

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 8, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending December 8, 2023

Plutonium Facility–Radiological Control: Last Tuesday, a worker alarmed the final set of hand and foot monitors prior to exiting the facility. Responding radiological control personnel identified skin contamination on the individual’s hand and successfully decontaminated them. The contamination was a particle, which are difficult to detect. The worker, wearing a labcoat and booties as personal protective equipment (PPE), had not been performing hands on work but was acting as an escort for carpenters performing preparatory activities for decontamination and decommissioning (D&D) in a laboratory room. During active D&D in this room, additional PPE is required, and the room is subsequently decontaminated to allow labcoat access. The room has had several contamination spreads and PPE contamination events over the past several weeks during active D&D and was the most likely source of the contamination. During this week’s fact-finding for this event, participants identified a broader training concern not directly related to the event. Facility specific contamination monitoring training is not being assigned until personnel meet all security requirements for unescorted access to the facility. Management is evaluating this issue to determine if personnel should take this training while still under escort.

On Monday, there were two related contamination events in the low-level waste area of the basement. The first event involved discovery of contamination on one worker’s PPE. During the next shift a new crew, supported by a radiological control technician, inspected the waste bags that were the probable source of the first contamination. They were unable to find any damage to the bags or contamination; however, three workers discovered PPE contamination during full body surveys, and a continuous air monitor alarmed as they exited the basement. No other personnel in the basement had any contamination detected on their PPE, but there was contamination detected on the low-level waste staging bins. Low-level waste staging, labeling, and bagging practices are under evaluation to help prevent recurrence of this type of event.

Plutonium Facility–Safety Basis: Last week, Triad personnel submitted a revised atmospheric dispersion modeling protocol that will support the new Plutonium Facility safety basis. The new revision is intended to address NNSA Field Office comments (see 10/27/2023 report). The revised protocol asserted that other conservative portions of the dose calculation justify reducing the conservatism of the proposed dispersion calculation. Triad quoted DOE Standard 3009-2014 regarding the use of an alternate dispersion parameter for calculating the co-located worker doses. Additionally, Triad stated that calculating a co-located worker dose to a worker that is not physically at 100 meters is excessively conservative. However, the resident inspector notes that DOE Standard 3009-2014 requires evaluating the co-located worker dose to a receptor at 100 m, unless no viable control strategy exists. In the protocol, Triad did not state which facilities lack a viable control strategy for the co-located worker. Triad said it would provide technical justification, including information on the viability of its control strategy, in facility-specific safety bases.

Area G–Safety Basis: N3B hosted a series of meetings this week to support development of the new DOE Standard 3009-2014 compliant documented safety analysis for Area G (see 8/11/2023 report). Efforts this week focused on development of implementable technical safety requirements and engaging the DOE Office of Environmental Management’s safety basis review team on the same topic.