

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

**DEFENSE NUCLEAR FACILITIES  
SAFETY BOARD**

Washington, DC 20004-2901



July 13, 2023

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

Dear Secretary Granholm:

On August 24, 2022, the Defense Nuclear Facilities Safety Board (Board) sent a letter to the Secretary of Energy regarding the safety software central registry (Central Registry). The Department of Energy (DOE) created this registry in 2003 to enhance the quality assurance of selected software that its contractors use in safety analysis. In its August 2022 letter, the Board highlighted issues with the Central Registry, including the fact that it contains outdated software, and requested a briefing on DOE's plans for the registry by January 2023.

DOE has not provided the briefing the Board requested per the reporting requirement; however, DOE personnel did provide a status update to the Board on June 8, 2023. The Board appreciated that opportunity to learn what DOE was considering before DOE answered the reporting requirement. Personnel from DOE's Office of Environment, Health, Safety and Security told the Board that they would visit DOE field sites to collect relevant information. The Board also is interested in this process and will likely have its staff observe some of these site visits.

The Board reiterates that revitalizing the Central Registry in several key areas would be beneficial to safety at DOE's defense nuclear facilities. For example, it is important for DOE to identify which software codes are recommended for use by its contractors, and for DOE to provide guidance on how those codes can appropriately be used to ensure compliance with relevant DOE standards. DOE could also facilitate the sharing of software-related lessons learned among its contractors at multiple DOE sites.

As part of the Central Registry, DOE personnel evaluate the software for quality assurance. DOE has struggled to perform these evaluations in a timely manner as code developers release updates to their software. The Board understands that DOE might discontinue its own evaluations, and instead rely on its contractors' evaluations. As part of this decision, DOE should consider what federal staffing and capabilities are needed to ensure appropriate field oversight of contractors' evaluation and use of safety software.

DOE is currently revising DOE Order 414.1, *Quality Assurance*. This order contains requirements related to safety software including DOE's responsibilities for management of the Central Registry. DOE personnel informed the Board that their path forward on the Central Registry will not be finalized in time for the current revision of the order. Therefore, DOE may need to revise the order again to institutionalize its chosen path forward on the Central Registry. Alternatively, DOE could suspend or extend the DOE Order 414.1 review and comment process until it makes decisions regarding the Central Registry.

Finally, the reporting requirement from the Board's letter of August 2022 is still open. The Board expects DOE to submit an extension request that will provide a new timeline for the briefing requested by the Board such that the Board's safety oversight activities can be efficient and effective.

Sincerely,

A handwritten signature in black ink, reading "Joyce L. Connery". The signature is written in a cursive style with a large, sweeping initial "J".

Joyce L. Connery  
Chair

c: Mr. Joe Olencz