U.S. Department of ENERGY	EA Enterprise Assessments	Number: EA CRAD EA-30-07 Revision: Rev. 1 Effective Date: February 13, 2025
Federal Line Management Oversight – Assessment Criteria and Review Approach Document		
Authorization and Approval	Kevin G. Kilp Digitally signed by Kevin G. Kilp Date: 2024.10.16 14:25:26 -04'00' Kevin G. Kilp, Director Office of Environment, Safety and Health Assessments	DAVID OLAH Digitally signed by DAVID OLAH Date: 2024.10.16 14:19:40 -04'00' David Olah, Lead Occupational Safety and Health Manager

1.0 PURPOSE

The mission of the U.S. Department of Energy (DOE) Office of Environment, Safety and Health Assessments (EA-30) is to assess the effectiveness of safety and emergency management systems and practices used by line and contractor organizations and to provide clear, concise, rigorous, and independent evaluation reports of performance in protecting workers, the public, and the environment from the hazards associated with DOE activities.

This criteria and review approach document (CRAD), in part, fulfills the responsibility assigned to EA in DOE Order 227.1A, *Independent Oversight Program*, to conduct independent evaluations of DOE organizations (including DOE Headquarters) to evaluate the effectiveness of line management performance and risk management in implementing and overseeing safety (nuclear and industrial) programs.

Significant changes were made in Revision 1 of this CRAD to improve EA-30 assessments of line management oversight by:

- Adding reviews of contractor-developed, DOE-approved plans, system and program description documents and assessment of DOE field element oversight of contractor-managed implementing procedures. This included citing requirements for DOE field element approval of plans and description documents in appendix A. These changes were made because EA's *Independent Assessment of U.S. Department of Energy Contractors' Management of Safety Issues*, dated April 2024, identified that safety-related requirements of DOE directives and applicable consensus standards were often inadequately incorporated into the DOE-approved plans, description documents, or contractor-managed implementing procedures.
- Enhancing reviews of DOE field element oversight and assessment of contractor assurance system (CAS) effectiveness. Assessments by the Office of Emergency Management Assessments (EA-33) and the Defense Nuclear Facility Safety Board (DNFSB) staff report, *Review of DOE Safety Oversight Effectiveness*, dated April 10, 2022 (hereafter referred to as the April 2022 DNFSB staff report), identified instances of DOE line management relying on CAS data without adequately verifying CAS effectiveness.

- Dividing objective FO.2 into the elements of DOE field element oversight to facilitate a more structured and thorough data analysis and reporting by EA-30 assessment teams.
- Enhancing reviews of DOE field element staffing. EA-30 assessments, the April 2022 DNFSB staff report, and the Government Accountability Office (GAO) report GAO-24-106479, *Nuclear Waste Cleanup – Changes Needed to Address Current and Growing Shortages in Mission-Critical Positions*, dated July 2024, identified extensive understaffing and management of safety-related positions within DOE field elements that can allow weaknesses in safety to develop into more significant consequences before being detected. GAO-24-106716, *Nuclear Waste Cleanup – More Effective Oversight is Needed to Help Ensure Better Project Outcomes*, dated July 2024, also identified inadequate oversight of quality assurance practices for capital asset projects. Quality assurance oversight of these projects would be additional, infrequently performed work for a DOE field element so lines of inquiry were added to assess how this work is being factored into staffing analyses.
- Revising the lines of inquiry for objectives FO.4 and FO.5 to better assess how DOE field elements are self-assessing their performance and identifying and resolving issues with their oversight of safety performance.

EA's CRADs are available to DOE line and contractor assessment personnel to aid them in developing effective DOE oversight, self-assessment, and issues management processes and contractor assurance systems. The current revisions are available at https://www.energy.gov/ea/criteria-and-review-approach-documents.

2.0 APPLICABILITY

The following CRAD is approved for use by the Office of Environment, Safety and Health Assessments (EA-30) and sub-tier offices.

3.0 FEEDBACK

Comments and suggestions for improvements on this CRAD can be directed to the Director, Office of Environment, Safety and Health Assessments.

4.0 CRITERIA AND REVIEW APPROACH

EA assessments of Federal line management can evaluate the effectiveness of DOE oversight programs and processes from the Headquarters to field element level.

The following functional areas are designed as stand-alone sections to be used in any combination as needed for the specific assessment. Other EA-30 CRADs may contain similar criteria and where appropriate, this CRAD could be used to supplement those assessments based on the complexity and the need to assess a given functional area in greater detail.

The objectives, criteria, and lines of inquiry are supported by the following policy, regulations, orders and standards:

- 10 CFR 830, *Safety Basis Requirements*
- 10 CFR 851, *Worker Safety and Health Program*
- DOE Policy 226.2, *Policy for Federal Oversight and Contractor Assurance Systems*
- DOE Order 210.2A, *DOE Corporate Operating Experience Program*
- DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*
- DOE Order 227.1A, *Independent Oversight Program*
- DOE Order 414.1D, *Quality Assurance*

- DOE Order 422.1, *Conduct of Operations*
- DOE Order 426.1B, *Department of Energy Federal Technical Capabilities*
- DOE Order 442.1B, *Department of Energy Employee Concerns Program*
- DOE Order 450.2, *Integrated Safety Management*
- DOE-STD-1063-2021, *Facility Representatives*

Appendix A also cites requirements assigned to Federal line management to ensure contractor safety, including many that are in addition to the requirements for worker safety and health across the Department that are required for safety at sites with hazards associated with operations in nuclear facilities.

Users should also refer to EA CRAD 33-06, Rev. 0, *Federal Line Management Oversight of the Field Emergency Management Program Criteria and Review Approach Document*, when reviewing emergency management programs.

OBJECTIVES

FO.1: DOE Headquarters line organizations maintain sufficient technical capability and knowledge of site and contractor activities to make informed decisions about hazards, risks, and resource allocation and evaluate contractor performance. (DOE Order 226.1B, 4a(2))

Criteria

1. DOE Headquarters line organizations evaluate contractor programs and management systems and site assurance systems for effectiveness of performance (including compliance with requirements). (DOE Order 226.1B, 4b(1))
2. Oversight processes implemented by DOE Headquarters line organizations focus primarily on the effectiveness of their DOE field element's contractor oversight. (DOE Order 226.1B, 4b(3))
3. Secretarial Officers establish and document individual and organizational capabilities for assigned safety responsibilities or delegated safety authorities. (DOE Order 450.2, 5b(5) and appendix A, 1j, 2b(2), and 2b(3))
4. The DOE Headquarters' central technical authorities (CTAs)[1] maintain awareness of the DOE field element implementation of nuclear safety requirements and guidance consistent with the principles of integrated safety management (ISM). (DOE Order 226.1B, 5c(1))
5. The DOE Headquarters' CTAs periodically review DOE field element maintenance of sufficient qualified staff to effectively fulfill nuclear safety responsibilities. (DOE Order 226.1B, 5c(2))
6. The DOE Headquarters' CTAs periodically assess DOE Headquarters and DOE field element programs for oversight of high consequence activities. (DOE Order 226.1B, 5c(3))

Lines of Inquiry

- Do the DOE Headquarters line organizations review the results of DOE field element contractor oversight in relation to safety performance (contractor assurance system (CAS) metrics, occurrence reporting and processing system (ORPS) reports, DNFSB issues, Inspector General and GAO reports) and adjust the frequency and depth of oversight accordingly?

[1] DOE CTAs in NNSA and the Under Secretaries for Energy and Science provide centralized technical expertise and maintain operational awareness to ensure adequate implementation of nuclear safety policy and requirements. The CTAs are supported by the Chief of Nuclear Safety/Chief of Defense Nuclear Safety(CNS/CDNS) technical support organizations. The CNS/CDNS perform oversight activities at DOE organizations and nuclear facilities in support of their respective Program Offices and CTAs.

- Do the DOE Headquarters line organizations assess or participate in assessments led by DOE field elements to determine the adequacy of DOE field element contractor oversight activities?
- Do the DOE Headquarters line organizations monitor the DOE field element handling of highly significant issues including causal analysis, extent of condition, and corrective actions closure effectiveness?
- Have the DOE Headquarters line organizations provided adequate direction and feedback to their DOE field elements to assist them in implementing and improving documented oversight program plans? (DOE Order 226.1B, 5b(2))
- Have Secretarial Officers adequately established and documented individual and organizational capabilities for assigned safety responsibilities or delegated safety authorities. (DOE Order 450.2, 5b(5) and appendix A, 1j, 2b(2), and 2b(3))
- Have Secretarial Offices ensured delegations of authority are reviewed or self-assessed for nuclear facility safety delegations every two years? (DOE Order 450.2, appendix A, 1i, and 2c(1)(b))
- Have the DOE Headquarters line organizations established and maintained appropriate qualification standards for personnel with Headquarters and field element oversight responsibilities and clear, unambiguous lines of authority and responsibility for oversight? (DOE Order 226.1B, 5b(3))
- Does the CTA review documented safety analyses, authorization agreements, and readiness reviews as necessary to evaluate the adequacy of safety controls and implementation?
- Does the CTA review DOE field element staffing analyses, staffing plans, succession plans, and self-assessments of nuclear facility safety delegations to ensure that the DOE field element maintains sufficient qualified staff to effectively fulfill nuclear safety responsibilities?
- Does the CTA periodically assess DOE Headquarters and DOE field element programs for oversight of high consequence activities, such as high hazard nuclear operations?
- Have the DOE Headquarters line organizations managed differing professional opinions (DPOs) per DOE Order 442.2, *Differing Professional Opinions for Technical Issues Involving Environmental, Safety, and Health Technical Concerns*?

FO.2[2]: DOE field elements maintain sufficient technical capability and knowledge of site and contractor activities to make informed decisions about hazards, risks, and resource allocation; provide direction to contractors; and evaluate contractor performance. (DOE Order 226.1B, 4a(2))

FO.2.a. – Incorporation of safety requirements and responsibilities into field element and contractor documents and procedures:
DOE field elements incorporate applicable requirements, roles, and responsibilities for their safety and emergency management functions and oversight into the field element's programs and procedures. DOE field elements also ensure their respective contractor(s) incorporate invoked safety and emergency management requirements into DOE-approved plans and DOE-approved system and program descriptions and into contractor-approved implementing procedures.

[2] Per DOE Order 226.1B, DOE field elements are responsible for directly overseeing and providing direction to each contractor to improve performance. Accordingly, elements of this objective for field elements are listed separately with their associated criteria and lines of inquiry to provide more structure for data collection and analysis. Assessment teams should also consider binning and documenting their assessment results into these elements of field element oversight.

Criteria

1. Line management and support organizations, with safety management responsibility, must develop, issue, and maintain, separately or as part of the ISM system description document (ISMSDD), an organizational functions, responsibilities, and authorities (FRA) document. (DOE Order 450.2, 4.h)
2. DOE field elements and contractors establish organizational structures, functional responsibilities, levels of authority, interfaces, and management processes. (DOE Order 414.1D, attachment 2, criterion 1, see also requirements of the DOE field element cited in appendix A)
3. DOE field elements develop and, in some cases, approve separate quality assurance plans (QAPs) for the field element and the contractor. (DOE Order 414.1D, 4b, 5c(2) and (3), and attachment 1, requirement 2)
4. To ensure adequate safety in contractor management of DOE facilities while meeting mission goals, DOE line management must ensure that appropriate requirements are incorporated into contracts and oversee compliance. (DOE Order 450.2, 4.g)
5. DOE field elements approve contractor-developed and -maintained plans and system and program descriptions as required per the references in appendix A to ensure they adequately incorporate invoked safety requirements. DOE field elements oversee compliance with these requirements in the contractor's implementing procedures.

Lines of Inquiry

- Are oversight responsibilities defined in approved DOE field element documents, such as the DOE field element ISMSDD and/or its FRA document? (DOE Order 450.2, *Integrated Safety Management*, 4h and DOE Order 414.1D, 4a and attachment 2, criterion 1)
- Has the DOE field element effectively maintained and implemented its ISMSDD? (DOE Order 450.2, 4.a and b)
- Has the DOE field element adequately incorporated requirements, roles, responsibilities, and authorities from its FRA document, ISMSDD, and QAP into the field element's procedures?
- Has the DOE field element ensured each contractor adequately maintained the contractor's ISMSDD and incorporated its requirements and expectations into the contractor's implementing procedures? (DOE Order 450.2, 4a and b)
- What percentage of the reviewed safety requirements, roles, and responsibilities have been inadequately incorporated into field element documents and procedures? What are the more significant potential/actual consequences of not incorporating them? Have there been significant events, reportable occurrences, and/or externally identified adverse trends (e.g., within the past three years) in areas that they were inadequately incorporated? Has performance been better in areas they were adequately incorporated?
- What percentage of the reviewed safety requirements have been inadequately incorporated into contractor-developed, DOE-approved plans and system or program description documents? What percentage of the reviewed safety requirements were inadequately incorporated into contractor-managed implementing procedures? What are the more significant potential/actual consequences of the unincorporated requirements? Have there been significant events, reportable occurrences, and/or externally identified adverse trends (e.g., within the past three years) in areas that safety requirements were inadequately incorporated? Has the contractor's performance been better in areas with the applicable safety requirements incorporated into the DOE-approved documents and contractor-managed implementing procedures?

FO.2.b. – Staffing, training, and qualification of DOE field element personnel:
DOE field elements maintain sufficient staffing of trained and qualified personnel to oversee safety and emergency management functions.

Criteria

1. DOE field element line management has sufficient qualified personnel to implement oversight processes. (DOE Order 226.1B, 4a(2) and 4c)
2. DOE Headquarters and field elements with defense nuclear facilities must define and implement a technical qualification program (TQP) that includes plans and procedures for its administration, identification of required technical capabilities, identification of TQP participants, a qualification process, continuing training, and periodic evaluations. (DOE Order 426.1B, 4c(1)-(6))
3. DOE field elements assign DOE Facility Representatives (FRs) to oversee conduct of operations in accordance with DOE-STD-1063-2021, *Facility Representatives*. (DOE Order 422.1, 4b)
4. Final qualification for FRs must include satisfactory completion of final qualification activities identified in DOE-STD-1063-2021. (DOE O 426.1B, *Department of Energy Federal Technical Capabilities*)
5. DOE field element personnel overseeing quality assurance and software quality assurance of defense nuclear facilities are qualified per DOE-STD-1150-2002, *Quality Assurance Functional Area Qualification Standard* (or latest version) and DOE STD-1172-2003, *Safety Software Quality Assurance Functional Area Qualification Standard* (or latest version), respectively. (DOE Order 414.1D, 4c)

Lines of Inquiry

- What safety authorities have been delegated to the DOE field element? Has the field element met the minimum Under Secretary's or Secretarial Office's expectations for the capabilities and capacities for delegations? (DOE Order 450.2, appendix A, 1j and 2b(2))
- Does the DOE field element staffing analysis adequately identify the required staffing based on the field element's safety-related FRAs and upcoming workload or mission changes (e.g., its role in overseeing quality assurance processes and supporting technical reviews of capital asset projects onsite)?
- Does the DOE field element staffing plan adequately address differences in staffing without imposed limits (a.k.a., unconstrained staffing) and constrained full-time equivalent staffing limits? For example, does the staffing plan adequately plan for getting assistance of personnel from other sites, Headquarters, and/or support service contractors and technical assistance contractors?
- Are general support services contractors or technical assistance contractors fulfilling "inherently government functions" by signing or making value judgments or accepting risk for the government?
- Does the DOE field element staffing plan adequately address safety-related areas with very limited numbers of qualified personnel providing oversight (e.g., single point of failure positions) to allow time for training and avoid burnout (e.g., provide personal time for vacations)? For example, are back-up or alternative points of contact identified for these positions?
- Does the field element's staffing plan adequately address projected attrition (including potential retirements) and the time required to qualify personnel (including qualifying personnel from other sites, headquarters, and contractors supplementing the field element's staffing on site facilities and processes) to perform the FRAs for the field element? Is the number of personnel eligible for retirement within the next five years adequately factored into the projected attrition for safety-related positions?
- Has the DOE field element's staffing and succession plans ensured that the DOE field element maintains sufficient qualified staff to effectively fulfill nuclear safety, emergency management, and worker safety and health responsibilities, including mission-critical responsibilities assigned to one person (a.k.a., single point failure positions)?
- Does the DOE field element have personnel required to be in the technical qualification program (TQP)? (DOE O 426.1B 4c(3), *Department of Energy Federal Technical Capabilities*) Is the TQP an accredited program? What is the status of technical qualification for senior technical safety managers, FRs, safety system

oversight specialists (SSOs), nuclear safety specialists, Federal personnel overseeing nuclear safety management programs and systems specialist, safety management system specialists? Other personnel in the TQP?

- Is the requirement for TQP participation documented in participant's position descriptions? (DOE O 426.1B 4c.(3)(a))
- Are formal assignments of required TQP performed within 90 days? (DOE O 426.1B 4c(4)(a))
- Are TQP qualifications completed within 18 months? (DOE O 426.1B 4c(4)(c)) How are completions and extensions tracked, managed?
- Has the DOE field element established expectations and frequency for conducting TQP self -assessments in the implementing procedures? (DOE O 426.1B 4c.(6)) Has the self-assessment been conducted within the prescribed periodicity?
- Has the DOE field element maintained adequate capabilities (i.e., assigned enough qualified personnel responsibility) to oversee quality assurance, including safety software quality assurance (e.g., over the past three years)? (DOE Order 414.1D, 4c)
- For how long and what percentage of the reviewed safety-related positions have remained vacant, temporarily assigned to personnel also fulfilling other safety-related positions, or been assigned to unqualified personnel over the past three years? Are there more vacancies for some specific positions (e.g., Facility Representatives, nuclear safety specialists, safety and occupational health specialists, or industrial hygienists)?
- Has the DOE field element inadequately performed required assessment and/or oversight activities cited in appendix A due to being understaffed?
- Have there been significant events, reportable occurrences, and/or externally identified adverse trends in areas lacking enough fully qualified DOE field element personnel? Has performance been better in areas with enough qualified DOE field element personnel?
- Are individuals fulfilling the DOE field element's FRAs assigned too many roles or collateral duties?
- Are DOE field element personnel adequately trained on the attributes of DOE Policy 226.2, *Policy for Federal Oversight and Contractor Assurance Systems,* for effective assurance and oversight and on the field element and contractor assurance systems, processes, practices, and expectations?

FO.2.c. – Planning and implementation of operational awareness and assessment activities:
DOE field elements adequately plan, integrate, implement, and document oversight activities to maintain knowledge of site and contractor activities.

Criteria

1. DOE field elements perform the minimum set of baseline oversight activities identified by 10 CFR 830 and DOE directives. (See appendix A of this CRAD for specific requirements.)
2. Oversight processes are tailored according to the effectiveness of contractor assurance systems, the hazards at the site/activity, and the degree of risk, giving additional emphasis to potentially high consequence activities. (DOE Order 226.1B, 4b(5))
3. The DOE field element line management oversight program includes written plans and schedules for planned assessments, focus areas for operational oversight, and reviews of the contractor's self-assessment of processes and systems. (DOE Order 226.1B, 4b(2))

Lines of Inquiry

- Are DOE field element oversight personnel adequately integrating required assessments (e.g., those of the DOE orders and regulations cited in appendix A) into oversight planning? Is there a determination of the overall scope, content, and frequency of required and supplemental assessments included in the coordinated DOE Headquarters and DOE field element line management oversight program (e.g., integrated assessment plan)?
- Does the DOE field element oversight planning process appropriately identify focus areas for operational awareness and assessments?
- Do DOE field element line management oversight programs define the process for modifications of the annual oversight activity schedule and for DOE line management approval in response to changing circumstances?
- Does the DOE field element assessment planning process tailor the level and/or mix of oversight (i.e., adjust the rigor or frequency in a particular area without effectively stopping its oversight of that area) based on considerations of hazards, the maturity and operational performance of the contractor's programs and management systems?
- What percentage of the required and other planned assessments each year are shadow assessments (i.e., assessments performed by contractor personnel that are observed by field element personnel without field element personnel performing their own independent assessment)?
- Are operational awareness activities documented, shared among oversight personnel, and factored into the assessment planning process?
- Are planned assessments performed consistent with the integrated assessment schedule? What percentage of the required and other planned assessments are accomplished each year?
- Have there been significant events, reportable occurrences, and/or externally identified adverse trends in areas DOE field element personnel infrequently oversee? Has performance been better in areas with DOE field element personnel providing more oversight?
- Does the DOE field element oversight include performance-based oversight and assessments with field work observations and worker interviews?
- Do DOE field element procedures provide direction for the development of assessment plans, CRADs and lines of inquiry, and have these been used in the conduct of assessments?

FO.2.d. – Evaluation of the contractor's assurance system and performance:
DOE field elements evaluate contractor programs and management systems, including assurance systems, for effectiveness.

Criteria

1. DOE field element line management evaluates contractor programs and management systems and site assurance systems for effectiveness of performance (including compliance with requirements). "Such evaluations must be based on the results of operational awareness activities; assessments of facilities, operations, and programs; and assessments of the contractor's assurance system." (DOE Order 226.1B, 4b(1) and 5e(4))
2. DOE line management must assess contractor performance against established performance measures, analyze relevant trends, and obtain relevant operational information for use as feedback to improve safety. (DOE Order 450.2, 4.g.)
3. The DOE field element manager or the head of contracting activities must establish and communicate performance expectations to contractors through formal contract mechanisms. (DOE Order 226.1B, 4c and 5f(5))

Lines of Inquiry

- Has the DOE field element verified the adequacy of contractor declarations of ISMSDD effectiveness? (DOE Order 450.2, 4b and c)
- Has DOE line management established (approved) annual measures of safety performance (e.g., in annual performance evaluation monitoring plans) and adequately assessed each contractor's safety performance according to these measures and safety-related events and occurrences each year (e.g., in annual performance evaluation summaries)? How much of the available fee/award can be impacted by each contractor's safety performance? Does the amount of the available fee/award adjustment effectively impact each contractor's safety performance, including nuclear safety and emergency management?
- Are DOE field element performance evaluations based on the results of operational awareness activities, assessments of facilities, operations, and programs, and assessments of the contractor's assurance system as required? (DOE Order 226.1B, 4b(1))?
- Does the DOE field element adequately evaluate the effectiveness of CAS and direct action to improve the CAS:
  - Using effectiveness evaluation criteria and/or
  - Comparing CAS measures of the performance (of operations and specific management programs and systems) and CAS-identified areas warranting improvement to trends and adverse events/conditions identified by the DOE field element? (DOE Order 450.2, 4g)
- Does the contractor's safety performance, issues, trends, events/conditions, reportable occurrences, and external reviews demonstrate strengths or weaknesses in CAS and/or the DOE field element's oversight? For example, has CAS or the DOE field element's oversight proactively identified and resolved issues before they develop into significant issues or has a significant event(s) occurred or has an EA assessment, other external reviews, or significant events/occurrences identified significant weakness(es) in an area(s) CAS and/or the field element's oversight considered performance to be adequate? (External reviews include audits, assessments, and evaluations by EA, DNFSB, DOE Inspector General (DOE-IG), or GAO.)
- Does the DOE field element formally assess the compliance of CAS, its procedures, and their implementation with requirements in DOE directives and selected consensus standards as DOE approved in the contractor's QAP?
- Does the DOE field element routinely gather insights into CAS performance during operational awareness activities (such as evaluating the conduct of assessments, issue significance determinations, causal analysis and corrective action, etc) at the functional level?
- What formal and informal direction has the DOE field element provided to the contractor to improve CAS?
- Do DOE field element oversight personnel maintain awareness of the contractor's response to operational events (including non-reportable incidents), accidents, occupational injuries and illnesses, and quality assurance and nuclear safety issues?
- Do the DOE field element's Facility Representatives maintain adequate operational awareness of their assigned facilities?
- Does the DOE field element have unencumbered access to the database(s) and information of the CAS?
- Were the DOE field element assessments conducted in a comprehensive and rigorous manner?
- Do oversight personnel exhibit a questioning attitude?

FO.2.e. – Communication of oversight results:
DOE field elements communicate oversight results and other information up the line management chain of command and to contractors in a timely manner and as appropriate, to allow senior managers to make informed decisions.

Criteria

1. DOE field element line management has in place effective processes for communicating oversight results and other issues in a timely manner up the line management chain, and to the contractor as appropriate, sufficient to allow senior managers to make informed decisions. (DOE Order 226.1B, 4d)

Lines of Inquiry

- Does the DOE field element line management have effective processes for communicating oversight results to the contractor and DOE line management using a graded approach based on the hazards and risks? Do these processes require prompt communications for ongoing safety issues especially those representing a potential imminent danger or condition or a major vulnerability? (DOE Order 227.1A)
- Do the DOE field element processes for overseeing the contractor require issues to be communicated with a sufficient technical basis for managers to make informed decisions?
- Do the DOE field element processes or practices discourage communicating and documenting DPOs per DOE Order 422.2? Note, that this order provides the procedure and forms for managing DPOs, so the DOE field element can rely on that without additional local processes or procedures.
- Do the processes for resolving disputes about issues include provisions for independent technical reviews of significant issues?
- Do the DOE field element and the contractor meet on some periodicity to review the CAS results?
- Do FRs, safety system oversight (SSO) engineers, and subject matter experts (SMEs) adequately document and communicate the results of their oversight to DOE line and contractor management?
- Does the DOE field element clearly communicate to contractors its expectations for a response to significant and/or repeat issues (e.g., request the contractor notify the field element of completion of corrective actions, suspension of activities, and the results of contractor investigations/assessments)?
- What percentage of the DOE field element's oversight results reviewed by the EA assessment team was adequately communicated to the contractor in a timely manner?

FO.3: DOE field elements provide oversight of the contractor. (10 CFR 851, *Worker Safety and Health Program*, 11(b) and (c))

Criteria

1. The head of the field element shall ensure that the contractor's worker safety and health program (WSHP) effectively implements all 10 CFR 851, subpart C, *Specific Program Requirements*, requirements prior to approving the WSHP and the start of work. (10 CFR 851.11(b))
2. The head of the DOE field element shall ensure that all contractors submit annual WSHP updates or a letter stating no changes are necessary for their approval and that the WSHPs are effectively implemented. (10 CFR 851.11(c)(2))
3. The head of the DOE field element directs contractors to incorporate any changes, conditions, or workplace safety and health standards to WSHP based on evaluations and effectiveness of WSHP. (10 CFR 851.11(c)(3))
4. DOE field elements shall ensure that contractor WSHPs integrate with the site-specific integrated safety management system, with emphasis on implementation of the five ISM core functions for work planning and control. (10 CFR 851.11(a)(3)(ii))
5. DOE field elements shall ensure that the requirements of 10 CFR 851, subpart C, are flowed down to the management and operating (M&O) or prime contractor and to all subcontractors. (10 CFR 851.11(a)(2).

Lines of Inquiry

- Did the contractor provide collective bargaining units, performing work under the WSHP, timely notice on the content of the WSHP prior to requesting DOE field element approval of the original or updated WSHP?
- Does the field element have an effective mechanism for tracking contractor WSHP deliverables and ensure DOE approvals prior to the contractor conducting work on site? Does the field element track receipt of annual WSHP update submittals?
- Does the field element have qualified worker safety and health professionals to review contractor WSHPs?
- Does the field element have an effective review process to ensure that all worker safety and health hazards associated with the contract and work site are adequately addressed?
- Has the field element adequately directed the contractor to incorporate needed changes or standards needed to address emergent hazards or address worker safety and health performance issues?
- Has the field element ensured that the contractor has effectively integrated ISM core functions for work planning and control into its WSHP?
- Has the field element ensured that M&O or prime contractors flow down 10 CFR 850, subpart C, requirements to their subcontractors through contract clauses.
- Are the results of field element oversight activities documented in a format that allows for tracking and trending of workplace hazards for the purpose of directing future oversight activities?

FO.4: Program offices and field elements have a structured, documented program for self-assessment of DOE line management safety and emergency management functions and of their oversight of contractor performance and assurance systems for these functional areas to ensure compliance with applicable requirements and improve or verify effective performance. (DOE Order 414.1D, attachment 2, criterion 10, and DOE Order 226.1B, 4b(1))

Criteria

1. Oversight processes implemented by applicable DOE line management organizations must evaluate DOE programs and management systems for effectiveness of performance, including compliance with requirements. (DOE Order 226.1B, 4b(1))
2. Oversight processes must include DOE Headquarters line organizations' conduct of oversight processes that are focused primarily on their DOE field elements, including reviewing contractor activities to the extent necessary to evaluate the implementation and effectiveness of the field element's oversight of its contractors. (DOE Order 226.1B, 4b(3))
3. Each Departmental element and associated field element(s) must assess their management processes and identify and correct problems that hinder the organization from achieving its objectives. (DOE Order 414.1D, attachment 2, criterion 9)
4. Periodically (at intervals no greater than 2 years) delegations of authority are reviewed and nuclear facility safety delegations are self-assessed based on the criteria in DOE Order 450.2, appendix A. (DOE Order 450.2, appendix A, 1i and 2c(1)(b))
5. DOE field elements self-assess the effectiveness of the field element's management systems and programs per the requirements cited in appendix A.
6. Each Departmental element and associated field element(s) must use independent assessments to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. (DOE Order 414.1D, attachment 2, criterion 10(a))

7. Cognizant Secretarial Officers evaluate the overall effectiveness of Facility Representative programs at assigned DOE field elements, including onsite assessment and shadowing, performance indicator information sufficiency, and program self-assessments and associated corrective actions adequacy. (DOE-STD-1063-2021, *Facility Representatives*, 4.2.3.b)
8. DOE field element managers (FEMs) shall ensure that their Facility Representative programs are evaluated periodically (not to exceed three years) relative to the requirements of this standard. FEMs shall provide the results of these self-assessments to the responsible Program Office at DOE Headquarters, with a copy to the DOE FR Program Manager. (DOE-STD-1063-2021, 4.2.4.e and 5.6.2)

Lines of Inquiry

- Does the DOE line management adequately monitor (e.g., with metrics) and self-assess the performance of its safety and emergency management FRAs and processes, including quality assurance and software quality assurance processes, and take action to improve performance?
- Does the DOE field element adequately use the results of assessments, reviews, evaluations, and assist visits by its Program Office and the DOE Office of Environmental, Health, Safety, and Security to improve performance?
- Does the DOE field element adequately facilitate and use independent assessments of its organization (i.e., assessments performed by organizations not within DOE line management such as EA, DOE-IG, DNFSB, and the GAO) to improve its oversight of the contractor?
- Does the DOE field element include self-assessments on its integrated assessment schedule? Does this include the required self-assessments cited in appendix A, as well as periodic self-assessments for other programs?
- Does the DOE field element adequately monitor and self-assess the effectiveness of its Facility Representative program?
- What percentage of the self-assessments required of the DOE field element were conducted per the required periodicities cited in appendix A over the past three years?
- Does DOE field element management regularly assess whether its personnel are adequately overseeing and evaluating CAS implementation to ensure the contractor is self-identifying deficiencies and areas for improvement and taking timely and effective actions?
- Does the DOE field element have a process for performing and documenting self-assessments?
- Are DOE field element staff trained in performing self-assessments?
- Are the self-assessments sufficiently comprehensive and self-critical?
- Are adequate metrics established to monitor the qualification progress of TQP participants and training and/or qualification of other DOE field element staff?
- Have issues been identified by self-assessments? For example, has the DOE field element identified weaknesses in its oversight by evaluating significant events, reportable occurrences, and/or externally identified adverse trends? Were issues/weaknesses identified by DOE field element self-assessments appropriately categorized, tracked, and corrected in its issues management system?
- Does the DOE field element adequately monitor and assess its issues management processes and their implementation to ensure issues, trends, and their causes are resolved in a timely manner?
- What are some examples demonstrating how the DOE field element has used its self-assessments to improve its oversight and performance?

FO.5: The DOE field element has an issues management process that is capable of categorizing findings based on risk and priority, ensuring that relevant line management findings are effectively communicated to the contractors, and ensuring that problems are evaluated and corrected on a timely basis. (DOE Order 226.1B, 4b(4))

Criteria

1. Oversight processes implemented by DOE field elements must include an issues management process that is capable of categorizing findings based on risk and priority, ensuring relevant line management findings are effectively communicated to the contractors, and ensuring that problems are evaluated and corrected on a timely basis. (DOE Order 226.1B, 4b(4))
2. In the DOE field element issues management process, for issues categorized as high significance findings, the issues management process ensures that:
   (a) A thorough analysis of the underlying causal factors is completed.
   (b) Corrective actions that will address the cause(s) of the findings and prevent recurrence are identified and implemented.
   (c) After completion of a corrective action or a set of corrective actions, the conduct of an effectiveness review using trained and qualified personnel that can verify the corrective action/corrective action plan has been effectively implemented to prevent recurrence.
   (d) Documentation of the analysis process and results described in (a) and maintenance tracking to completion of plans and schedules for the corrective actions and effectiveness reviews described in (b) and (c) above, in a readily accessible system. (DOE Order 226.1B, 4b(4))
3. When notified by EA of either an imminent danger or condition or a major vulnerability, cognizant DOE management must take actions to mitigate the short and long-term risk and must notify the Program Secretarial Officer and EA within 10 working days of actions taken and any compensatory measures planned. (DOE Order 227.1A, 4e(2))
4. Corrective action plans must be developed and implemented for independent oversight appraisal (a.k.a., EA assessment) findings. Cognizant DOE managers must use site- and program-specific issues management processes and systems to manage and approve these corrective action plans and track them to completion. (DOE Order 227.1A, 4f(1))
5. Findings and other deficiencies identified in independent oversight appraisal reports are managed in accordance with DOE O 226.1 processes and quality assurance programs established to meet the requirements of DOE O 414.1D, *Quality Assurance*, and 10 CFR Part 830, *Nuclear Safety Management*. (DOE Order 227.1A, 4f(1))
6. Cognizant DOE managers must provide EA with information on corrective actions related to prior Independent Oversight appraisals of their organization, sites, and/or contractor activities when requested. (DOE Order 227.1A, 4f(4))
7. Defense nuclear facilities must develop formal corrective action plans for identified emergency management findings. The corrective action plan must be approved by the field element manager. The field element manager must ensure effective corrective actions are tracked, identified, and implemented. (DOE Order 151.1D, *Comprehensive Emergency Management System,* attachment 4, 15j(2))

Lines of Inquiry

- Does the DOE field element issues management process allow some DOE findings to be tracked via the contractor's issues management process as allowed by DOE Guide 226.1-2A, *Federal Line Management of Department of Energy Nuclear Facilities*, section 3.6? If so, are DOE field element personnel adequately ensuring that findings tracked via the contractor's process are evaluated and corrected in a timely manner?
- Do the cognizant DOE field element managers adequately approve, manage, and track corrective action plans for EA findings against the DOE field element and its contractor(s) to completion? Are EA-identified findings

and deficiencies being adequately managed (resolved) via the DOE field element or contractor issues management system?

- Does the DOE field element issues management process include the following essential elements:
  - Determining significance and implementing a graded approach based on issue significance
  - Evaluating the scope and extent of condition of the deficiency
  - Notifying DOE field element managers of issues using a graded approach
  - Determining and ensuring reportability in accordance with DOE or regulatory requirements
  - Analyzing for direct and contributing causes and identifying actions to correct the identified causes
  - Developing, approving, managing, and tracking corrective actions and corrective action plans to ensure timely completion and correction of issues
  - Verifying that actions are complete
  - Assessing whether actions effectively correct the causes of issues
  - Documenting and storing records supporting closure of issues?
- Does the DOE field element staff include or use personnel who are trained in conducting causal analysis?
- Are deficiencies in DOE field element programs or performance communicated to appropriate management in a timely manner?
- Are lower-level issues, which may be precursors to more serious issues, documented, corrected, and monitored for adverse trends?
- Based on review of a sample of issues being managed by the DOE field element (which should include some issues concerning both DOE field element processes and performance and DOE or externally identified findings concerning a contractor's processes or performance), what percentage were inadequately:
  - Identified or entered into an appropriate issues management system
  - Categorized based on their risk and priority
  - Resolved per the graded approach of the respective quality assurance plan
  - Corrected in a timely manner
  - Documented for closure?
- What is the more significant potential/actual consequences of the DOE field element inadequately resolving the issues reviewed above? Has there been significant events, reportable occurrences, and/or externally identified adverse trends (e.g., within the past three years) in areas associated with these issues?
- What are the more significant examples demonstrating how the DOE field element's management of safety issues have resulted in improvements in safety-related process or performance?
- What actions does the DOE field element take to address the contractor's refusal or delays in correcting an issue identified by oversight activities of the field element or external reviews?
- For emergency management findings at defense nuclear facilities, does the DOE field element manager approve the corrective action plan? Are compensatory measures performed until causal analysis and corrective actions are identified and implemented?

FO.6: DOE Headquarters and field elements have developed and implemented an operating experience (OE) program to share and use good practices and lessons learned from operating experience. (DOE Order 210.2A, 4)

Criteria

1. Departmental elements, including Headquarters and field elements, must develop and implement an operating experience (OE) program and identify and designate an OE program coordinator. The OE program will use a graded approach when addressing the applicability of requirements and the basis for

this approach must be documented based upon the review and analysis of the hazards and risks for the program and its operational activities. (DOE Order 210.2A, 4a)

2. OE organizations must submit lessons learned from operating experience to the DOE corporate lessons learned database when both (1) the operating experience has relevance to other DOE facilities, sites, or programs, and (2) the information has the potential to help avoid adverse operating incidents, for performance improvements, or for cost savings. (DOE Order 210.2A, 4b and 4c(2))
3. DOE line managers must routinely review OE program data and determine appropriate actions to resolve any identified risks or vulnerabilities. (DOE Order 210.2A, 4c(5))

Lines of Inquiry

- Has the DOE field element assigned an OE program coordinator(s) with access to senior management?
- Are DOE field element OE responsibilities and processes fully described in a formal program description document?
- Does the OE coordinator(s) execute the OE program as written in the DOE field element OE program description document? Are locally developed lessons learned recommended for inclusion in the DOE Corporate Lessons Learned Database? Does the coordinator share relevant lessons learned with DOE field element oversight personnel?
- Based on a review of a sample of relevant risks and vulnerabilities identified in OE data, for what percentage did DOE line management (e.g., the DOE Field Element) determine and implement appropriate actions to evaluate and resolve?
- Does the DOE field element adequately self-assess the effectiveness of its OE program, for example, as part of self-assessments conducted to evaluate organizational performance in ISM?
- Are Federal personnel knowledgeable of recently disseminated lessons learned?

REVIEW APPROACH

Record Review:

- DOE Headquarters and field element FRA documents, delegations of safety authority, and oversight directives, policies, program descriptions, procedures, instructions, and guidance. These should include DOE field element documents governing surveillances, operational awareness activities, assessments (including management self-assessments and use of independent assessments), and sharing and evaluating operating experience.
- Contractor assurance policy and program description, QAP, and CAS-related procedures, instructions, and guidance. These should include those for assessments, surveillances, management observations, performance monitoring and trending, management self-assessments, independent assessments, issues management, and sharing and evaluating operating experience.
- The last two periodic reviews of delegations of authority and self-assessments of nuclear facility safety delegations required by DOE Order 450.2, appendix A, 1i and 2c(1)(b).
- Sampling of DOE Headquarters and/or field element assessments and operational awareness activities performed over the last three years from multiple FRs, SSOs, SMEs, project and other oversight staff.
- Performance expectations established and communicated to the contractors per DOE Order 226.1B, 4c over the past three years and the associated evaluations of each contractor's performance (e.g., the performance evaluation monitoring plans (PEMPs) and performance evaluation summaries (PESs) at National Nuclear Security Administration (NNSA) sites).

- Sampling of CAS-related products including performance metrics, dashboards, assessments, and focus areas for improvement over the last three years
- Self-assessments and independent assessments related to the FR and SSO programs and oversight of nuclear safety, worker safety and health, and quality assurance (including software quality assurance).
- DOE field element and contractor ISMSDD updates and declarations over the past three years or the most recent if there have been none issued over the past three years.
- DOE Headquarters, field element, and contractor QAPs
- Management walk-around programs
- ORPS reports for the last three years, including timing of notifications and approvals by FRs
- DOE field element issues management system description and procedures and either access to the issues management system (preferred) or documentation on a sample of issues selected by the EA team
- List of DOE line management-identified issues over the last three years, and any corrective actions generated as a result of these issues
- List of issues identified by external organizations over the last three years (e.g., EA findings and recommendations of the DNFSB, DOE-IG, and GAO related to safety), and any corrective actions generated as a result of these issues
- FR program indicators
- Sampling of documentation on operating experience shared and evaluated by the DOE field element
- Sampling of documentation on operating experience shared and evaluated by the contractor
- Proof of contractor assurance system approval
- DOE Field Element assessments and surveillances of the CAS for the last 3 years
- Documentation related to EA identified deficiencies and finding (e.g., procedures for managing, completed assessments, transmittal of issues to the contractor, causal analyses and corrective action plans, verification/validation records, and effectiveness determinations)
- Trend analysis and performance indicator reports and evaluate the analyses, conclusions, and any related corrective actions
- Training and qualification records, including continuing training, to support interviewing personnel to determine the adequacy in establishing and enhancing competence of DOE field element oversight personnel, including those overseeing CAS and quality assurance
- FR program process descriptions and implementing procedures (i.e., training and qualification; performance indicators; occurrence reporting; and logs and reports)
- Differing professional opinion implementing processes or procedures and recent documentation of DPOs
- Sampling of DPOs over the past three years
- Organizational charts
- Field office staffing analysis
- FR staffing analysis
- TQP qualification metrics that monitor the qualification progress of TQP participants

Interviews:

- Leadership team (site and Program Office)
- Facility Representatives
- Safety system oversight (SSO) engineers
- DOE Headquarters and field element subject matter experts, including those overseeing quality and contractor/performance assurance systems

- Project oversight
- Operating contractor management
- Contractor field personnel
- Operating contractor personnel processing DOE field element issues
- DOE field element Federal technical capability progam and training manager
- CAS manager/performance assurance manager
- Operating experience manager
- Program Office technical support

Observations:

- Field element personnel (FRs, SSOs, SMEs) performing operational awareness activities or oversight data collection of operations or management system performance. Evaluate the FR's/SSOs/SMEs interaction with staff and knowledge of the process or system.
- Observe the day-to-day activities of at least one FR. Do not choose the senior FR if possible. Determine whether the FR's routine is varied or the same each day. Determine whether the FRs periodically monitor other FRs' facilities to strengthen knowledge and provide backup to other FRs.
- Headquarters personnel performing oversight data collection
- Walk down assigned facilities and systems with FRs and SSOs
- Fact-finding and critiques
- ORPS report processing
- Interaction with line and contractor management
- Oversight activities, including assessments, operational awareness activities, walk-throughs, and management observations with any oversight personnel
- Contractor issues management meetings (to evaluate issue management processes, observe issue screening and indirectly evaluate organizational learning/safety culture)
- Meetings where senior management is apprised of performance results
- Operational demonstration of issues management system
- Field element meetings discussing:
  - Oversight results
  - CAS effectiveness
  - Safety issues
  - Safety performance
  - Issues management
- Observe qualifications, on-the-job, formal training, continuing education, and oral boards, if possible, of any oversight personnel.

Appendix A: DOE Baseline Assessment Activities Required by DOE Directives

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Beryllium	10 CFR 850, *Chronic Beryllium Disease Prevention Program*	Requirement: • DOE field element manager must review and approve contractor chronic beryllium disease prevention program (CBDPP) annually. (10 CFR 850.10(a))
Conduct of Operations	DOE Order 422.1, *Conduct of Operations*	Requirement: • DOE line management must review and approve the documentation (e.g., matrix) cited in paragraph 4.c. above **at its inception**, when changes in conditions require changes in the documentation, **and at least every three years** or as directed by the DOE field element manager. (DOE Order 422.1)
Contractor Assurance Systems	DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*	Requirements: • DOE contractors must establish an assurance system. DOE field elements approve the initial CAS and review and assess the effectiveness of the CAS. (DOE Order 226.1B, 5f(f) and attachment (1), 2a) • DOE field element evaluations of contractors' performance "must be based on the results of operational awareness activities; assessments of facilities, operations, and programs; **and** [emphasis added] assessments of the contractor's assurance system." (DOE Order 226.1B, 4b(1)) • The CAS must include a method for evaluating the effectiveness of assurance system processes. (DOE Order 226.1B, attachment 1, 2b(1)) • See also the requirements for quality assurance functional area; specifically, how the DOE field element oversees how the contractor incorporates requirements for CAS-related criteria (i.e., criteria 1, 2, 3, 9, and 10) of DOE Order 414.1D, attachment 2 into its implementing procedures via the DOE-approved quality assurance plan (QAP).

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Emergency Planning	DOE Order 151.1D, *Comprehensive Emergency Management System* DOE G 151.1-1A, *Emergency Management Fundamentals and the Operational Emergency Base Program* DOE G 151-2, *Technical Planning Basis* DOE G 151-3, *Programmatic Elements* DOE G 151-4*, Response Elements* DOE G 151-5*, Biosafety Facilities*	Applicability: Federal and Contractor Requirements: • DOE field elements ensure that appropriate performance measures of the effectiveness of contractor site, facility, and activity emergency management programs are incorporated into contractual arrangements. **DOE field element management assesses the DOE field element emergency management program annually** and documents the results of the self-assessment in the DOE field element portion of the emergency readiness assurance plan (ERAP). • The all-hazards survey and emergency preparedness hazard assessment (EPHA) are **reviewed no less than every three years**, and updated if appropriate, or prior to significant changes to the site/facility/activity or hazardous material inventories. If the triennial review of the EPHA determines that there are no updates required, a letter to the DOE field element manager or appropriate Federal manager must be submitted to document the review and provide notification that an update is unnecessary. • The DOE field element approves site emergency plan. • The DOE field element approves the site emergency planning zone. • The DOE field element approves the annual emergency readiness assurance plan and submits it to the Office of Emergency Operations. • The DOE field element approves the annual exercise plan. • The DOE field element assesses the contractor(s) emergency management program. • The DOE field element approves corrective action plans for external findings identified during performance evaluations.

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Employee Concerns	DOE Order 442.1B, *Department of Energy Employee Concerns Program*	Requirements: The DOE Employee Concerns Program (ECP) Manager: • Must conduct a compliance and performance based self-assessment of its ECP program within one year of program approval, and then at least once every two years afterwards. • Must perform assessments of each new contractor ECP within one year of program plan approval, and at least once every two years thereafter. • MAY conduct additional assessments of Federal field office and contractor organizations, as appropriate, in support of a positive safety culture and a safety conscious work environment.
Environmental a. RCRA b. CERCLA c. CWA d. CAA e. SDWA f. EMS	40 CFR 260-272 40 CFR 300-399 40 CFR 87-149 40 CFR 60-61 40 CFR 141-149	None
Facility Safety a. Fire Protection b. Emergency Response c. Natural Phenomena Hazards Mitigation d. Configuration Management e. Criticality Safety	DOE Order 420.1C, *Facility Safety* DOE-STD-1020-2016, *Natural Phenomena Hazards Analysis and Design Criteria for DOE Facilities* DOE-STD-1073-2016, *Configuration Management* DOE-STD-3007-2017, *Preparing Criticality Safety Evaluations at DOE Nonreactor Nuclear Facilities*	Fire Protection Program Requirements: • Field element must approve the contractor's fire protection program(s). This may be included and approved as part of the worker safety and health program. • A documented comprehensive self-assessment of the fire protection program must be performed **at least every three years**, or at a frequency with appropriate justification approved by the Head of DOE Field Element. (DOE Order 420.1C) Emergency Response Requirements: • A baseline needs assessment (BNA) of the fire protection and emergency response organization must be conducted and approved by the Field Element.

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
f. Nuclear Safety Bases	*DOE-STD-1104-2016, Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*	• **The BNA must be reviewed at least every three years, or whenever a significant new hazard that is not covered by the current BNA is introduced and** be updated as appropriate. (DOE Order 420.1C) Natural Phenomena Hazards Mitigation Requirement: • Existing facility or site NPH assessments must be reviewed **at least once every ten years** and whenever significant changes in NPH data, criteria, and assessment methods warrant updating the assessments. Section 9.2 of DOE-STD-1020-2016 contains criteria and guidance for performing these reviews. The review results, along with any recommended update actions, must be submitted to the DOE Head of DOE field element for approval. (DOE Order 420.1C) Configuration Management System Requirement: • Assessments must include **periodic reviews** of system operability, reliability, and material condition as identified in DOE-STD-1073-2016. (DOE Order 420.1C) Criticality Safety Requirements: • Field element managers must approve the contractor's criticality safety program(s). This may be included and approved as part of nuclear facility safety basis documentation. • **Periodic** criticality safety evaluations must be conducted in accordance with DOE-STD-3007-2017, *Preparing Criticality Safety Evaluations at DOE Nonreactor Nuclear Facilities*, or by other documented methods approved by the DOE Head of DOE field element. (DOE Order 420.1C) Safety Basis Requirement: • When delegated, field element managers must review and approve safety bases per DOE-STD-1104-2016.

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
ISMS	DEAR 970.5223-1 DOE Order 450.2, *Integrated Safety Management System*	Requirements: • DOE line managers must: 1) determine the adequacy for approval and frequency of updates of both their DOE offices and their contractors' ISM system description documents and 2) determine the need for, and frequency of, DOE ISM declarations (i.e., the status and effectiveness of ISM system implementation). (DOE Order 450.2) • DOE field element managers ensure the establishment of the annual field element safety goals and objectives and contractor safety performance objectives, measures, and commitments. (DOE Order 450.2, 4g and 5c(3)) • Delegations of nuclear safety authorities must be made where the candidate's organization possesses, or has access to, sufficient staff with the necessary qualifications, experience, expertise, and processes and procedures, or compensatory measures must be established. Delegating officials must establish their minimum expectations in terms of individual and organizational capabilities and capacities for delegations. (DOE Order 450.2, appendix A, paragraphs 2a(1)-(4) and 2b(1)) • Periodically (at intervals no greater than 2 years) delegations of authority are reviewed and nuclear facility safety delegations are self-assessed based on the criteria in appendix A. (DOE Order 450.2, appendix A, 1i, 2c(1)(b))
Maintenance	DOE Order 433.1B, *Maintenance Management Program for DOE Nuclear Facilities*	Requirements: • Field element managers must approve the nuclear maintenance management program every three years. (DOE Order 433.1B, 4.b.) • DOE field element managers must conduct comprehensive self-assessments and assessments of contractor maintenance management programs. Assessments of nuclear maintenance management plan implementation must be conducted: 1) at least every three years or less frequently if directed by the Secretarial Office in accordance with DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, to evaluate whether all CRD requirements are appropriately implemented and 2) prior to startup of new hazard category 1, 2, or 3 nuclear facility. (DOE Order 433.1B, 4b and d and 5d(7))

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Nuclear Safety a. Safety Basis b. PISA/USQ Process c. Technical Safety Requirements d. IVR Process	10 CFR 830, subpart B, *Safety Basis Requirements* a. DOE-STD-3009, *Preparation of nonreactor Nuclear Facility Documented Safety Basis or equivalent.* b. DOE-G-424.1-1B, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements* c. DOE G 423.1-1B, *Implementation Guide for Use in Developing Technical Safety Requirements* d. DOE-STD-3006-2010, *Planning and Conducting Readiness Reviews* and Guide DOE-G 423.1-1A, appendix D	Per 10 CFR 830.203(b) and 830.207(a), the contractor must submit for DOE approval a procedure for it unreviewed safety question process. Applicability: Contractor Frequency and rigor based on the graded approach, recommended frequencies: a. Annually b. Annually c. Annually d. As required
Occupational Safety: a. 10 CFR 851, *Worker Safety and Health Program* b. Site Wide Safety Procedures	10 CFR 851 DEAR 970.5223-1	10 CFR 851.11(a) Requirement: • DOE field element manager must review and approve the contractor WSHP annually.
Operations a. Conduct of Operations b. Occurrence Reporting and Processing of Operations Information	DOE Order 422.1, *Conduct of Operations* DOE Order 232.2, Admin Chg. 1, *Occurrence Reporting and Processing of Operations Information*	None

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Operations Experience	DOE Order 210.2A, *DOE Corporate Operating Experience Program*	None
Real Property Asset Management	DOE Order 430.1B, Chg. 2, *Real Property and Asset Management*	Applicability: Contractor Condition assessment must be performed on all real property assets at least once during any 5-year period using inspection methods in accordance with industry standards. Annual facility information management system (FIMS) validation
Quality Assurance Program	10 CFR 130, subpart A, *Quality Assurance Requirements* DOE Order 414.1D, *Quality Assurance*	Applicability: DOE Department Elements, Field Elements, and Contractors Requirements: • DOE departmental elements and field elements must develop a quality assurance plan (QAP) and implement the approved QAP. (DOE Order 414.1D, 4.a.) • Contractors must develop and submit a QAP for DOE approval and implement the DOE-approved QAP. (DOE Order 414.1D, attch. 1, req. 2) • The QAP must describe the graded approach used in the QAP, implement the QA criteria as defined in Attachment 2 of the Order, and use appropriate consensus standards. (DOE Order 414.1D, 4a and attch. 1, req 1) • DOE departmental elements, field elements, and contractors review QAPs annually, or on a periodic basis defined in the QAP, and updates the QAP, as needed. (DOE Order 414.1D, 4b(2) and attch. 1, 2c).

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
Radiological Controls	10 CFR 835 DOE Order 458.1, *Radiation Protection of the Public and the Environment*	Requirement: Internal audits of the radiation protection program (RPP), including examination of program content and implementation, shall be conducted through a process that ensures that **all functional elements are reviewed no less frequently than every 36 months**. The RPP is reviewed and approved by DOE: (1) Whenever a change or an addition to the RPP is made (2) Prior to the initiation of a task not within the scope of the RPP, or (3) Within 180 days of a regulation change. (10 CFR 835)
Records Management	DOE Order 243.1B, *Records Management Program*	Assess records management practices at least every 3 years.
Startup	DOE Order 425.1D Chg. 2, *Verification of Readiness to Start Up or Restart Nuclear Facilities* DOE-STD-3006-2010, *Planning and Conducting Readiness Reviews*	As needed DOE field element line management must document their actions to verify field element and contractor readiness for each operational readiness review or readiness assessment and verify closure of prestart findings of the operational readiness review or readiness assessment. (DOE Order 425.1D, 4d(5)(d), 4d(10)(c), 4e(6)(d), and 4e(11)(c)).
Training	10 CFR 830.122, criterion 2, *Management/Personnel Training and Qualification* DOE Order 414.1D, attachment 2, criterion 2 DOE Order 426.1B, *Department of Energy Federal Technical Capabilities* DOE Order 426.2, Change 1, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*	Requirements: • DOE Headquarters, field elements, and contractors are required to train and qualify personnel to be capable of performing their assigned work and provide continuing training to personnel to maintain their job proficiency. (10 CFR 830.122, crit. 2 and DOE Order 414.1D, attch. 2, crit. 2) • DOE Headquarters and field elements with defense nuclear facilities must define and implement a technical qualification program (TQP) that includes plans and procedures for its administration, identification of required technical capabilities, identification of TQP participants, a qualification process, continuing training, and periodic evaluations. (DOE Order 426.1B, 4c(1)-(6)) • DOE Headquarters and field elements must conduct a periodic self-assessment of their TQP. (DOE Order 426.1B, 4c(6)).

Functional Area	DOE Orders, Law, Requirements, etc. (latest version)	Oversight Required by DOE Orders, Law, Requirements, etc.
	DOE-STD-1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs* DOE-STD-1063-2021, *Facility Representatives*	• Field element managers must review and approve (1) contractor implementation documentation showing compliance with DOE Order 426.2, including its CRD; and (2) contractor procedures for granting relief from any required aspect of a training and qualification program. • **At least every three years**, heads of field organizations/DOE field element manager for NNSA operations or designee must evaluate contractor training and qualification programs using the methodology described in DOE-STD-1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs*. (DOE Order 426.2)
Transportation Safety	10 CFR 830, subpart B	DOE O 460.1D DOE O 461.1C
Waste Management	DOE Manual 435.1-1, Admin Change 2, *Radioactive Waste Management Manual*	Requirement: Oversight shall ensure that radioactive waste management program activities are conducted in accordance with a radioactive waste management basis and meet the requirements of DOE Order 435.1, *Radioactive Waste Management*, and this manual (DOE Manual 435.1-1).
Work Planning and Control (WP&C)	DOE-HDBK-1211-2014, April 2014, *Activity-Level Work Planning and Control Implementation* DEAR 970.5223-1 (ISMS)	None