

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



**OFFICE OF ASSISTANT MANAGER
FOR SCIENCE**

**OFFICE/FACILITY-SPECIFIC
QUALIFICATION STANDARD**

**Revision 1
January 2008**

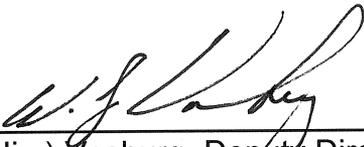
CONCURRENCE AND APPROVAL

The DOE Oak Ridge Office (ORO) Office of Assistant Manager for Science (AMS) is the sponsor for this Office/Facility-Specific (OFS) Qualification Standard. The AMS 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 Federal Technical Capability Program (FTCP) Panel is the approval authority for this qualification standard and is indicated by the signature of the ORO FTCP Panel Chair below.

CONCURRENCE:



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

1/30/08
Date



Johnny O. Moore, ORO Assistant Manager for Science

1/30/08
Date

APPROVAL:



Larry C. Kelly, ORO FTCP Panel Chair

1-30-08
Date

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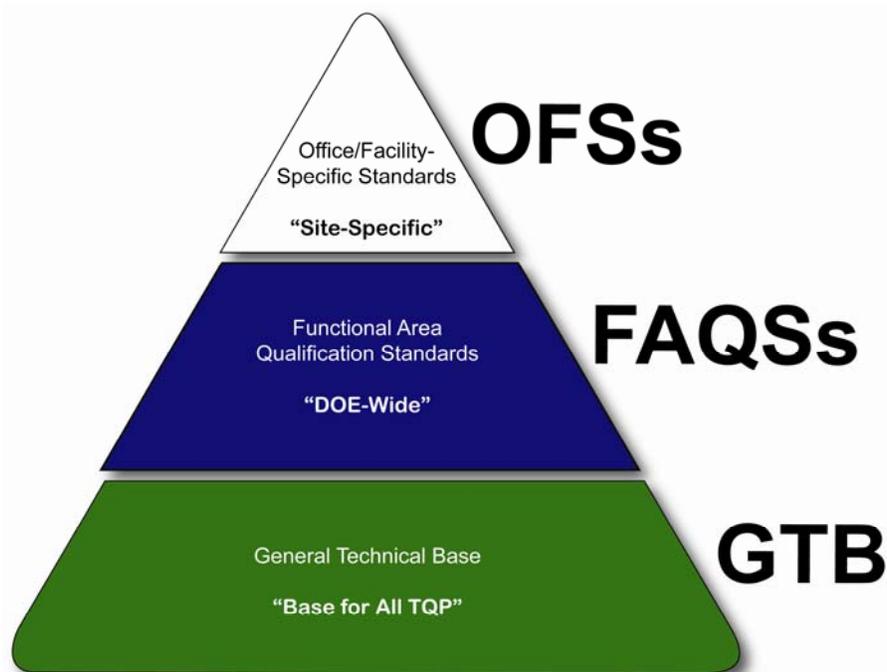
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PURPOSE

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 AMS 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 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 AMS 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 AMS 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 cannot 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 AMS personnel enrolled in the TQP are qualified to fulfill their duties and responsibilities.

AMS 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 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.orau.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 AMS 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*, and DOE M 426.1-1, *Federal Technical Capability Manual*. Personnel are not required to re-qualify; however, 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.

Note: All AMS Federal Project Directors are qualified through the Project Management Career Development Program.

SITE AND FACILITY UNESCORTED ACCESS

1. AMS personnel shall complete General Employee Training (GET).

Supporting Knowledge and/or Skill

Complete either General Employee Training or facility-specific General Employee Access Training that cover General Topics, Hazardous Communications, and General Employee Radiological Training.

2. AMS personnel shall complete Radiological Worker I training requirements.

Supporting Knowledge and/or Skill

Complete the Radiological Worker I training module.

ORNL SITE OFFICE FUNCTIONS

3. AMS personnel shall demonstrate a working level knowledge of the ORNL Site Office Procedures Manual and the latest revision of the appropriate following procedures because of the importance to performing work in their positions:

- OSOP 220, Actions/Commitments Tracking
- OSOP 250, Changes to Contractor Work Smart Standards
- OSOP 251, Operational Process Control
- OSOP 300, Employee Orientation
- OSOP 361, Training
- OSOP 403, Oversight of the Laboratory Directed Research and Development (LDRD) Program
- OSOP 412, Work Authorization System
- OSOP 413, Project Management
- OSOP 420, Review and Approval of Nuclear Facility Authorization Basis Documents
- OSOP 421, Review of Accelerator Safety Envelope
- OSOP 425, Startup and Restart of Nuclear Facilities at Oak Ridge National Laboratory
- OSOP 435, Waste Management and Pollution Prevention Program
- OSOP 436, Review and Approval of Radioactive Waste With No Path Forward to Disposal
- OSOP 442, Employee Concerns
- OSOP 450, Operations Awareness Program
- OSOP 452, Self Assessment
- OSOP 453, Integrated Assessment Program
- OSOP 454, Utilization of ORION2 and Environmental, Safety, and Health Performance Trending
- OSOP 470, Export Control
- OSOP 551, Vehicles
- OSOP 580, Purchasing
- OSOP-FRP-411, Facility Representative Oversight Program

Supporting Knowledge and/or Skills

- a. Describe the content of the procedures and how the procedures relate to the incumbent's job.
- b. Describe the process for initiating new procedures and revising existing procedures.

4. **AMS personnel shall demonstrate a familiarity level knowledge of program guidance, requirements, and budgeting process, related to ORNL/ORISE programs/activities to ensure adequacy to implement established program goals, meeting environmental, safety, and health (ES&H) regulations, and to coordinate resolution of program/budget disconnects.**

Supporting Knowledge and/or Skills

- a. Using DOE Order 412.1A, Work Authorization System, describe DOE system for HQ authorizing work to the field.
- b. Describe methods of transferring funds between DOE field elements and/or DOE contractors.
- c. Describe the process that Headquarters utilizes to provide funding for specific ORNL/ORISE programs.

5. **AMS personnel shall demonstrate a working level knowledge of the organizations and personnel responsible for implementing the DOE programs of his/her oversight responsibility at ORNL/ORISE.**

Supporting Knowledge and/or Skills

- a. Using a current ORNL/ORISE organization chart, discuss the primary interfaces between Site Office and contractor personnel.
- b. Using a current ORNL organization chart, discuss the major functions of each ORNL Associate Laboratory Director.

Mandatory Performance Activity

Conduct an operational awareness activity with the contractor.

6. **AMS personnel shall demonstrate a working level knowledge of emergency management functions associated with ORNL.**

Supporting Knowledge and/or Skill

Using ORO Order O 150, Emergency Management and Planning, discuss responsibilities of the assigned position.

Mandatory Performance Activity

Participate or observe an emergency management activity such as training, drills, or exercises.

7. **AMS personnel shall demonstrate a working level knowledge of DOE training requirements applicable to AMS federal employees.**

Supporting Knowledge and/or Skill

Using DOE O 360.1B and related directives, describe the major technical training requirements for AMS federal personnel.

Mandatory Performance Activity

Assess personal continuing training record in preparation of the Individual Development Plan (IDP).

ORNL/ORISE SITE/FACILITY AWARENESS

8. **AMS personnel shall demonstrate a familiarity level knowledge of the ORNL/ORISE operations, facilities, and hazards related to the AMS missions.**

Supporting Knowledge and/or Skill

Attend a general orientation by AMS management.

9. **AMS personnel shall demonstrate a working level knowledge of ORNL/ORISE programs, processes, and operations.**

Supporting Knowledge and/or Skills

- a. Discuss the primary mission of AMS and the purpose of the ORNL/ORISE facilities.
- b. Describe some of the key programs and/or projects performed at ORNL/ORISE facilities.
- c. Describe some of the key operations and/or processes performed at ORNL/ORISE facilities.
- d. Discuss the major nuclear safety risks to workers and the public resulting from operations at AMS facilities.

Mandatory Performance Activity

Identify the primary non-nuclear hazards and controls associated with operations at assigned AMS facilities.

- 10. AMS personnel shall demonstrate a working level knowledge of the ORNL/ORISE environmental, safety, and health programs, permits, procedures, and hazards associated with processes, areas and equipment to oversee the environmental, safety, and health programs.**

Supporting Knowledge and/or Skills

- a. Discuss the ORNL and ORISE Integrated Safety Management System programs, their implementation, and DOE oversight.
- b. Discuss the Standards Based Management System at ORNL, and its relationship to these programs.

Mandatory Performance Activity

Participate in a related oversight activity.

POSITION-SPECIFIC COMPETENCIES

Nuclear Facility Program Coordinator

- 11. AMS personnel shall demonstrate a working level knowledge of activities associated with their assigned facility(ies) and programs.**

Supporting Knowledge and/or Skills

- a. Discuss the purpose of the facility and its role in meeting DOE mission requirements.
- b. Describe the facility boundary, location, and general layout of the building.
- c. Locate and identify the major equipment in the building (e.g., storage vaults, hot cells, control stations, laboratories, etc.).
- d. Identify and explain the material types (e.g., uranium, plutonium, beryllium, thorium, etc.); material forms (e.g., canned subassemblies, fuel assemblies, oxides, metals, alloys); storage configurations (e.g., cans, drums, birdcages); and the hazards associated with each.
- e. Determine the major criticality safety features and limits applicable to the operations in the building as well as postulated accident scenarios.
- f. Recognize facility management and identify key reporting relationships relative to ORNL management.
- g. Identify Headquarters sponsor organizations relative to the specific facility.
- h. Research and review the facility's near-term budget history and requirements.

- i. Identify and explain DOE training requirements applicable to the contractor training activities/development of training policies and procedures.
- j. Identify facility authorization basis document requirements and how the contractor implements the requirements.
- k. Identify and explain the operational limits as documented in the facility Operational Safety Requirements (OSR) or Technical Safety Requirements (TSR).

12. AMS personnel shall demonstrate a working level knowledge of ORNL process development activities sufficient to review and evaluate the contractor's technical progress as defined by laboratory and DOE guidance requirements.

Supporting Knowledge and/or Skill

Locate and describe ORNL procedures, facilities, laboratories, and related equipment related to process development activities.

Mandatory Performance Activity

Using the ORNL Performance Evaluation Measurement Plan, review, analyze, and evaluate contractor performance in meeting critical outcomes.

Nuclear Facility Safety

13. AMS personnel shall demonstrate a working level of knowledge of the Facility Safety Basis implementation at the ORNL (in accordance with current rules and DOE Orders) in order to identify problems, to evaluate solutions, and to monitor technical progress.

Supporting Knowledge and/or Skills

- a. Describe the ORNL Nuclear Facility Safety Program policies, procedures, and organizational structure.
- b. Describe the basic requirements of the ORNL DSA program, including the current schedule/plans to issue DOE-Approved safety documentation
- c. Describe the ORNL implementation plans for meeting Unreviewed Safety Question Determination (USQD) requirements.

Mandatory Performance Activity

Identify the ORNL OSR/TSR requirements and explain how they relate to facility safety.

Quality Assurance

- 14. AMS personnel shall demonstrate a working level knowledge of the ORNL quality assurance requirements that is sufficient to identify problems, to evaluate solutions, and to monitor technical progress.**

Supporting Knowledge and/or Skills

- a. Describe the policies, procedures, and organizational structure of the ORNL Quality Assurance Program and the requirements that implement 10 CFR 830.120.
- b. Explain how the Price-Anderson Amendments Act relates to Quality Assurance at ORNL.
- c. Identify the ORNL Counterfeit and Suspect Part requirements that are currently established.

Mandatory Performance Activity

List the attributes of the ORNL Corrective Actions and Issues Management Program.

Waste Management Program Manager

- 15. AMS personnel shall demonstrate a working level knowledge of the waste management activities associated with their assigned facilities, and a familiarity level knowledge with the ORNL Waste Management Operations.**

Supporting Knowledge and/or Skills

- a. Describe the purpose of the ORNL Laboratory Waste Services (LWS) Organization and its role in meeting the DOE mission requirements.
- b. Locate and identify major facilities managed by UT-Battelle, LLC, in the various waste management systems at ORNL.
- c. Describe the satellite accumulation area and ninety-day area general requirements.
- d. Be cognizant of LWS near term budget history and requirements.
- e. Describe the general features of the Pollution Prevention plans at ORISE and ORNL.
- f. Describe the interface between EM and SC for waste management activities.

Mandatory Performance Activity

Identify the major waste types and where they are typically stored or disposed.

Laboratory Support Team

- 16. AMS personnel shall demonstrate a working level knowledge of the Industrial Safety (IS), Radiological Control/Health Physics (HP), and Industrial Hygiene (IH) Programs at ORNL that is sufficient to identify problems, reevaluate solutions, and monitor technical progress.**

Supporting Knowledge and/or Skills

- a. Describe the Operational Awareness Program and its applicability to ORNL/ORISE work areas.
- b. Identify the policies, procedures, and organizational structure of the ORNL/ORISE Industrial Safety Programs; and describe the DOE-contractor interface.
- c. List the common and unique workplace hazards in ORNL/ORISE facilities, including the identification, the elimination, and the control of such hazards.
- d. Identify the policies, procedures, and organizational structure of the ORNL/ORISE Radiological Control Program; and describe the DOE-contractor interface. (HPs only)
- e. Identify the major radiological concerns at the ORNL/ORISE. (HPs only)
- f. Identify the policies, procedures, and organizational structure of the ORNL/ORISE Industrial Hygiene Program; and describe the DOE-contractor interface. (IHs only)
- g. List and describe the types of monitoring equipment and their applications that are used in the ORNL/ORISE Industrial Hygiene Program. (IHs only)
- h. Discuss the current environmental permits applicable to ORNL operation. (Environmental personnel only)

Mandatory Performance Activity

Given a contractor response to an expertise-specific (e.g., IS, HP, IH, or environmental) hazard event, assess how well the contractor responded and determine what other ways the contractor could have responded.