

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 28, 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 February 28, 2020

DNFSB Staff Activity: P. J. Migliorini supplemented the onsite staff. His activities included walk-downs of the Plutonium Facility and Area G, as well as observation of the management review board held by the Associate Laboratory Director for Weapons Production.

Emergency Management: Last Wednesday, there was a small fire in a non-radiological laboratory at the Technical Area 48 Radiochemistry Facility. A researcher working in a fume hood added an organic solvent to flasks that contained a water reactive reagent when the solvent ignited, flame traveled back to the solvent bottle, and the researcher dropped the flaming bottle on the floor. Due to confusion regarding proper operation of an approved fire extinguisher, another researcher extinguished the fire using liquid nitrogen. The researchers notified their programmatic line management, but nobody notified the fire department or the Emergency Operations Support Center (EOSC). Facility management became aware of the situation the next morning and subsequently called the EOSC. Due to concerns regarding this event, Triad management debuted their new process for rapid sharing of information. This Wednesday, Triad issued an Immediate Lessons Learned that noted the following three items: (1) If there is any fire, even if it is extinguished, the Los Alamos Fire Department must be called; (2) Anytime there is an abnormal event, the EOSC must be called; and (3) Liquid nitrogen is not an approved fire extinguisher. Individuals not properly reporting events to the fire department and the EOSC has been a recurring issue at the laboratory (see 5/12/2017 and 2/9/2018 reports). The EOSC launched a new, mnemonic phone number in May 2019. The launch included training and provided a multitude of reminder paraphernalia across the laboratory.

Flanged Tritium Waste Containers (FTWC): On Thursday, Triad and N3B personnel conducted an emergency drill at the shed in Area G containing the FTWCs. The scenario involved an explosive pressure release during FTWC venting that knocked one worker over badly injuring an arm and dazed two other workers. All three casualties were potentially tritium contaminated. This training drill was the first conducted in Triad's new operational control area within Area G, and it demonstrated many areas where coordination between the two contractors and responders will need to improve. Of particular note, the EOSC improperly directed personnel to shelter-in-place in a damaged fabric waste storage dome—repeating the same error that occurred during last week's exercise (see 2/21/2020 report).

Technical Area 18–Legacy Materials: In early February 2020, a radiological control technician identified legacy radioactive materials stored outside in Technical Area 18, the former home to the Critical Experiments Facility. The problematic radioactive material is in a 5 gallon plastic bucket containing various bagged and wrapped objects. Radioassay measurements detected isotopes of curium, americium, and californium. On Monday, Triad personnel discovered that these materials had been identified for disposal in 2016. Consequently, they initiated an evaluation of breakdowns in the waste management process. Triad personnel overpacked the bucket in a metal drum and are evaluating whether the known information on this material is sufficient for waste disposal or whether additional characterization, likely at the Chemistry and Metallurgy Research Building, will be needed.