

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

**DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

Washington, DC 20004-2901



August 11, 2021

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

Dear Secretary Granholm:

On July 13, 2021, the Defense Nuclear Facilities Safety Board (Board) held a virtual public meeting and a virtual public hearing covering several topics related to the safety of defense nuclear facilities at the Savannah River Site (SRS). The Board appreciates the participation by representatives of the Department of Energy's (DOE) leadership and staff.

The public meeting focused on DOE's lessons learned in safely operating its defense nuclear facilities in the constrained environment of the COVID-19 pandemic. The Board found the public meeting discussions important and insightful.

The public meeting was followed by a public hearing comprising two sessions. The first session focused on the safety of the Savannah River Tritium Enterprise (SRTE) facilities, particularly on the Board's concern that action is needed to better protect workers at SRS from potential accidents involving the tritium facilities. The DOE witnesses discussed completed actions, most of which were analyses, and provided general timelines for other improvements, including physical modifications. The Board articulated its concerns with safety of the SRTE facilities in Recommendation 2019-2, which was rejected by DOE. The Board remains concerned about the safety of the tritium facilities. The Board did not hear anything persuasive from the DOE testimony that actions would be taken to alleviate those safety concerns. Of particular note was the lack of any proposed compensatory measure for near term safety risks.

The public hearing concluded with a discussion of the technical staffing needs required to ensure effective federal safety oversight of the defense nuclear facilities at SRS. Based on this discussion, DOE appears to be on track to meet near term staffing needs at SRS with qualified personnel. However, retention challenges and the need for staffing increases to meet the expected future increases in operational demands warrant management attention.

During the public hearing, DOE participants took questions for the record. The enclosure provides the detailed list of these items. Please provide responses to these questions, any

supplements to or clarifications to the testimony, and any additional written testimony to the Board's General Counsel, Kevin Lyskowski, by September 13, 2021, when the record for this hearing will be closed. We extended this date for one month from the original date of August 13, 2021 to allow you to collect the necessary information. For your reference, the enclosure also provides requests for information based on discussions during the public hearing and meeting.

The Board thanks DOE for its participation in the public meeting and hearing and looks forward to additional opportunities for continued productive communication with DOE.

Sincerely,

A handwritten signature in cursive script that reads "Joyce L. Connery".

Joyce L. Connery
Chair

Enclosure

c: Mr. Joe Olencz

ENCLOSURE

Questions for the Record

Please provide responses to these questions for the record, any supplements to or clarifications of earlier testimony, and any additional written testimony by September 13, 2021, when the record for this hearing will be closed. Please direct the requested information to:

Kevin Lyskowski
General Counsel
Defense Nuclear Facilities Safety Board

	TO	FROM	QUESTION
1.	Mr. Jason Armstrong (Manager, Savannah River Field Office)	Ms. Jesse H. Roberson (Board Member)	The consolidated hazards analysis for the combined tritium facilities recommended that several actions be taken to mitigate explosion events, such as interlocked inline oxygen monitors or a room or building-level stripper or scrubber system. Since the National Nuclear Security Administration (NNSA) decided these were not feasible, what actions will be taken in the near term to address this risk, or will the risk be accepted through a formal process?
2.	Armstrong	Roberson	In July 2018, the management and operating contractor proposed 19 actions to NNSA that could potentially reduce the consequences of several events to the co-located workers. Provide a copy of NNSA's approval of the 19 actions.
3.	Armstrong	Roberson	NNSA has committed to upgrading the fire suppression systems in Buildings 233-H, 234-7H, and the Tritium Extraction Facility. Of these three facilities, which do you expect to be the most challenging to upgrade?
4.	Armstrong	Mr. Thomas A. Summers (Vice Chair)	The conceptual safety design report for the Tritium Finishing Facility identifies that 20 percent of the material-at-risk could be impacted and released prior to activation of the fire suppression system for common cause events, such as a seismic event. Given that the Tritium Finishing Facility is a new facility, does the facility design include a strategy for tritium confinement?

	TO	FROM	QUESTION
5.	Armstrong	Roberson	The preliminary fire hazard analysis for the Tritium Finishing Facility proposed providing only one safety class water supply, with the other supply being the existing general service H-Area water loop. If the safety class water supply is not available, what impacts would it have on safety of Tritium Finishing Facility operations? For example, would operations personnel have to put the facility in standby mode until the safety class water supply is restored, or would they rely on the general service water supply?
6.	Armstrong	Ms. Joyce L. Connery (Chair)	Since the approval of the new combined safety basis for the Savannah River Tritium Enterprise in 2019, what new hazard controls has NNSA implemented?
7.	Armstrong	Roberson	Has the management and operating contractor conducted or does it plan to conduct any field drills or exercises involving scenarios in which one or more victims receive greater than 5 rem total effective dose from tritium?

Staff Requests for Information

The following is a list of additional information requested by the Defense Nuclear Facilities Safety Board's staff that has been submitted following the normal request for information process through the Departmental Representative:

1. Plan for resuming in-person emergency preparedness exercises at the facility and site level at the Savannah River Site.
2. Drill and exercise schedule for testing/implementing the site relocation and evacuation plan (up to and including any evaluated field exercises) at the Savannah River Site.
3. Savannah River Nuclear Solutions letters approved by July 8, 2021, letter from Mr. Jason A. Armstrong, Manager, NNSA Savannah River Field Office, to Mr. Mark Davis, Senior Vice President, NNSA Operations and Programs, Savannah River Nuclear Solutions, *Approval of Activities Associated with the Co-Located Worker Risk Reduction Strategy*.
 - a. Letter, M. E. Davis to J.A. Armstrong, *Transmittal of the FY21 Mid-Year Update to the Activities Associated with the Co-Located Worker Risk Reduction Strategy*, dated June 28, 2021, SRNS-T0000-2021-0020.
 - b. Letter, M. E. Davis to J. M. Allison, *Transmittal of the Updated Co-Located Worker Risk Reduction Strategy and the Activities Associated with Implementing the Strategy*, September 30, 2020, SRNS-T0000-2020-00284.