

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 14, 2017

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending July 14, 2017

DNFSB Activity: On Thursday, NNSA Headquarters and Field Office personnel briefed the Board Members on the results and path forward associated with the 2017 review performed in accordance with NNSA Supplemental Directive 226.1-1A, *Headquarters Biennial Review of Nuclear Safety Performance* (see 3/17/17 weekly).

Plutonium Facility–Housekeeping: On Wednesday, management completed their extent of condition review stemming from the fire associated with unlabeled pyrophoric legacy materials (see 4/21/17 weekly). As a result, they determined that there was a need for eight additional multi-item actions to remedy the identified issues. Examples of the identified issues include items that were unlabeled, missing barcodes, otherwise lacking acceptable knowledge, or located in inaccessible spaces. Management’s plan is to complete the actions by the end of August 2017.

Area G–Flanged Tritium Waste Containers (FTWC): On Tuesday, two maintenance workers crossed a barrier intended to restrict access to a 50-foot exclusion zone around the FTWCs with potentially explosive headspace mixtures of oxygen and hydrogen isotopes (see 10/28/16 weekly). The exclusion zone was established as a safety significant Specific Administrative Control in the Evaluation of the Safety of the Situation to protect workers from a potential explosion accident. In addition to a roped barrier with signs indicating restricted access, the exclusion zone is implemented through a standing order.

During a fact-finding of the event, the worker with access to Area G who was acting as the escort admitted to mistakenly crossing the boundary, not recognizing it as an exclusion area. Management identified the escorting worker had not been trained on and had not read the standing order. Additional issues identified during the fact finding included: (1) the hazard identification and control worksheet included in the work package was not updated when the exclusion zone was established; (2) the badge reading system at Area G is not capable of tracking the training requirements necessary for access; (3) the plan of the day did not indicate the maintenance was going to be performed in this particular location; and (4) operations center personnel did not ascertain the intended location of the maintenance when the workers checked in prior to commencing their work. Facility management is taking immediate actions that include installing a more robust barrier around the exclusion zone and ensuring all personnel with access to Area G are personally briefed on the exclusion zone. LANL personnel are also conducting a causal analysis of the event, as well as an extent of condition review.

Transuranic Waste Facility (TWF): On Thursday, NNSA Field Office personnel briefed NNSA Headquarters on the path forward regarding the malfunctioning seismic power cutoff system. The system is a safety class control intended to isolate electrical power to the waste storage building upon detection of a seismic event. TWF personnel encountered issues with this new system’s internal fault-checking functions, as well as oversensitivity to severe weather and have proposed an 18 month plan to develop a retrofit. In the interim, they are proposing a new surveillance requirement to compensate for the impaired functionality. On Friday, the NNSA Field Office approved this proposal.