

Joyce L. Connery, Chair
Thomas A. Summers, Vice Chair

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Washington, DC 20004-2901



December 5, 2023

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

Dear Secretary Granholm:

The Defense Nuclear Facilities Safety Board (Board) has often communicated to the Department of Energy (DOE) on the importance of readiness review activities to demonstrate and confirm the ability to safely start up or restart defense nuclear facilities. Key requirements and improvements originated in 1993 with DOE's implementation plan for Board Recommendation 92-6, *Operational Readiness Reviews*, resulting in development of DOE Order 5480.31, *Startup and Restart of Nuclear Facilities*. Subsequent order revisions are now incorporated as DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, last revised in 2010. The Board and its staff have worked with DOE to ensure appropriate safety requirements, best practices, and lessons learned were included in each order revision.

DOE began revising DOE Order 425.1D in late 2021 and provided the Board's staff with revised drafts of the order as the revision process progressed. The staff provided comments on the proposed changes in the successive drafts. While DOE resolved many of the staff's comments, the Board has significant safety concerns remaining with two key proposed changes to DOE Order 425.1D:

Allowing up to 18-Month Facility Shutdown Without Restart Readiness Reviews—The draft order includes a new provision that would allow up to 18 months of shutdown without requiring restart readiness reviews. This is a significant change to the requirement, which has used 12 months as the maximum shutdown period since 1993 per DOE's response to Recommendation 92-6. This change is being made without explicit justification or requiring compensatory measures during the longer shutdown period. Extending the shutdown time could exacerbate the detrimental impact of factors such as loss of operator proficiency, changes in operator crews and facility management, equipment reliability, and procedure changes. If DOE maintains the change to allow for up to 18 months, an order requirement to conduct properly planned, rigorous cold operations (i.e., operations without nuclear material in the process) to maintain operator proficiency after 12 months of shutdown should be included.

Parallel Contractor and DOE Readiness Reviews—The draft order includes a new provision that would explicitly allow parallel contractor and DOE readiness reviews rather than conducting those reviews in a serial fashion. The draft order limits the parallel reviews provision to: initial startup of a new activity or operation within an operating nuclear facility; or occasions not meeting other order criteria but directed by DOE line management. Per the current DOE Order 425.1D, such a deviation from the conduct of serial reviews requires higher-level approval (i.e., Program Secretarial Officer (PSO) approval with Central Technical Authority (CTA) concurrence). The draft order would allow approval of parallel reviews at the Startup Authorization Authority (SAA) level as a routine option. At many DOE sites, the SAA is delegated to field office management.

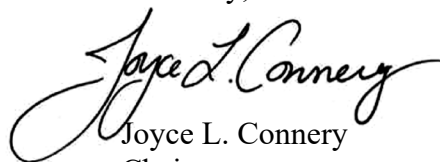
This new provision represents a surprising departure from commitments DOE made in response to Recommendation 92-6 that included independent performance of the DOE readiness review in a serial fashion. Conducting parallel reviews compromises DOE line management's verification of readiness following the contractor readiness review, and the independence of the DOE readiness review. Use of parallel readiness reviews warrants PSO/CTA review and approval to ensure that circumstances justify such a deviation from serial reviews.

As an illustration of this concern, field office management (delegated as SAA) recently approved parallel contractor and DOE readiness reviews for the planned startup of new electrorefining operations in the 9215 Complex at the Y-12 National Security Complex. This was done without requesting and obtaining PSO/CTA review and approval per the current order. The Board questions the conduct of parallel contractor and DOE reviews to confirm readiness for safe startup of electrorefining and encourages DOE to reconsider.

The Board understands the DOE Order 425.1D revision effort is in its final stages, including submittal to the DOE Directives Review Board for approval and issuance of the revised order by the Deputy Secretary. The Board advises strongly that the draft order be revised to address the two safety concerns noted above before the order is issued.

Pursuant to 42 United States Code § 2286b(d), the Board requests a report and briefing from DOE within 45 days from the date of this correspondence regarding DOE's path forward on the revision to DOE Order 425.1D.

Sincerely,



Joyce L. Connery
Chair

c: Mr. Todd LaPointe
Mr. Joe Olencz