place in standby mode.

N3B–Training: N3B personnel are continuing their efforts to resolve training issues and the stop work remains in place (see 8/18/2023 report). Minimum staffing at Area G has been compliant with the technical safety requirements since August 19th.

Area G–Safety Basis: Two Fridays ago, workers performing routine inspections in Area G observed a utilities pole swaying due to high wind. The workers notified facility management who contacted Triad utilities for support. Area G facility management authorized Triad to enter a combustible restrictive area with their utilities vehicle to assess the hazard and secure the utility pole. Though authorized, this entry introduced a larger quantity of fuel than analyzed in the safety basis, and a technical safety requirements violation was declared. This was an allowable action outside of the technical safety requirements as addressing the issue with the utility pole was necessary to protect workers, the public, or the environment from imminent and significant harm.

Waste Characterization, Reduction, and Repackaging Facility (WCRRF)–Safety Basis: Last Thursday, the NNSA Field Office conditionally approved a revised preliminary documented safety analysis that supports restart of WCRRF as a hazard category 3 facility (see 7/14/2023 report). The first condition of approval was to designate the lightning protection system, the fire detection and alarm system, and continuous air monitors as other hazard controls in the upcoming documented safety analysis for WCRRF restart. The other is to evaluate, update, and resubmit the three previously approved equivalencies from the safety design strategy.