

**Statement of Vice Chair Thomas Summers
of the U.S. Defense Nuclear Facilities Safety Board
at the 2024 Nuclear Deterrence Summit
January 31, 2024**

Good afternoon, it is great to be here today! I am Tom Summers, Vice Chair of the Defense Nuclear Facilities Safety Board. We are an independent agency that oversees safety at DOE's defense nuclear facilities throughout their lifecycle, from design to demolition. I would like to thank Mr. DeGrasse and the organizers of this meeting for this opportunity to speak with you. My remarks are on behalf of both Chair Connery and myself. However, my responses to questions will be solely my own perspective.

Today I want to highlight some results from our recent safety oversight of NNSA's defense nuclear facilities.

At Pantex, we are focused on maintaining and improving the safety of nuclear explosive operations at a time when NNSA is emphasizing demanding production milestones. In Recommendation 2019-1 the Board identified numerous concerns with Pantex's safety basis for

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nuclear explosive operations. These concerns included planned safety improvements and conditions imposed by NNSA that had remained incomplete for many years. DOE accepted this recommendation and NNSA has made progress in addressing the Board's safety concerns.

In a January 2023 letter, we summarized the conclusions from our review of several actions NNSA has taken. We noted progress in several areas, such as replacing wood-framed false ceilings in nuclear explosive cells; correcting errors in fire protection calculations and drawings; and addressing potentially inappropriate applications of certain weapon response rules.

But we also noted that NNSA is completing some of those actions without fully addressing the specific safety concerns. We continue to monitor NNSA's activities at Pantex.

At the Savannah River Site, the Board engaged with NNSA leadership to reemphasize the need to improve worker protection at the site. In January 2020, DOE rejected Recommendation 2019-2 on the

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safety of the Savannah River Site tritium facilities on the basis that NNSA was already taking action to address the Board's safety concerns. We were, and continue to be, very concerned about inadequate controls for certain accident scenarios that could result in potentially significant consequences to a large number of workers at the tritium and surrounding H-Area facilities. Consequently, we continue to monitor NNSA's actions intended to reduce the risk from those scenarios.

During a full Board visit to Savannah River in May 2023, NNSA briefed us on its progress on several actions it has been taking to reduce risk and improve safety at the tritium facilities. While these efforts are encouraging, NNSA has only accomplished limited improvements to date, and a significant amount of work remains to reduce the safety risk to an acceptable level. Therefore, the Board issued a letter to DOE in October 2023 that established a requirement for NNSA to provide an annual report and briefing to us on its progress on improving safety at the tritium facilities.

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While at Savannah River in May, we also conducted walkdowns of NNSA's Plutonium Processing and Surplus Plutonium Disposition projects. Our discussions centered primarily on safety issues that we had communicated to DOE in a March 2023 letter. In that letter we expressed concerns with the adequacy of controls intended to ensure worker safety and the effectiveness of federal oversight in addressing those concerns.

One positive recent development was a letter we received from NNSA in January of this year committing to classifying all gloveboxes handling plutonium at the Savannah River Plutonium Processing Facility as either safety class or safety significant. This replaces the project's original design strategy of relying on workers to take self-protective actions instead of being protected by engineered safety systems.

At Los Alamos, we are focusing on known vulnerabilities in the safety basis and engineered safety systems of the lab's plutonium

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facility, referred to as PF-4. Currently, NNSA is preparing PF-4 to produce 30 pits per year for the nuclear weapons program.

In November 2022, the Board held a public hearing on nuclear safety and increased production activities at PF-4. In June 2023 we requested additional information regarding NNSA's planned safety posture for PF-4. NNSA committed to providing five deliverables to answer that request; we recently received the last two deliverables and are in the process of assessing the information provided.

This information will help us evaluate the assumptions that underpin NNSA's passive confinement strategy for PF-4, and the functional design requirements for its fire suppression and confinement ventilation systems.

When we conduct oversight of specific facilities and activities, we also identify crosscutting or emerging safety issues that may impact safety at multiple sites. There are two that I'd like to highlight here.

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The first crosscutting safety issue is the **decrepit state of the infrastructure supporting DOE’s defense nuclear facilities**. DOE needs a robust, integrated, and consistently implemented real property management framework for the physical infrastructure supporting its defense nuclear facilities. This framework is necessary for ensuring the reliability and resilience of services, utilities, and other systems that DOE depends on to protect workers and the public.

In Recommendation 2020-1 on DOE’s nuclear safety requirements, we recommended that DOE develop such an approach—including requirements—for managing its infrastructure. In response, DOE only committed to producing a benchmarking report that characterizes each program secretarial office’s approach to managing its aging defense nuclear facilities and identifies best practices and process enhancements that DOE could implement across all facilities.

Unfortunately, the Board is concerned that the results of this effort are not adequate to guide development of the safety requirements and

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processes needed to improve DOE's management of the infrastructure supporting its defense nuclear facilities. We expressed those concerns to DOE in a November 2023 letter, and we plan to further engage with DOE on the topic over the next few months.

The second crosscutting safety issue that we regularly focus on is **emergency preparedness and response**. In 2023, the Board's staff observed emergency response exercises at Nevada, Hanford, Pantex, Livermore, Y-12, Savannah River, Sandia, Idaho, Los Alamos, and WIPP. I was fortunate to be able to observe several of those exercises.

Recurring safety issues that we observed during these exercises included inadequate radiological contamination practices and poor communications among responding groups. I've advocated that NNSA and site leadership encourage and incentivize workforce participation in emergency drills and exercises. We all know too well that when an emergency happens, *and it will happen*, people respond as they've practiced.

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While observing these exercises, I also had the pleasure of seeing Livermore and Y-12 use their new emergency operations centers during the exercises. We look forward to seeing the fruits of efforts at Sandia, Nevada, and Savannah River to build their own new emergency operations centers, which are valuable and much-needed safety infrastructure investments.

We've had a busy year overseeing NNSA's defense nuclear activities. Overall, we received very good support from NNSA sites during our oversight activities and we are pleased to see progress on our safety concerns in several areas. Moreover, we are beginning to see an improved responsiveness to our safety concerns on the part of NNSA, as evidenced by NNSA's recent communications on PF-4 and the Savannah River Plutonium Processing Facility.

Thank you for this opportunity to speak. I will be happy to answer any questions.