

U.S. DEPARTMENT OF ENERGY
OFFICE/FACILITY-SPECIFIC
QUALIFICATION STANDARD

TRAINING AND DEVELOPMENT DIVISION



OAK RIDGE OPERATIONS OFFICE

JULY 1996
REVISION 0

CONCURRENCE AND APPROVAL

The DOE-Oak Ridge Operations Office (ORO) Training and Development Division (TDD) Director is the management sponsor for this TDD Qualification Standard. As the management sponsor, the TDD Director 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 the qualification standard by the TDD Director is indicated by signature below.

The ORO Assistant Manager for Defense Programs (AMDP) is the approval authority for the qualification standard. Approval of this qualification standard by the AMDP is indicated by signature below.

CONCURRENCE:

Training and Development Division Director

Date

APPROVAL:

Assistant Manager for Defense Programs

Date

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TRAINING AND DEVELOPMENT DIVISION

The Training and Development Division (TDD) is a Department of Energy Oak Ridge Operations Office (ORO) organization. TDD includes technical and administrative personnel who are assigned the responsibility to manage and administer training, education, technical qualification, and personnel development programs within ORO and to administer Department training-related initiatives. In this role, TDD staff perform numerous tasks and activities for supporting line management's objective to retain and extend the technical capabilities of the Federal employees. TDD also provides guidance for and evaluation of contractor training programs associated with ORO defense nuclear facilities.

PURPOSE

The TDD Office/Facility-Specific Qualification Standard was developed to define qualification competencies required for carrying out the duties and responsibilities outlined above and detailed on pages 3 and 4. This standard has been developed as part of the Technical Qualification Program (TQP) required by DOE Order 360.1, Training. It supplements the Department-Wide General Technical Base and Technical Training Qualification Standards. It contains the competency requirements TDD staff assigned to the Technical Qualification Program need to perform activities assigned to the division. Satisfactory, documented completion of the competencies contained in this qualification standard ensures that the TDD staff are competent to fulfill their duties and responsibilities.

QUALIFICATION STANDARD DEVELOPMENT

This qualification standard has been constructed using information from TDD position descriptions, position standards from TDD, interviews with TDD staff, and recommendations from the TDD Director. The format follows the department-wide functional area qualification standards developed by DOE Human Resources' Office of the Technical Personnel Program Coordinator.

APPLICABILITY

This qualification standard applies to TDD staff, and other Federal personnel temporarily assigned to TDD, who provide management direction or oversight that could impact the safe operation of an Oak Ridge Operations defense nuclear facility.

IMPLEMENTATION REQUIREMENTS

The competencies contained in the Standard are divided into the following categories:

1. General Technical
2. Administrative
3. Regulatory
4. Management and Assessment

Each of the categories contains one or more competency statements indicated by bold print. The competency statements define the expected capabilities that an individual must possess. Each of the competency statements is followed by a listing of supporting knowledge and/or 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.

All of the competencies identify either a familiarity level, working level, or 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 reference appropriate materials and/or expert advice as required to ensure the safety of Department 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.

This qualification standard contains a composite of all the competencies applicable to the TDD staff as a group who are enrolled in the TQP. No one individual is expected to be qualified on all the competencies. The TDD Director assigns to each participating TDD member the specific competencies from this qualification standard that the participant is required to complete. The AMDP reviews the competencies selected for the TDD Director to complete.

Exemptions are not used in this phase of the qualification program. Only those competencies assigned by management are required to be completed.

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

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. Classroom instruction, computer-based training, interactive television broadcasts, and self-study guides are available to individuals preparing to meet competencies in their qualification standards. Training courses used to acquire needed competencies should be selected with care so as to best satisfy the competencies.

TQP participants use this qualification standard in conjunction with their Technical Qualification Records to document implementation and completion of the office/facility-specific qualification requirements. Documented completion of the requirements of this qualification standard will be included in the employee's training record.

DUTIES AND RESPONSIBILITIES

The following duties and responsibilities may be assigned to TDD staff who provide employee training, education, development, and qualification program services for Federal employees, and who provide technical support to line management for review and assessment of management and operating (M&O) contractor training programs.

1. Implement DOE policies and develop and implement procedures, training program standards, certification program requirements, and management processes for training, education, development, and qualification programs for the Oak Ridge Operations Office.
2. In support of and at the direction of line management, perform reviews and assessments of M&O contractor training programs, including evaluating contractor compliance with DOE requirements related to training.
3. Serve as training task monitor for M&O contractors.
4. Supply training and development expertise to other ORO organizations, including interpreting technical training and qualification policies and requirements.

5. Design, develop, implement, evaluate, and manage Federal central training programs. Provide for training courses that meet the regulatory, qualification, and development needs of ORO personnel, and that support management's missions and organizational objectives.
6. Administer ORO implementation of the DOE Technical Qualification Program; develop implementing guidelines, support line management with development of office/facility specific qualification standards, monitor completion status and maintain records.
7. Support the continued technical growth of current ORO employees and the technical qualification of new employees as a part of the DOE technical excellence initiatives.
8. Review, evaluate, coordinate, implement, and report on corrective actions for Defense Nuclear Facilities Safety Board (DNFSB) training related recommendations.
9. Develop scope of work, review proposals, select, monitor, and evaluate the performance of support service contractors assisting TDD.
10. Develop and manage the administration of plans and budgets for training, education, development, and qualification activities.
11. Prepare written reports and special studies regarding the technical and administrative aspects of training programs and make presentations to management.

EMPLOYEE BACKGROUND

The U.S. Office of Personnel Management (OPM) establishes minimum education, training, and experience, or other relevant requirements applicable to a particular occupational series/grade level, as well as alternatives to meeting specified requirements.

Following the recommended background identified for technical training personnel in the department-wide Technical Training Qualification Standard, TDD personnel may possess the following:

1. Education

Bachelor of Science degree in engineering or physical science (with training program management experience) or a bachelor degree in instructional technology, training, or education; or meet alternative requirements specified by OPM.

2. Experience

Experience in technical training program design, development, implementation, and management in an industrial setting, preferably at a DOE or commercial nuclear facility. Individuals performing training program evaluations should possess technical abilities similar to the area being evaluated, as well as having prior experience in training program management and implementation.

Alternative education and experience that meets the requirements for the position of training manager for contractors at DOE nuclear facilities (DOE Order 5480.20A) or for commercial nuclear facilities (American National Standard 3.1) may also be acceptable for TDD personnel in the TQP. These requirements are:

1. Education

Bachelor degree including courses in education and technical subjects. If the degree did not include education courses, training must include educational techniques.

2. Experience

Four years of job-related experience, including two years of nuclear experience.

REQUIRED COMPETENCIES

The competencies contained in this qualification standard are distinct from those competencies contained in the General Technical Base Qualification Standard and the series of Department-Wide functional area qualification standards. Participating individuals must complete the competency requirements of the General Technical Base Qualification Standard and a primary functional area qualification standard prior to or in parallel with the completion of assigned competency requirements in this qualification standard.

Participating TDD staff should complete training associated with the topics listed below as co-requisites to the requirements of this qualification standard. Most ORO sites have training requirements on these topics in order to access facilities to work. The specific training courses required for TDD staff should be identified in Individual Development Plans.

- General Employee Training
- Radiation Worker Training
- Nuclear Criticality Safety Training
- Hazardous Waste Operator Training

EVALUATION REQUIREMENTS

The evaluation process identified below serves as a measurement tool for assessing whether 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 the TDD Director, or by a subject matter expert (SME) designated by the TDD Director. Any of the following methods may be used to evaluate incumbent 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)

The TDD Director or SME performing 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.

CONTINUING TRAINING AND PROFICIENCY REQUIREMENTS

Requalification on the competencies contained in this qualification standard is not required. TDD staff should participate in continuing learning activities in order to maintain and improve previously acquired knowledge and skills and to acquire new knowledge and skills where necessary. Continuing training and education to maintain technical proficiency includes the following elements:

1. Technical education and/or training on topics directly related to TDD duties and responsibilities.
2. Training on topics that address an individual's knowledge and/or skill deficiencies.
3. Training in areas added to the qualification standard since initial qualification.

Competencies added to the qualification standard are documented in the Technical Qualification Record and are addressed like other qualification standard competencies. Specific continuing training or education needs should be documented in Individual Development Plans.

1.0 GENERAL TECHNICAL COMPETENCIES

1.1 Demonstrate 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, 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 operations at ORO defense nuclear facilities.
- d. Identify the major non-nuclear hazards associated with ORO defense nuclear facility operations.
- e. Discuss the contractor training organizations serving the ORO defense nuclear facilities, with emphasis on training management contacts, organization staffing, and relationship of the training organization to the facility line management.

1.2 Demonstrate the ability to review a facility Training Implementation Matrix (TIM) for adequacy and track actions to complete TIM implementation.

Supporting Knowledge and/or Skills

- a. Discuss the purpose and intent for requiring contractors to produce TIMs.
- b. Review a TIM against DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, using a graded approach.
- c. Coordinate review comment resolution on a TIM in the approval process
- d. Determine that schedules and milestones are adequate to implement the TIM commitments.
- e. Describe tracking methods used to verify contractor compliance actions with the TIM.

- 1.3 Demonstrate a working level knowledge of problem-solving and decision-making in order to manage activities and ensure issues are identified and appropriate actions taken to resolve and close them.

Supporting Knowledge and/or Skills

- a. Explain the importance of problem identification and the use of occurrence reports, trending, and lessons learned for preventive and predictive actions.
- b. Define root cause.
- c. Explain the necessity of root cause determination in problem solving.
- d. Describe methods of root cause determination.
- e. Discuss problem solutions and weighing of risks.
- f. Explain progress monitoring and verification methods for closure of activities.

2.0 ADMINISTRATIVE COMPETENCIES

2.1 Demonstrate a working level knowledge of the Technical Qualification Program (TQP).

Supporting Knowledge and/or Skills

- a. Discuss the requirements of the TQP from DOE Order 360.1, Training.
- b. Explain the role of the individual and management in the TQP.
- c. Describe the process for individual qualification.
- d. Discuss resources available for use in qualification, such as Lead Site materials, courses, and other training activities.
- e. Explain the documentation and records related to the TQP.

2.2 Demonstrate a working level knowledge of TDD management processes.

Supporting Knowledge and/or Skills

- a. For each of the following describe its purpose, scope, and use:
 - Individual Development Plan
 - Handbook for Training Program Evaluation
 - TDD Procedures
 - ORO Directives with training emphasis
- b. Describe the relationship between TDD and ORO line managers with regard to responsibility for defense nuclear facility training programs.
- c. Participate in the development or the review of TDD procedures, training policy, or guidance documents.
- d. Explain how TDD can provide assistance to ORO managers in establishing or reviewing training, qualification, or employee development programs or requirements for their staff.
- e. Discuss the purpose and applications of TDD's training records and information system.

2.3 Demonstrate the ability to provide input for the development of the TDD Annual Training Management Plan (ATMP) and to use the ATMP in work activities.

Supporting Knowledge and/or Skills

- a. Discuss the purpose, scope, and use of the ATMP.
- b. Describe how the ATMP is used for planning TDD activities and gauging performance.
- c. Describe how milestones and deliverables are established and prioritized.
- d. Develop task description sheets for work assignments.
- e. Track work assignments using the ATMP.

3.0 REGULATORY COMPETENCIES

3.1 Demonstrate a working level knowledge of the influences on training of external groups and DOE actions related to these external factors.

Supporting Knowledge and/or Skills

- a. Describe the purpose, scope, charter, and authorities of the Defense Nuclear Facilities Safety Board (DNFSB).
- b. Describe the events leading to DNFSB Recommendation 94-4, Y-12 Plant Conduct of Operations, and ORO's corrective actions to respond to the recommendation.
- c. Discuss the training impact of DNFSB Recommendation 93-3, Improving DOE Technical Capabilities of Defense Nuclear Facilities Programs.
- d. Relate changes made to contractor training requirements resulting from Recommendation 92-7, Training and Qualification.
- e. Discuss the DNFSB's recommendation 92-2, Improving DOE's Facility Representative Program at Defense Nuclear Facilities and ORO's implementation of the recommendation.
- f. Describe important changes in the conduct of training that occurred in response to Recommendation 91-6, Radiation Protection for Workers and the General Public at DOE Defense Nuclear Facilities.
- g. Describe training aspects of the Tennessee Oversight Agreement.

3.2 Demonstrate a familiarity level knowledge of emerging safety issues within DOE.

Supporting Knowledge and/or Skills

- a. Describe safety management initiatives resulting from DNFSB Recommendation 95-2, Safety Management.
- b. Discuss the Price-Anderson Amendments Act and its effect on DOE and its contractors.
- c. Explain the impact of rule making on DOE and its contractors and the basic process of implementing rules.
- d. Discuss the Work Smart Standards approach as it relates to compliance.
- e. Discuss ORO's use of the Standards/Requirements Identification Documents.

4.0 MANAGEMENT AND ASSESSMENT COMPETENCIES

4.1. Demonstrate a working level knowledge of the requirements for startup and restart of nuclear facilities and the conduct of Operational Readiness Reviews (ORRs).

Supporting Knowledge and/or Skills

- a. Discuss the purpose of ORRs as outlined in DOE Order 5480.31, Startup and Restart of Nuclear Facilities.
- b. List the conditions which require performance of ORRs and circumstances when only readiness assessments would be allowable.
- c. Describe the qualification requirements and any limitations for serving on an ORR.
- d. Discuss the minimum core requirements, with respect to training, when developing the depth and breadth of an ORR.
- e. Outline the responsibilities of ORR team members.
- f. Participate on an ORR team, conduct work in preparation for an ORR, or complete an ORR training course.
- g. Review ORR reports and discuss the relevant training findings.

4.2. Demonstrate the ability to conduct technical support activities associated with contractor training programs.

Supporting Knowledge and/or Skills

- a. Explain the process for evaluating contractor training programs in accordance with Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities.
- b. Discuss the requirements for use of DOE Standard 1070-94, Guidelines for Evaluation of Nuclear Facility Training Programs.
- c. Develop a training program evaluation plan.
- d. Conduct a training program evaluation.
- e. Prepare a training program evaluation report.

4.3 Demonstrate a working level knowledge of the conduct of self-assessments of Technical Qualification Program implementation.

Supporting Knowledge and/or Skills

- a. Explain the self-assessment requirements of DOE Order 360.1, Training.
- b. Discuss the elements that should be assessed to determine effective implementation of the TQP.
- c. Develop a sample check list, or critique and discuss an existing checklist for use in a TQP implementation self-assessment.
- d. Describe a plan, with supporting methods, for assessing ORO progress with TQP implementation.
- e. List the ORO organizations that should have staff participating in the TQP and describe or identify the positions that should participate in the program.

4.4 Demonstrate the ability to establish performance indicators and measure performance, to ensure effectiveness and efficiency in the use of resources,

Supporting Knowledge and/or Skills

- a. Discuss the purpose/value of using prescribed measures of performance.
- b. List performance indicators used to demonstrate effective use of TDD resources in meeting identified needs and plans.
- c. Participate in data gathering, analysis, measurement, and assessment of the information used to measure performance for TDD activities.
- d. Describe the results and significance of TDD performance measures.