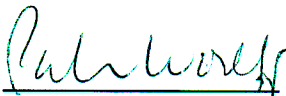
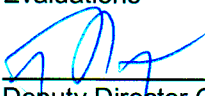


<p>U.S. Department of Energy</p>	<p>Subject: Technical Qualification Program (OA-50)</p>	<p>SP: OA-50-TQP-1 Rev.: 0 Eff. Date:</p>
<p>Office of Oversight</p>	<p> Director Office of ES&H Evaluations</p>	<p>Controlled Copy</p>
<p>Standard Procedure</p>	<p> Deputy Director Office of ESH Evaluations</p>	<p>Number 1 of 1</p> <p>Page 1 of 17</p>

1.0 PURPOSE

This procedure implements the Office of ES&H Evaluations Technical Qualification Program (TQP) per the criteria contained in DOE Manual 426.1-1 "Federal Technical Capability Manual". Key elements of the program include (1) identifying personnel required to participate in the TQP, (2) identifying, developing, approving, revising and updating individual qualification requirements, (3) evaluating staff members against the assigned Technical Qualification Standards and documenting the approval of equivalencies, (4) establishing and updating individual development plans, training plans, and qualification cards to document the learning activities that an individual must accomplish to satisfy established competencies, (5) implementing a continuous training and requalification program and (6) maintaining training and qualification records.

2.0 APPLICABILITY

The Technical Qualification Program applies to Federal personnel assigned to or supporting the Office of ES&H Evaluations.

The rigor and formality used when applying this procedure should be consistent with the risk, hazard, and complexity of the activities for which the person has direct responsibility.

Refer to **Appendix A** for definitions used throughout this procedure.

3.0 IMPLEMENTATION OF THE TECHNICAL QUALIFICATION PROGRAM

General

The TQP is composed of three types of standards. The DOE General Technical Base Qualification Standard is based upon core technical competencies for all TQP participants. The Functional Area Qualification Standards build on the core competencies established in the General Technical Base Qualification Standard and are based upon general technical position requirements of the TQP participant. The list of DOE Functional Area Qualification Standards is shown in Appendix B.

Office/Facility Specific Qualification Standards build upon the Functional Area Qualification Standards and a functional analysis of the participant's specific office mission requirements and activities. Successful completion of the TQP entails satisfying all competencies contained in the General Technical Base, assigned primary Functional Area and Office/Facility Specific Qualification Standards applicable to the participant's position. Participants should normally successfully complete all TQP requirements within 18 months from the date they entered the program. Upon successful completion of the TQP, Oversight members will start the requalification process.

Identification of the Technical Areas of Responsibility and Selection of Personnel to Participate in the Technical Qualification Program

The Director of ES&H Evaluations will select and document the technical areas (e.g., industrial hygiene, waste management, radiation protection, etc.) needed to perform assigned mission requirements. The Director then assigns staff members to the ES&H Evaluations specific technical areas including the required primary and secondary (if applicable) TQP Functional Area Qualification Standards. TQP Functional Area Qualification Standard assignments are also made in a timely basis when new personnel become a part of the group.

The Director of ES&H Evaluations will designate in writing the Subject Matter Experts (SMEs) and TQP Evaluators that have an expert knowledge for each technical area to assist in development, implementation and evaluation of activities identified for completion of TQP Qualification Standard competencies. The designated SMEs may also serve as the TQP Evaluators.

Development of Technical Qualification Records

The Office of ES&H Evaluations TQP participant obtains current copies of the General Technical Base, assigned Technical Functional Area(s), and ES&H Evaluations Office Specific Qualification Standards. The Technical Qualification Record consists of a Cover Page (Appendix C), Summary of Exemptions (Appendix D), Summary of Equivalencies (Appendix E) and Summary of Needed Learning Activities (Appendix F). The TQP participant maintains the Technical Qualification Record to document signature approvals of exemptions, equivalencies and completed development activities.

The participant reviews the assigned Qualification Standards to identify recommended individual competency exemptions and equivalencies. The exemptions (Appendix D) and equivalencies (Appendix E) for the qualification standards will be annotated in the Technical Qualification Record and should include a written justification for each qualification competency exemption and equivalency. The Director or Deputy Director for ES&H Evaluations reviews and approves the TQP competency exemptions and equivalencies. Next, the TQP participant generates the "Summary of Needed Developmental Activities" record (Appendix F). This form lists all TQP competencies from each qualification standard that did not receive an approved exemption or equivalency. It is used to track and document completion of the listed needed

developmental activities necessary for the participant to successfully complete all assigned qualification standard competencies. Written explanation of each competency completion and approval signatures will be maintained on this form.

Implementation and Completion of the Technical Qualification Records

The TQP “Summary of Needed Developmental Activities” record (Appendix F) is a summary of all outstanding competencies for the General Technical Base, Functional Area(s) and the ES&H Evaluations Office Specific Qualification Standards that did not receive an exemption or equivalency. Each line on the report identifies a qualification standard competency number that is to be successfully completed and evaluated in order to complete the TQP. Each competency listed will be completed by the TQP participant.

The developmental activities and related evaluation methods for each outstanding competency are identified, listed and developed by the TQP participant. Signature verifications with dates for successful completion of each outstanding competency can be made by the Director or Deputy Director of ES&H Evaluations. The designated TQP Evaluator for the specified technical area may recommend successful completion of an outstanding competency.

If a training course is designated as the competency developmental activity, the Director or Deputy Director of ES&H Evaluations should review in advance the course materials for quality and applicability to the competency requirements. After presentation, the Director or Deputy Director verifies the course was attended and the knowledge and skills related to the course have been attained, and then signs and dates successful completion and evaluation of the competency in the appropriate blocks of the TQP “Summary of Needed Developmental Activities” record. If a written examination was administered by the course sponsor, achievement of a passing grade is sufficient to demonstrate adequate learning by the participant. Unless otherwise specified, a passing grade is defined as a score of at least 80 percent. If available, the grade shall be entered in the Evaluation Notes block of the “Summary of Needed Developmental Activities” record.

For oral checkouts, the Director, Deputy Director of ES&H Evaluations or the TQP Evaluator performs the evaluation in accordance with the guidance provided in DOE Standard 1011-92; DOE Guide to Good Practices for the Design, Development, and Implementation of Examinations. The results shall be entered in the Evaluation Notes block of the “Summary of Needed Developmental Activities” report. Participants who do not pass an examination or checkout are given an indication of the areas in which additional study is needed, and are given another evaluation by the Director, Deputy Director of ES&H Evaluations or the TQP Evaluator when ready.

If on-the-job training (OJT) or self-study is designated as the learning activity, the participant completes the learning activity and demonstrates his/her attainment of the required knowledge and skills, as described below. Guidance for conducting OJT is contained in DOE Standard 1012-92, Guide to Good Practices for On-The-Job Training. OJT or self-study learning verification may be performed by written

examination, oral checkout, performance, or simulation. The Director or Deputy Director of ES&H Evaluations or designated TQP Evaluator conducts the developmental activity evaluation and annotates the method and results in the “Summary of Needed Developmental Activities” record.

When all outstanding competency statements have been completed, the Director or Deputy Director of ES&H Evaluations may conduct a supervisory checkout with the participant. The participant may also be required to complete a final qualification evaluation consisting of an oral board and/or certification examination, as determined by the Director of ES&H Evaluations. When satisfied with the participant’s qualifications, the Director of ES&H Evaluations signs the participant’s Technical Qualification Record Cover Page (Appendix C).

Review of the Office Specific TQP Qualification Standard for ES&H Evaluations

SMEs are designated by the Director of ES&H Evaluations to review the ES&H Evaluations Office Specific Qualification Standards annually to determine whether updates in competency statement coverage and content are required to reflect changes in the office mission and goals. This review shall also be conducted following revision to the General Technical Base or office-related Functional Area Qualification Standards. The SMEs then make recommendations to the Director of ES&H Evaluations regarding the continued validity of these competency statements. The Director of ES&H Evaluations will review and approve the recommendations as applicable and revise the ES&H Evaluations Office Specific Qualification Standard.

Individual Development Plan

The Needed Developmental Activities identified in the TQP General Technical Base, Functional Area, and ES&H Evaluation Office Specific Qualification Standards are included in each participant’s Individual Development Plan (IDP). TQP participants schedule developmental activities within the constraints of time and funding resources.

Requalification Program

The requalification process is designed to allow the process to be tailored to each staff member’s unique qualifications. The requalification record provides the formal documentation of the process and is attached in Appendix G. The process starts following completion of initial qualifications. First, the requalification candidate and the candidate’s supervisor select and document the appropriate learning activities to ensure the necessary knowledge and skill levels are maintained for the completed qualification standards (General Technical Base, Office Specific and Primary Functional Area). The selected learning activities should cover changes in the material referenced in the applicable qualification standards (for example changes to DOE Orders) since the completion of initial qualification. Additional learning activities should be selected that review the information presented in the completed qualification standards. A final requalification due date is selected and intermediate due dates are selected for each learning activity. The final requalification due date should be at three year intervals from the initial qualification date. The development of the candidate’s IDP

should be closely coordinated with the development of the requalification record. Some of the learning activities selected for the requalification record should also be listed and tracked on the candidate's IDP. Therefore, it is important to update the requalification record and the IDP at least once a year at the same time.

There are several types of activities that should be considered to be included in a candidate's requalification record.

- Participation in ES&H Evaluation Activities (inspections, special reviews, etc) in the appropriate area related to TQP functional area qualifications
- Participation in appropriate seminars, conferences and training classes. These should be shown on the candidate's IDP.
- Certification examinations
- Required reading of revised DOE Orders, CFRs, etc
- Review of select areas with assigned Subject Matter Experts.

The requalification candidate is responsible to complete and document completion of the learning activities on the requalification record. After completion of all the required requalification learning activities, the Director or Deputy Director of ES&H Evaluations reviews the candidate's knowledge and skill levels and certifies completion of requalification. Finally, a new requalification record is developed for the next period of requalification.

4.0 ROLES AND RESPONSIBILITIES

The Director ES&H Evaluations is responsible for the following functions:

- Identify and update the selection of technical areas needed to perform assigned mission requirements.
- Designate the personnel within their organizations to participate in the TQP.
- Designate the subject matter experts (SME) to assist in the review of the TQP qualification standards.
- Designate the TQP Evaluators for each applicable technical area who will assist in performing and approving competency needed development activities and verifications.
- Approve requests for competency statement exemptions and equivalencies.
- Approve the ES&H Evaluations Office Specific Qualification Standard.

- Approve the participant's successful completion of initial and requalification of the TQP.

The **Staff Development and Qualification Team Leader** is responsible for the following functions:

- Coordinate the development, implementation, and maintenance of the TQP and monitor the status of the programs.
- Maintain and monitor TQP records for the program and individual participant.
- Coordinate the development and review of ES&H Evaluations Office Specific Qualification Standards.
- Coordinate the issuance of TQP certificates of completion.

The **TQP Evaluators** are responsible for the following functions:

- Conduct verification checkouts with TQP participants to assess satisfactory knowledge and skills related to completed learning activities.
- Administer and grade written/oral qualification examinations, as required.
- Ensure that any examinations used to verify the successful completion of training activities are securely maintained.

The **TQP Participants** are responsible for the following functions:

- Maintain the TQP Technical Qualification Record and TQP Requalification Record.
- Conduct initial review and recommend exemptions and equivalencies to the TQP General Technical Base, Functional Area, and ES&H Evaluations Office Specific Qualification Standards.
- Participate in developmental activities to satisfy the competency requirements contained in the TQP Technical Qualification Record and Requalification Record.
- Gather proof of training, qualification, certification, and education information relevant to verification of successful completion of TQP and requalification activities.
- Participate in checkouts with TQP Evaluators and supervisors to demonstrate attainment of the knowledge and skills in related TQP competency statements, and points to maintain TQP qualification.
- Maintain awareness of progress towards completion of TQP and requalification requirements.

5.0 REFERENCES

DOE Manual 360.1-1B, Federal Employee Training Manual
DOE Manual 426.1-1, Federal Technical Capability Manual

APPENDIX A

DEFINITIONS AND ACRONYMS

DEFINITIONS

Checkout - The process of demonstrating, to a TQP Evaluator, the attainment of the knowledge and skill related to a competency statement in the Technical Qualification Record.

Competency Statement - Defines the level of expected performance of an individual. Support skills and/or knowledge statements are provided as guidance to describe the intent of the competency statement.

Exemptions - Justification for release from a qualification standard competency statement

Equivalencies - Waiver of a learning activity required to support a competency statement identified in a qualification standard. Equivalencies are based on objective evidence that the participant meets the intent of the competency statement.

Functional Area Qualification Standard - A list of common technical duties, responsibilities, competency statements, and supporting knowledge and skill statements that are specific to a technical functional area that provides minimum requisite competence to perform technical management, oversight, or operation of a defense nuclear facility.

General Technical Base Qualification Standard - The General Technical Base Qualification Standard consists of competency statements in eight technical fundamental areas. Completion of these requirements helps to ensure that participants are prepared to meet the next level of technical competency requirements contained in the Functional Area Qualification Standards. Adherence to the General Technical Base Qualification Standard ensures that all personnel enrolled in the Technical Qualification Program have a common level of core technical knowledge.

Individual Development Plan (IDP) - An individually tailored plan established between a supervisor and an employee outlining the employee's short and long-range career objectives and the means for achieving these objectives within certain time frames. The purpose of the IDP is to increase the current proficiency, development, and progression of personnel through a systematic training plan.

Office/Facility-Specific Qualification Standard - A list of duties, responsibilities, competency statements, and supporting knowledge and skills specific to an individual office and/or facility. The standard is developed and approved by office/facility management. This qualification standard is built on the Functional Area and based upon an analysis of specific requirements associated with the position.

Outstanding Competency Statement - A competency statement contained in a participant's Technical Qualification Record that has not been satisfactorily completed, exempted, or granted equivalency.

Qualification - Sum total of education, experience, training, and other special requirements that provides personnel with the competencies required to safely, effectively, and efficiently perform the duties and responsibilities of their position.

Qualification Training Record - A formal method to determine when an incumbent in a job has fulfilled the competency requirements of the job. These requirements are identified on a form.

Subject Matter Expert (SME) - An incumbent recognized as an expert in a technical area. SMEs are used to support development and implementation of the Technical Qualification Program.

Supporting Knowledge and/or Skill - The knowledge and/or skills a participant must demonstrate to fulfill the intent of a competency statement.

Technical Personnel (Position) - All Federal and contractor personnel whose positions require them to provide oversight that could impact the safe operation of a defense nuclear facility.

Technical Qualification - The process used to determine whether personnel performing oversight of defense nuclear facilities possess the necessary knowledge, skills, and abilities to effectively perform their specific duties and responsibilities.

Technical Qualification Program (TQP) Evaluator - An individual, designated by the applicable Office Director, who is a subject matter expert (SME) in an area and has been given the authority to evaluate and sign off the knowledge and skills associated with competency statements.

Technical Qualification Record - The record for annotating competency statement exemption, equivalency, or completion for a TQP participant.

Technical Qualification Standard - A document that describes the process and requirements to determine that participants can effectively perform specific activities related to oversight of the Department's defense nuclear facilities. The document typically describes the selection criteria, initial training requirements, continuing training requirements, and performance evaluation criteria.

APPENDIX B

TECHNICAL QUALIFICATION PROGRAM

DOE TECHNICAL FUNCTIONAL AREA QUALIFICATION STANDARDS

Aviation Safety Manager

Expertise in areas such as establishing standards for the aviation program for safe and efficient operation, developing aviation implementation plans, and directs and reviews aviation contractors.

Aviation Safety Officer

Expertise in such areas as developing and implementing a field aviation safety program, implementing integrated safety management systems, assessing aviation activities including charter aircraft operations and with conducting aviation accident or incident investigations.

Chemical Processing

Expertise in areas such as the principles of chemical processing, chemical hazards evaluation and protection, chemical process safety, and chemical processing problem analysis.

Civil/Structural Engineering

Expertise in areas such as seismic design and engineering, facility foundation and structural design and modification, and structural design and safety requirements related to nuclear safety.

Construction Management & Engineering

Expertise in areas such as facility design methodology, surveying, site preparation, reading and interpreting blueprints and specifications, industrial construction methods, construction project management, and construction contracting.

Criticality Safety

Expertise in areas such as criticality safety programs consequences of a nuclear criticality accident, review of authorization basis documents, and emergency preparedness and emergency response support related to criticality safety incidents.

Decontamination and Decommissioning

Expertise in areas such as management of applicable decontamination and decommissioning projects, occurrence reporting and corrective actions, worker and public health and safety programs, environmental protection & regulatory compliance, waste TSD and transportation programs, and regulatory agreements and permits.

Electrical Systems

Expertise in applied facility engineering and design related to electrical distribution systems, motors, generators, battery systems, emergency power supplies, and electronic control systems.

Emergency Management

Expertise in areas such as Federal, state and local emergency preparedness laws, facility emergency preparedness programs, facility emergency management engineering systems, risk assessment, and root cause analysis.

Environmental Compliance

Expertise in areas related to environmental laws and regulations, water quality management programs, air quality management programs, pollution prevention, and license and permit processes and requirements.

Environmental Restoration

Expertise in areas related to environmental restoration projects, environmental laws and regulations, license and permit processes and requirements, site characterization process, hazard classifications, and decontamination and decommissioning processes and requirements.

Facility Maintenance Management

Expertise in areas such as maintenance engineering programs, post-maintenance testing, predictive and preventive maintenance programs, and work control systems.

Facility Representative

On-site Department management representative to oversee facility contractor operations. Generalists in areas of design, operations, orders and regulations at a specific facility(ies).

Fire Protection

Expertise in areas such as fire protection system engineering, fire prevention, fire detection systems, and fire response organizations.

Industrial Hygiene

Expertise in areas such as industrial health regulations and laws, personnel monitoring programs, access control programs, personal protection equipment, hazardous materials control programs, and biological effects of hazardous materials and environments.

Instrumentation and Control

Expertise in areas such as process control system design and operation, control loop troubleshooting, process system instrumentation, and maintenance and repair of process system components.

Mechanical Systems

Expertise in applied facility engineering and design related to pumps, valves, piping systems, nuclear ventilation systems, emergency diesels, turbines, and heat exchangers.

Nuclear Explosive Safety

Expertise in areas of nuclear explosive safety as it relates to basic nuclear safety design, nuclear weapon assembly and disassembly, and nuclear explosives testing.

Nuclear Systems Safety

Expertise in areas such as criticality safety, nuclear safety, safety analysis reports, and risk assessments.

Occupational Safety

Expertise in areas such as Federal, state, and local laws and regulations related to occupational safety, construction safety, personal protective equipment requirements, electrical safety, and transportation safety programs.

Project Management

Expertise in areas such as project management and control systems, facility modification programs, cost control, scheduling, value engineering, and configuration management.

Quality Assurance

Expertise in Quality Assurance Programs, plans, and processes to monitor and assess effectiveness and compliance with applicable regulations, standards and DOE Orders.

Radiation Protection

Expertise in areas such as radiation instruments and detection systems, radiological engineering and administrative controls, radiation monitoring programs, and radiation health effects.

Safeguards and Security

Expertise in areas such as control, accountability, and transportation of special nuclear material, physical security, communications security, and classification of information.

Senior Technical Safety Manager

Expertise in areas such as integrated safety management, departmental directives, federal and state regulations and other binding agreements, allocating resources to meet the department's missions safely and communicating technical safety expectations and issues.

Technical Training

Expertise in areas such as technical training and qualification program design, development, implementation, and evaluation for contractor and Federal technical personnel.

Technical Program Manager

Expertise in areas such as managing and coordinating assigned programs in a safe, efficient and effective manner, ensuring deliverables and outcome are technically adequate, ensuring that safety is integrated into management and work practices

and compliance with nuclear, environmental, and departmental directives and regulations.

Transportation and Traffic Management

Expertise in areas such as transportation and traffic management programs, site transportation and carrier operations, and emergency preparedness and emergency response support related to transportation incidents

Waste Management

Expertise in areas such as Federal, state, and local laws and regulations related to storage and handling of hazardous waste, nuclear and non-nuclear waste management engineering systems, waste minimization programs, and waste transportation regulations.

APPENDIX C

DEPARTMENT OF ENERGY



**Office of the ES&H Evaluations
Technical Qualification Record**

Name: _____

Position: _____

Primary Technical Area: _____

Secondary Technical Area: _____

The above named employee has satisfactorily completed the Technical Qualification Program requirements for this position within the Department of Energy.

Technical Qualification Record Completed:

Office Director: _____ Date: _____

Date Entered TQP: _____ Date Completed TQP: _____

Summary of Equivalencies

INSTRUCTIONS

An equivalency is granted for a competency statement if the participant can provide objective evidence that the knowledge and skills associated with the competency statement have been met. Equivalencies are granted based upon the individual's prior education, training, certification, or experience.

Technical Qualification Program participants are responsible for gathering objective evidence of prior training, education, and/or experience (transcripts, certificates, etc.) that document successful completion of the stated competency. The participant makes initial recommendations of proposed competency equivalencies and assembles the evidence supporting each recommended equivalency. Examples of documented evidence include:

- | | |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Training</u> | Certificate of completion, course completion examination, validated printout of the course completion, and written verification of completion from the instructor or program office. |
| <u>Formal Education</u> | Official transcript, certificate of completion, or written verification of completion from the instructor or institutional official. |
| <u>Experience</u> | Personnel work history file and oral/written verification by former supervisors. |

The Office Director assesses the suggested equivalencies and supporting evidence provided by the participant and determines concurrence, additions, or deletions to the recommendations. The Office Director signs this form when completed for the participant.

APPENDIX F

Office of the ES&H Evaluations
 Technical Qualification Program
SUMMARY of NEEDED LEARNING ACTIVITIES

POSITION TITLE: _____
INDIVIDUAL: _____
SERIES/GRADE: _____

PRIMARY FUNCTIONAL AREA: _____
SECONDARY FUNCTIONAL AREA: _____
TECHNICAL SPECIALTY: _____

Competency Statement	Learning Activity	Target Date	Comments	Learning Verification	Signature	Completion Date

Competency Statement Achieved By:	
<u>LEARNING ACTIVITY</u>	<u>LEARNING VERIFICATION</u>
1. Training Course	1. Training Course Completion
2. On-the-Job Training	2. Job Performance
3. Self-Study	3. Examination
4. Other (specify in Comments)	4. Simulation
	5. Discussion

APPENDIX G

Office of ES&H Evaluations
Technical Qualification Program
Requalification Record

Individual: _____

Position Title: _____

- (A) General Technical Base
- (B) Office of ES&H Evaluations Office Specific
- (C) Primary Functional Area:
- (D) Secondary Functional Area:

Requalification Due Date: _____

Requalification Compete: _____
Signature/Date

Area	Learning Activity	IDP Related	Comments	Date Required	Learning Verification	Signature	Date Completed