

Bruce Hamilton, Chairman
Jessie H. Roberson
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**DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

Washington, DC 20004-2901



October 28, 2019

The Honorable James Richard Perry
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Secretary Perry:

We received the Department's letter dated September 23, 2019, regarding the implementation plan for Board Recommendation 2019-1, *Uncontrolled Hazard Scenarios and 10 CFR 830 Implementation at the Pantex Plant*. In our August 22, 2019, letter, we noted significant concerns with the implementation plan such that it is our position that you have rejected our recommendation; we maintain that position. The attached enclosure provides further explanation of our conclusion (with examples).

We accept your offer to provide the Board with a detailed and comprehensive briefing on your implementation plan and request representative(s) who can speak for the Department and NNSA to provide this brief to the Board during a public meeting at the Board's Washington, DC, headquarters, in accordance with the Government in the Sunshine Act. The Board is prepared to receive this briefing on December 12, 2019. Pursuant to 42 U.S.C. § 2286b(d), we request you confirm, by November 1, 2019, that you or your representative(s) will provide the briefing on December 12, 2019.

We request the briefing address the main categories described in the enclosure to this letter. Please provide your briefing materials to the Board at least 24 hours in advance of the public meeting.

We will post the agenda for the public meeting on our web page, <http://www.dnfsb.gov>, and will update the agenda as we finalize preparations for the meeting. Your staff may contact our Technical Director, Mr. Christopher Roscetti, should you have any questions regarding our position on your implementation plan or to make the necessary arrangements for you or your representative(s) attendance.

Yours truly,

A handwritten signature in black ink that reads "Bruce Hamilton". The signature is written in a cursive style with a large initial "B".

Bruce Hamilton
Chairman

Enclosure

c: The Honorable Lisa E. Gordon-Hagerty
Mr. Joe Olencz

Evaluation of Recommendation 2019-1 Implementation Plan

The Defense Nuclear Facilities Safety Board (Board) evaluated the Department's implementation plan (IP) for Recommendation 2019-1 against Board Policy Statement-1, *Criteria for Judging the Adequacy of DOE Responses and Implementation Plans for Board Recommendations*. The Board judges the 2019-1 IP as insufficient to address the Board's recommendations.

1. The IP fails to identify essential federal actions required to ensure adequate protection.

Examples include:

- a. Numerous deliverables are solely a contractor product without federal review and approval of the product. The federal approval authority has the responsibility on behalf of the Secretary to ensure adequate protection of the public. In accordance with DOE's role as regulator, federal review and approval is required for these associated deliverables. There may be substantial rework necessary for contractor products to meet federal approval authority expectations. (IP Issues: 1.1, 1.2, 1.3, 1.4, 1.7, 2, 3, 4.1, 4.2, 4.3, 5)¹
- b. After reviewing the causal analysis report and IP, the Board cannot conclude that the actions will address the root causes of the deficiencies identified in the recommendation. For example, one of the identified causes is lack of DOE guidance or industry standards related to special tooling design, manufacturing, and maintenance; DOE/NNSA provided no actions to address this cause. (IP Issues: 1.2, 2, 4.1, 4.3, 4.5)

2. The IP specifically rejected the Board's recommendations by failing to address them.

Examples include:

- a. The process improvements proposed only consider administrative controls for falling technician scenarios. The Board recommended implementation of both process redesign and engineered controls to address both impact and falling technician scenarios. While the falling technician administrative controls are a good first step, as the recommendation was accepted, the IP needs to include additional engineering efforts. (IP Issue 3)
- b. The proposed actions only constitute an independent review of the Board issue, and not acceptance of the sub-recommendation. (IP Issue 4.2)
- c. The IP does not address the concern that maintenance of special tooling is not performed according to detailed written procedures (as with other safety systems). (IP Issue 4.3)

¹ Six months after completing the final IP action, DOE/NNSA commits to initiate an effectiveness review of all actions taken.

3. **The IP fails to fully address actions the Board specifically recommended.**

Examples include:

- a. Proposed deliverables do not provide evidence of completed actions to resolve Board issues. A schedule does not provide evidence that the corrective actions have been completed. The Board is aware of multiple schedules that planned to correct issues with the Pantex Plant safety basis that did not come to fruition. (IP Issues: 1.6, 1.7, 2, 4.3, 4.4)
- b. The actions to address these issues do not implement immediate compensatory measures as the Board recommended, but provide for a reevaluation of the identified scenarios, review of administrative control degradation, reevaluation of control sets, or plan to resolve open conditions of approval. Some of these plans will take several years to complete. The Board recommended compensatory measures in the immediate future to provide adequate protection in the interim. (IP Issues 1.1, 1.5, 1.6, and 1.7)
- c. The proposed resolution does not fully address concerns with the technical basis for existing special tooling requirements (e.g., lack of a rigorous technical foundation for special tooling factors of safety, incomplete guidance for when to use yield or ultimate strength in tooling evaluations, and failure probability criteria for seismic events). (IP Issue 4.1)
- d. The proposed corrective actions, while beneficial in assuring that special tooling will meet its design function, do not address all deficiencies noted in Recommendation 2019-1 Enclosure 1—for example, loss of tooling function during elastic deformations and non-conservative falling technician analysis. (IP Issue 4.5)