



**Department of Energy**  
**Under Secretary for Nuclear Security**  
**Administrator, National Nuclear Security Administration**  
**Washington, DC 20585**



April 26, 2023

The Honorable Joyce L. Connery  
Chair, Defense Nuclear Facilities Safety Board  
625 Indiana Ave. NW, Suite 700  
Washington, DC 20004

Dear Chair Connery:

I am responding on behalf of the Secretary to your letter dated August 17, 2022, regarding the results of the Defense Nuclear Facility Safety Board's (DNFSB/Board) review of Department of Energy (DOE) oversight effectiveness at DOE defense nuclear facilities. The letter requested a briefing and written report on how DOE, including DOE's National Nuclear Security Administration (NNSA) plan to address the Board's advice to improve safety oversight.

The enclosed report describes DOE/NNSA's evaluation of safety oversight processes at defense nuclear facilities and presents ongoing and new DOE/NNSA actions in the process of addressing the effectiveness of safety oversight. Self-improvement does not end with the actions in this report, and DOE/NNSA expects to identify additional improvement opportunities resulting from this process. DOE/NNSA looks forward to discussing its evaluation with you and will work with Board staff to schedule a briefing.

DOE/NNSA appreciates the Board's review and feedback on the four main areas (effectiveness assessments, staffing, proactive oversight, and issues management) that demonstrate DOE/NNSA's safety oversight approach is effective. With respect to the areas that the DNFSB reviewed, and the issues cited, DOE/NNSA determined that existing oversight processes are adequate. However, there are opportunities to strengthen their effectiveness.

DOE/NNSA continues to value the Board's advice and assistance. If you have any questions, please contact Mr. Ahmad Al-Daouk, Associate Administrator for Environment, Safety, and Health, at (202) 586-4096.

Sincerely,

A handwritten signature in black ink, appearing to read "Jill H", with a long, sweeping horizontal stroke extending to the right.

Jill Hruby

Enclosure

**U. S. Department of Energy**

**Report on DOE's, Including NNSA's, Evaluation of Federal Safety  
Oversight Processes at Defense Nuclear Facilities**



Washington, DC 20585

April 2023

## **Executive Summary**

A Department of Energy (DOE) team, led by DOE's National Nuclear Security Administration (DOE/NNSA), reviewed the Defense Nuclear Facilities Safety Board (DNFSB/Board) letter dated August 17, 2022, which identified four main areas for improvement with DOE's safety oversight approach. The four areas identified were effectiveness assessments; staffing; proactive safety oversight; and safety issues management. In response to the Board's recommendations, DOE formed a working group comprised of senior staff from NNSA and DOE's offices of Environmental Management (EM), Science (SC), and Enterprise Assessments (EA), to evaluate whether any immediate actions were needed to ensure safety was maintained at Defense Nuclear Facilities (DNF). DOE, including NNSA, determined that its oversight processes are adequate, but the working group identified opportunities to improve in the four areas cited by the DNFSB. These opportunities comprise a combination of the following new initiatives and ongoing activities:

- DOE/NNSA will use Energy Facility Contractors Group (EFCOG) tools to develop Contractor Assurance System (CAS) effectiveness evaluation criteria. Following development, DOE/NNSA will evaluate how best to capture the new criteria for Departmental use.
- DOE/NNSA leadership will continue to champion effective measures to address safety staffing, retention, training, and qualification challenges. Examples include: NNSA's Safety Staffing Integrated Project Team and safety staffing risk dashboard; legislative proposals to address recruitment challenges; and continued support from the DOE Federal Technical Capabilities Panel (FTCP).
- DOE will evaluate how best to institutionalize NNSA's Site Integrated Assessment Plan (SIAP) process at the DOE level. NNSA will evaluate the need for improvements to SIAP attributes in NNSA Supplemental Directive (SD) 226.1C, *NNSA Site Governance*, Appendix C. This will include considerations for improved guidance on what types of oversight activities are deemed proactive and expected levels of proactive oversight.

DOE/NNSA consider these initiatives as a key initial step in the iterative process of improving mutual DNFSB and DOE interests, particularly effective CASs and associated CAS oversight. DOE appreciates the Board's feedback and looks forward to discussing the initiatives in greater detail at the upcoming briefing specific to this report.

### **DOE's, including NNSA's, Actions to Improve Safety Oversight Effectiveness**

1. **Effectiveness Assessments:** The DNFSB letter expressed that DOE/NNSA needs to improve its effectiveness assessments at all levels of its safety oversight framework. It stated DOE/NNSA safety oversight leverages CAS without a sufficient, documented federal assessment basis to justify that CASs are reliable and effective.

DOE/NNSA determined that in areas related to safety oversight of DNFs, the methodology contained in existing guidance was sufficient to ensure performance issues were being recognized and addressed at the appropriate levels of field and contractor management, and the flexibility built into DOE/NNSA policies, directives, and guides allows DOE/NNSA to be

responsive and focus oversight resources in areas where performance, risk, and program maturity suggest they should be focused.

As the DNFSB report noted, CASs are responsible for performing the foundation of oversight in the current framework, yet they vary in maturity. DOE/NNSA agrees with the Board that an updated set of criteria should be developed. To this end, DOE/NNSA will use the Energy Facility Contractors Group (EFCOG)-generated CAS maturity tool and *EFCOG Best Practice Contractor Assurance System Effectiveness Validation Lines of Inquiry* (LOI) to develop CAS effectiveness criteria, including possible quantitative effectiveness thresholds. The criteria would be used to accelerate the maturation of CAS elements and associated DOE/NNSA oversight. Following development, DOE/NNSA will consider the best means of capturing the criteria for Departmental use.

DOE/NNSA program management leadership are aware of both the strengths and challenges associated with federal oversight and contractor performance in various functional areas (e.g., criticality safety, radiological safety, emergency management, etc.). Recent independent assessments conducted by the Office of Enterprise Assessments have identified strengths, and at some sites significant weaknesses, in federal office oversight. Evaluations performed by headquarters elements, like NNSA's Biennial Reviews (BR), also provide useful insights into the effectiveness of federal oversight. DOE/NNSA is committed to continuously improving federal oversight effectiveness through a number of ongoing actions as described below.

#### *NNSA Ongoing Actions to Improve Safety Oversight Effectiveness*

NNSA evaluates the effectiveness of the field offices oversight of DNFs, CAS, and field oversight through the BR process as documented in NNSA SD 226.1-1B, *Headquarters Biennial Review of Nuclear Safety Performance*. The BR evaluates self-assessments and other documentation that demonstrate how the field offices perform their oversight of management and operating contractor's (M&O) safety management programs and oversee CAS. Historically, the BR approach included attributes of performance-based oversight but focused heavily on compliance. In fiscal year (FY) 2021 improvements were initiated to the BR process to clarify and formalize the expectations for the performance-based aspects to support the evaluation of both performance and compliance at NNSA sites.

Recently, the NNSA Fee Determining Official issued guidance that emphasized use of CAS in evaluating contractor performance as noted in the Proactive Safety Oversight section below.

NNSA is continuing to mature its safety governance to assure effective safety oversight includes CAS. As discussed in the NNSA Safety Functions, Responsibilities, and Authorities (FRA), NNSA SD 226.1-1B, *NNSA Site Governance*, contractor performance is inextricably linked to CAS through the use of safety performance objectives, measures, and commitments. Other input mechanisms are also linked including BRs, SIAP, and Environment, Safety and Health (ESH) Checkerboard. Outputs include the contractor performance evaluation and Integrated Safety Management (ISM) declaration processes.

Both the NNSA Safety FRA and *NNSA Site Governance* SDs are being reviewed and revised to clarify roles and responsibilities within the safety governance model to capture opportunities for

improvements noted during recent BR reviews. The purpose is to drive NNSA toward highly effective safety programs and processes. These improvements will lead to developing appropriate evaluation criteria and acceptance thresholds for future effectiveness assessments. The August 17, 2022, DNFSB letter conclusions are being considered during the preparation of these revisions.

#### *EM Ongoing Actions to Improve Safety Oversight Effectiveness*

EM consistently re-enforces its commitment to the maintenance and use of effective CAS and Integrated Safety Management Systems (ISMS). Biennially, EM Headquarters (EMHQ) requests that its field offices submit Effectiveness Declarations for theirs and their contractors' CAS and ISMS. Each EM field office prepares these declarations for submittal to EMHQ. EMHQ does not dictate the methodology to be used by the individual field offices but does state that the field offices' "existing oversight should provide the Field Element Manager with the needed evidence to document that work is being performed safely, securely, and in compliance with all requirements; risks are being identified and managed; and that the systems of control are effective and efficient." The EMHQ declaration request to its field offices does include a template with specific elements that must be answered to support their declarations.

EMHQ, in consultation with its field offices, evaluated several alternatives for effectiveness reviews of ISMS and CAS, including a comprehensive, biennial review of these programs to evaluate their overall effectiveness. However, based upon the importance of these programs to the achievement of safety performance, continuous monitoring of these programs is needed. EM field offices have used this approach for several years and monitor CAS and ISMS performance through many of the mechanisms previously described (operational awareness, surveillances, focused assessments, data analysis, etc.). This approach does result in variations in field office evaluation of these critical programs. EM will continue to monitor and evaluate the CAS and ISMS routinely but recognizes the benefits of the Board's suggestion to develop and promulgate a set of criteria to assess CAS effectiveness. Such an approach would reduce variations in criteria and expectations for CAS and ISMS and enhance the identification and sharing of best practices across the complex.

#### *The Office of Environment, Safety, and Health Assessments Ongoing Activities to Improve Safety Oversight Effectiveness*

The Office of Environment, Safety, and Health Assessments (EA-30) issued a new criteria and review approach document (CRAD) for federal line management oversight assessment in late 2020. This CRAD includes objectives and criteria for assessing field element as well as headquarters and program office oversight. This CRAD has since been used extensively for EA-30 assessments and is planned to be used for a majority of the FY 2023 EA-30 assessments. Additionally, EA finalized a new protocol in 2022, Protocol 34-00, *Office of Nuclear Engineering and Safety Basis Assessments Protocol for High-Hazard Nuclear Facility Project Oversight*, which states that assessments of high-hazard nuclear facility projects must include an evaluation of the Federal line management oversight of the project.

### **DOE/NNSA New Initiatives:**

DOE/NNSA will use EFCOG tools to develop CAS effectiveness criteria. The criteria would be used to accelerate the maturation of CAS elements and drive sustainable improvements to oversight effectiveness. Following development, DOE/NNSA will evaluate how to best capture the new criteria for Departmental use (e.g., Handbook). Independently and in parallel, EA will benchmark the federal line management oversight CRAD against the CAS effectiveness criteria and consider making appropriate changes to the CRAD in the next revision.

NNSA is considering DNFSB conclusions from its August 17, 2022, report as it revises the NNSA Safety FRA and *NNSA Site Governance* SDs. For example, the DNFSB identified the NNSA Production Office (NPO) as having a more defined process than the other field offices for evaluating and leveraging CAS effectiveness. NNSA Office of Environment, Safety and Health (NA-ESH)-20 will work with NPO to understand and consider improvement needs (if appropriate) in the revision process of these NNSA documents.

DOE/NNSA will evaluate opportunities in existing Communities of Practice (e.g., NNSA/EFCOG Conduct of Operations Working Group) to discuss CAS. The community of practice could allow the broad socialization of strengths and challenges between Federal and Contractor partners across DOE, including NNSA, DNFs, and could be used to identify improvement initiatives.

2. **Staffing:** The DNFSB letter expressed that DOE needs to improve its staffing plans and implementation to ensure sufficient technical capability is applied to safety oversight activities.

DOE/NNSA is leveraging many opportunities to address the challenges with hiring a highly capable workforce in the post-COVID work environment to meet the DOE/NNSA mission. The desire for individuals to seek telework or remote work positions in a post-COVID environment has driven DOE/NNSA to exert extensive effort to enhance its workforce. Recruiting and maintaining an onsite staff is a challenge. DOE/NNSA is working diligently to recruit highly qualified technical staff to meet the agency needs. DOE/NNSA is also limited in the number of staff that may be hired due to limited appropriations and statutory caps. DOE/NNSA is committed to use all available tools to ensure oversight responsibilities are met. DOE/NNSA continues to use subject matter experts cross-programmatically on a project-by-project basis to supplement the technical capabilities of site offices and headquarters offices.

DOE/NNSA continuously evaluates its mission to ensure the appropriate level of staffing is on site and makes strides for improvement.

### *NNSA Ongoing Actions to Improve Safety Staffing*

Annually, NNSA evaluates and updates its unconstrained staffing analysis. The scope of the updates is to identify gaps in staffing and prioritize increases in staffing to meet mission requirements. The update includes an evaluation by each organization to inform the forecasted staffing needs. New federal billets are more constrained than this staffing analysis, but the

unconstrained analysis is a useful tool for planning and prioritizing future federal billets that become available. Staffing needs are tied to mission requirements and staffing allocations are made at the most senior leadership levels. These decisions consider the staffing inputs, plans, and priorities of all organizations and ensure priority needs are filled in a balanced and informed way to successfully meet mission needs. This includes providing staffing to field offices to support effective oversight.

Through strong hiring efforts, NNSA field offices are typically staffed at 95 percent of the allocated billets. NNSA continues to make strong use of its excepted service hiring authority to support staffing needs supporting oversight and works closely with field offices to surge human resource assistance where needed to address staffing gaps. NNSA excepted service has been such a critical tool that NNSA is pursuing a legislative proposal that would eliminate the cap associated with these positions. NNSA is also more aggressively leveraging government-wide direct hiring authorities for science, technology, engineering, and math (STEM) positions to address staffing needs. While these authorities support acquiring necessary talent quickly, expansion of the covered series would provide even more support to DOE/NNSA in addressing critical staffing gaps. Significant progress has been made in the last year in staffing our offices. DOE recognizes its staffing may ebb and flow with factors such as retirements, leaving for other opportunities, etc., as it works toward filling all identified billets. A recurring challenge for some sites is recruiting and retaining a workforce in remote or highly expensive locations.

Since there is a lengthy qualification and learning process associated with safety staffing experts, DOE continues to work with the FTCP to provide needed training opportunities and leverage prior experience to complete the Technical Qualification Program (TQP). Additionally, NNSA has chartered an Integrated Project Team (IPT) to closely examine more near-term needs in safety staffing. This IPT, co-led by NA-NPO and NA-ESH, is analyzing safety staffing positions to make recommendations for the improvement of NNSA's recruitment, development, and retention of safety subject matter experts (SMEs). The IPT is also developing a white paper for Senior NNSA Leadership to evaluate and implement. Additionally, NNSA's Office of Management and Budget and NA-ESH partnered to form a Knowledge Preservation Program, capturing knowledge of current employees to transfer to existing/new hires and for posterity.

As part of NNSA's Enterprise Safety Risk Dashboard reports, federal staffing risk (including TQP qualifications) for each NNSA site is assessed as part of monitoring oversight vulnerabilities to allow for earlier intervention to address potential risks to adequate oversight. NNSA reports the Safety Risk Enterprise Dashboard to NA-ESH-1 on a triannual basis (three times-a-year).

#### *EM Ongoing Activities to Improve Safety Staffing*

Recruiting and retaining key safety personnel is concern at several EM sites, including sites that were included within the scope of the Board's oversight assessment. EM is aware of the issue and has been working to develop a comprehensive plan to improve its ability to recruit and retain key safety personnel. Safety personnel, within the context of this discussion, includes Facility Representatives (FRs), Safety System Oversight (SSOs), and safety SMEs. SMEs include criticality safety, nuclear safety, fire protection, and other personnel occupying key safety

positions. There is no single cause to the staffing issue and EM field offices are faced with identifying solutions that address the cause(s) that are applicable to their site, but must do so within the constraints of federal laws and regulations pertaining to pay, retention allowances, etc. However, there are some common causes affecting multiple sites, such as EM's reliance on traditional General Schedule pay scales which have drawbacks with respect to pay raise flexibility compared to other pay scale options used by some elements within the department; lengthy and uncompensated commutes to remote work locations; and a desire to have telework and/or remote work has negative impacts on some FR recruitment and retention.

EM has been pursuing special hiring authorities for more than one year. A primary objective was to obtain authorization to use Excepted Service, particularly Enterprise Knowledge hiring authorities. EM has received authorization for 129 Enterprise Knowledge positions. Of these, 108 are for safety-related positions. The current plan is to convert 76 existing positions to Enterprise Knowledge positions for retention purposes. An additional 32 Enterprise Knowledge positions have been identified for recruitment purposes. EMHQ collaborated with its field offices to identify specific safety related positions at each site that would benefit from either conversion of an existing position to an Enterprise Knowledge position, or the identification and justification of a need for additional Enterprise Knowledge staff.

EMHQ has been monitoring its staffing numbers as well as its field elements' safety staffing closely. For FRs and SSOs, EMHQ monitors: the number of full-time equivalents (FTEs) positions authorized; the number of FTEs in those positions that are currently filled; the number fully qualified FRs and SSOs; the number of hiring actions initiated for any shortfalls; and the number of government support services contractors used to supplement staffing shortfalls in key safety disciplines. EM's safety staffing has improved modestly over the past six months, and it is anticipated that additional improvement will continue over the next year as the use of the Enterprise Knowledge authorized positions expands. Collectively, at EM sites there has been a net increase of 2 FRs over the past 6 months with an additional 26 hiring actions initiated but not yet filled. The largest shortfall is at the Hanford site where aggressive hiring actions are underway. For SSOs, the current EM-wide shortfall is 16, and 16 hiring actions have been initiated.

It is important to note that the SSO designation is more challenging to quantify across EM sites as there are differences in the types of assignments given to SSOs, the acceptable collateral duties that they may assume, and overall position designations. For example, a criticality safety specialist may be an SME and not a qualified SSO. Their function may consist exclusively of reviewing criticality safety program activities, and outputs from the analysis process (e.g., criticality safety evaluations). At another site, an individual assigned to the criticality safety specialist position may also be responsible for the criticality alarm and annunciation system (CAAS) which is an SSO responsibility (when appropriately credited in safety basis documentation). For this reason, comparing the number of SSOs at one site to another similarly sized site can produce inaccurate results if the nuances of each site's distinction between SMEs and SSOs is not well understood.



### **DOE/NNSA New Initiatives:**

There are no new DOE/NNSA initiatives to be taken at this time. As discussed in the previous sections, DOE/NNSA leadership will continue to champion effective measures to address safety staffing, retention, training, and qualification challenges. Additionally, the Federal Technical Capabilities Panel will continue to work with DOE to identify needed training opportunities once staff is hired.

3. **Proactive Safety Oversight:** The DNFSB letter expressed that DOE needs to increase proactive safety oversight to ensure safety issues are identified in a timely manner.

DOE/NNSA continue to implement evaluations of programs and processes related to safety in accordance with DOE Policy 226.2, “*Policy for Oversight and Contractor Assurance System*” and DOE Order 226.1B, “*Implementation of Department of Energy Oversight Policy*” using a mix of evaluation techniques to ensure federal resources are appropriately allocated in areas where program maturity, risk and performance suggest they are needed.

DOE/NNSA continue to leverage CASs as their primary resource of information to evaluate and inform facility and site federal management at all levels to understand safety performance. DOE/NNSA have confidence that the current methodology is effective at identifying and correcting safety issues in a timely manner. However, improvements could be made in providing Departmental expectations for contractor, field office, and headquarters element evaluations of CASs so that risk associated with safety programs and federal elements will be transparent and evident for earlier action. DOE/NNSA expect that commitments in the *Effectiveness Assessments* section above will assist in ensuring DOE/NNSA safety issues are identified in a timely manner.

#### *NNSA Ongoing Actions to Improve Proactive Safety Oversight*

In 2021, NNSA emphasized the importance of CAS, including use of CAS in the evaluation of M&O performance. As discussed earlier, CAS is an integral part of the NNSA Site Governance Model as set forth in the latest version of SD 226.1 *NNSA Site Governance*, which is comprised of oversight by the federal NNSA team including program, functional, and field offices as well as the M&O contractor and corporate parents. The attributes of an effective federal oversight system are articulated there including the expectation that federal assessments leverage the contractor site-level governance system activities wherever possible. Federal oversight activities must evaluate the effectiveness of CAS, use CAS information including Safety Performance Objectives, Measures and Commitments (SPOMCs) to assess effectiveness of contractor programs and processes, and perform risk-based oversight.

The results of federal oversight, to include CAS data, serve as the basis for contractor evaluation under the NNSA Corporate Performance Evaluation Process (CPEP). This process emphasizes:

- CAS is fully implemented and is credible, objective, and transparent.
- CAS information is reviewed on a periodicity that supports the CPEP evaluation process and provides for traceability to rating determinations. Specifically, CAS is effective

when management and staff are engaged, demonstrating ownership and accountability for CAS activities, resulting in improved mission execution and operational performance.

- Risks are identified and managed with decisions being risk-informed – what is important gets done.
- The organization learns from its successes and failures and from those of others.
- There is trust and transparency among the partners; results of CAS are broadly shared internally and externally to the organization.
- CAS drives continuous feedback and performance improvement with identification and correction of negative performance/trends before they become significant issues.

CAS effectiveness is intricately linked to contractor performance and integrated safety as illustrated in the safety process flow chart included in the NNSA SD 450.2B, *Functions, Responsibilities, and Authorities for Safety Management*.

NNSA continues to mature the use of Safety Performance Objectives Measures and Commitments (SPOMCs) in conjunction with CAS. The maturation of the use of SPOMCs will provide additional feedback on contractor performance with data providing insight to how well safety objectives are being met. To support the expanded and improved use of SPOMCs, in June 2022, NNSA held a symposium to share best practices and lessons learned in the development and use of SPOMCs. All NNSA sites participated in the symposium.

CAS insights, such as those discussed above, are used by DOE in assessment planning tools to support proactive safety oversight. For example, NNSA implements a SIAP process which promotes the integration of assessments conducted by organizations external to the field office with those conducted by the field office and site contractors. This process leverages the timely review and analysis of data related to performance, compliance, risk; insights from the CAS; and is a risk-based approach to help identify and prioritize oversight focus areas.

As part of the SIAP process, the NNSA Office of Safety proactively provides recommendations of safety-related areas for review to all NNSA sites, based on observations from an enterprise and site level to inform the SIAP process. This input supports the identification of safety areas of higher interest. The office also delivers subject matter expertise to the field offices to support the execution of the SIAP.

NNSA is on the path to improved safety governance, including how we assure effectiveness of safety programs and processes. This continuing effort includes clarifying the links and connections such as the Safety FRA, CAS, SPOMCs, SIAP, oversight, and performance that may seem disparate into a highly effective safety governance model. These initiatives will be discussed in much greater detail at the DNFSB briefing when scheduled.

Other DOE offices use a similar assessment process, but its implementation expectations are not as explicitly defined/institutionalized (e.g., standards or guidance) as is the case with NNSA (e.g., NNSA SD 226.1C, “Appendix C: Site Integrated Assessment Plans”). The DNFSB makes a reasonable observation for the assessment activities listed on all SIAPs reviewed are most likely interpreted as reactive or supplemental oversight as described in DOE Guide 226.1-2A. There may be opportunities to improve upon the attributes of an effective SIAP in Appendix C

for proactive assessments (e.g., add an identifier, such as “proactive,” in assessment scheduling that indicates the type of assessment).

### *EM Ongoing Activities to Improve Proactive Safety Oversight*

EM field offices perform the bulk of proactive assessments at their sites, although some corporate reach back occurs in that EMHQ staff members routinely participate in this form of oversight. Each site prepares an annual assessment plan that is based on several factors: an activity’s safety risk; the magnitude of an activity in terms of its significance, scope, and scale; and requirements for performing periodic evaluations of specific programs and processes. Assessments of these types added to a site’s annual assessment or oversight plans are proactive. However, because the assessment schedule planning process includes a review of an activity’s safety risk, typically based upon recent performance, there is a reactive element to several such scheduled assessments.

### **DOE/NNSA New Initiatives**

DOE/NNSA actions in the *Effectiveness Assessments* section above are new initiatives that will assist in ensuring DOE/NNSA safety issues are identified in a timely manner.

DOE will evaluate how to best institutionalize the SIAP process at the DOE level and NNSA will evaluate the need for improvements to SIAP attributes in NNSA SD 226.1C, Appendix C. This will include considerations for improved guidance on what types of oversight activities are deemed proactive and expected levels of proactive oversight.

DOE/NNSA will evaluate and include an identifier in annual oversight schedules that indicates an assessment is categorized as proactive.

- 4. Safety Issues Management:** The DNFSB letter expressed that DOE/NNSA needs to implement an effective safety issues management system to ensure timely and effective correction of safety issues.

A structured issues management and corrective action system is a key attribute for an effective CAS and federal oversight system. The issues management system should be able to adequately capture program and performance issues from many sources, and issues should be appropriately categorized to ensure problems are evaluated, reported, and corrected (including corrective actions).

While the DNFSB staff found instances where identified issues may not have been resolved in a manner that prevented similar issues from recurring, DOE/NNSA Offices are working diligently to implement and improve issues management systems to provide greater fidelity to self-identify and self-correct issues. Some improvements have been recently observed.

EA noted improvements and weaknesses in their recent complex-wide assessments of Issues Management at two NNSA sites. The December 2022 report from its review of Issues Management at the Y-12 National Security Complex identified a number of strengths in their

issues management processes, including four best practices. However, EA also identified weaknesses including one finding relating to training issues management processes. Likewise, EA also cited improvements with respect to issues management and integration between field office and contractor issues management systems in their 2021 issues management assessment at the Nevada National Security Site (NNSS). EA conducted a total of nine assessments of DOE/NNSA contractor performance in the management of safety issues between 2019 and March 2023. Overall, these assessments revealed a number of Best Practices, but also significant and extensive noncompliances in the implementation of DOE safety issues management policies and directives. EA expects to issue a lessons learned report on safety issues management later in 2023, which is expected to include recommendations to resolve the likely causes of those concerns. DOE/NNSA will consider incorporating EA's recommendations in future improvement actions.

DNFSB staff found instances where identified issues did not have formal documentation that addressed the "cradle-to-grave" resolution. Field Offices identify and prioritize which issues and actions will be reviewed by federal staff for effectiveness. It is common for issues, without a clear link to safety, to have little or no documented evaluation of effectiveness by federal staff.

Across DOE DNFs, federal oversight entities have existing issues management systems that are in various stages of maturity and are optimized for their respective business processes. While there is no indication of a systemic breakdown of issue management within DOE/NNSA, our DNF sites and HQ are being proactive to implement and mature robust issues management systems.

**DOE/NNSA New Initiatives:**

There are no new DOE/NNSA initiatives to be taken at this time. DOE/NNSA will keep the DNFSB apprised of DOE's improvements in issues management at DNFs through normal communication channels with DNFSB Resident Inspectors and DNFSB staff.

As stated in the attachment to the Board's letter, the Office of Safety, Security, and Quality Assurance (EM-3.1) is piloting a new issues management system for EMHQ. It is a commercially available software that will provide for expandability and possible connectivity with field sites. This effort has already been initiated and multiple planning and development meetings have been conducted between EM-3.1 personnel and the vendor. It is anticipated that a prototype system will be available to EM-3.1 staff later in calendar year 2023.

**Conclusions:**

DOE/NNSA appreciates the extensive effort put forth by the Board and its staff to research and evaluate DOE/NNSA's safety oversight approach at DNFs and ensure effectiveness in the following areas: effectiveness assessments; staffing; proactive safety oversight; and safety issues management. While DOE/NNSA affirms its safety oversight at its DNFs to be adequate, it recognizes opportunities to improve processes that better evaluate the effectiveness of the contractor's safety performance. DOE/NNSA is evaluating areas noted in this report for sustainable improvements when determining safety oversight effectiveness at DNFs.