

Joyce L. Connery, Chair
Thomas A. Summers, Vice Chair
Jessie H. Roberson

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Washington, DC 20004-2901



December 19, 2022

The Honorable Jennifer M. Granholm
Secretary of Energy
US Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Secretary Granholm:

Pursuant to the Memorandum of Understanding (MOU) between the Department of Energy (DOE) and the Defense Nuclear Facilities Safety Board (Board), the Board issued a letter on October 20, 2022, informing you that DOE has not consistently responded to reporting requirements established by the Board in a timely manner. The Board's letter provided examples where DOE's delayed response to reporting requirements affected the Board's safety oversight. Since then, DOE has fulfilled several of the overdue reporting requirements. The Board appreciates DOE's efforts to provide these responses but draws your attention to the recent practice of the National Nuclear Security Administration (NNSA) of dating its letters to the Board weeks prior to their transmittal. This practice results in an inaccurate record of correspondence between the Board and NNSA, incorrectly implying that NNSA's responses were transmitted to the Board much earlier than they actually were. The Board asks that future DOE responses are dated with the date of submission to the Board.

The Board is also concerned that NNSA has recently provided responses to Board reporting requirements that only partially address the safety concerns identified in the Board's correspondence. NNSA's responses have sometimes rationalized that DOE's and NNSA's safety directives can be interpreted as allowing known safety deficiencies to persist contrary to the plain language of the safety directives, and, in one case, NNSA did not provide the Board the requested report. Several examples are summarized below:

- **NNSA's report on the adequacy of the Los Alamos National Laboratory (LANL) onsite transportation safety document and DOE's onsite transportation safe harbors (responding to Board letter dated January 6, 2022).** NNSA's response acknowledged that DOE's safe harbor for development of safety bases for onsite transportation of radioactive materials was deficient but then incongruously contended that the LANL transportation safety document was acceptable because it met the deficient safe harbor. NNSA's response also argued that it was unnecessary to flow down safety requirements from DOE's safety regulation, Title 10, Code of Federal Regulations, Part 830 (10 CFR 830), *Nuclear Safety Management*, to the safe harbor, on the ground that the requirements of the regulation apply regardless. This is inconsistent with the role of safe

harbors in 10 CFR 830, which describes them as “acceptable methodologies for preparing a documented safety analysis.” Based on its argument, NNSA did not require LANL to enter its process for evaluating potential inadequacies of the safety analysis (PISA) or promptly implement compensatory measures for the safety deficiencies identified in the Board’s letter. NNSA’s Los Alamos Field Office did take the initiative to identify candidate compensatory measures for the LANL contractor to consider, but 11 months after the Board’s letter, the contractor still has not implemented any compensatory measures or made any other changes to its transportation safety document. The calculated dose consequences resulting from an onsite transportation accident demonstrate that safety controls are necessary to protect the public and workers. The Board touched on this issue with NA-LA during its November visit to LANL and public hearing on the LANL Plutonium Facility. NA-LA committed to following up, and we are still awaiting NA-LA’s decision regarding plans for compensatory measures.

- **NNSA briefing on actions to protect workers from tritium stack releases drawn back into Savannah River Tritium Enterprise (SRTE) facilities (responding to Board letter dated August 11, 2022).** NNSA briefed the Board on November 30, 2022, in response to the reporting requirement in the Board’s letter. On January 30, 2022, SRTE had an unplanned tritium release concurrent with a meteorological condition that resulted in the ventilation system pulling a small amount of tritium back into the facility. Although such weather conditions are not frequent, the Board is concerned with the potential for them to occur concurrently with a larger unplanned release, representing an unanalyzed hazard for tritium workers. The Board requested that NNSA provide details regarding safety controls to be put in place to improve detection of similar events and allow responders to make informed decisions to protect the workforce. Instead, NNSA described why this event did not require further analysis, based on a flawed interpretation of DOE Standard 3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*. While NNSA described protocols for responding to future events, these solely involved directing workers to remain indoors regardless of the tritium concentrations inside the facilities. NNSA did not provide written guidance it would use for evacuating or relocating workers or identify what data it would use to make informed decisions.
- **DOE report on use of the PISA process following probabilistic seismic hazard analysis (PSHA) updates (responding to Board letter dated June 16, 2022).** The Board issued its letter because DOE’s responses to a reporting requirement established a year earlier did not address the Board’s fundamental concern that some NNSA sites were not taking timely action when PSHA updates identified increased seismic hazards that exceed qualification assumptions for seismic safety controls in defense nuclear facilities. DOE’s November 2, 2022, response agreed with the Board’s position that sites should enter the PISA process in such circumstances but did not address the lack of timeliness of NNSA sites in doing so. Contrary to the position articulated in DOE’s letter, two NNSA sites that identified an increased seismic hazard that exceeds safety system qualifications have not declared PISAs.

- **NNSA report on analysis performed by LANL of Board Technical Report 44, *Los Alamos National Laboratory Plutonium Facility Leak Path Factor Methodology* (responding to Board letter dated August 11, 2022).** NNSA's response, dated November 8, 2022, did not provide the Board the requested analysis. Instead, the response stated that the requested information had been provided to the Board's resident inspectors at LANL at an unspecified date. The information provided to the resident inspectors was transmitted via an October 25, 2022, email from a manager at NNSA's Los Alamos Field Office and took the form of an undated table, with no indications of authorship or NNSA approval. This was nonresponsive to the Board's reporting requirement. In accordance with the MOU, responses to reporting requirements established by the Board should be delivered to the Board, so that they may be posted to the Board's and DOE's websites for the benefit of the public.

In contrast, NNSA's November 22, 2022, briefing on the safety posture at the Pantex Plant (in response to the Board's letter dated July 20, 2022) focused on the safety of operations at Pantex and thoroughly addressed initiatives to sustain the positive trajectory of operational safety performance. The Board was encouraged by this and acknowledges that Pantex and the NNSA Production Office demonstrated their ongoing commitment toward improving safety.

Sincerely,



Joyce L. Connery
Chair

c: Mr. Joe Olencz