

**DEPARTMENT OF ENERGY
OFFICE OF ES&H EVALUATIONS**



**OFFICE SPECIFIC
QUALIFICATION STANDARD
FOR
ES&H SYSTEMS
ASSESSOR/APPRaiser**

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Approved:

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Director Office of ES&H Evaluations/Date

OFFICE OF ENVIRONMENT SAFETY AND HEALTH (ES&H) EVALUATIONS

ES&H SYSTEMS ASSESSOR/APPRaiser QUALIFICATION STANDARD

FUNCTIONAL AREA

Environment, Safety and Health Systems Assessor/Appraiser

An environmental, safety and health system assessor/appraiser is that person who is normally at the GS 13 through 15 level, Excepted Service or Senior Level and assigned the responsibility to assess and evaluate management systems, environmental, safety and health programs and technical activities associated with DOE nuclear and non-nuclear facilities.

PURPOSE

The environmental, safety and health systems assessor/appraiser functional area qualification standard establishes common functional area competency requirements for all technical personnel in the Office of Environmental Safety and Health Evaluations. Satisfactory and documented completion of the competency requirements contained in this Standard ensures that technical employees possess the minimum requisite competence to fulfill their functional area duties and responsibilities. This standard is integrated with existing qualification standards developed by DOE in accordance with DOE Manual 426.1-1 "Federal Technical Capability Manual". This standard satisfies the qualification requirements contained in 10 CFR 830.120 for personnel with independent assessment responsibilities.

APPLICABILITY

This Standard applies to all the Office of Environment, Safety and Health Evaluations personnel and support contractors assessing line management and environmental, safety and health operations at DOE facilities. Personnel directed by the Director, Office of Environment, Safety and Health Evaluations to conduct appraisals of DOE systems are required to satisfy the competency requirements of this Standard.

IMPLEMENTATION REQUIREMENTS

The competencies contained in the Standard are divided into the following three categories:

1. Regulatory
2. Technical
3. Assessment and Oversight

Each of the categories is defined by one or more competency statements indicated by bold print. Each of the competency statements is further explained by a listing of supporting knowledge and/or skill statements. The competency statements define the expected knowledge and/or skill that an individual must possess to meet the intent of each category. The supporting knowledge and/or skill statements further describe the intent of the competency statements. However,

each of the supporting knowledge and/or skill statements do not necessarily have to be fulfilled to meet the intent of the competency.

All of the competencies identify either a working level or an expert level of required knowledge or skill. These levels are defined as follows:

Working level is defined as the knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to reference appropriate materials and/or expert advice as required to ensure the safety of Departmental activities.

Expert level is defined as a comprehensive, intensive knowledge of the subject or process sufficient to provide advice in the absence of procedural guidance.

Documentation of the completion of the requirements of this Standard shall be included in the employee's training and qualification record.

Equivalencies may be granted for individual competencies based upon an objective evaluation of the employee's prior education, experience, and/or training. Documentation of equivalencies shall indicate how the competency requirements have been met. The supporting knowledge and/or skill statements should be considered when evaluating an individual's ability with respect to each competency requirement.

DUTIES AND RESPONSIBILITIES

The following are duties and responsibilities normally expected of the Office of Environment Safety and Health Evaluations personnel assigned to the functional area of environment, safety and health systems assessor/appraiser:

- A. Must possess the knowledge to effectively conduct objective and independent appraisals using and interpreting applicable performance objectives and criteria, standards and requirements.
- B. Must be able to develop and communicate a management systems and technical program appraisal plan within a defined scope and approach that identifies applicable standards, necessary personnel, required documents and tools and an appraisal agenda.
- C. Must be able to effectively execute an appraisal plan, including the scoping meetings, performing the appraisal, any required team meetings, using generally accepted auditing techniques, and verifying, documenting and communicating findings within the defined scope and approach.
- D. Must be able to objectively present and communicate verified nonconformances to both management systems and technical performance objectives and criteria, standards and requirements and evaluate the effectiveness of the resultant follow-up or corrective action activities.
- E. Must know and be able to apply auditing tools and techniques such as, observation techniques, interviewing, observing performance, performance testing and physical examination techniques, and causal analysis.

RECOMMENDED BACKGROUND

The education and experience requirements for an environmental, safety and health system assessor/appraiser is:

- 1. Education:
Bachelor of Science degree in engineering, a related science, health, technical related field or equivalent, and meeting the Qualifications Standards of at least one of the functional areas, including Aviation Safety Manager, Aviation Safety Officer, Chemical Processing, Civil/Structural Engineering, Construction Management and Engineering, Criticality Safety, Decontamination and Decommissioning, Electrical Systems, Emergency Management, Environmental Compliance, Environmental Restoration, Facility Maintenance Management, Facility Representative, Fire Protection, Industrial Hygiene, Instrumentation and Control, Mechanical Systems, Nuclear Explosives, Nuclear Safety Systems, Occupational Safety, Project Management, Quality Assurance, Radiation Protection, Safeguards and Security, Senior Technical Safety Manager, Technical Trainer, Technical Program Manager, Transportation and Traffic Management, Waste Management.
- 2. Experience:
Industry related and other experience that has provided specialized background in leadership, management or performance of oversight/evaluation/appraisal/audit in nuclear,

industrial safety and health, or environmental programs. Specialized experience can be demonstrated through possession of the competencies outlined in this Standard. Additionally, the individual needs to be meeting and maintaining the Qualifications Standards of at least one of the functional areas listed in 1. Education above.

REQUIRED COMPETENCIES

The competencies contained in this Standard are distinct from those competencies contained in the DOE General Technical Base Qualification Standard. All Environment, Safety and Health Evaluations personnel must complete the competency requirements of the General Technical Base Qualification Standard prior to or in parallel with the completion of the competency requirements contained in this Standard and the standard in one or more the functional areas listed above. Each of the competency statements defines the level of expected knowledge and or skill that an individual must possess to meet the intent of this Standard. The supporting knowledge and/or skill statements further describe the intent of the competency statements.

1. REGULATORY

- 1.1 An environment safety and health (ES&H) systems assessor/appraiser shall demonstrate an expert level of knowledge of the independent assessment process as outlined in Department of Energy Order 470.2B, the Office of Oversight Appraisal Process Guide and the ES&H Appraisal Process Protocols.**

Supporting Knowledge and/or Skills

- a. Describe the focus and content of an independent assessment process.
- b. Describe the responsibilities of personnel performing independent assessments.
- c. Explain the idea of "independence" as it relates to independent assessments, in general.
- d. Explain, in general, who is/are the customer(s) for independent assessments.
- e. Explain the differences between independent assessment and line management assessment.
- f. Explain the Department's corrective action process as it pertains to OA inspection activities.
- g. Explain the need to have personnel performing independent assessments technically qualified and knowledgeable in the areas assessed.

2. TECHNICAL

- 2.1 An environmental, safety and health systems assessor/appraiser shall demonstrate an expert level knowledge of at least one or more functional areas as defined in the qualification standards including Aviation Safety Manager, Aviation Safety Officer, Chemical Processing, Civil/Structural Engineering, Construction Management and Engineering, Criticality Safety, Decontamination and Decommissioning, Electrical Systems, Emergency Management, Environmental Compliance, Environmental Restoration, Facility Maintenance Management, Facility Representative, Fire Protection, Industrial Hygiene, Instrumentation and Control, Mechanical Systems, Nuclear Explosives, Nuclear Safety Systems, Occupational Safety, Project Management, Quality Assurance, Radiation Protection, Safeguards**

and Security, Senior Technical Safety Manager, Technical Trainer, Technical Program Manager, Transportation and Traffic Management, Waste Management.

Supporting Knowledge and/or skills

See the Functional Area qualification standards handbook to meet the competency requirements for the specific functional area.

3. ASSESSMENT, AND OVERSIGHT

3.1 An environment safety and health systems assessor/appraisers shall demonstrate an expert level knowledge of appraisal techniques (such as observations, interviews, and document reviews) to assess systems performance, report results of appraisals, and follow up on action taken as the result of appraisals.

Supporting Knowledge and/or Skills

- a. Describe Environment Safety and Health Systems Assessor/appraiser's role in oversight of Department of Energy sites and operations.
- b. Describe appraisal requirements and limitations in Environment Safety and Health Systems Assessor/appraiser's interface with contractor employees.
- c. Demonstrate ability to conduct interviews of various levels and types of personnel, including managers, technical and administrative staff during an audit.
- d. Explain the essential elements of performance-based, compliance-based and management systems assessments, including the areas of investigation, fact-finding, and reporting.
- e. Describe the contents of an appraisal report.
- f. Explain the essential elements and processes associated with the following assessment activities:
 - Scoping visit
 - Planning
 - Onsite Activities
 - Report Development
 - Quality Review Board
 - Informal Validation
 - Formal Validation
 - Closeout
 - Corrective action plan review and follow-up
- g. Describe the actions to be taken if the contractor challenges findings and explain how such challenges can be avoided.
- h. Able to present and discuss the results of appraisals in formal meetings between Department of Energy management and senior contractor management.

3.2 An environment safety and health systems assessor/appraiser displays effective skills during the development and communication of the appraisal plan.

Supporting Knowledge and/or Skills

- a. Possesses the ability to make sound judgments of key and priority issues based on objective evidence contained through a review and evaluation of information contained in documents.
- b. Discuss the key processes and methodology used in the trending and analysis of operations information and their relationship to the resulting impact on management planning activities.
- c. Using an actual list of performance indicators (e.g., lost work, exposure), determine what type of assessments should be performed and in what areas.
- d. Given a set of incident/occurrence report data for a specified period, analyze the information for safety trends or compliance problems.
- e. Writes concise appraisal plans that outline review topics, organizations and individuals to be interviewed, documents to be reviewed, monitoring, sampling, testing procedures or operations to be observed, and team interfaces necessary to effective and efficient team integration.
- f. Writes concise appraisal plans that discuss the purpose, scope and approach to the evaluation of management systems and/or environment, safety and health programs.
- f. Demonstrates the ability to clearly and fluently communicate to management and/or staff the appraisal plan for a selected function area.
- g. Able to conduct/participate in team and Department of Energy management briefings discussing the appraisal plan and making modifications at the direction of management.

3.3 An environment safety and health systems assessor/appraiser displays effective communication skills and personal attributes during the conduct of an appraisal.

- a. Demonstrates the ability to clearly and fluently present findings and appraisal results in report(s) and briefings before management and/or staff.
- b. Demonstrates sufficient objectivity and independence during the conduct of the appraisal to permit accomplishment of assigned appraisal responsibilities
- c. Displays diplomacy, tact and the ability to listen conducive to effective and efficient audit performance.
- d. Possesses sufficient organizational skills to complete assigned responsibilities during the conduct of an appraisal.

- e. Able to conduct/participate in team meetings and site briefings discussing the results of appraisal activities and modifies individual appraisal activities at the direction of topic coordinators and team management.
- f. Able to prepare and complete clear and concise working papers that document the work performed, techniques used and conclusions reached while conducting the appraisal.
- g. Able to properly conduct interviews that are planned and coordinated with team members and management to accomplish desired results in a time-effective manner.
- h. Employs verification strategies based upon the evaluation of the strengths, weaknesses and risks associated with systems and programs that ensure key issues are covered in sufficient depth during the appraisal.
- i. Able to develop testing plans, gathers data, performs verification testing, clearly documents the results and communicates results to team members.
- j. Possesses sufficient understanding of health and safety requirements to ensure protection of the individual from work place hazards.

EVALUATION REQUIREMENTS

The following requirements shall be met to complete the environment safety and health systems assessor/appraiser qualification standard. The evaluation process identified below serves as a measurement tool for assessing whether the participants have acquired the competencies outlined in this Standard.

1. Documented completion of the Department-wide General Technical Base Qualification Standard and competency requirements listed in a functional area qualification standard in accordance with the requirements contained in that Standard.
2. Documented completion of the competency requirements listed in the environment, safety and health systems assessor/appraiser qualification standard. Documentation of the successful completion of competency requirements may be satisfied by the Director, Office of Environment, Safety and Health Evaluations, using any of the following methods:
 - Documented evaluation of equivalencies
 - Documented oral evaluation
 - Documented observation of performance
 - Written examination
3. Comprehensive examination. After completion of all competency requirements, the prospective environment, safety and health systems assessor/appraiser should pass an examination that evaluates his/her comprehension of and the ability to apply the body of knowledge identified in this Standard. The examination can be oral, written, practical, or any combination of the three types. The development and administration of the examination should be in accordance with the Administration section of this

Standard.

4. Appraisal participation. An environment, safety and health systems assessor/appraiser shall have participated in a minimum of three appraisals as on-the-job training within a period of time not to exceed three years prior to the date of qualification.

CONTINUING TRAINING AND PROFICIENCY REQUIREMENTS

Environment, safety and health systems assessor/appraiser shall participate in a continuing training and qualification program that includes the following elements:

1. Technical education and/or training covering topics directly related to the duties and responsibilities of environment safety and health systems assessor/appraiser as determined by the management. This may include courses and/or training provided by:
 - Department of Energy
 - Other government agencies
 - Outside vendors
 - Educational institutions
2. Training covering topics that address deficiencies identified during individual's qualification evaluation in the knowledge and/or skill of Environment Safety and Health Systems Assessor/appraisers.
3. Training in areas added to the Environment Safety and Health Systems Assessor/appraiser Qualification Standard since initial qualification to maintain competencies in Auditing techniques consistent with the appraisal process guide and accepted audit practices.
4. Specific continuing training requirements shall be documented in Individual Development Plans, such as Radiological Worker II (RAD II) training and the Hazardous Waste Operations (HAZWOPER) and its annual refresher training.

MAINTENANCE OF PROFICIENCY

An environment safety and health systems assessor/appraiser should maintain their proficiency through one of the following: regular and active participation in the appraisal process; review and study of regulations, standards, procedures, instructions or other documents related to selected technical functions and systems auditing; or participation in training programs.

An environment safety and health systems assessor/appraiser who does not maintain their proficiency for a period of two years or more may require requalification. Requalification may include retraining and reexamination in accordance with the evaluation requirements of this standard and participation in at least one appraisal. Further information on requalification is provided in the Office of Environment, Safety and Health Evaluations TQP procedure.

ADMINISTRATION

The development and administration of the examination is the responsibility of the Director,

Office of Environment, Safety and Health Evaluations. The Director, Office of Environment, Safety and Health Evaluations may delegate this activity to another organization, but should retain responsibility for conformance of the examination and its administration. The integrity of the examination should be maintained through proctoring and appropriate confidentiality of files, where applicable. Copies of objective evidence regarding the types(s) and content of the examination(s) shall be retained by the Office of Environment, Safety and Health Evaluations in accordance with record retention requirements of the Office of Oversight and should be updated annually.

CERTIFICATION AND QUALIFICATION

Each environment safety and health systems assessor/appraiser shall be certified by the Director, Office of Environment, Safety and Health Evaluations as being qualified to conduct appraisals. This certification shall, as a minimum, document the following:

- Employer's name;
- Assessor/appraiser's name;
- Date of certification or recertification;
- Basis of qualification (education, experience, training, examination, etc.)
- Signature of certifying official.