

**U.S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS OFFICE
OFFICE OF ENVIRONMENTAL MANAGEMENT**



**TECHNICAL QUALIFICATION PROGRAM
OFFICE/FACILITY-SPECIFIC
QUALIFICATION STANDARD**

**REVISION 1
AUGUST 2001**

CONCURRENCE AND APPROVAL

The DOE Oak Ridge Operation's Office (ORO) Office of Environmental Management (EM) is the sponsor for this Office/Facility-specific Qualification Standard (Standard). The EM Management is responsible for reviewing the Standard to ensure that its technical content is accurate and adequate for its intended application and for ensuring that it is maintained current. Concurrence with this document is indicated by the signatures below.

The ORO Training and Development Group (TDG) coordinates implementation of the Technical Qualification Program (TQP) and assists line managers in the development of their associated Standards. Concurrence with this Standard by the TDG Team Leader is indicated by the signature below.

The Assistant Manager for Environmental Management (AMEM) is the approval authority for this Standard. Approval by the AMEM is indicated by the signature below.

CONCURRENCE:



Bill Seay, Leader, ORR Remediation Management Group 8/2/01

Date



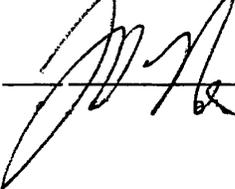
Robert Sleeman, Leader, Environmental Services Group 8/3/01

Date



Jim Hart, Acting Leader, Environmental Technology Group 8/6/01

Date



Timothy Noe, Leader, Facility Representatives Group 8/6/01

Date



Pam Thompson, Leader, WSSRAP Group 8/21/01

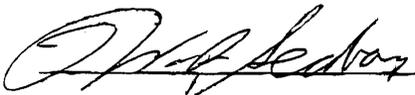
Date

 _____ 8/8/2001

L. Dennis Boggs, Leader, Off-Site Facilities Group Date

 _____ 8/15/01

Sharon J. Robinson, Manager, Portsmouth Site Office Date

 _____ 10/9/01

Don Seaborg, Manager, Paducah Site Office Date

 _____ 10-17-01

Jim Vosburg, Leader, Training and Development Group Date

APPROVAL:

 _____ 12-11-01

Rodney Nelson, Assistant Manager for Environmental Management Date

ORO OFFICE OF ENVIRONMENTAL MANAGEMENT OFFICE/FACILITY-SPECIFIC QUALIFICATION STANDARD

PURPOSE

This Standard is required by the Department of Energy (DOE) Order DOE O 360.1A, *Federal Employee Training*, as part of the Technical Qualifications Program (TQP) and supplements the department-wide General Technical Base and Functional Area Qualification Standards. It contains the competency requirements that Environmental Management (EM) staff assigned to the TQP need (as a composite) in order to perform assigned activities.

Each of the competency statements is followed by a list of supporting knowledge and skill statements that further amplify and describe the intent of the competency. The supporting knowledge and skill statements are not additional requirements and do not necessarily have to be fulfilled to meet the intent of the competency.

IMPLEMENTATION

The various competencies identify knowledge requirements at either a familiarity level, a working level, and an expert level; or they require the individual to actually demonstrate the ability to perform a task or activity. These levels are defined as follows:

Familiarity level is defined as basic knowledge of or exposure to the subject or process adequate to discuss the subject or process with individuals of greater knowledge.

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.

Demonstrate the ability is defined as the actual performance of a task or activity in accordance with policy, procedures, guidelines, and/or accepted industry or Department practices.

TQP participants input, track and report on technical qualification competency information through DOE's web-based Employee Self Service (ESS) program. The reports are sent to ORO's Training and Development Group (TDG) for input into a centralized database.

Participants should read the ORO Technical Qualification Program (TQP) Manual prior to selecting applicable qualification standards and inputting information in ESS. The TQP Manual and other TQP resources are available through the TDG web site at <http://www.ornl.gov/tdd/QualPrgm/qualprgm.htm>.

COMPLETION OF COMPETENCIES

Exemptions to the requirements of the listed subject areas are not to be used in this phase of the TQP. The competencies listed in this Standard represent a core of knowledge and skills necessary for qualification and must be verified in some manner.

Equivalencies may be granted for individual competencies based upon an objective evaluation of the employee's prior education, training, and experience. Documentation of equivalencies must be provided which indicates how these requirements were met. The supporting knowledge and skill statements should be considered when evaluating an employee's ability with respect to each competency requirement.

For an explanation of exemptions and equivalencies, see the TQP Manual.

Verifying and documenting that the competencies have been met may be accomplished by the EM Management, or by a subject matter expert (SME) designated by it. The evaluation must be documented (evaluator notes, certificates of course completion, test reports, etc.); the supervisor's signature on a hard copy of the TQR document is necessary to show completion of the competency.

Any of the following methods may be used to fulfill the initial participant's competencies.

- ! Formal education (college courses and academic degrees)
- ! Training (DOE, DOE contractor, other agency, outside vendor)
- ! DOE experience/on-the-job training
- ! Equivalencies for prior experience, education, and training
- ! Documented oral evaluation
- ! Documented observation of performance
- ! Written examination (including test out)

REQUIRED COMPETENCIES

1. EM personnel shall demonstrate a familiarity level knowledge of the basic operations and processes for ORO facilities.

Supporting Knowledge and/or Skills

- a. Discuss the primary mission(s) of ORO (e.g., Y-12, ORNL, ETTP, and Paducah and Portsmouth gaseous diffusion plants).
- b. Describe some of the key operations processes performed at major ORO facilities.
- c. Discuss the major safety risks to workers and the public resulting from operations at ORO facilities.

2. EM personnel shall demonstrate a familiarity level knowledge of Safety Basis Requirements, as described in 10CFR830, Subpart B.

Supporting Knowledge and/or Skills

- a. Discuss the basic purposes and objectives of a Nuclear Facility Safety Basis.
- b. Describe the responsibilities of contractors authorized to operate nuclear facilities regarding the development and maintenance of 10CFR830, Subpart B, Safety Bases.
- c. Define the following terms and discuss the purpose of each:
 - ! Authorization Agreements
 - ! Authorization Basis
 - ! Safety Basis (SB)
 - ! Unreviewed Safety Question Determinations (USQDs)
 - ! Safety Evaluation Report (SER)
 - ! Documented Safety Analysis
- d. Define the various Hazard Categorization levels and the general process utilized to determine the Facility Hazard Category.

3. EM personnel shall demonstrate a familiarity level knowledge of the relevant DOE Order on Unreviewed Safety Questions (USQs).

Supporting Knowledge and/or Skills

- a. Discuss the reasons for performing an USQD.
- b. Describe the responsibilities of contractors authorized to operate nuclear facilities for the performance of safety evaluations.
- c. Describe the action(s) to be taken by a contractor upon identifying information that indicates a potential inadequacy of previous safety analyses or a possible reduction in the margin of safety as defined in the technical safety requirements.
- d. Discuss the action(s) to be taken if it is determined that an USQ is involved.

4. EM Personnel shall demonstrate a working level knowledge of the EM process for SB approval.

Supporting Knowledge and/or skills

- a. Discuss the Process utilized by EM to review and approve SB documents.
- b. Discuss the level of Approval Authority as it relates to Facility Hazard Categorization/Classification.

5. EM Personnel shall demonstrate a working level knowledge of the SB for the facility(ies) for which they have responsibility.

Supporting Knowledge and/or Skills

- a. Identify their facility(ies) SB documents by name/title.
- b. Identify and explain the Hazards addressed in the SB.
- c. Identify and explain the controls addressed in the facility(ies) SB.

6. EM personnel will demonstrate the ability to act as a Subject Matter Expert (SME) on appropriate environmental management, technical, and regulatory issues.

Supporting Knowledge and/or Skills

- a. Review and comment on draft DOE orders, policies, and procedures for their area of expertise. Assess potential impact of changes or additions.
- b. Participate in decisions on environmental technology applications, project priorities, directions, findings, etc.
- c. Provide other ORO organizations with technical assistance in data analysis, problem solving and decision making on environmental related issues.
- d. Evaluate other TQP participants in EM-related competencies.
- e. Mentor new Federal employees to support continued technical growth.
- f. Conduct and/or develop training in applicable SME areas.

7. EM personnel will show a familiarity level knowledge of the relationship between the DOE and state and local regulations and laws, including Federal Facilities Agreements (FFAs).

Supporting Knowledge and/or Skills

- a. Discuss and describe the relationship between DOE and state and local regulations and laws.
- b. State the purpose and applicability of the above regulations.
- c. Compare and contrast the respective roles of a contractor's operations organization(s) and DOE personnel as outlined in the above regulations.
- d. Describe and provide examples of effective interactions between state and Federal agencies.

8. EM personnel will show a familiarity level knowledge of emerging regulatory issues within DOE.

Supporting Knowledge and/or Skills

- a. Describe safety management initiatives resulting from DNFSB Recommendation 95-2, *Integrated Safety Management*.
- b. Explain the impact of rule making on DOE and its contractors and the basic process of implementing rules.
- c. Discuss the Work Smart Standards approach as it relates to compliance.
- d. Discuss ORO's use of the Standards/Requirements Identification Documents.
- e. Bring out some key components of the ORO Pollution Prevention Program.

9. EM personnel will show a working level knowledge of the process for transition of facilities to the EM domain.

Supporting Knowledge and/or Skills

- a. Describe the kinds of ORO facilities that are subject to transition into the EM domain.
- b. Bring out some common conditions, risks, and hazards these facilities contain.
- c. Explain the major requirements for transition of another ORO Program Office facility to the EM Program.
- d. Discuss the EM controls, systems, and processes for ensuring that risks and hazards present in transitional facilities are properly identified and managed throughout the transition period.

10. EM personnel will show a working level knowledge of the EM Assessment Programs.

Supporting Knowledge and/or Skills

- a. Discuss the purpose, scope, and applicability of assessments within EM.

- b. Show an understanding of the Quality Assurance principles and practices that are applied in the conduct of self-assessments.
- c. Describe how assessments improve safety and provide lessons-learned.
- d. Bring out how to conduct an assessment of an EM activity to determine status or acceptability.
- e. Demonstrate an understanding of the way in which strengths, weaknesses, and improvement areas are identified and documented during assessment activities.
- f. Describe how EM uses feedback from assessments to plan work process improvements or take other actions to eliminate non-conformance.
- g. Discuss the purpose and value of using prescribed measures of performance.
- h. Bring out the need for participation in data gathering, analysis, measurement, and assessment of the information used to measure performance for EM activities.
- i. Describe the results and significance of EM performance measures.

11. EM personnel will show a working level knowledge of the process to monitor contractor project activities.

Supporting Knowledge and/or Skills

- a. Bring out the significance of acting as the principal liaison between EM's contractors and other DOE organizations, identifying contractor deliverables, objectives, timeliness, assumptions, constraints, and priorities for EM projects.
- b. Demonstrate appropriate understanding of how to read, interpret, and evaluate the following project control measures and tools:
 - ! Gantt (bar) charts
 - ! Critical path networking techniques
 - ! Labor schedules
 - ! Material equipment schedules
 - ! Finance schedules
- c. Discuss *stop work* authority and responsibility for site safety.

- d. Describe EM responsibilities for monitoring its contractors to ensure compliance with the technical, safety, and administrative requirements of the contract.
- e. Demonstrate knowledge of how to formulate, analyze, and approve or disapprove plans and schedules.
- f. Bring out EM's responsibility to ensure continuity in performance and information exchange among project team participants.
- g. Discuss how EM project managers ensure project cost, schedule, and scope requirements are met.