



The Secretary of Energy
Washington, DC 20585

October 11, 2017

The Honorable Sean Sullivan
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue NW, Suite 700
Washington, DC 20004

Dear Chairman Sullivan:

I am writing in response to your letter regarding the Department of Energy's (DOE) revision and issuance of DOE Order (O) 232.2A, *Occurrence Reporting and Processing of Operations Information*. The enclosure to your letter describes seven areas of concern which the Defense Nuclear Facilities Safety Board (Board) considers to have significantly weakened occurrence reporting and impeded safety oversight at defense nuclear facilities.

In 2016, the Department undertook a deliberative effort to issue DOE O 232.2A, relying on the collaboration of an Integrated Project Team (IPT). The IPT for this Order revision consisted of Federal and contractor senior level management subject-matter experts and occurrence reporting practitioners from throughout the Department. The objectives of this revision were to clarify the purpose of DOE's event reporting in terms of significance and the value of lessons learned based on a risk-informed strategy; examine how the DOE Lessons Learned program and site-level Contractor Assurance Systems could be leveraged to support DOE corporate learning and improvement; and identify how the tailoring of the Order requirements at the Program Secretarial Office level could be used to balance critical reporting needs specific to mission areas, while providing flexibility to other DOE missions. The Department believes that DOE O 232.2A meets these objectives without weakening occurrence reporting or impeding nuclear safety oversight.

The Board's concerns were communicated by the Board's technical staff to the IPT during the review and comment cycle of draft DOE O 232.2A. While the IPT accepted a number of Board staff's comments on the draft Order, the IPT (and DOE senior management) thoroughly considered, but did not accept, the comments pertaining to the seven areas of concern cited in your letter. DOE's response to all comments were provided and discussed with the Board's technical staff during the review process. Enclosure 1 provides additional information on DOE's response to your May 10 letter and its enclosure. Also enclosed, as requested in your letter, are descriptions of supplemental actions that DOE's Office of Environmental Management, Office of Science, and the National Nuclear Security Administration plan to take in implementing DOE O 232.2A.



We believe that DOE O 232.2A still ensures safety oversight is not degraded at defense nuclear facilities, it reduces duplicate reporting requirements and is better integrated with local (site-specific) reporting processes, which will result in an efficient and effective sharing of information across the DOE Complex. In addition, and as is standard practice for all of the Department's new or revised directives, we will closely monitor the effectiveness of DOE O 232.2A following Department-wide implementation.

If you have any questions regarding this response, please contact Mr. Andrew Lawrence, Acting Associate Under Secretary for Environment, Health, Safety and Security, at (202) 586-6740.

Sincerely,

A handwritten signature in black ink that reads "RICK PERRY". The letters are in all caps and have a cursive, slightly slanted appearance.

Rick Perry

Enclosures

ENCLOSURE 1

**Response to the Defense Nuclear Facilities Safety Board
Letter and Staff Issue**

Response to the Defense Nuclear Facilities Safety Board Letter and Staff Issue

In 2016, the Department of Energy (DOE or Department) initiated an effort to evaluate DOE Order (O) 232.2, *Occurrence Reporting and Processing of Operational Information*, and to identify ways to improve the Order. DOE convened an Integrated Project Team (IPT) comprised of Federal and contractor senior level management subject-matter experts and occurrence reporting practitioners from throughout the Department for this evaluation effort. DOE asked the IPT to accomplish the following objectives:

- Develop and present the “Commander’s Intent” for DOE O 232.2 by clarifying the purpose of DOE’s event reporting in terms of significance and the value of lessons learned based on a risk-informed strategy.
- Examine how the DOE Lessons Learned program and site-level Contractor Assurance Systems could be leveraged to support DOE corporate learning and improvement. In addition, the IPT was asked to determine the need and value in reporting/learning of occurrences of lower significance that may be a precursor or near-miss to a more significance event and how this data can include corporate learning and lessons learned for DOE.
- Identify how tailoring of the Order requirements at the Program Secretarial Office (PSO) level could be used to balance critical reporting needs specific to Mission Areas, while providing flexibility to other missions of the Department.

The IPT unanimously agreed that DOE O 232.2 is essential to DOE’s mission and should be retained and revised/updated. The IPT reached consensus on recommended changes with a phased approach for implementation due to system and database upgrades necessary. The recommended changes to the Order include the following:

- Redefinition of significance categorization levels for reporting to enhance efficiency of reporting.
- Modification of the time to report events commensurate with risk.
- Reduction in the overall complexity of event reporting.
- Better alignment with other required events reporting.
- Clarification of the roles and responsibilities of the Order in accordance with Departmental policy as stated in the Secretary of Energy’s memorandum entitled, *Department of Energy Roles/Responsibilities – National Laboratories*, issued on October 20, 2016.

From August to December 2016, the IPT held conference calls and conducted two in-person workshops in an effort to complete a revised DOE O 232.2A¹ and meet the objectives highlighted above. The team received comments on the draft Order from throughout the Department (as well as from the Defense Nuclear Facilities Safety Board (Board) staff). The IPT

¹ For clarity, the revised Order will be referred to in this Enclosure as “O 232.2A.” Its predecessor will be referred to as “DOE O 232.2.”

strongly believes that O 232.2A effectively achieves the purpose as stated in the DOE decision memorandum to revise the Order:

“DOE O 232.2 ensures DOE and National Nuclear Security Administration personnel are informed about events that could adversely affect the health and safety of the public or the workers, the environment, DOE missions, or the credibility of the Department. This Order also promotes organizational learning consistent with DOE’s Integrated Safety Management System ... Revisions to this Order will help the Department better accomplish its mission by improving consistency in implementation, reducing duplicative reporting, increasing quality of reporting, and clarifying roles and responsibilities.”

Below are DOE’s response to each of the Board concerns listed in the May 10, 2017, letter and its Enclosure.

- 1) ***Deleting the Requirement to Report a Potential Inadequacy of the Safety Analysis (PISA)*** — The mechanism to meet the notification requirement of PISAs contained in Title 10 Code of Federal Regulations (CFR) Part 830, *Nuclear Safety Management*, will be satisfied in accordance with the local DOE Field Office and contractor procedures. The PISA reporting requirement in 10 CFR Part 830 does not specify that Occurrence Reporting and Processing System (ORPS) be used as a notification conduit. In addition, a PISA is an initial notification of a potential inadequacy of the facility’s documented safety analysis; thus the cognizant facility safety professional has yet to determine whether or not there is a safety concern. Once a PISA has been declared, 10 CFR Part 830 also requires that the facility personnel perform the unreviewed safety question determination (USQD) process. If the USQD is positive, then the PISA and the USQD results are reported into ORPS to notify DOE of the safety analysis inadequacy. DOE has and will continue to strictly adhere to the requirements of 10 CFR Part 830. The facility personnel actions relating to a PISA declaration to take immediate actions (e.g., compensatory measures and operational restrictions to place or maintain the facility in a safe condition while the PISA is being addressed) are elements of 10 CFR Part 830. Nothing in O 232.2A would prevent DOE and its contractors from adhering to 10 CFR Part 830. Another aspect of using PISA reporting for initial notification is that it does not align with O 232.2A’s reporting timeframes (Attachment 4, Page 1). For Low and Informational Level Reports, sites have 10 business days to report them into the ORPS database. Thus, within 10 business days, a positive USQD should be completed for a PISA and reported into the ORPS database.

In their respective supplemental action enclosures, the DOE Office of Environmental Management (EM) and Office of Science (SC) both discuss Program-specific expectations pertaining to the reporting of PISAs.

- 2) ***Deleting the Requirements to Issue Separate Notification and Final Reports for Occurrences Designated as Low Level Reports*** — Low Level Report requirements are in line with the objectives of the O 232.2A revision: to modify the time to report events commensurate with risk and to reduce the overall complexity of reporting events. Low Level and Informational Level Reports are required to be entered into the ORPS database within 10 business days. This time allotment will allow for event response and more

detailed, accurate and higher quality reports to be submitted to the ORPS Database. The Informational and Low Level Reports may be updated at any time and all fields are available for use, including a new feature by which Causal Analysis reports, Corrective Actions, photos, and other supporting documentation may be attached to such reports.

- 3) ***Downgrade of Positive Unreviewed Safety Question Determination (USQD) Reporting*** — Order 232.2A does not negate established USQ processes. The USQ requirements are specified in 10 CFR Part 830 and guidance on the USQ process is provided in DOE Guide 424.1-1B, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*. With respect to positive USQD reporting under O 232.2A, such reports have been categorized as Low Level Reports to accurately reflect the information that those reports would contain. Thus, the outcome of the PISA and USQ process is not “downgraded” and will be captured in the ORPS Database via the Low Level Report category. The intent of the report level for positive USQDs is to ensure that such information is reported into ORPS while allowing the established USQ processes and procedures at a particular site to work as intended.
- 4) ***Deletion of Requirement and Expectation for Categorizing Near Miss and Management Concern Occurrences*** — Near miss and Management Concern events will continue to be reported in ORPS using the Informational Report Level. If a site chooses to provide more information than the minimum requirements of an Informational Level Report, it may do so. Also subsequent updates to Informational Level Reports may be used to provide more information. During the IPT discussion on near miss and Management Concern reporting, a common deterrent cited for reporting near misses and Management Concerns was that the Significance Category had to be chosen and agreed upon at the site-level. This could often result in long discussions among staff regarding how to report an occurrence. The IPT decided to assign a Report Level (similar to the previously used Significance Categories) to every Reporting Criteria in order to eliminate these internal debates and foster increased promptness of reports on near miss and Management Concern occurrences. In addition, the IPT anticipates an increase in the quantity and quality of reports as a result of fewer debates amongst staff, incorporation of locally approved procedures to best fit the needs of a particular site, and simplified Report Level structure when compared to Significance Categories.

In its supplemental action enclosure, EM discusses implementation requirements pertaining to the reporting of near miss events into ORPS.

- 5) ***Deletion of Requirement on Depth of Causal Analysis Included in Final Reports*** — The revision of DOE O 232.2 focused on the Commander’s intent of this Directive which was to provide requirements on notification of events. Requirements that exist in other DOE Directives and repeated in DOE O 232.2 were removed from O 232.2A; an example is the requirement regarding the depth of causal analysis that is specified in DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*. Order 232.2A requires any completed causal analysis to be reported in High Level Reports. The PSOs could require Causal Analysis for other Report Levels and to have cause codes and corrective actions uploaded to the ORPS database; the EM and SC supplemental action enclosures provide supplemental requirements to this regard. It is important to note that the ORPS database

will allow all fields to be completed for all Report Levels. The responsibility is on the site office to determine what additional notifications the event warrants and what timeframes are followed. The reporting model in O 232.2A allows local procedures to specify what additional reporting requirements are needed.

In their respective supplemental action enclosures, EM and SC both discuss Program-specific expectations pertaining to the performance and inclusion of causal analysis requirements into ORPS. In addition, EM, SC, and the National Nuclear Security Administration (NNSA) discuss the importance of using ORPS data for trending analysis.

- 6) ***Deletion of Requirement on Addressing Need for Extent-of-Condition Review in Final Reports*** — Under DOE O 232.2A, extent of condition reviews that have been performed must be reported in final High Level Reports. Previously in DOE O 232.2, the need for an extent of condition review had to be assessed and results documented in final reports. The difference in the new Order is the focus on notification of what actions have been conducted regarding the event, including any causal analyses, corrective actions, and extent of condition reviews, all of which are a result of local procedures and the implementation of DOE O 226.1B requirements. If an extent of condition review is performed, the information must be provided into ORPS per O 232.2A. In addition, with High Level Reports having 60 calendar days to be finalized (extended from the 45 calendar days in DOE O 232.2), the extent of condition review, along with causal analysis, will either be ongoing or completed for most events and therefore, the information will be provided in the High Level Report.
- 7) ***Allowance to not Report Informational Level Reports*** — The PSOs will make the determination regarding which, if any, Informational Level Reports are entered into ORPS based on their utilization of the tailored approach provided in the revision to the Order. If the PSOs decide to tailor Informational Level Reports, their internal processes will capture this information.

In the respective supplemental action enclosures, NNSA, EM, and SC all discuss expectations pertaining to the reporting of Informational Level Reports into ORPS.

Conclusion. DOE believes that O 232.2A has established an appropriate level of reporting and occurrence analysis requirements without degrading safety or safety awareness, simplified and clarified required reporting, redefined significance categorization levels, and modified reporting time requirements. DOE also believes that it has met the objectives of the O 232.2A revision without weakening occurrence reporting and/or impeding nuclear safety oversight. The pending implementation of O 232.2A will reduce duplicate reporting requirements and foster better integration with local (site-specific) reporting processes, all of which would result in an efficient and effective sharing of information across the DOE Complex. In addition, and as is standard practice for all of the Department's new or revised directives, DOE will closely monitor the effectiveness of O 232.2A following Department-wide implementation.

ENCLOSURE 2

**Office of Environmental Management Supplemental
Direction Concerning DOE Order 232.2A**

**Office of Environmental Management Supplemental Direction Concerning
DOE Order 232.2A**

The Office of Environmental Management (EM) is implementing, in conjunction with DOE O 232.2.A *Occurrence Reporting and Processing of Operations Information*, supplemental guidance for EM contractors. This will be implemented through a Contract Requirement Document Supplement (CRDS) that has been prepared.

Major aspects of the CRDS include the following:

- Informational and Low Level (L) reports are expected to be short summary reports with enough detail to understand the nature of the event and actions taken to address the condition.
- A potential inadequacy of the documented safety analysis (PISA) shall be reported as per prompt verbal notification requirements with a corresponding Facility Representative (FR) explanatory email that discusses any resulting operational restrictions. A formal written report will only be required in the ORPS database if the PISA results in the determination of a Positive Unreviewed Safety Question (USQ) per Group 3, Subgroup B (2) L. Determination of a positive USQ that reveals a currently existing inadequacy in the Documented Safety Analysis.
- A near miss to an injury, where something that was unexpected or unintended occurred AND where no barrier prevented such an event from having a reportable consequence (i.e., happenstance was the main reason the event did not result in a reportable injury) shall be reported as Informational (I). A near miss event in the follow-up reporting shall be declared as High (H), Low (L), or Informational (I) depending upon the potential corresponding reportable consequence.
- Minimum required causal analyses, based on the event significance are specified similar to the previous revision. Local DOE sites are afforded latitude in analysis level. Causes must be identified and appropriately documented and the database field must include a brief discussion that clearly links the event to the cause code(s) and resulting corrective actions.
- Specific provisions for trend analysis per DOE O 226.1.B *Implementation of Department of Energy Oversight Policy* in order to tie Occurrence Reporting & Processing System (ORPS) data to the oversight process.
- Select Low Level (L) reportable items were specified for review by the EM Facility Representative within 10 days.

EM leadership intends to periodically review the implementation of O 232.2A with CRDS and implement changes as required.

ENCLOSURE 3

**National Nuclear Security Administration
Supplemental Direction Concerning DOE Order 232.2A**

**National Nuclear Security Administration Supplemental Direction
Concerning DOE Order 232.2A**

The Department of Energy's National Nuclear Security Administration (DOE/NNSA) distributed a memorandum dated August 3, 2017, from the Associate Principal Deputy Administrator. The memorandum provided DOE/NNSA's field offices with guidance on reporting associated with the revised DOE Order 232.2A, *Occurrence Reporting and Processing of Operations Information*.

- The reporting categories were simplified into "High," "Low," and "Informational" level reporting. For Low and Informational reporting, the revised Order reflects causal analysis and corrective actions will be conducted in accordance with local procedures. This information will not be duplicated in the ORPS database.
- The goal for simplifying the categories and moving the analysis and corrective action process to local procedures was to reduce administrative requirements, while still allowing trending and opportunities to learn from one another.
- Retaining Low and Informational reports in the Occurrence Reporting and Processing System (ORPS) database will allow DOE/NNSA to systematically collect, evaluate, and share operational experience at the enterprise level.
- The implementation process for this Order is driven by changes in the ORPS reporting database. The changes to this database were completed in June 2017. Following the database going live on October 1, 2017, all required reporting will be in accordance with DOE Order 232.2A.
- Given that follow-up requirements for causal analysis and corrective actions have been assigned to field offices for action within existing programs, Field Offices were encouraged to review local procedures to ensure adequacy to accomplish these actions.

ENCLOSURE 4

**Office of Science Supplemental Direction Concerning DOE
Order 232.2A**

Office of Science Supplemental Direction Concerning DOE O 232.2A

The Department of Energy Office of Science (DOE-SC) has put into place supplemental guidance to DOE O 232.2A that applies only to Hazard Category 1, 2, and 3 nuclear facilities. The supplemental guidance is included in the Office of Science Management System and each DOE-SC Field Element Manager is required to incorporate these requirements into their site contract, if applicable. The supplemental direction has an implementation date of October 1, 2017.

The supplemental direction includes:

- Three nuclear safety specific Informational Level reporting criteria for events that occur in a Hazard Category 1, 2, or 3 nuclear facility will be required to be entered into the Occurrence Reporting & Processing System (ORPS) database. The three Informational Level reporting criteria are: 1) Surveillance test performed after the prescribed surveillance period in which the structure, system, or component (SSC) was found to be capable of performing its specified safety function; 2) Any fire in a nuclear facility; 3) Degradation of a safety class (SC) SSC when not required to be operable.
- A potential inadequacy of the documented safety analysis will be reported as Reporting Criterion Group 10, *Management Concerns and Issues*, #1.
- A root cause analysis is required to be performed for nine High Level criteria that occur in Hazard 1, 2, and 3 nuclear facilities. Results and associated corrective actions of the root cause analysis are required to be entered into ORPS. Examples of High Level criteria required to perform root cause analysis include Technical Safety Requirement violation, fire that activates the automatic fire suppression system, and nuclear facility exceedance of approved hazard categorization.
- An apparent cause analysis is required to be performed for six Low Level criteria that occur in Hazard 1, 2, or 3 nuclear facilities. Results and associated corrective actions of the apparent cause analysis are required to be entered into ORPS. Examples of Low Level criteria required to perform apparent cause analysis include actuation of safety significant (SS) SSC as a result of an unsafe condition, violation of a credited hazard control approved in the documented safety analysis, and performance degradation of a SC or SS SSC when required to be operable.