



Department of Energy

Washington, DC 20585

September 25, 2020

Dr. Thomas Mason
Laboratory Director
Triad National Security, LLC
Los Alamos National Laboratory
Bikini Atoll Road SM 30
Los Alamos, New Mexico 87545

NEL-2020-01

Dear Dr. Mason:

The Office of Enterprise Assessments' Office of Enforcement has completed an evaluation of two incidents involving inadequate implementation of nuclear criticality safety program elements at the Department of Energy's (DOE's) Los Alamos National Laboratory (LANL) in March and June 2019. The previous management and operating contractor had reported programmatic issues with the nuclear criticality safety program to DOE using the Noncompliance Tracking System (NTS) in 2014 (NTS--LASO-LANS-LANL-2014-0004). The March and June 2019 incidents occurred after Triad National Security, LLC (Triad) became the LANL management and operating contractor in fall 2018. In recognition of the continuing programmatic issues as well as the organizational differences following contract transition, Triad is in the process of closing out this previous NTS report and reiterating the programmatic noncompliance in a new NTS report (NTS-NA-LAFO-TRIAD-LANL-2020-0009937). The new NTS report specifically addresses noncompliances revealed by the March and June 2019 incidents.

The Office of Enforcement's evaluation of the March and June 2019 incidents, which included a site visit, did not identify any new issues that Triad had not already documented in its cause evaluation and initiated actions to correct. The Office of Enforcement is issuing this letter to communicate DOE's expectations for Triad's implementation of work process and training requirements of 10 C.F.R. Part 830, Subpart A, *Quality Assurance Program*, and to acknowledge the thoroughness of Triad's response to the noncompliant conditions and commitment to improve its nuclear safety culture.

The Office of Enforcement's evaluation confirmed that Triad did not implement appropriate work processes while performing fissionable material operations. Specifically, Triad did not ensure that required criticality safety evaluations (CSEs) and nuclear criticality controls were in place before the conduct of operations, as required by SD130, *LANL Nuclear Criticality Safety Program*, Revision 4, dated December 20, 2018. First, in March 2019, Triad's operators were performing fissionable material operations



and found that multiple containers were staged in an area that did not have a valid CSE. Operators had mistakenly relied on a CSE for a different location, and identified the discrepancy when they exceeded a limit of that inapplicable CSE. Second, in June 2019, Triad identified that Technical Area 55 operators removed six containers of fissionable material from carts and set them on the floor of the room to facilitate personnel egress from the room in case of emergency. The floor was not a fissionable material operation location, and therefore no nuclear CSE had been performed.

Further, as noted in its cause evaluation for the March 2019 event, Triad did not provide sufficient training to ensure adequate implementation of Triad's nuclear criticality safety program. The operators performing the fissionable material operations performed the material moves using conventions learned through informal communication and mentoring rather than the formal training that is required by LANL's nuclear criticality safety program.

Triad's performance of fissionable material operations without a CSE was preventable. Triad determined that the conditions created by these two events were of low safety significance based on actual material configurations and quantities. However, the underlying deficiencies could create conditions that would result in more significant safety consequences if left uncorrected.

The Office of Enforcement has concluded that Triad accurately characterized the severity of these events, uncovered the root causes and the extents of the conditions, and accurately identified and reported the nuclear safety noncompliances. Triad also developed corrective actions that, if well executed, will result in a more effective nuclear criticality safety program that should prevent recurrence of similar events during fissionable material operations at Triad-operated laboratory facilities. Triad personnel consistently demonstrated a questioning attitude and persistent determination in identifying the source and extent of the problem. Triad management's ongoing actions to improve the laboratory's nuclear safety culture and their commitment to facility safety and continuous improvement in nuclear safety performance have been extensive and appropriate.

However, continued management attention is warranted to sustain improvements that will prevent recurrence. Issuance of this Enforcement Letter reflects DOE's decision to not pursue further enforcement activity on this issue against Triad at this time in recognition of the thoroughness of Triad's response to the noncompliant conditions and commitment to improve its nuclear safety culture. In coordination with the National Nuclear Security Administration, the Office of Enforcement will continue to monitor Triad's efforts to improve nuclear safety performance.

This letter imposes no requirements on Triad and no response is required. If you have any questions, please contact me at (301) 903-7707, or your staff may contact Mr. Jacob M. Miller, Director, Office of Nuclear Safety Enforcement, at (301) 903-7707.

Sincerely,

A handwritten signature in black ink that reads "Kevin L. Dressman". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Kevin L. Dressman
Director
Office of Enforcement
Office of Enterprise Assessments

cc: Michael Weis, NA-LA
Jim Stein, Triad