

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 31, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for Week Ending December 31, 2021

Year in Review: A summary of the key developments of 2021.

- The pace of work in the Plutonium Facility continued to increase, especially construction work on the backshift when many of the equipment removals and upgrades to support the 30 pit per year mission take place. Triad is working to support a large influx of workers including providing the substantial training and conduct of operations mentoring needed to work safely and effectively in a nuclear facility.
- This marked the first year for comingled shipments of NNSA managed and Environmental Management transuranic waste from the RANT Shipping Facility. Comingling shipments allows for more efficient building of payloads. Despite safety basis issues at Area G and the titanium event at the Plutonium Facility, Triad and N3B completed more than fifty shipments to the Waste Isolation Pilot Plant this calendar year. These shipments included more than a thousand waste containers and exceeded the generation rate of transuranic waste at the lab.
- N3B curtailed transuranic waste operations at Area G following the identification of several potential inadequacies of the safety analysis. Many of these were discovered through a detailed extent of condition review of the current safety basis directed by the Environmental Management Field Office. N3B personnel have been addressing the weaknesses in the current safety basis and have re-established much of their mission work under controls from a series of Justifications for Continued Operations. Meanwhile, a modern safety basis for Area G is still under development.
- Triad and N3B both experienced challenges addressing potentially reactive transuranic waste containers as discussed in DNFSB-TECH-46, *Potential Energetic Chemical Reaction Events Involving Transuranic Waste at Los Alamos National Laboratory*. By the end of the year N3B had identified the set of containers they were most concerned about in terms of potential reactivity and are managing them under new controls. Triad experienced an unexpected titanium powder sparking while loading a waste drum in the Plutonium Facility and performed a causal investigation which generated many corrective actions to improve waste generation and handling.
- The multi-year effort to establish the fire suppression system at the Transuranic Waste Facility as safety-significant continued with the approval of a new safety basis. Implementation is planned to be completed in January 2022.
- Triad continued efforts to transition the Radioactive Laboratory Utility Office Building to a Hazard Category 3 nuclear facility to be known as PF-400. This year they performed an Implementation Verification Review of the new safety basis and commenced a Management Self Assessment to support federal and contractor Operational Readiness Reviews next year.
- Progress on venting the Flanged Tritium Waste Containers stored at Area G stalled this year partly due to the safety basis issues at Area G and permitting delays.
- Both the Environmental Management and the NNSA Field offices again welcomed new site managers in 2021.