

U.S. DEPARTMENT OF ENERGY  
QUALIFICATION STANDARD

SENIOR TECHNICAL SAFETY MANAGER



OAK RIDGE OPERATIONS OFFICE

NOVEMBER 1996  
REVISION 0

### CONCURRENCE AND APPROVAL

The DOE-Oak Ridge Operations Office (ORO) Deputy Manager is the management sponsor for this Senior Technical Safety Manager Qualification Standard. As the management sponsor the Deputy Manager is responsible for reviewing the qualification standard to ensure that the technical content is accurate and adequate for its intended application and for ensuring that the qualification standard is maintained current. Concurrence with this qualification standard by the Deputy Manager is indicated by signature below.

The Training and Development Division (TDD) Director coordinates implementation of the technical qualification program and assists line managers in the development of ORO qualification standards. Concurrence with this qualification standard by the TDD Director is indicated by signature below.

The ORO Manager is the approval authority for this qualification standard. Approval of this qualification standard by the Manager is indicated by signature below

#### CONCURRENCE:

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S. D. Richardson, Deputy Manager

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Date

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W. J. Vosburg, Training and Development Division Director

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Date

#### APPROVAL:

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J. C. Hall, Manager

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Date

### About this Standard:

This technical qualification standard has been developed as a part of the Technical Qualification Program (TQP) required by DOE Order 360.1, Training. It supplements the department-wide General Technical Base and the Senior Technical Safety Manager Qualification Standards. This standard contains the Oak Ridge Operations (ORO) competencies required of all ORO staff in positions identified as Senior Technical Safety Managers in the TQP. The competency statements are indicated by bold print. The competency statements define the expected capabilities that a Senior Technical Safety Manager must possess. Each competency statement is followed by a number of supporting knowledge and/or skill statements that further amplify and describe the intent of the competency. These supporting knowledge and skill statements are not additional requirements and do not necessarily have to be fulfilled to meet the intent of the competency.

The competencies identify either a familiarity level or a working level of knowledge. Familiarity level is defined as a 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 Department activities.

### Completion of Competencies:

Individuals must complete the competency requirements of the General Technical Base Qualification Standard and the Senior Technical Safety Manager Functional Area Qualification Standard prior to or in parallel with the completion of competency requirements in this qualification standard. Competencies may be achieved in numerous ways, including on-the-job training, formal training and education courses, self-study, rotational assignments, and mentoring.

Equivalencies may be granted on a case-by-case basis for individual competencies based upon an objective evaluation of the employee's prior education, training, and/or experience. Documentation of equivalencies shall indicate how the competency requirements have been met.

Satisfactory completion of development activities to meet competency requirements is determined by evaluation. Evaluation may be accomplished by the participant's immediate supervisor or by a subject matter expert (SME) designated by the supervisor. Although the evaluation may be documented (evaluator notes, certificate of course completion, test report, etc.), the supervisor's signature on the Technical Qualification Record is necessary to show completion of the competency.

Any of the following methods may be used to evaluate incumbent competency.

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

1. A Senior Technical Safety Manager shall have a familiarity level knowledge of the basic operations and processes for DOE-Oak Ridge defense nuclear facilities.

Supporting Knowledge and/or skills

- a. Discuss the primary mission(s) of ORO defense nuclear facilities (e.g., Y-12, ORNL Building 3019, K-25, and Paducah and Portsmouth gaseous diffusion plants).
  - b. Describe some of the key operations processes performed at ORO defense nuclear facilities.
  - c. Discuss the major nuclear safety risks to workers and the public resulting from the operations at ORO defense nuclear facilities.
  - d. Identify the major non-nuclear hazards associated with ORO defense nuclear facility operations.
  - e. Discuss the primary nuclear facility protection features at ORO defense nuclear facilities for preventing or mitigating operational accidents.
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2. A Senior Technical Safety Manager shall demonstrate a familiarity level knowledge of the primary emergency management systems and programs at ORO.

Supporting Knowledge and/or Skills

- a. Discuss the scope, purpose, and objectives of ORO emergency response drills and exercises.
- b. Describe the emergency communications capabilities at ORO for notification, emergency response, and information distribution for use during emergencies.
- c. Discuss the current state and local government offsite response program for addressing incidents that may occur at ORO.
- d. Discuss the ways and means the headquarters Emergency Management Team interfaces with the ORO Emergency Operations Center Cadre in emergency circumstances.
- e. Outline the functions and capabilities of the Oak Ridge Emergency Operations Center and the alternate Oak Ridge Emergency Operations Center.

3. A Senior Technical Safety Manager shall have a working level knowledge of ORO safety requirements, programs and responsibilities for the oversight of its contractors.

Supporting Knowledge and/or skills

- a. Discuss the role of the ORO Facility Representative in contractor operational oversight.
- b. Discuss the role of the EH Site Representative in contractor safety and health oversight.
- c. Discuss the actions required of ORO personnel when, in their opinion, contractor operations or activities may result in an undue nuclear criticality safety risk or an undue risk to the environment or the health/safety of workers or public.
- d. Describe the ORO initiatives and commitments implemented in recent years to improve the safety of ORO facilities, including those in response to recommendations from the Defense Nuclear Facilities Safety Board.
- e. Explain how DOE and ORO use the operational readiness review (ORR) process to validate safety systems capabilities, component and equipment operation, procedures, processes, and personnel readiness.
- f. Review selected ORO operational readiness review reports, occurrence reports, or audit/evaluation reports and identify potential safety issues and lessons learned.

4. A Senior Technical Safety Manager shall demonstrate a familiarity level knowledge of ORO environmental and waste management policies.

Supporting Knowledge and/or Skills

- a. Discuss the need to consider waste as a product of ORO facility operations.
- b. Discuss the waste certification process at ORO.
- c. Describe ORO's major waste streams from generation to disposal.
- d. Describe ORO's integration of pollution prevention and waste reduction into all aspects of operations.
- e. Discuss the new or alternative technologies employed, or planned for, at ORO to expedite environmental cleanup and reduce risks to the environment and the public.