

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



SENIOR TECHNICAL SAFETY MANAGER

**OFFICE/FACILITY-SPECIFIC
QUALIFICATION STANDARD**

AUGUST 2008

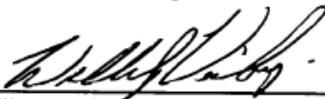
CONCURRENCE AND APPROVAL

The DOE Oak Ridge Office (ORO) Deputy Manager is the sponsor for this Senior Technical Safety Manager (STSM) Office/Facility-Specific (OFS) Qualification Standard. The ORO Deputy Manager organization 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 ORO management is indicated by the signatures below.

The Human Capital Assessment Group (HCAG) coordinates implementation of the Technical Qualification Program (TQP) and assists line managers in the development of ORO office/facility-specific qualification standards. Concurrence with this qualification standard by the Deputy Director of Human Resources is indicated by the signature below.

The ORO Manager is the approval authority for this qualification standard.

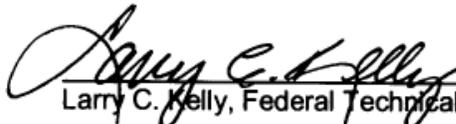
CONCURRENCE:



William J. (Jim) Vosburg, Deputy Director, Human Resources Division

8-6-08

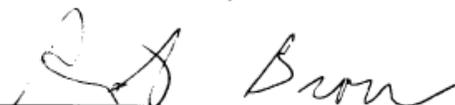
Date



Larry C. Kelly, Federal Technical Capability Panel Agent

8-11-08

Date



Robert J. Brown, Deputy Manager

8/11/08

Date

APPROVAL:



Gerald G. Boyd, Manager

8/11/08

Date

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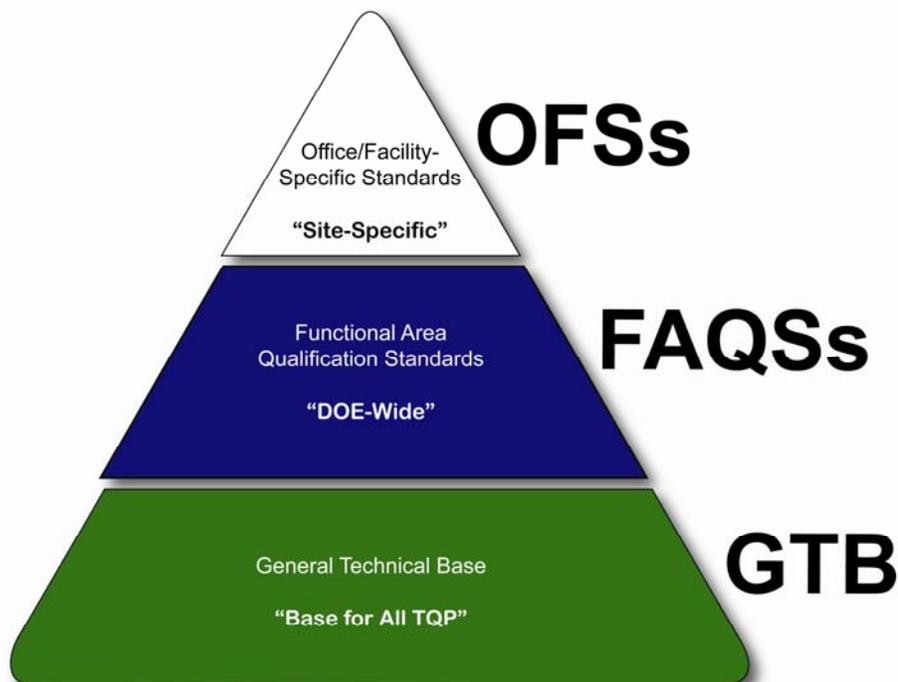
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PURPOSE

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 M 426.1-1, *Federal Technical Capability Manual*, 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 OFS qualification standard is required by DOE M 360.1-1, *Federal Employee Training Manual*, DOE O 360.1, *Federal Employee Training*, and DOE M 426.1-1, *Federal Technical Capability Manual*, 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 ORO OFS qualification standard establishes common office/facility-specific area competency requirements for all ORO 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 ORO 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 an expert level of knowledge; or they require the individual to 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 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.

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.

Equivalencies should 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 TQP Manual and the supporting knowledge and/or skill statements should be considered before granting equivalency for a competency.

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 ORO 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
- 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 print completion reports on technical qualification competency information using DOE's web-based Employee Self Service (ESS), which is located at <http://mis.doe.gov/ess/>. Upon completion of the qualification standards, the completion reports are sent to the ORO Human Capital Assessment Group (HCAG) for input into a centralized TQP Administration Module database.

Participants should read the TQP Manual posted on the HCAG web site prior to inputting information in ESS. The TQP Manual and other TQP resources are available through the HCAG web site at <http://www.ornl.gov/tdd/QualPrgm/qualprgm.htm>.

INITIAL QUALIFICATION, REQUALIFICATION, AND TRAINING

This ORO OFS qualification standard has been constructed using information from position descriptions, DOE and ORO orders, 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 360.1 *Federal Employee Training*, DOE M 360.1-1, *Federal Employee Training Manual*, DOE M 426.1-1, *Federal Technical Capability Manual*, and DOE-STD-1175-2006, *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 ORO 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, 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 ORO nuclear and non-nuclear facilities, and science institutes.

Supporting Knowledge and/or Skills

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

Mandatory Performance Activity:

With a safety assurance person, walk down significant areas of AMS and AMEM facilities (and applicable AMNFS facilities) 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 ORO.

Supporting Knowledge and/or Skills

- a. Discuss the scope, purpose, and objectives of ORO Emergency Management program.
- 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 (EOC) Cadre in emergency circumstances.
- e. Outline the functions and capabilities of the ORO Emergency Operations Center (OROEEOC).

Mandatory Performance Activity:

Participate in the OROEOC 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 OROEOC or site EOC during a site emergency management drill or exercise.

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. Describe the basic requirements of DOE O 226.1, Implementation of DOE Oversight Policy, and its application at ORO.
- c. Discuss the impact of 10 CFR 851, Worker Safety and Health Program, on ORO contractor activities.
- d. 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.
- e. 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.
- f. 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.

Mandatory Performance Activity:

Review selected ORO assessment/oversight reports, ORR reports, occurrence reports, or related evaluation reports to identify potential safety issues and lessons learned.

4. A Senior Technical Safety Manager shall demonstrate a working 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.

Mandatory Performance Activity:

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

5. A Senior Technical Safety Manager shall demonstrate a working level knowledge of ORO's role as an Office of Science (SC) Integrated Support Center (ISC), and of the SC Management System (SCMS).

Supporting Knowledge and/or Skills

- a. Describe the administrative, business, and technical services that ORO provides to the SC complex.
- b. Review and discuss the current ISC Service Plan, and describe the specific ORO responsibilities.
- c. Review and discuss the role of the SCMS.

Mandatory Performance Activities:

- a. Participate on an assessment team reviewing application and flowdown of DOE and/or ISC directives.
- b. Participate in the preparation and/or review of a new or revised DOE directive checking that the applicable SCMS management system descriptions fulfill the requirements of the directive.

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

Supporting Knowledge and/or Skills

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

Mandatory Performance Activity:

- a. Trace a DOE requirement through its application to ORO and flowdown to and implementation by a contractor; or
- b. Participate in any oversight activity described in 6.b above.