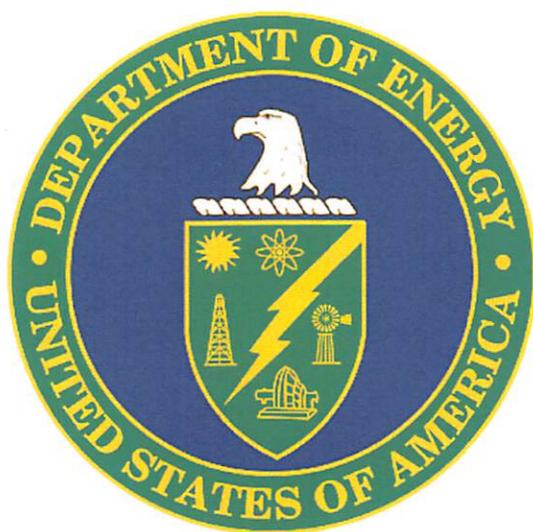


**U.S. DEPARTMENT OF ENERGY  
OAK RIDGE OFFICE OF  
ENVIRONMENTAL MANAGEMENT**



**SENIOR TECHNICAL SAFETY MANAGER**

**OFFICE/FACILITY-SPECIFIC  
QUALIFICATION STANDARD**

**SEPTEMBER 2015**

## CONCURRENCE AND APPROVAL

The Department of Energy Oak Ridge Office of Environmental Management (OREM) Manager is the sponsor for this Senior Technical Safety Manager (STSM) Office/Facility-Specific (OFS) Qualification Standard. The OREM Facility Operations Division Director is responsible for reviewing this 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 OREM management is indicated by the signatures below.

The OREM Deputy Manager is the approval authority for this qualification standard.

### Concurrence:



Brenda L. Hawks, Senior Technical Advisor

9-25-2015

Date



Jason A. Armstrong, Facility Operations Director

9/29/2015

Date

### APPROVAL:



John A. Mullis, Deputy Manager

10/23/15

Date

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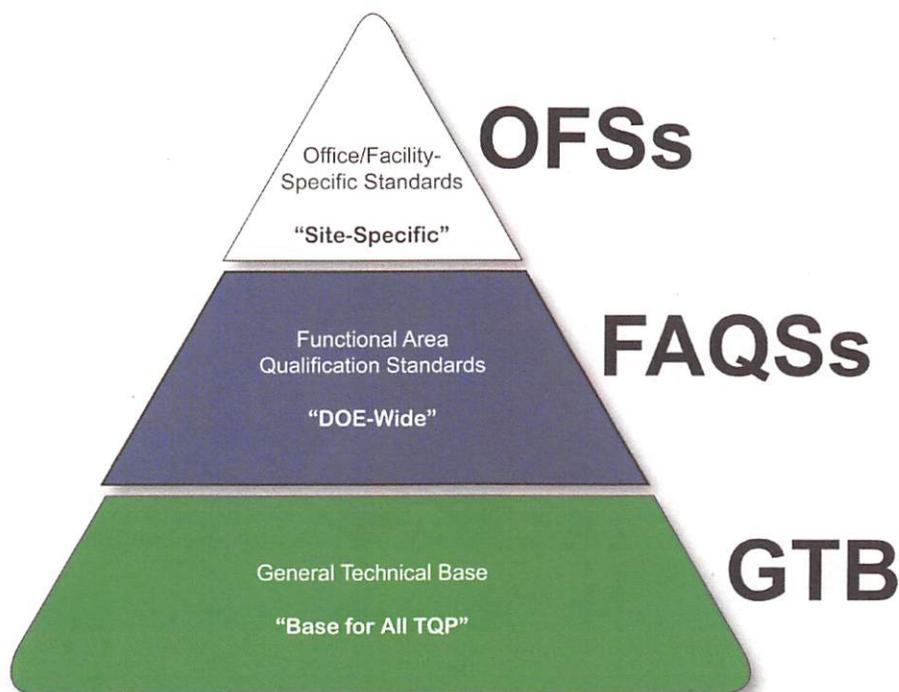
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## PURPOSE

The Senior Technical Safety Manager (STSM), a Department of Energy functional position, is usually at the GS/GM-15, Excepted Service IV or V or Senior Executive Service level and assigned the direct responsibility to manage technical programs, resources, and/or personnel who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities impacting the safe operation of nuclear and/or non-nuclear facilities.

DOE O 426.1, Change 1, *Federal Technical Capability*, commits the Department to continuously strive for technical excellence. The Technical Qualification Program (TQP), along with the supporting technical qualification standards, complements the personnel processes that support the Department's drive for technical excellence. In support of this goal, the competency requirements defined in this technical qualification standard should be aligned with and integrated into the recruitment and staffing processes for technical positions. This OFS qualification standard contributes to the basis for developing vacancy announcements, qualification requirements, crediting plans, interviewing questions, and other criteria associated with the recruitment, selection, and internal placement of STSM personnel.

This ORO STSM OFS qualification standard is required by DOE O 426.1 *Federal Technical Capability*, as part of the Technical Qualification Program (TQP) and as outlined in the illustration below, supplements the department-wide General Technical Base (GTB) Qualification Standard and Functional Area Qualification Standards (FAQSs).



## APPLICABILITY

This OREM STSM OFS qualification standard establishes common office/facility-specific area competency requirements for all OREM STSM personnel who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities that could impact the safe operation of DOE's nuclear and non-nuclear facilities.

## IMPLEMENTATION

This ORO OFS qualification standard identifies the minimum technical competency requirements for DOE OREM STSM personnel. The competency statements define the expected knowledge and/or skill that an individual must meet. Each of the competency statements is further described by a listing of supporting knowledge and/or skill statements, which although not required, do describe the intent of the competency statements. In some cases, expected knowledge and/or skills have been designated as "Mandatory Performance Activities." These actions are not optional and can not be exempted.

Generally, TQP competencies identify a familiarity level, a working level; or they require the individual to demonstrate the ability to perform a task or activity. These levels are defined as follows:

**Familiarity level** is 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 the knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to recognize the need to seek and obtain appropriate expert advice (e.g., technical, legal, safety) or consult appropriate reference materials required to ensure the safety of Departmental activities.

**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.

Equivalencies must be used sparingly and with the utmost rigor and scrutiny to maintain the spirit and intent of the TQP. Equivalencies may be granted for individual competencies based on objective evidence of previous education, training, certification, or experience. Objective evidence includes a combination of transcripts, certifications, and in some cases, a knowledge sampling through a written and/or oral examination. Equivalencies shall be granted in accordance with the OREM TQP process. The supporting knowledge and/or skill statements should be considered before granting equivalency for a competency.

Training must be provided to employees in the TQP who do not meet the competencies contained in this technical OFS. Training may include, but is not limited to, formal classroom and computer-based courses, self-study, mentoring, on-the-job

training, and special assignments. Departmental training must be based on appropriate supporting knowledge and/or skill statements similar to the ones listed for each of the competency requirements.

The supporting knowledge and/or skill statements will be used as the basis for evaluating the content of any training used to provide individuals with the requisite knowledge and/or skill required to meet the technical OFS competency requirements.

Competencies can be achieved in numerous ways including on-the-job training; formal training and education courses, on and off the job; self-study; rotational assignments; mentoring; etc. Each fulfillment method, such as those below, is required to be documented.

- Formal education (college courses and academic degrees)
- Training (DOE, DOE contractor, other agency, vendor)
- DOE experience
- Equivalencies for prior experience, education, and training
- Documented oral evaluation
- Documented observation of performance
- Documented results of a written examination

## EVALUATION REQUIREMENTS

The evaluation process identified below serves as a measurement tool for assessing whether or not the participants have acquired the technical competencies in this qualification standard. The following requirements apply to the completion of this qualification standard. Verifying and documenting that the competencies have been met may be accomplished by delegated management, or by a subject matter expert (SME) designated by OREM management. Any of the following methods may be used to evaluate a competency. Each evaluation method is required to be documented.

- 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
- Documented observation of performance
- Documented results of a written examination (including test out)

Whoever performs the verification must provide some level of evaluation to confirm the participant's level of understanding when self study (of DOE orders, Federal and state/local regulations, procedures), or required reading is used to satisfy a competency. In all cases, the evaluation is documented by signature on the participant's Technical Qualification Record. Documented satisfactory completion of the competencies contained in this qualification standard ensures that the STSM personnel enrolled in the TQP are qualified to fulfill their duties and responsibilities.

STSM personnel input, track, and document completion on the hard copy of the qualification card provided to the employee. Upon completion of the qualification standards, the completed qualification card and all documented evidence are to be entered into the OREM records management system as a QL-1 record and the original sent to the Oak Ridge Office Training Development Group for input into a centralized training records management system with the employees other training records.

## INITIAL QUALIFICATION, REQUALIFICATION, AND TRAINING

This OREM STSM OFS qualification standard has been constructed using information from position descriptions, DOE orders, OREM procedures, and discussions with incumbents. The format of this document follows the department-wide functional area qualification standards developed by the DOE Federal Technical Capability Program. Qualification of STSM personnel shall be conducted in accordance with the requirements of DOE O 426.1, *Federal Technical Capability*, and DOE-STD-1175-2013, *DOE Standard: Senior Technical Safety Manager Functional Area Qualification Standard*. STSM personnel are required to requalify, and, they shall participate in continuing education and training as necessary to improve their performance and proficiency and ensure that they stay up-to-date on changing technology and new requirements. This continuing education and training shall be documented in the employees Individual Development Plan (IDP) and may include courses and/or training provided by:

- DOE
- Other government agencies
- Outside vendors
- Educational institutions

Beyond formal classroom or computer-based courses, continuing training may include:

- Self-study
- Attendance at symposia, seminars, exhibitions
- Special assignments
- On-the-job experience

## DUTIES AND RESPONSIBILITIES

Specific duties and responsibilities of personnel who fulfill this OREM OFS are contained in each employee's position description.

## REQUIRED TECHNICAL COMPETENCIES

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. Each of the competency statements is further described by a listing of supporting knowledge and/or skill statements, which although not requirements, do describe the intent of the competency statement. In some cases, expected knowledge and/or skills (at least one per working level and expert level competencies) have been designated as "Mandatory Performance Activities." These actions are not optional.

**Important Note:** When regulations, DOE directives, OREM procedures, or other industry standards are referenced in this OFS, the most recent revision should be used.

**1. A Senior Technical Safety Manager shall have a working level knowledge of the basic operations and processes for OREM nuclear and non-nuclear facilities.**

Supporting Knowledge and/or Skills

- a. Discuss the primary mission(s) of OREM nuclear and non-nuclear facilities.
- b. Describe some of the key operations processes performed at OREM nuclear and non-nuclear facilities.
- c. Discuss the major safety risks to workers and the public resulting from the operations at OREM nuclear and non-nuclear facilities.
- d. Identify the major nuclear and non-nuclear hazards associated with OREM defense nuclear facility operations.
- e. Discuss the primary facility protection features at OREM nuclear and non-nuclear facilities for preventing or mitigating accidents.

**Mandatory Performance Activity:**

With a facility representatives, engineer, safety basis lead reviewer, subject matter expert, and/or safety system engineers, walk down an OREM Nuclear Hazard Category 2 facility identifying key safety and hazard issues.

**2. A Senior Technical Safety Manager shall demonstrate a working level knowledge of the primary emergency management systems and programs at OREM.**

Supporting Knowledge and/or Skills

- a. Discuss the scope, purpose, and objectives of OREM Emergency Management program.
- b. Describe the emergency communications capabilities at OREM 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 OREM.

- d. Discuss the ways and means the Headquarters Emergency Management Team interfaces with the ETTP Emergency Operations Center (EOC) Cadre and the ORO Emergency Operations Center in emergency circumstances.
- e. Outline the functions and capabilities of the ORO Emergency Operations Center (OROEEOC).

**Mandatory Performance Activity:**

Participate in the OROEOEC or site EOC during a site emergency management drill or exercise. For those STSMs who are not members of the emergency response organization cadre, observe in the OROEOEC or site EOC during a site emergency management drill or exercise.

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

**Supporting Knowledge and/or Skills**

- a. Discuss the role of the OREM Facility Representative in contractor operational oversight.
- b. Discuss the role of the OREM Safety System Oversight personnel in contractor active safety system oversight.
- c. Describe the basic requirements of DOE O 226.1B, Implementation of DOE Oversight Policy, and its application at OREM.
- d. Discuss the impact of 10 CFR 851, Worker Safety and Health Program, on OREM contractor activities.
- e. Discuss the actions required of OREM 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.
- f. Describe the OREM initiatives and commitments implemented in recent years to improve the safety of OREM facilities, including those in response to recommendations from the Defense Nuclear Facilities Safety Board.
- g. Explain how DOE and OREM use the readiness review process (ORR/RA) and the implementation verification review (IVR) processes to validate safety systems capabilities, component and equipment operation, procedures, processes, personnel readiness, and changes to the safety basis.

**Mandatory Performance Activity:**

a1. Review recent OREM assessment/oversight reports, ORR/RA/IVR reports, occurrence reports, or related evaluation reports to identify potential safety issues and lessons learned.

OR

a2. Actively participate on the OREM Assessment Program Committee.

b. Participate on an assessment and/or surveillance that evaluate safety requirements, safety program(s), or safety system.

**4. A Senior Technical Safety Manager shall demonstrate a working level knowledge of OREM environmental and waste management policies.**

**Supporting Knowledge and/or Skills**

a. Discuss the need to consider waste as a product of OREM facility operations.

b. Discuss the waste certification process at OREM for the various disposal sites.

c. Describe OREM's major waste streams from generation to disposal.

d. Describe OREM'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 OREM to expedite environmental cleanup and reduce risks to the environment and the public.

f. Discuss application of NEPA within OREM and application of NEPA values to CERCLA projects.

**Mandatory Performance Activity:**

a. Review, evaluate, or participate in an oversight activity of a contractor's environmental management system or waste disposal certification activity.

b. Review recent NEPA documentation generated for OREM projects.

**5. A Senior Technical Safety Manager shall demonstrate a working level knowledge of OREM's procedures.**

**Supporting Knowledge and/or Skills**

a. Describe the administrative, business, and technical services executed by OREM.

- b. Review and discuss the current OREM procedures and describe the specific OREM organizational responsibilities.
- c. Review and discuss the OREM memorandums of agreement(s), prime contracts, and regulatory documents.
- d. Review and discuss the role of the OREM Issue Management System.

**Mandatory Performance Activities:**

- a. Participate on an assessment team reviewing application and flow down of DOE directives.
- b. Participate in the preparation and/or review of a new or revised DOE directive checking that the applicable OREM procedures fulfill the requirements of the directive.

[Note: If a new or revised DOE directive is not available, then candidate can select a current directive and execute the above.]

- 6. A Senior Technical Safety Manager shall demonstrate a working level knowledge of OREM's overall oversight responsibilities, capabilities and process.**

**Supporting Knowledge and/or Skills**

- a. Describe the flowdown of DOE and OREM mission requirements to the contractors.
- b. Describe the tools and techniques used by OREM to oversee the contractor, such as assessment/oversight programs, procurement actions, Federal Project Director Certification and assignment, and use of Facility Representatives, Safety System Oversight, and Subject Matter Expert personnel.

**Mandatory Performance Activity:**

- a. Trace a DOE requirement through its application to OREM and flow down to and implementation by a contractor.
- b. Participate in any oversight activity described in 6.b above.