



The Secretary of Energy
Washington, D.C. 20585

August 29, 2007

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The Honorable A. J. Eggenberger
Chairman, Defense Nuclear Facilities
Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004-2941

Dear Mr. Chairman:

The purpose of this letter is to update you on one element of our *Implementation Plan to Improve Oversight of Nuclear Operations*, dated October 12, 2006, developed in response to Board Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*.

Commitment 5 of the Implementation Plan called for development and issuance of a DOE Safety Oversight Guide for effectively implementing this Order. Specifically, Commitment 5, Deliverable A, called for the Department to draft a DOE Safety Oversight Guide, including a Criteria and Review Approach Document, to be transmitted for Board review and comment by the Departmental Representative.

I have approved a change to the schedule for completing this commitment in light of other activities that had to be completed first, namely the revision of Order 226.1A, a copy of which is enclosed. The new due date for completion of the Oversight Guide will be February 1, 2008. Development of the Oversight Guide had to follow the Order revision so that it would accurately reflect approved requirements. Development of this Guide is an important activity, and the new schedule will allow us to make it a valuable aid.

If you have any questions, please do not hesitate to contact me or have your staff contact Dr. Patricia Worthington at (301) 903-5926.

Sincerely,

A handwritten signature in cursive script that reads "Samuel W. Bodman".

Samuel W. Bodman

Enclosure



DOE O 226.1A

8-16-07

ERRATA SHEET

This Errata Sheet transmits the following minor change to DOE O 226.1A, *Implementation of Department of Energy Oversight Policy*, dated 7-31-07. Paragraph 8, should read "CONTACT. Questions concerning this Order should be directed to the Office of Health, Safety and Security at 301-903-6061."

The change is reflected in this Order.

This Errata Sheet must remain with DOE O 226.1A.

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U.S. Department of Energy
Washington, D.C.

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OFFICE OF HEALTH, SAFETY AND SECURITY BOARD

ORDER

DOE O 226.1A

Approved: 7-31-07

SUBJECT: IMPLEMENTATION OF DEPARTMENT OF ENERGY OVERSIGHT POLICY

1. **PURPOSE.** This Order provides direction for implementing Department of Energy (DOE) P 226.1A, *Department of Energy Oversight Policy*, dated 5-25-07, which establishes DOE policy for assurance systems and processes established by DOE contractors and oversight programs performed by DOE line management and independent oversight organizations. The objective of the Order is to ensure that contractor assurance systems and DOE oversight programs are comprehensive and integrated for key aspects of operations essential to mission success.
2. **CANCELLATION.** This Order cancels DOE O 226.1, *Implementation of Department of Energy Oversight Policy*, dated 09-15-05. Cancellation of a directive does not, by itself, modify or otherwise affect any contractual obligation to comply with such a directive. Canceled directives that are incorporated by reference in a contract must remain in effect until the contract is modified to delete the reference to the requirements in the canceled directives.
3. **APPLICABILITY.**
 - a. **Departmental Elements.** Except for the exclusions in paragraph 3c, this Order applies to all Departmental elements. (Go to <http://www.directives.doe.gov/references> for the current listing of Departmental elements). This list automatically includes all Departmental elements created after the Order is issued.

The Administrator of the National Nuclear Security Administration (NNSA) will assure that NNSA employees and contractors comply with their respective responsibilities under this Order. Nothing in this Order will be construed to interfere with the NNSA Administrator's authority under section 3212(d) of Public Law (P.L.) 106-65 to establish Administration specific policies, unless disapproved by the Secretary.

This Order applies to assurance systems implemented by DOE contractors¹ and DOE organizations that manage or operate onsite; oversight programs implemented by DOE line management² (both Headquarters and field elements); and DOE independent oversight organizations.³ This Order covers such

¹ DOE contractors are those that operate under contracts governed by 48 CFR 970.5204-2, *Laws, Regulations, and DOE Directives*; however, this Policy should also apply to contracts governed by 48 CFR 952.204-2, *Security Requirements*; 48 CFR 952.204-70, *Classification/Declassification*; and/or 48 CFR 952.223-71, *Integration of Environment, Safety, and Health into Work Planning and Execution*.

² DOE line management refers to the management chain with responsibility for the site. This chain typically extends from the responsible site organization (e.g., site office or field office) to the responsible program office through the Under Secretary and ultimately to the Deputy Secretary and Secretary of Energy.

³ Independent oversight refers exclusively to oversight by DOE Headquarters organizations that do not have line management responsibility for the activity.

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INITIATED BY:
Office of Health, Safety and Security

operational aspects as environment, safety, and health; safeguards and security; cyber security; and emergency management.

b. DOE Contractors.

- (1) The Contractor Requirements Document (CRD), Attachment 1, sets forth requirements that are to be applied to contractors with responsibility for worker safety and health, security, cyber security, or emergency management at DOE sites or facilities.
- (2) Except for the exclusions in paragraph 3c, the CRD sets forth requirements of this Order that will apply to contractors whose contracts include the CRD. The CRD applies to all DOE contracts when incorporated consistent with the clause entitled, "Laws, regulations, and DOE directives," 48 CFR 970.5204-2.
- (3) The office identified in the Responsibilities paragraph is responsible for notifying the contracting officer which contracts are affected by the requirements described in this Order. Once notified, the contracting officer is responsible for incorporating the CRD into each affected contract via the Laws, regulations, and DOE directives clause (48 CFR 970.5204-2) of the contract.
- (4) Regardless of the performer of the work, the contractor is responsible for compliance with the requirements of the CRD that are incorporated in its contract. An affected contractor is responsible for flowing down the requirements of the CRD to subcontractors at any tier to the extent necessary to ensure the contractors compliance with the requirements and the safe performance of work.

c. Exclusions.

- (1) This Order does not apply to activities conducted under the authority of the Director, Naval Nuclear Propulsion Program, as assigned by Executive Order 12344.
- (2) With respect to intelligence-related activities of the Director, Office of Intelligence and Counterintelligence; and counterintelligence-related activities of the Office of Intelligence and Counterintelligence, this Order applies only information protection and cyber security measures, pursuant to Executive Order 12333.
- (3) Consistent with Secretarial Delegation Order Number 00-033.00A to the Administrator and Chief Executive Officer, Bonneville Power Administration, this Order does not apply to oversight of environmental programs or occupational safety and health programs at Bonneville Power Administration.

- (4) This Order does not apply to the Office of the Inspector General.
- (5) Requirements in this Order that overlap or duplicate requirements of the Nuclear Regulatory Commission (NRC) related to radiation protection, nuclear safety (including quality assurance), and safeguards and security of nuclear material, do not apply to the design, construction, operation, and decommissioning of Office of Civilian Radioactive Waste Management (RW) facilities. This exemption does not apply to requirements for which the NRC defers to DOE or does not exercise regulatory jurisdiction.

4. REQUIREMENTS.

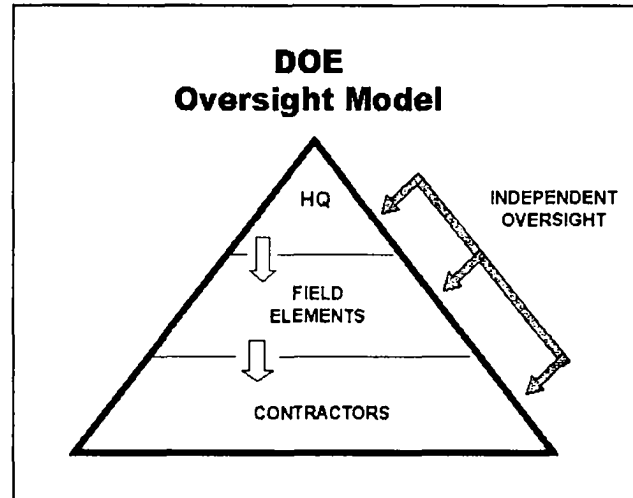
- a. This Order establishes the minimum requirements for implementing DOE P 226.1A. This Order does not preclude requirements in existing or new directives from being more rigorous for operations or activities where it has been determined that the risk or hazard necessitates more rigor.
- b. Oversight and assurance processes may identify DOE directives or site-specific requirements that conflict, are unclear, or are incomplete. Deficiencies in DOE requirements will be brought to the attention of the responsible DOE Headquarters policy organization (the Office of Primary Interest) for resolution. Deficiencies in site-specific requirement will be brought to the attention of the contracting officer.
- c. All applicable DOE organizations must establish and implement an effective oversight program consistent with DOE P 226.1A, the requirements of this Order, and the applicable attachments to this Order (Attachment 1, Contractor Requirements Document; Attachment 2, DOE Line Management Oversight Processes; and Attachment 3, Independent Oversight Processes), to include the following.
 - (1) A comprehensive and rigorous assurance system at all sites implemented by the contractor (for Government-owned/contractor-operated sites) and Federal organizations (for Government-owned/Government-operated sites) that manage or operate DOE sites, facilities, or operations.
 - (2) DOE field element line management oversight processes, such as inspections, reviews, surveillances, surveys, operational awareness, and walkthroughs that evaluate programs and management systems and the effectiveness of the site assurance system. DOE field elements must prepare documented program plans and annual schedules for both planned assessments and focus areas for operational oversight.
 - (3) DOE Headquarters line management oversight processes that are focused primarily on the DOE field elements and also look at contractor activities

to the extent necessary, in order to evaluate the implementation and effectiveness of field element line management oversight. DOE Headquarters elements must prepare documented program plans and annual schedules for both planned assessments and focus areas for operational oversight.

- (4) Independent oversight processes (see also DOE O 470.2B, Independent Oversight and Performance Assurance Program) that are performed by DOE organizations that do not have line management responsibility for the management of the activity and thus provide an independent perspective for senior management on the effectiveness of programs and activities at all organizational levels (Headquarters, field, and contractor).
 - (5) These four essential elements of an oversight program must be designed to work as a comprehensive system to provide assurance that DOE activities are safe and secure.
 - (6) Oversight of high consequence activities, such as high hazard nuclear operations, require additional rigor, such as instituting Central Technical Authorities (CTAs) for core nuclear safety functions. Documented oversight program plans and schedules must address the role of the CTAs and their support staff.
- d. Implementation must be accomplished on the following schedule:
- (1) Existing Environment, Safety and Health (ES&H) oversight practices are contained in: Title 10 CFR 830 Subpart A, Quality Assurance; DOE O 414.1C, Quality Assurance; DOE M 450.4-1, Integrated Safety Management System Manual; and DOE O 450.1, Environmental Protection Program. Other DOE regulations and directives, such as the Nuclear Safety Management Rule (10 CFR 830), the Worker Health and Safety Program Rule (10 CFR 851), and DOE O 470.2B, Independent Oversight and Performance Assurance Program contain related and overlapping requirements and responsibilities. These ES&H and QA oversight practices are to be integrated and enhanced as needed to meet the requirements of DOE P 226.1A and DOE O 226.1A for a comprehensive and rigorous assurance system.”
 - (2) S&S Implementation of DOE O 226.1A by Departmental elements is due 90 days after the effective date of the Order.
 - (3) DOE O 151.1C *Comprehensive Emergency Management System*, Chapter X, Readiness Assurance (Sections 1-3), and the CRD (Section 7) address contractor self-assessments, field element evaluations, and program office evaluations, and includes exercise evaluations, use of performance indicators, corrective actions (identification, tracking,

verification/validation through closure), and lessons learned--management practices that are consistent with the requirements of DOE P 226.1A and DOE O 226.1A. Implementation of DOE O 226.1A by Departmental elements is due 90 days after the effective date of this Order.

- (4) DOE O 205.1A, *Department of Energy Cyber Security Management Program*, maintains long-standing requirements for DOE line organizations to conduct cyber security performance assurance activities that meet the intent of DOE O 226.1A. These activities include site assistance visits, program reviews, compliance reviews, self-assessments, management assessments, analysis of performance measurement criteria, peer reviews, and vulnerability analyses. DOE line management organizations must comply with the provisions of DOE O 226.1A within 90 days after the effective date of the Order.
- e. For activities and programs at Government-owned and Government-operated facilities and sites that are not under the cognizance of a DOE field organization, DOE Headquarters program offices will establish and implement comparably effective oversight processes consistent with requirements for the contractor assurance system (Attachment 1, Appendix A) and DOE line management oversight process (Attachment 2).



5. RESPONSIBILITIES.

- a. The Administrator, NNSA, the Under Secretary of Energy, and the Under Secretary for Science. The Administrator, NNSA, the Under Secretary of Energy, and the Under Secretary for Science will maintain operational awareness of nuclear operations. To assist in these responsibilities, the Administrator, NNSA, the Under Secretary of Energy, and the Under Secretary for Science will each establish a Central Technical Authority to maintain operational awareness,

especially with respect to complex, high-hazard nuclear operations, for ensuring that the Department's safety policies and requirements are adequate and properly implemented.

- b. Administrator, NNSA; Cognizant Secretarial Officers; DOE and NNSA Procurement Executives; and Program Secretarial Officers.
- (1) Establish oversight programs and processes to implement DOE P 226.1A and this Order at Headquarters and across field organizations, and hold personnel accountable for implementing these programs and processes.
 - (2) Design and implement line management oversight programs for DOE Headquarters and field organizations consistent with Attachment 2 or comparably effective criteria established by the responsible program office, and prepare and maintain documented program plans and annual schedules for both planned assessments and focus areas for operational oversight.
 - (3) Assist the field elements in implementing and improving documented oversight program plans and schedules through direction and feedback.
 - (4) Revise program office specific policies and directives to conform to DOE P 226.1A and this Order within one year after the effective date of this Order.
 - (5) Provide unfettered access to information and facilities to conduct an effective oversight program, consistent with applicable laws and requirements.
 - (6) Require that DOE Headquarters, site offices, and contractors regularly assess the effectiveness of DOE-wide lessons learned processes to improve all work processes (e.g., safety, security, etc) and associated management systems.
 - (7) Establish and maintain appropriate qualification standards for personnel with Headquarters and field oversight responsibilities and clear, unambiguous lines of authority and responsibility for oversight.
 - (8) Establish and implement a comparably effective site assurance system consistent with the provisions of Attachments 1 and 2 for activities and programs at Government-owned and Government-operated facilities/activities and DOE sites that are not under the cognizance of a DOE field organization.
 - (9) Perform periodic reviews of contractor assurance system programs and processes for consistency across the complex and ensure that they reflect industry best practices.

c. Central Technical Authorities (CTAs).

- (1) Maintain awareness of the implementation of nuclear safety requirements and guidance, consistent with principles of Integrated Safety Management across the organization (including, for example, reviewing documented safety analyses, authorization agreements and readiness reviews as necessary to evaluate the adequacy of safety controls and implementation).
- (2) Periodically review and assess whether the number of technically capable personnel is adequate to fulfill nuclear safety responsibilities and authorities.

d. Heads of Field Organizations/Heads of Contracting Activities.

- (1) Notify the contracting officer of affected contracts so that the CRD will be incorporated into those affected contracts under the process established by DEAR 970.5204-2.
- (2) Coordinate any requested exemptions to this Order in accordance with DOE M 251.1-1B.
- (3) Coordinate any interpretations of this Order with the affected DOE elements to properly resolve identified issues (for NNSA, provide non-binding interpretations, as requested).
- (4) Establish and implement line management oversight programs and processes at the field element level to meet the requirements of this Order, including Attachment 2, and hold personnel accountable for implementing these programs and processes. Prepare and maintain documented program plans and annual schedules for both planned assessments and focus areas for operational oversight.
- (5) Provide unfettered access to information and facilities to conduct an effective oversight program, consistent with applicable laws and requirements.
- (6) Establish and implement effective DOE line management oversight processes consistent with the provisions of Attachments 1 and 2 for Government-owned and Government-operated facilities and DOE sites under the field organizations' cognizance.
- (7) Review and approve contractor assurance system program descriptions. If existing processes (e.g., quality assurance program or integrated safety management description documents) provide adequate descriptions of the contractor assurance programs, or if such processes can be modified to provide adequate descriptions, submittals under these processes can be used to meet this requirement.

- (8) Revise field element policies and implementing procedures and require that site-specific policies and implementing procedures conform to DOE P 226.1A during the established review and revision cycle and ensure they are consistent with this Order, to include Attachments 1 and 2, or comparably effective criteria established by the responsible program office.
 - (9) Use the results of DOE line and independent oversight and contractor assurance systems to make informed decisions about corrective actions and the acceptability of risks and to improve the effectiveness and efficiency of programs and site operations.
 - e. Office of Health, Safety and Security. Serves as Office of Primary Interest for DOE O 226.1A
 - (1) Coordinates any changes, revisions, or directives developed in support of this Order.
 - (2) Coordinates any requested exemptions to or interpretations of this Order with all other affected DOE elements to properly resolve the exemption/interpretation request.
 - f. Contracting Officers, once notified, must incorporate the CRD without modification into their contracts as soon as practicable but no later than 6 months after the effective date of this Order. (Applicable contracts include those DOE contracts that contain the clauses 48 CFR 952.204-2, "Security"; 48 CFR 952.204-70, "Classification/Declassification"; and/or 48 CFR 952.223-71, "Integration of Environment, Safety and Health into Work Planning and Execution.")
- 6. NECESSITY FINDING STATEMENT. In compliance with section 3174 of P.L. 104-201 (42 USC 7274k note), DOE hereby finds that this Order is necessary for the protection of human health and the environment or safety, fulfillment of current legal requirements, and conduct of critical administrative functions.
- 7. DEFINITIONS.
 - a. "Assurance systems" encompass all aspects of the processes and activities designed to identify deficiencies and opportunities for improvement, report deficiencies to the responsible managers, complete corrective actions, and share in lessons learned effectively across all aspects of operation.
 - b. "DOE Oversight" encompasses activities performed by DOE organizations to determine whether Federal and contractor programs and management systems, including assurance and oversight systems are performing effectively and/or complying with DOE requirements. Oversight programs include operational awareness activities, onsite reviews, assessments, self-assessments, performance

evaluations, and other activities that involve evaluation of contractor organizations and Federal organizations that manage or operate DOE sites, facilities, or operations. Nothing in this paragraph or associated with "DOE Oversight" will be construed or undertaken in contravention of section 3212 of Public Law 106-65.

- c. "Site programs" refers to programs that protect the public, workers, environment, and national security interests or support essential mission activities. Site programs specifically include environment, safety, and health; safeguards and security; cyber security; emergency management; and business operations programs.
 - d. "Site management systems" refers to required management systems that provide the framework for a set of related site programs. Site management systems specifically include Integrated Safety Management, Integrated Safeguards and Security Management, and Quality Assurance Programs.
8. CONTACT. Questions concerning this Order should be directed to the Office of Health, Safety and Security at 301-903-6061.

BY ORDER OF THE SECRETARY OF ENERGY:



CLAY SELL
Deputy Secretary

CONTRACTOR REQUIREMENTS DOCUMENT
DOE O 226.1A, IMPLEMENTATION OF DEPARTMENT OF ENERGY
OVERSIGHT POLICY

1. **RESPONSIBILITIES.** The contractor must comply with the following requirements to ensure establishment of implementing procedures for the provisions of this Contractor Requirements Document (CRD), compliance with applicable requirements, and effective and efficient performance.

Contractor implementation of the safety aspects should have occurred 9/15/2006 per DOE O 226.1. Contractors must comply with the S&S, Cyber Security, and emergency management requirements of the CRD to this Order no later than 6 months after the date the CRD has been incorporated into their contracts.

Consistent with clauses 970.5223-1 (h) and 970.5223-1 (i) in 48 CFR 970.5223-1, regardless of the performer of the work, the contractor is responsible for complying with the requirements of this CRD. The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements. Depending upon the complexity and hazards associated with the work, the contractor may choose not to require the subcontractor to submit a contractor assurance system program description for the contractor's review and approval. However, contractors are still required to ensure that work performance by subcontractors meets the applicable ES&H, including quality assurance and ISM; S&S and Cyber Security; and emergency management requirements.

2. **REQUIREMENTS.**
 - a. A comprehensive and integrated contractor assurance system must be established, consistent with the hazards and the risks associated with the work performed, to identify and address program and performance deficiencies, opportunities for improvement, provide the means and requirements to report deficiencies to the responsible managers and authorities, establish and effectively implement corrective and preventive actions, and share lessons learned across all aspects of operations.
 - b. The contractor assurance system will address the criteria described in Appendix A to this CRD, or other comparably effective criteria established by responsible DOE line management, for activities such as the following:
 - (1) assessments (including self-assessments or management assessments, operational awareness or management walk-throughs, quality assurance assessments, and internal independent assessments),
 - (2) event reporting (including reporting, analyzing, trending operational events, accidents and injuries),
 - (3) worker feedback mechanisms,

- (4) issues management (including analysis of causes, identification of corrective actions, corrective action tracking, monitoring and closure, verification of effectiveness, trend analysis, and identification of continuous improvement opportunities),
 - (5) lessons learned,
 - (6) performance measures.
- c. The contractor must submit, for DOE review and approval, detailed contractor assurance system program descriptions to address the following aspects of operations: (1) environment, safety, and health; (2) safeguards and security; (3) emergency management; and (4) cyber security. If existing processes (e.g., quality assurance program or integrated safety management description documents) provide adequate descriptions of the contractor assurance system, or if such processes can be modified to provide adequate descriptions, submittals under these processes can be used to meet this requirement. Depending upon the complexity and hazards associated with the work, the contractor may choose not to require the subcontractor to submit a contractor assurance system program description for the contractor's review and approval. However, contractors are still required to ensure that work performed by subcontractors meets the requirements of the existing Quality Assurance programs and Integrated Safety Management systems.
- d. The contractor assurance system must include self-evaluations of compliance with applicable laws, regulations, national standards, DOE directives, DOE-approved plans and program documents (e.g., security plans, authorization basis documents, and quality assurance program), site-specific procedures/manuals, criteria review and approach documents, contractual performance objectives, and other contractually mandated requirements.
- e. Contractor personnel who manage and perform assurance functions must possess experience, knowledge, skills, and abilities commensurate with their responsibilities.
- f. The contractor must establish and maintain appropriate qualification standards for personnel with oversight responsibilities.
- g. The contractor must establish clear and unambiguous lines of authority and responsibility for personnel performing oversight.
- h. The contractor must provide unfettered access to information and facilities for DOE oversight officials to conduct an effective oversight program, consistent with applicable laws and requirements.
- i. Oversight and assurance processes may identify DOE directives or site-specific requirements that conflict, are unclear, or are incomplete. Deficiencies in DOE

requirements must be brought to the attention of the contracting officer and forwarded to the responsible DOE Headquarters policy organization (the Office of Primary Interest) for resolution.

CONTRACTOR ASSURANCE SYSTEMS

1. REQUIREMENTS.

- a. DOE contractors must establish a comprehensive and integrated contractor assurance system in accordance with quality assurance requirements (as stated in 10 CFR Part 830, Subpart A, or other applicable regulations), applicable DOE directives (e.g., O414.1C), and contract terms and conditions. A contractor's assurance processes must encompass all of the various activities designed to—
 - (1) identify deficiencies and opportunities for improvement,
 - (2) report deficiencies to the responsible managers and authorities, and
 - (3) implement effective corrective actions.
- b. Assurance activities must encompass environment, safety, and health; safeguards and security; cyber security; and emergency management and must include—
 - (1) assessments (including self-assessments, management assessments, and internal independent assessments as defined by laws, regulations, and DOE directives such as quality assurance program requirements) and other structured operational awareness activities (e.g., management walk-throughs);
 - (2) incident/event reporting processes, including accident investigations;
 - (3) worker feedback mechanisms;
 - (4) issues management, including causal analysis, identification of corrective actions and recurrence controls, corrective action tracking and monitoring, closure of corrective actions and verification of effectiveness, trend analysis, and identification of continuous improvement opportunities;
 - (5) lessons-learned programs; and
 - (6) performance indicators/measures.
- c. Contractor assurance system data must be documented and readily available to DOE. Results of assurance processes must be periodically analyzed, compiled, and reported to DOE in support of the formal contract evaluation.
- d. Contractors must integrate processes for corporate audits, third-party certifications, or external reviews by experts in designing and implementing the contractor's assurance system.

- e. Program effectiveness can be certified by third parties to provide management with assurance that program elements meet national standards and reviewers' expectations. Although third-party certification can complement internal assurance systems, it is not a substitute for rigorous internal assurance system processes.
- f. Contractors must monitor and evaluate all work performed under their contracts, including the work of subcontractors.

2. ASSESSMENTS. A rigorous and credible assessment program is the cornerstone of effective, efficient management of programs such as environment, safety, and health; safeguards and security; cyber security; and emergency management.

Contractors will be responsible for developing, implementing, and performing comprehensive assessments of all facilities, systems, and organizational elements, including subcontractors, on a recurring basis. The scope and frequency of assessments must be specified in site plans and program documents (e.g., the quality assurance program) and must ensure that required assessments by applicable DOE directives are being performed; the effectiveness of safety management programs, including programs that are credited in the safety basis for nuclear facilities are being assessed adequately; deficiencies are being self-identified; and corrective actions are being taken in a timely and effective manner. External peers or subject matter experts may be utilized to support assessment activities.

- a. Self-Assessment is used to evaluate performance at all levels periodically and to determine the effectiveness of policies, requirements, and standards and the implementation status (see also DOE Order 414.1C, Criterion 9, "Management Assessment").
 - (1) Management self-assessments (also called management assessments) are performed by contractor management, and are developed (scope and review criteria) based on the nature of the facility/activity being assessed and the hazards and risks to be controlled.
 - (2) Self-assessments, which focus on hands-on work and the implementation of administrative processes, involve workers, supervisors, and managers to encourage identification and resolution of deficiencies at the lowest level practicable (e.g., workplace inspections and post-job reviews).
 - (3) Support organizations will perform self-assessments of their performance and the adequacy of their processes.
 - (4) Contractor, at all levels, will assess the implementation and adequacy of their processes, including analysis of the collective results of lower-level self-assessments.

- (5) Self-assessment results will be documented commensurate with the significance of and risks associated with activities being evaluated. Deficiencies will be accurately described and documented for evaluation and correction using formal issues management processes.
 - b. Internal independent assessments will be performed by contractor organizations or personnel that have authority and independence from line management, to support unbiased evaluations (see also DOE Order 414.1C, Criterion 10, "Independent Assessment").
 - (1) The assessments will be formally planned and scheduled based on the risk, hazards, and the complexity of the processes and activities to be evaluated.
 - (2) Independent evaluators will be appropriately trained and qualified and have knowledge of the areas assessed.
 - (3) Reviewers will be dedicated contractor staff, members of external organizations, or both.
 - (4) Although independent assessments are applied to individual activities and processes, they will typically focus on entire facilities or projects, and programs and management processes that are used by multiple organizations.
 - (5) Internal independent assessments will concentrate on performance and observation of work activities and the results of process implementation.
3. EVENT REPORTING. Formal programs will be established and effectively implemented to identify issues and report, analyze, and address operational events, accidents, and injuries.
 - a. Reportable occurrences that meet occurrence reporting and processing system thresholds and associated corrective actions will be evaluated, documented, and reported as required by the DOE directive (M 231.1-1, Environment, Safety and Health Reporting Manual).
 - b. For activities covered by the Price-Anderson Amendments Act, nuclear and worker safety and health issues (e.g., noncompliance) meeting DOE reporting thresholds should be self-reported through the DOE-wide Noncompliance Tracking System to mitigate the severity level of the violation and potential financial penalties.
 - c. Trending analysis of events, accidents, and injuries is performed in accordance with structured/formal processes.
4. WORKER FEEDBACK. In addition to structured assessments, DOE contractors will establish and implement processes to solicit feedback from workers and work activities.

Common feedback mechanisms are described in site plans/program documents and include the following:

- a. employee concerns programs,
- b. telephone or intranet "hotline" processes for reporting concerns or questions,
- c. pre-job briefs,
- d. job hazard walk-downs by workers prior to work,
- e. post-job reviews,
- f. employee suggestion forms,
- g. safety meetings,
- h. employee participation in committees and working groups, and
- i. labor organization input.

5. ISSUES MANAGEMENT. Contractors must ensure that a comprehensive, structured issues management system is in place. This system must provide for the timely and effective resolution of deficiencies, and be an integral part of effective contractor assurance system (see also DOE Order 414.1C, Criterion 3, "Quality Improvement").
 - a. Program and performance deficiencies, regardless of their source, must be captured in a system or systems that provide for effective analysis, resolution, and tracking. Issues management must include structured processes for—
 - (1) determining the risk, significance, and priority of deficiencies;
 - (2) evaluating the scope and extent of the condition or deficiency (e.g., applicability to other equipment, activities, facilities, or organizations);
 - (3) determining event reportability under applicable requirements (e.g., Price-Anderson Amendments Act, Occurrence Reporting and Processing System, security incident reporting);
 - (4) identifying root causes (applied to all items using a graded approach based on risk);
 - (5) identifying and documenting suitable corrective actions and recurrence controls, based on analyses, to correct the conditions and prevent recurrence;
 - (6) identifying individuals/organizations responsible for implementing corrective actions;

- (7) establishing appropriate milestones for completion of corrective actions, including consideration of significance and risk;
 - (8) tracking progress toward milestones such that responsible individuals and managers can ensure timely completion of actions and resolution of issues;
 - (9) verifying that corrective actions are complete;
 - (10) validating that corrective actions are effectively implemented and accomplish their intended purposes, using a graded approach based on risk; and
 - (11) ensuring that individuals and organizations are accountable for performing their assigned responsibilities.
- b. Issues management will provide a process for rapidly determining the impact of identified weaknesses and taking timely action to address conditions of immediate concern. For such conditions, interim corrective actions (e.g., stopping work, shutting down activities, or revising a procedure) are to be taken as soon as a condition is identified and without waiting until a formal report is issued.
 - c. Processes for analyzing deficiencies, individually and collectively, must be established to enable the identification of programmatic or systemic issues. Process products will be used by management to monitor progress in addressing known systemic issues and to optimize the allocation of assessment resources.
 - d. Sites must have effective processes for communicating issues up the management chain to senior management, using a graded approach that considers hazards and risks. The processes must provide sufficient technical basis to allow managers to make informed decisions and must include provisions for communicating and documenting dissenting opinions. Processes for resolving disputes about oversight findings and other significant issues must be implemented. The processes must include provisions for independent technical reviews of significant issues.
6. LESSONS LEARNED. Formal programs must be established to communicate lessons learned during work activities, process reviews, and event analyses to potential users and applied to future work activities. Contractors must identify, apply, and exchange lessons learned with the rest of the DOE complex. Contractors must review and apply lessons learned identified by other DOE organizations and external sources to prevent similar occurrences (see also DOE Order 414.1C, Criterion 3, "Quality Improvement").
 7. PERFORMANCE MEASURES. Contractors must identify, monitor, and analyze data measuring the performance of facilities, programs, and organizations. The data must be used to demonstrate performance improvement or deterioration relative to identified goals. Using a program to analyze and correlate data, contractors must suggest further improvements and identify good practices and lessons learned. To accomplish these

objectives, contractors must establish programs that identify, gather, verify, analyze, trend, disseminate, and make use of performance indicators (see also DOE Order 414.1C, Criterion 3, "Quality Improvement").

Performance indicator data must be considered in allocating resources, establishing goals, identifying performance trends, identifying potential problems, and applying lessons learned and good practices. Quantitative performance indicators/measures also may be considered in evaluating performance and establishing oversight priorities. However, quantitative performance measures provide only a partial indication of system effectiveness and must be considered in combination with other appraisal and operational awareness results.

**DOE LINE MANAGEMENT
(BOTH HEADQUARTERS AND FIELD ELEMENTS)
OVERSIGHT PROCESSES**

1. **REQUIREMENTS.** DOE Headquarters and field element line management maintain sufficient knowledge of site and contractor activities to make informed decisions about hazards, risks and resource allocation, provide direction to contractors, and evaluate contractor performance. The effectiveness of contractor assurance systems, the hazards at the site/activity, and the degree of risk are factors in determining the scope and frequency of DOE line management assessments and operational awareness activities.
 - a. DOE line management oversight must:
 - (1) Ensure contractor compliance with requirements. DOE line management must periodically examine contractor programs and their implementation at the work-activity level to assess that DOE requirements and external regulatory requirements are met effectively. Deficiencies must be brought to the attention of contractor management and addressed in a timely manner.
 - (2) Ensure the adequacy of contractor assurance systems. DOE line management must review contractor assurance systems periodically to ensure that: required assessments by applicable DOE directives are being performed; the effectiveness of safety management programs, including programs that are credited in the safety basis for nuclear facilities are being assessed adequately; deficiencies are being self-identified; and corrective actions are being taken in a timely and effective manner.
 - (3) Evaluate contractor performance. DOE line management must periodically evaluate contractor performance in accordance with the provisions of their contracts.
 - (4) Ensure compliance with requirements applicable to DOE line management. DOE line management organizations must establish and implement oversight processes for monitoring their internal operations and completing required activities, such as reviewing and approving safety analysis reports and security plans, performing emergency management functions, adjudicating security clearances, implementing computer security programs at DOE office buildings, operating classified and sensitive information identification and protection programs, and operating employee concerns programs and other such functions.
 - b. DOE line management must set expectations and communicate them to contractors. This will be implemented through formal contract mechanisms and direct communication between DOE and contractor managers.

- (1) Particular attention must be devoted to ensuring that requirements and expectations are established in contractual documents, including performance indicators, measures, objectives, and criteria.
 - (2) Performance expectations must be established through the development and approval of required program documents for –
 - (a) quality assurance,
 - (b) integrated safety management (including the environmental management system),
 - (c) integrated safeguards and security management,
 - (d) cyber security, and
 - (e) emergency management.
 - (3) DOE line management must verify that plans submitted by contractors clearly delineate actions to be taken and describe programs that meet DOE requirements and expectations.
 - (4) Indicators and performance measures must be established and periodically reviewed by DOE line management and communicated to contractors to provide tools for monitoring performance in meeting expectations.
 - (5) In addition to collecting and analyzing long-term indicators of interest complex-wide, contractor-specific performance objectives and criteria and appropriate incentives must be identified and specified in contract documents. Objectives and criteria must be challenging and focused on improving performance in known areas of weakness.
 - (6) If the contractor assurance system is not adequate, DOE line management will provide direction to the contractor through such measures as contractual provisions and required program documents (e.g., quality assurance program).
- c. To promote efficiency, DOE field organizations will perform most onsite operational awareness and assessment activities on behalf of the responsible DOE line management organization. However, DOE Headquarters, field managers, and support or Service Center staff may conduct “for cause” reviews, reviews pursuant to other requirements in this Order, discretionary assessments, or provide support to field elements during assessments.
 - d. DOE line management must have effective processes for communicating line oversight results and other issues up the DOE line management chain, using a graded approach based on the hazards and risks. The processes must provide sufficient technical basis to allow senior DOE managers to make informed

decisions and must include provisions for communicating and documenting dissenting opinions. Processes for resolving disputes about oversight findings and other significant issues must also be implemented and include provisions for independent technical reviews of significant issues.

- e. DOE Headquarters line management personnel must regularly review the results of DOE field organization oversight and other information to maintain awareness of site conditions and trends and to determine the effectiveness of field line management oversight processes. DOE Headquarters line management must establish appropriate oversight activities that are primarily focused on DOE field elements and may also include contractor activities as necessary, to review the adequacy of the scope and implementation of field office self-assessment activities, field office oversight activities, field office technical capabilities, and field office assurance systems.
- f. Oversight of high consequence activities, such as high hazard nuclear operations, require additional rigor, such as Central Technical Authorities (CTA) for core nuclear safety functions. Oversight of operations with the potential for high consequence events such as nuclear facilities and operations require additional oversight that must include Headquarters awareness and assessment activities. For high-consequence nuclear operations, the CTAs will maintain awareness of the content of applicable DOE line oversight programs, plans, and processes, and contractor assurance systems by monitoring, evaluation and trend analyses, and by participation in oversight activities. The CTAs will also maintain awareness of the state of implementation of these line management programs, plans, and processes, and contractor assurance systems by monitoring associated assessment reports. The CTAs and their CNS/CDNS staffs will also conduct and participate in various DOE Headquarters line oversight review activities as defined in the associated Headquarters oversight programs. Based on these activities the CTA will communicate identified issues and trends to line management, provide advice concerning technical solutions or options, and be able to follow up to ensure proper closure or implementation.
- g. The oversight program will provide a balance between reviews of documentation (e.g., plans, procedures, and records) and adequacy of implementation through performance tests and observation of actual work activities at the facilities.
- h. Oversight program activities will provide for a similar balance between evaluations of systems (such as the DOE integrated safety management system and integrated safeguards and security management system), programs (e.g., radiation protection), facilities, and implementation of individual elements of those systems (e.g., specific work activities).
- i. DOE line management oversight will coordinate assessment activities with site assurance system activities to promote efficient use of resources and may conduct some assessments jointly with contractors. However, DOE line management

must maintain an adequate baseline oversight program that includes sufficient standalone assessments of contractor management systems and site programs.

- j. DOE line management (primarily through field organizations) will implement a baseline line management oversight program that focuses resources on selected assessments, operational awareness activities, performance measure monitoring and improvement, and assessment of assurance systems. For sites that need improvement in site programs, management systems, or assurance systems (e.g., insufficient rigor or comprehensiveness in existing systems), DOE line management will conduct more frequent assessments focusing on areas needing improvement.
- k. DOE Headquarters and field element line management will regularly assess site assurance systems to determine the appropriate level of overlap and redundancy of DOE Headquarters and field element line management oversight. Accordingly, DOE line management organizations may increase their frequency and/or depth based on performance deficiencies or events or may decrease the frequency and/or depth of line management oversight assessments to reflect sustained effective site performance. Although external organization reviews and the effectiveness of assurance systems are considered in determining DOE line management oversight priorities and the scope and frequency of oversight activities, DOE line management must always maintain an adequate minimum baseline oversight program that enables DOE line management to understand the hazards and risks of activities.
- l. The effectiveness of the contractor assurance system will be determined based on objective criteria. DOE line management will establish criteria for determining the effectiveness of site programs, management systems, and contractor assurance systems that include consideration of previous assessment results (internal and external), effectiveness of completed corrective actions, demonstrated success in self-identifying and correcting deficiencies, the existence of rigorous and well documented programs, and evidence of sustained management support for site programs, management systems, and assurance systems.
- m. DOE Headquarters and field line management will establish documented program plans that describe their oversight activities and will develop an annual schedule of planned assessments and focus areas for operational awareness. Modifications to the schedule are expected in response to changing circumstances, but modifications are approved by DOE line management in accordance with defined processes.
- n. DOE oversight programs and assurance systems will evaluate performance against requirements and performance objectives to include laws, regulations, national standards, DOE directives, DOE-approved plans and program documents (e.g., security plans, authorization basis documents, and quality assurance program), site-specific procedures/manuals, criteria review and approach documents, other contractually mandated requirements, and contractual

performance objectives. Requirements and performance objectives are established and interpreted through approved processes so that they are relevant to the site and mission. Continuous improvement opportunities are identified and pursued.

2. PROCESSES. DOE line management must implement oversight processes as described below.
 - a. Operational Awareness Activities. Operational awareness refers to those activities taken by DOE line personal to maintain cognizance of overall facility or activity status, major changes planned, and overall safety posture. The expected degree of operational awareness varies based on distance from the work.
 - (1) DOE line management must rigorously review and critique contractor processes and performance in identifying, evaluating, and reporting events and safety issues that are required to be reported by laws, regulations, or DOE directives to determine whether issues are properly screened, evaluated, and reported.
 - (2) DOE line management must evaluate and monitor the contractor evaluations and corrective actions for events and issues and assess whether effective recurrence controls are identified and implemented.
 - (3) Operational awareness activities must be documented either individually or in periodic (e.g., weekly or monthly) summaries.
 - (4) Deficiencies in programs or performance identified during operational awareness activities must be communicated to the contractor for resolution through a structured issues management process, which can be managed by the DOE field organization or the contractor.
 - b. Assessments of Facilities, Operations, and Programs. DOE line management must establish and implement assessment programs to determine contractor compliance with requirements.
 - (1) DOE line management assessments will be planned and scheduled based on requirements, analysis of hazards and risks, past performance, and effectiveness of contractor assurance systems for organizations, facilities, operations, and programs.
 - (2) In addition to scheduled assessments, "for cause" reviews will be performed when circumstances warrant (e.g., when events indicate degradation of a system).
 - (3) Assessments will be performed in support of facility startup and restart or review and will review and approve required program documents (e.g., authorization basis documents).

- (4) Assessments must include reviews of site qualification standard programs, training programs, and individual training and qualifications as they relate to environment, safety, and health; safeguards and security; emergency management; and cyber security.
 - (5) Assessment results, including findings, must be documented and provided to the contractor for timely resolution.
 - (6) Deficiencies identified by DOE assessments or other DOE reviews must be addressed in a structured issues management process. DOE verifies that contractor corrective actions are complete and effective in addressing deficiencies before they are closed out in the issues management system.
 - (7) DOE line management must maintain a baseline assessment program that provides assurance that DOE managers have an accurate picture of the status and effectiveness of site programs and that deficiencies are identified in a timely manner.
 - (8) DOE line management will perform “for cause” reviews and assessments in support of startup/restart and program document reviews as warranted.
 - (9) Oversight must include structured and rigorous processes for validating the accuracy of information collected during assessments. DOE line management requires that findings must be tracked and resolved through structured and formal processes, including provisions for review of corrective action plans.
 - (10) DOE line management must verify that corrective actions are complete and performed in accordance with requirements before findings identified by DOE assessments or reviews are closed, and requires that deficiencies are analyzed both individually and collectively to identify causes and prevent recurrences.
- c. Assessments of Contractor Assurance Systems. DOE requires that contractor assurance systems address all organizations, facilities, and program elements.
- (1) DOE line management must assess implementation and effectiveness of contractor assurance systems for environment, safety, and health; safeguards and security; emergency management; and cyber security systems and their subelements (e.g., radiation protection within environment, safety, and health) by examining the following:
 - (a) assessment methods (e.g., whether sufficient emphasis is placed on observation of work activities);
 - (b) the frequency, breadth, and depth of self-assessments;
 - (c) line management involvement in self-assessments;

- (d) evaluators' technical expertise and qualifications;
 - (e) the number and nature of findings identified; and
 - (f) the degree of rigor applied to self-assessment.
- (2) DOE line management must regularly assess the effectiveness of contractor issues management and corrective action processes, lessons learned processes, and other feedback mechanisms (e.g., worker feedback). DOE line management must also evaluate contractor processes for communicating information, including dissenting opinions, up the management chain.
 - (3) DOE line management must validate that contractor corrective actions have been implemented and are effective in resolving deficiencies and preventing recurrence.
 - (4) DOE line management must also regularly assess the contractor's reporting processes and performance to assess that contractors meet reporting requirements for events and incidents of security, environment, safety, health, cyber security, and emergency management concern and take effective actions to prevent recurrence of deficiencies or findings.
 - (5) For sites where contractors report the results of performance measures to DOE (e.g., as part of a contractual provision), DOE must regularly assess the effectiveness of processes for collecting, evaluating, and reporting performance data to ascertain the accuracy, completeness, and validity of the performance measures.
- d. Evaluations of Contractor Performance. As contracting officers, DOE line management must periodically evaluate contractor performance in meeting contractual requirements and expectations.
- (1) A combination of DOE line management oversight, contractor self-assessments, and other performance indicators (e.g., performance measures and event reports) must be used to evaluate contractor performance.
 - (2) DOE line management must evaluate the effectiveness of management programs, including environment, safety, and health; safeguards and security; cyber security; and emergency management. Poor performance in these areas must have significant negative consequences on evaluations and fee determination. In accordance with contract provisions, evaluations must be used to reward significant accomplishments and/or performance improvements.

- (3) Quantitative performance indicators and measures may be used to support the evaluation of a contractor; however, such indicators provide only a partial indication of system effectiveness and must be considered in combination with assessment results.
 - (4) Evaluations must be based on an analysis of the results of relevant information obtained or developed during the performance period, including contractual performance measures and objectives, DOE line management oversight, contractor self-assessments, operational history/events, and reviews by DOE and external organizations.
- e. Self-Assessments of DOE Line Management Functions and Performance. DOE Headquarters and field organizations must have a structured, documented self-assessment program for environment, safety, and health; safeguards and security; cyber security; and emergency management to comply with DOE requirements. DOE organizations must perform self-assessments of programmatic and line management oversight processes and activities (e.g., security surveys, facility representative programs, personnel qualification standards, and training programs) to assess whether requirements and management expectations are met. The frequency of assessments of these functions must be commensurate with the hazards and risks related to the activity being assessed. Continuous improvement mechanisms (e.g., corrective action processes) must be in place to improve the effectiveness and efficiency of oversight programs and site operations.

INDEPENDENT OVERSIGHT PROCESSES

1. REQUIREMENTS. Independent oversight will be conducted under the direct authority of the Secretary of Energy, and the results will be provided to DOE line management and other appropriate interested parties (e.g., Congress or other Federal/State agencies). Independent oversight performance evaluations at DOE sites provide an independent perspective on the effectiveness of DOE line management and contractors in ensuring that site operations are performed safely, securely, and in compliance with applicable requirements.

To ensure consistent implementation of oversight processes, the director of each independent oversight program will ensure that independent oversight is accomplished in accordance with DOE directives (e.g., DOE O 470.2B, *Independent Oversight and Performance Assurance*) and other written work processes and established criteria (e.g., inspector protocols/guides and performance test methodologies).

2. FOCUS. Independent oversight processes focus on areas of potential risk to DOE, such as environment, safety, and health; safeguards and security; cyber security; and emergency management.
 - a. In establishing priorities, independent oversight programs must select specific sites, facilities, programs, and activities for review through a planning process that considers risks, hazards, past performance, facility conditions, changes in mission or operations, changes in contractors or management organizations, and other such factors.
 - b. A selective sampling approach must provide sufficient independent reviews of sites and programs while minimizing overlap with the DOE line management oversight activities conducted by the DOE Headquarters and field organizations.
 - c. Written plans with evaluation criteria will be developed for major assessments. The current and historical effectiveness of the DOE line management oversight programs and contractor feedback and improvement processes is a major factor in determining the scope, breadth, and depth of an inspection. In addition, independent oversight priorities and the sampling approach may change over time as conditions change or at the direction of the Secretary of Energy.
 - d. At the conclusion of independent oversight inspections, reports detailing assessment activities and results will be documented and disseminated to DOE line management. The independent oversight report development process and validation process will be documented in written work instructions to ensure that information collected during assessments and resulting findings are based on factually accurate and valid information.
 - e. Independent oversight must provide a balance between reviews of documentation (e.g., procedures and records) and adequacy of implementation through

performance tests and observation of work activities. A similar balance must be achieved for evaluations of systems (such as the DOE integrated safety management and integrated safeguards and security management systems), programs (e.g., radiation protection), facilities, and implementation of individual elements of those systems (e.g., specific work activities).

- f. Independent oversight activities, such as Office of Health, Safety and Security's Office of Independent Oversight inspections, differ from DOE line management assessments in that they focus on the combined effectiveness of contractors and DOE line management in establishing site programs that meet DOE expectations. The selective evaluation of program implementation by contractors provides an indication of the effectiveness of DOE line management in providing direction and ensuring contractor performance.