



The Secretary of Energy
Washington, DC 20585

September 2, 1999

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DNF SAFETY BOARD

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue N.W., Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

In the Revised Implementation Plan (IP) for Board Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*, the Department commits to updating the Technical Qualification Programs (TQPs) to reflect the results of the Phase I assessments. As a deliverable pursuant to Commitment 5.4.3 of the IP, updated TQP Program Plans from each affected Office are to be provided to the Chair of the Federal Technical Capability Panel (Panel).

Phase I assessments were completed and reported to the Board on October 29, 1998. All of the defense facilities organizations modified their TQP plans based on the results of those assessments and submitted the plans to the Federal Technical Capability Panel for its review in early 1999. Those revised plans have been in use since that time. Two organizations were required to finalize negotiations with bargaining units before the plans could be signed and officially transmitted to the Panel. That process has been recently completed and the requirements under Commitment 5.4.3 have been met.

Enclosed for your information is a copy of the revised TQP Implementation Plan prepared by Richland Operations Office that is representative of the program plans received by the Panel. The Department has completed the actions identified under Commitment 5.4.3 and proposes closure of this commitment.

If you have any questions, please call me at (202) 426-1506.

Sincerely,

David R. Roth
Executive Secretary
Federal Technical Capability Panel

Enclosure

cc:

Chairman, Federal Technical Capability Panel
Panel Members
Mark B. Whitaker, Jr., S-3.1



United States Government

Department of Energy
Richland Operations Office**memorandum**

DATE: DEC 30 1998
REPLY TO: OTR:RJS 99-OTR-021
ATTN OF:
SUBJECT: TRANSMITTAL OF U.S DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE (RL) 93-3 TECHNICAL QUALIFICATION PROGRAM (TQP)

TO: Steven D. Richardson, Chair *Steve*
Federal Technical Capabilities Panel, ORO

Attached for your information is the Implementation Plan for the revised RL TQP. The TQP provides the overall technical qualification goals necessary for DOE staff to meet Recommendations 93-3, 95-2, and 97-2 from the Defense Nuclear Facilities Safety Board (DNFSB) as described in the Secretarial letter dated May 5, 1998, same subject as above.

Implementation of the revised RL TQP more than fulfills the Secretary's commitment to the DNFSB; it offers RL an opportunity to validate the quality of its technical and management staff. It also provides improved, more efficient, and more effective training at the Hanford Site by formalizing and standardizing the technical qualification process.

The training described in the TQP incorporates the original three basic elements required for technical and management personnel and supplements these three with a fourth new one:

1. General Technical Base Qualification Standard,
2. Functional Area Qualification Standard,
3. Office/Facility-Specific Qualification Standard, and
4. Technical Discipline Qualification Standards.

In addition, details of our proposed implementation of continuing training are also included.

This revised TQP is needed to continue the implementation phase. Currently, we are on schedule to meet the Secretary's commitment for full implementation.


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Steven D. Richardson
99-OTR-021

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DEC 30 1998

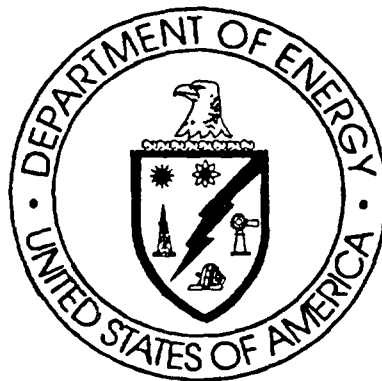
If you have any questions, you may contact Charles A. Hansen, Assistant Manager for Waste Management, on (509) 376-7434.


John D. Wagoner
Manager

Attachment

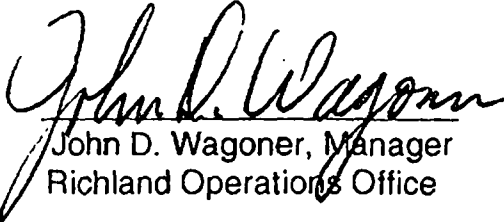
cc w/attach:
T.W. Evans, HR-31, HQ
D.R. Roth, HR-31, HQ

**DOE-RL
TECHNICAL QUALIFICATION
PROGRAM**



**U.S. Department of Energy
Richland Operations Office
Richland, WA**

The Richland Operations Office Revised Technical Qualification Program is approved for use to qualify Federal Technical staff members at Hanford.


John D. Wagoner, Manager
Richland Operations Office

12/30/98
Date

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1.0 INTRODUCTION

The U.S. Department of Energy, Richland Operations Office (DOE-RL) is dedicated to effective management of the Hanford site facilities. A fundamental requirement for the effective management of the Hanford site programs is to ensure that personnel are fully qualified and capable to perform their duties in a safe and correct manner. The DOE-RL Technical Qualification Program is composed of elements representing the activities necessary to develop and implement an effective qualification and training program.

This document outlines the components and requirements of the DOE-RL Technical Qualification Program as committed in DOE's 93-3 Implementation Plan.

1.1 Purpose

The DOE-RL Technical Qualification Program establishes the training program requirements to ensure that DOE-RL technical personnel are qualified to perform their assigned duties.

1.2 Scope

The DOE-RL Technical Qualification Program provides the description of the training program elements and establishes the training requirements necessary to promote safe and reliable operations of DOE-RL facilities. A systematic approach to training will be used to ensure that DOE-RL personnel are qualified and trained to competently perform their assigned tasks and job duties.

The revised RL site-wide implementation of the TQP will integrate other existing and anticipated Technical Qualification Programs under a uniform set of programmatic standards. The result will be greater consistency between the various programs and initiatives and lower administrative requirements.

Programs covered under this Implementation Plan are:

Technical Qualification Program
Facility Representative Training Program
Criticality Safety Training Program
Integrated Safety Management Training Program
Senior Technical Safety Manager Program

1.3 References

- a. DOE Technical Personnel Qualification Standards
- b. DOE Order 360.1 Training
- c. Uniform Guidelines on Employee Selection Procedures
- d. General Technical Base Qualification Standard
- e. Functional Areas Qualification Standards (24)
- f. Technical Qualification Program Implementation Guidelines
- g. Revised DOE Technical Qualification Program Implementation Plan
- h. DOE Policy 420.1 Federal Technical Capability Policy for Defense Nuclear Facilities

1.4 Acronyms

Acronyms

DNFSB	Defense Nuclear Facilities Safety Board
DTC	Division Training Coordinator
FAQS	Functional Area Qualification Standard
GTBQS	General Technical Base Qualification Standard
IDP	Individual Development Plan
OFSQS	Office / Facility Specific Qualification Standard
OTR	Office of Training
SME	Subject Matter Expert
PQS	Position Qualification Standard
TDQS	Technical Discipline Qualification Standard
TFSS	Technical Fundamentals and Skills
TRM	Training Requirements Matrix

1.5 Definitions

Competency Equivalency: Satisfactorily meeting a specific competency through prior training, education, or experience that provide knowledge, skill, and ability of equal value to that acquired by training or other learning activities.

Competency Evaluation: In the qualification process, the candidate's knowledge and skill level is assessed using examinations and performance evaluations based upon required employee competencies. Oral and written examinations probe the employee's theoretical knowledge, system knowledge, etc., needed to perform a task or activity. The performance evaluation requires the candidate to demonstrate competency to a second party who will observe the performance, evaluate, and document the candidate's competency level.

Continuing Training: The program to maintain proficiency for technical qualification. It may incorporate briefings, required reading, formal classroom training, on-the-job training, facility changes and lessons learned.

Critical Technical Skills: The Knowledge, skills and abilities essential to provide management, direction, and guidance integral to the safe accomplishment of the Department's defense nuclear missions and responsibilities.

Defense Nuclear Facility: A facility, reactor and non-reactor, that is or has been involved in defense-related activities for DOE.

DNFSB 92-4 Implementation Plan: The DOE response plan for implementation of the actions outlined in DNFSB Recommendation 92-4 for the safe operation of a Multi-Waste Tank Facility.

DNFSB 93-3 Implementation Plan: The DOE response plan for implementation of the actions outlined in DNFSB Recommendations 92-7 and 93-3 for training and qualification of DOE personnel.

Employee Standard Qualification Matrix: The development of the matrix or equivalent document, is a process tool showing initial management decisions about the technical positions and about employee applicability within the technical qualification program. It has a dual purpose of both showing a composite of the standards that each candidate must achieve to become qualified, and as a record of these management decisions.

Exemption: An exemption is a release from the requirement to meet a competency prescribed in a given qualification standard. Qualification exemption may be granted when the candidate neither currently, nor will ever, need the skills or knowledge associated with the specific competency in order to carry out duties and responsibilities assigned to the position.

General Technical Base Qualification Standard: The Position Qualification Standard based upon those core technical competencies based upon fundamental knowledge and skills and abilities required by technical personnel to perform their duties and responsibilities. The General Technical Base is based upon applicable industry, Departmental and Management practices.

Functional Area Qualification Standard: The Position Qualification Standard that builds upon the general technical Knowledge, Skills and Abilities (KSAs) contained in the General Technical Base Qualification Standard and is developed to capture the KSAs, Duties and Responsibilities by a specific job category or functional area (e.g. Facility Representative, Project Manager or Waste Management).

Office / Facility Specific Qualification Standard: The Position Qualification Standard that builds upon those Knowledge, Skills and Abilities contained within the General Technical Base and Functional Area Qualification Standards to reflect those knowledge, skills and abilities required for technical personnel to perform their duties and responsibilities at a specific facility, office or program (e.g. Tank Waste Remediation Systems, Plutonium Reprocessing Facility and Decontamination and Decommissioning).

Position Qualification Standard: The document that defines the knowledge and skill requirements to qualify to perform the functions of the position.

Proficiency: Possession of the knowledge and experience needed for success in accomplishing any activity. This includes the ability to make sound judgments as well as having technical knowledge, skills, and abilities in a particular technical area(s).

Qualification: The total of education, experience, training and other special requirements that provide employees with the competencies required to perform the duties and responsibilities for their position safely, effectively and efficiency.

Qualification Card: The listing of competencies and signature blocks to document qualification.

Subject Matter Expert: A person who is currently involved in activities related to the subject matter and has sufficient technical knowledge, skill, ability and understanding to assist candidates in completing requirements.

Technical Discipline Qualification Standard: The Position Qualification Standard that builds upon the knowledge, skills and abilities contained in the General Technical Base, Functional Area and Office Facility Specific Qualification Standards and is developed to maintain Critical Technical Skills for vital technical positions.

Technical Position: A position which provides management direction or oversight of contractor technical activities that could impact the safe operation at defense nuclear facilities.

Technical Qualification: The process that determines whether technical personnel performing activities in the management, oversight, or operation of Department's defense nuclear facilities have the necessary knowledge, skills, and abilities.

Technical Qualification Standard: A document that describes the requirements to determine whether employee's can effectively perform specific activities in technical management, oversight, or operation of the Department's defense nuclear facilities.

2.0 ROLES AND RESPONSIBILITIES

2.1 Manager, DOE-RL shall:

- Designate, in writing, all defense nuclear facilities at RL.
- Designate, in writing, the technical positions at RL that require formal qualification.
- Establish the DOE-RL technical qualification program.
- Designate in writing and define responsibilities for Line Management Sponsor(s).

2.2 Line Management Program Sponsor, DOE-RL shall:

- **Manage DOE-RL implementation of requirements within the following areas of responsibility.**
 - **Technical Qualification Program**
 - **Facility Representative Training Program**
 - **Criticality Safety Training Program**
 - **Integrated Safety Management Training Program**
 - **Senior Technical Safety Manager Program**
- **Serve as the site spokesperson for interfacing with DOE Headquarters and other regulatory bodies within their area of responsibility.**
- **Be designated in writing by the DOE-RL Manager.**

2.3 Assistant Managers/Office Directors shall:

- **Approve office or facility technical qualification standards, as appropriate, for each position to supplement the Department-wide qualification standard.**
- **Ensure appropriate orientation and training for qualification candidates.**
- **Approve qualification equivalencies and exemptions for competencies listed in the qualification standards for their direct reports.**
- **Approve the Technical Qualification Matrix for personnel in their organization.**
- **Determine the need for comprehensive qualification evaluations for technical positions where it is not specified in the qualification standards.**

2.4 Director, Office of Training shall:

- **Manage the DOE-RL qualification and training processes required to achieve consistency, standardization, and cost-effectiveness.**
- **Maintain file copies of all Department-wide functional area qualification standards and the general technical base qualification standard.**
- **Interface with the DOE-RL Division Directors to assist in identification, documentation, development, and support of qualification and training requirements.**
- **Provide support for the development of training to meet technical competencies.**
- **Maintain the Employee Qualification Standard Matrix for each organization.**
- **Develop, maintain, assess and manage a qualification and training program consistent with DOE requirements, the DOE-RL Technical Qualification Program and the expectations of the Manager, DOE-RL.**
- **Maintain DOE-RL Training records.**
- **Establish and maintain examination banks and administer tests for the Base Technical Qualification Standard.**

- Establish guidelines for completion of competencies by equivalency.
- Report progress semi-annually to the Technical Excellence Executive Committee.
- Ensure that training and education programs meet the Headquarters or Field component office requirements identified in all technical qualification standards.

2.5 DOE-RL Division Directors shall:

- Ensure all technical related tasks and duties are identified and that their direct and support staff are technically competent to perform their assigned tasks and duties.
- Ensure all Hanford general, technical, and career development training required for their staff is identified, documented and completed.
- Appoint a Division Training Coordinator
- Provide Subject Matter Experts (SMEs) from division disciplines to assist, as necessary, in the development and presentation of technical training courses.
- Ensure the development of the program or facility-specific qualification standards for their area of responsibility.
- Approve qualification equivalencies and exemptions for their direct reports.
- Conduct initial evaluation of candidates competencies against the competency requirements.
- Provide a schedule of completion of Qualification and Training requirements individuals must meet and evaluate the candidates progress toward completion.

2.6 Director, Environment, Safety, and Health shall:

- Identify Environmental Safety and Health, and Quality Assurance regulatory requirements which effect qualification and training of technical personnel.

2.7 Subject Matter Experts shall:

- Assist, as necessary, in the development and presentation of technical training.
- Assist, as required, with employee's qualification within their designated area(s)
- Sign off completed competencies within their designated area(s)
- Maintain working knowledge of the TQP and their designated technical area(s).

2.8 Division Training Coordinators shall:

- Provide primary qualification and training interface between the Division and RL-OTR.
- Monitor the status of division employees qualification training and keep the Division Director informed.
- Coordinate qualification and training activities for division employees.
- Notify candidates of the requirements they must meet.

2.9 Federal Employees designated as Qualification Candidates shall:

- Complete the training, self study, and/or performance demonstrations to achieve the competencies required for qualification.
- Once qualified, maintain technical competency through continuing training and education.

3.0 GENERAL REQUIREMENTS

3.1 Goals and Objectives

The goals and objectives of the DOE-RL Technical Qualification Program are to ensure personnel are qualified to carry out assigned functions and to identify a time- frame for qualification.

- 1) Identify managers and technical staff personnel who shall be participants in the DOE-RL Technical Qualification Program.
- 2) Identify personnel who must complete training to satisfy regulatory requirements.
- 3) Complete training or obtain equivalency for requirements stated in the General Technical Base Qualification Standard.
- 4) Identify training requirements for the systems, processes, and operation of a facility.
- 5) Compare individual positions to the requirements and determine the Primary Standard which applies to the individual.
- 6) Integrate the Primary Standard requirements with the office/facility-specific requirements, the General Technical Base Qualification Standard requirements, and the requirements identified by law and/or regulation to establish the Position Qualification Standards.
- 7) Develop a qualification card with the requirements defined in the Position Qualification Standards.
- 8) Implement training for the requirements not exempted or fulfilled by equivalencies.

- 9) **Qualify all incumbent personnel to the requirements of the DOE-RL Technical Qualification Program within their assigned qualification period.**

3.2 Identifying the Target Population

This section provides the guidance to be used by managers to identify the personnel required to participate in the DOE-RL Technical Qualification Program. The following criteria may be used to select employees for qualification:

1. The employee, according to assigned duties, provides direction, guidance, oversight, or evaluation, of contractor technical activities, or is in a position that requires professional judgment in technical matters in a defense nuclear facility, and;
2. The employee performs activities related to the management, oversight, or operation of a defense nuclear facility, and;
3. The employee's decisions or actions could impact the safe operation of a defense nuclear facility.
4. All Project Managers are required to be participants in the Technical Qualification Program. Project Managers at Defense Nuclear Facilities are required to complete the General Technical Base, at least one Functional Area, and any applicable Office / Facility Specific and Technical Discipline Qualification Standards. (Note: personnel designated to complete the Project Management Qualification Standard as their primary qualification standard will be required to complete an additional Functional Area Qualification Standard (secondary).

Project Managers at non-Defense Nuclear Facilities are required to complete as a minimum, the Project Management Functional Area Qualification Standard.

If the answer is "yes" to the top three conditions, then the employee is selected to be a candidate for the technical qualification program.

3.3 Training Requirements

All competencies shall be defined in measurable terms as performance objectives. The objectives shall be used to determine the content of the training regardless of the training method chosen for implementation and will form the basis for any related examination.

Each competency and supporting performance objective stated in the Position Qualification Standard (PQS) shall be reviewed against existing training available. The purpose of the review is to identify training which meets the intent of the PQS and meets the need of DOE-RL organizations. The course review consists of course content and the course objectives. The course may be audited for applicability.

3.4 Training Requirements Completion

DOE employees who enter the DOE-RL Technical Qualification Program continue with their assigned duties and tasks while they complete their qualification program requirements. The decision of whether a new employee can take unilateral action or make decisions relative to directing or overseeing technical programs at DOE-RL,

prior to completion of the DOE-RL Technical Qualification Program, is a management responsibility.

Technical personnel who may experience a change in position or function shall complete the qualifications for the new position within a time frame established by the Division Director.

Management shall review the training record of any individual who has demonstrated an inability to complete the qualification requirements in the established time frame and make a determination to restrict activities, reassign the individual, or continue efforts toward qualification.

4.0 THE TECHNICAL QUALIFICATION PROGRAM AND ITS RELATION TO OTHER TRAINING/QUALIFICATION PROGRAMS

The Technical Qualification Program is a part of the process established for training and development of the employee. It is necessary to recognize the parts of the process that are associated with a position and the parts that relate to an individual.

"FOR THE POSITION"	"FOR THE INDIVIDUAL"
<p>The Position Qualification Standard (PQS) shall apply to position and not to an individual. The PQS will be developed by integrating the requirements identified in the following:</p> <ul style="list-style-type: none">• The General Technical Base Qualification Standard;• The Primary Functional Area Qualification Standard;• The Secondary Functional Area Qualification Standard(s) and other selected competencies which are germane to the position;• Office/Facility-specific Qualification Standard;• Technical Discipline Qualification Standard;• Training required by law or regulation;• Other requirements identified via an analysis of the position.	<p>The Training Requirements Matrix (TRM) is a compilation of the training needed by an employee as identified:</p> <ul style="list-style-type: none">• By all Position Qualification Standards;• Through the Performance Appraisal System to facilitate employee development;• By management mandate (e.g., AIDS in the Workplace, Sexual Harassment Awareness Training, DOE- RL New Employee Orientation, etc.);• An Individual Development Plan (IDP) is the combination of the TRM and the employee's professional goals.

The revised TQP consists of four parts:

1. Technical Fundamentals and Skills (TFS)
2. Technical Discipline Qualification Standards
3. Continuing Training Program
4. Program administration

4.1 Technical Fundamentals and Skills

The Technical Fundamentals and Skills portion captures knowledge, or performance of, those Technical Fundamentals, Experiences and Skills required for a person assigned to a particular technical position under the TQP. It includes the General Technical Base, Functional Area and Office / Facility Qualification Standards of the former TQP.

4.1.1 General Technical Base Qualification Standard

The General Technical Base Qualification Standard (GTBQS) identifies basic technical competencies and supporting objectives which shall be completed by all employees who are required to participate in the DOE-RL Technical Qualification Program.

The GTBQS consists of requirements in the following areas:

- Radiological Fundamentals
- Nuclear Physics Fundamentals
- Environmental Management
- Quality Assurance
- Industrial Safety
- Conduct of Operations
- Nuclear Safety Documents and Evaluation
- Technical Communications

4.1.1.1 Process

Each competency and supporting objective stated in the GTBQS shall be reviewed against existing training available. The objective of the review is to identify training which meets the intent of the GTBQS requirements and also meets the needs of the DOE-RL organization. The course review may consist of an evaluation of the course content and objectives or, the course may be audited for applicability.

4.1.1.2 Implementation

Each staff position designated to participate in the DOE-RL Technical Qualification Program will be scheduled to complete the training. If the training identified requires self-study, then the reference material will be given to the employee.

4.1.2 Functional Area Qualification Standards

DOE-HQ has developed Functional Area Qualification Standards in 23 technical areas. These qualification standards contain competencies that are divided into four categories: 1. General Technical, 2. Regulatory, 3. Administrative, and 4. Management Assessment and Oversight. Each category is defined by one or more competencies. Each competency is further defined by a list of supporting knowledge and skill statements. Position specific qualification requirements are established in the Position Qualification Standard based upon the risk, hazard, and complexity of facility operations for which the position is assigned. FAQs are listed in Appendix 2.

These standards outline the roles and responsibilities, technical competencies and general requirements identified with a technical functional area.

4.1.2.1 Identifying the Primary Standard

Using the Functional Area Qualification Standards, a matrix will be prepared which will match the DOE-RL personnel against the standards. DOE-RL management, with input from staff, shall determine which standard best applies to an employee by reviewing the roles and responsibilities in the standard and comparing them to that employee's job functions. This will determine which standard is most applicable to that employee (Primary Standard). Positions completing qualification requirements shall receive a certificate of completion.

4.1.2.2 Secondary Standard Requirements

Secondary Standard requirements are those competencies and the supporting objectives identified in Functional Area Qualification Standards other than the employee's Primary Standard.

4.1.3 Office/Facility-Specific Qualification Standards

Office/Facility specific qualification standards shall have competencies/tasks developed that address office/facility specific requirements including office/facility specific equipment, processes, safety issues, and administrative requirements and other generic competencies not selected in the primary or secondary functional area qualification standards.

The content of office/facility specific training is not targeted at obtaining an ability to operate or perform maintenance on a particular system or piece of equipment. It is to provide sufficient knowledge of the facility to enhance the oversight function of DOE-RL and to improve communications between DOE-RL and the operating contractor. OFSQS are listed in Appendix 3.

4.1.3.1 Process

Office/facility specific training may be derived by review of existing courses which provide an overview of a facility's systems, processes, and safety issues. The development of this portion of the training program should be limited to ensuring that the DOE-RL staff and managers have a general understanding of an office/facility, as well as the safety issues associated with operations.

4.1.3.2 Implementation

The basic methodology will be to review existing courses and identify the knowledge requirements or expectations for DOE-RL personnel. This may require some modification to an existing course or may require integration of several courses. The target is to have a one- or two-day training session.

Office/facility specific training includes the identification and review of existing contractor course material, establishing or modifying the competencies and supporting objectives and development or review of an examination bank.

4.1.3.3 Office/Facility Specific Training Requirements

Office/facility specific training requirements will be identified via a facilitated discussion analyzing the requirements in the Functional Area Qualification Standards, and the training required by regulations, and shall identify any office/facility specific requirements which may not be covered in those source documents. The identified shall be integrated into the PQS.

4.2 Technical Discipline Qualification Standards

The Technical Discipline Qualification Standards portion captures knowledge, or performance of, the Technical Knowledge, Experiences and Skills required for a person assigned to designated critical functions or position, the loss of which could adversely effect DOE-RL from completing its mission, or lead to a loss of control, safety, or uncontrolled release of hazardous materials to the environment. TDQS are listed in Appendix 3. There are two components to a TDQS:

4.2.1 Core Technical Discipline Qualification Competencies

Core Technical Discipline Qualification Competencies are that portion of the TDQS which captures competencies at a site-wide level.

4.2.2 Facility / Program Specific Technical Discipline Qualification Competencies

Facility / Program Specific Technical Discipline Qualification Competencies are that portion of the TDQS that captures competencies at a facility or program specific level.

4.2.3 Process

Technical Discipline specific training may be derived by review of existing courses which provide an overview of the core and facility / program specific programmatic, technical, facility systems, processes, and safety issues.

4.2.4 Implementation

The basic methodology will be to determine qualification requirements, develop the TDQSS, review existing courses and training resources, and identify the knowledge requirements or expectations for DOE-RL personnel. This may require some modification to an existing course or may require integration of several courses, or the development of supporting training resources.

TDQS specific training includes the identification and review of existing contractor course material, establishing or modifying the competencies and supporting objectives

and development or review of an examination bank.

4.3 Continuing Training Program

The Continuing Training Program is that part of the TQP which ensures that program participants maintain the Technical Knowledge, Skills and Abilities necessary to perform their assigned duties as well as to provide qualification on those areas which have changed since their original qualification. The continuing Training Program will have two components:

1. Verify currency of required TFSS.
2. Provide updated training over TQP areas changed since qualification or last update.

4.3.1 Verify currency of required TFSS

It is essential that the required technical knowledge, skills and abilities required for an individual to perform their duties be maintained. To this end, individuals participating in the RL TQP will be required to demonstrate continued proficiency in the required technical KSAs. To that end, periodic testing and where required remedial training covering the required knowledge will be administered to the employee.

4.3.1.1 Process

Challenge examinations will be developed covering all required competencies within the TQP. The examinations will be centrally administered and graded by the Office of Training on a three year cycle. The results of the examination will be provided to the employee. Passing grade for each competency will be 80 percent. For those parts that are completed satisfactorily, certificates of completion will be issued. For those competencies that require additional work, the competencies will be identified to the individual and to their Division Director (via the DTC). The employee will have six months to study to either retake and pass the examination or pass an oral evaluation administered by either their Division Director (or Assistant Manager) or qualified Subject Matter Expert. Training resources will be available to the employee to allow preparation for the examination.

4.3.1.2 Implementation

Examination Banks will be developed and administered by OTR. OTR will utilize DOE SMEs to review examination questions. Examinations will be available on-line when on-line testing becomes available. Program administration will be conducted through the use of the CHRIS Training Administration system. OTR will provide individual and organizational testing schedules to TQP participants. OTR will also oversee the development of Training resources to support preparation for the examinations. The initial examinations cycle will be start on June 1, 2001.

Office/facility specific training includes the identification and review of existing contractor course material, establishing or modifying the competencies and supporting objectives and development or review of an examination bank.

4.3.2 TQP Training Updates

Given the dynamic nature of technology development, regulatory requirements and operating procedures it will be necessary to review and revise existing program requirements as well as to develop new requirements. Changes to the TQP will be passed on to program participants in a timely and efficient manner.

4.3.2.1 Process

OTR will develop Annual Training Updates to the TQP. Training Updates will be developed by Qualification Standard and will be reviewed by DOE-RI SMEs. Individuals will be responsible for reporting completion of Training Update training to their DTC and OTR. The Training Update program will be administered as part of the CHRIS Training Administration system.

4.3.2.2 Implementation

OTR will develop Annual Training Updates to the TQP starting in FY-2000. The updates will be available in both on-line and in hard copy formats. Training Updates will be developed by Qualification Standard and will be reviewed by DOE-RI SMEs. Individuals will be responsible for reporting completion of Training Update training to their DTC and OTR within three months of issuance. The Training Update program will be administered as part of the CHRIS Training Administration system.

4.4 Program Administration

The program administration portion of the TQP captures all programmatic aspects of the various TQP programs and includes guidance on administrative support, training development, assessment and evaluation and reporting.

5.0 COMPETENCY EVALUATIONS

There are several ways to evaluate individuals for their completion of competencies. Included are written examinations, oral examinations, equivalencies, and performance evaluations.

5.1 Written Examinations

Examinations shall be proctored at all times and reviewed with the individual upon completion. All examinations shall require a 80% passing grade to qualify the individual in an area of training. All completed examinations shall be included in the individual's training record.

A challenge examination will normally be centrally prepared and administered by OTR. Individual organizations may also develop challenge examinations to use in qualifying their own organizational personnel. Locally prepared examinations will be approved by OTR in advance of their use. When requested by a staff member or manager identified to complete training requirements. Staff members or managers must notify their Training Coordinator at least 3 days in advance to arrange for a challenge exam. Challenge exams shall cover at least 80 percent of the KSAs listed under each competency. Personnel who successfully achieve a score of 80% or better on the examination shall be deemed qualified in that area of training. Certain programs (e.g., facility representatives) may be held to a higher standard.

Personnel who do not successfully achieve a score of 80% shall attend the assigned training as identified.

All examinations shall contain questions that relate to and cover the training module performance objectives. Examinations given on a routine basis shall have an extended examination bank. This extended examination bank will assure that any two examinations given within a 60 day period shall have at least a 30% question difference.

Comprehensive evaluations may be required for selected positions in the qualification program. This determination is based on the risk, hazard, and complexity of the operations at the facility for which the person is assigned. The decision to employ comprehensive evaluations shall be made by the appropriate Division/Office Director.

5.2 Oral Examinations

Oral examinations relate to oral questions and answers used to validate knowledge level of a candidate for a competency. Oral examinations should not be confused with comprehensive oral boards. Oral examinations shall cover at least 80 percent of the KSAs listed under each competency and a written record of areas examined and questions asked should be maintained .

Oral examinations shall be pass/fail only. Numerical scores for oral examinations need not be assigned. Questions asked should pertain to knowledge required by the qualification standards.

5.3 Equivalencies

No equivalency shall be granted for training required by law/regulation.

Equivalencies may be granted for requirements stated in the Position Qualification Standard based upon an evaluation of the employee's prior education, experience and/or training. Documented, objective evidence of equivalencies must indicate how the competency statements of the subject area(s) have been met. The supporting knowledge skills statements should be considered when evaluating whether the competency statements have been met.

Employees selected for participation in the DOE-RL Technical Qualification Program are responsible for providing the objective evidence of prior training, education, or experience that documents successful participation in work or instruction covering the competencies listed in a standard. Where documented evidence currently exists within the system, e.g. official transcripts in personnel files, these documents do not need to be produced. Division Directors, however, should not grant equivalency based upon the expectation or assumption that the supporting documentation exists without confirming so in advance.

Equivalencies shall require the approval of the individual's Division Director or higher or designated Subject Matter Experts.

5.3.1 Alternate Course Completion

The requisite course that satisfies a competency or group of competencies shall be added to the individual's Training Requirements Matrix (TRM). The individual may apply for an equivalency based upon the content of a previously completed course. The equivalency source shall be documented.

The alternate course objectives do not have to mirror the objectives of the PQS, but must be able to demonstrate that the competencies associated with the objectives are covered. For example, the General Technical Base Qualification Standard is intended to ensure that all technical employees in a defense nuclear facility qualification program have a common level of core knowledge. Equivalencies may be granted for many of these core competencies based on the employee's prior education or training, such as completion of the Navy Nuclear Program or if the employee holds or has held a Senior Operator's License or Certification.

Documentation which may be used to show course completion may include a certificate of completion, course completion examination, written attestation from the course instructor, or existing training records.

5.3.2 Education

Education refers to formal education obtained in colleges, universities, trade schools, technical schools (including military) and apprenticeship programs. Required documentation to support equivalency may be diplomas, transcripts, written attestation from the instructor or institution, or other documentation which shows evidence of education.

5.3.3 Experience

Prior work experience, which can be documented, can be used for equivalency. The experience must directly relate to the competency or group of competencies for which the equivalency is requested. Documentation may include personal performance appraisals, personnel work history files, or written attestation of satisfactory work completion by a present or former manager.

5.4 Performance Evaluations

The performance evaluation requires the candidate to demonstrate competency to a second party who will observe the performance, evaluate, and document the candidate's competency level.

5.5 Alternatives to Educational Requirements

Educational criteria are described as either baccalaureate, associate degree, or high school diploma. In each case, the type of degree (diploma) required is a function of the individual's responsibilities. Individuals who do not possess the minimum formal educational requirements specified in the DOE-RL Technical Qualification Program shall not be automatically eliminated where other factors provide sufficient assurance of their abilities to fulfill the duties of a specific position. These factors shall be evaluated on a case-by-case basis and approved and documented by the Division Directors and reviewed and documented by the Director, RL-OTR. The following may be considered in evaluation:

- General Education Development (GED) test for a high school diploma;
- Professional Engineers License for a Baccalaureate or completion of Engineer in Training examination for an Associate degree;
- Completion of technical portions of an engineering, engineering technology, or related science program may substitute for the Baccalaureate or Associate

degree program. (NOTE: Successful completion shall be determined by a transcript or other certification by an accredited institution). The courses shall be in appropriate technical subjects relevant to the position;

- Completion of applicable technical military education may substitute for Baccalaureate or Associate degree program. (NOTE: Successful completion shall be determined by military service record entry documentation or course completion documentation). (Example: Completion of 1 full year of US Navy Nuclear Power School is equivalent to 1.3 years of academic schooling or 39 credit hours. Four years of schooling should be considered as 120 credit hours). Military schooling should be considered a complete program for technical courses only and will have an equivalency basis of one-to-one.
- Related experience may be substituted for education at the rate of six semester credit hours for each year of experience up to a maximum of 60 credit hours (Example: 10 years experience at 6 credit hours per year equals 60 credit hours).

5.6 Alternatives to Experience Requirements

Experience in nuclear design, construction, program development, research, and operations training may be considered applicable experience and should be evaluated on a case-by-case basis.

- Where course work is directly related to job assignments, post-secondary education may be substituted. Formal education shall not be allowed to substitute for more than 50 percent of the experience requirement.
- Job-related training in the position may qualify as equivalent to required experience on a one-for-one basis for up to a maximum of two years.
- The Division Director shall submit documentation that details criteria for granting an exemption alternative to experience requirements to RL-OTR for review and records storage.

6.0 TRAINING RECORDS

The DOE-RL Office of Training shall maintain training and qualification records for each technical employee. These records shall include the following as a minimum:

- Detailed information regarding
 - Education
 - Work History
 - Certifications or licenses
 - Specialized training
- Record of completion of all training courses to include dates, hours and instructor attestation.
- Training Requirements Matrix(ces) and completed qualification cards.
- Completed examinations.

Appendices to
DOE RL TQP
IMPLEMENTATION PLAN

Appendix One	Listing of Function Area Qualification Standards
Appendix Two	Listing of Office / Facility Specific Qualification Standards
Appendix Three	Listing of Technical Discipline Qualification Standards
Appendix Four	Revised TQP Implementation Schedule
Appendix Five	Flow Chart of Individual Required Actions between Revised TQP and TQP

Appendix One
to DOE Richland Operations Office
Technical Qualification Program
Implementation Plan

Listing of Function Area Qualification Standards

Facility Representative
Senior Technical Safety Manager
Radiation Protection
Waste Management
Environmental Compliance
Environmental Restoration
Emergency Management
Occupational Safety
Industrial Hygiene
Nuclear Safety Systems
Quality Assurance
Project Management and Engineering
Safeguards and Security
Mechanical Systems
Facility Maintenance Management
Technical Training
Electrical Systems
Environment, Safety & Health Resident
Construction Management & Engineering
Nuclear Weapons Safety
Instrumentation and Control
Civil/Structural Engineering
Fire Protection
Chemical Processing

Appendix Two
to DOE Richland Operations Office
Technical Qualification Program
Implementation Plan

Listing of Office / Facility Specific Qualification Standards

AMW ANALYTICAL LABS
AMF B PLANT
AMW CANNISTER STORAGE BUILDING
AME DECONTAMINATION & DECOMMISSIONING TEAM
AME ENVIRONMENT, SAFETY AND HEALTH QUALITY TEAM
AMF FAST FLUX TEST FACILITY
AMF FACILITY MAINTENANCE MANAGEMENT
AMW 200 EDF / 300 TEDF FACILITIES
AME GROUND WATER MANAGEMENT TEAM
AMW K BASINS
AMT LAB MANAGEMENT DIVISION
AME N AREA TEAM
PLUTONIUM FINISHING PLANT
PUREX
AME REMEDIAL ACTION TEAM
AMF SPECIAL NUCLEAR MATERIALS MANAGEMENT
AMW SOLID WASTE FACILITY
AMT TECHNOLOGY DEVELOPMENT TEAM
AMT TECHNOLOGY DEVELOPMENT PROJECTS TEAM
AME TECHNICAL MANAGEMENT TEAM
AMW T PLANT
TANK WASTE REMEDIATION SYSTEMS
AMF 300 SPECIAL NUCLEAR MATERIALS MGMT

Appendix Three
to DOE Richland Operations Office
Technical Qualification Program
Implementation Plan

Listing of Technical Discipline Qualification Standards

Criticality Safety
Facility Representative
Industrial Hygiene
Nuclear Safety
Occupational Safety
Radiation Protection
Safety Analysis Reports
Waste Packaging and Transportation
Waste TSD Technologies

Appendix Four
to DOE Richland Operations Office
Technical Qualification Program
Implementation Plan

REVISED TOP IMPLEMENTATION SCHEDULE

Task	Sub Task	Sub ² Task	Due date	Action	Related Tasks	Remarks
Review / Revise Existing Qual Standards.			03/19/99	OTR		
	Review / Revise GTBQS		02/05/99	OTR		
	Review / Revise FAQs		03/12/99	OTR		
	Review / Revise OFSQS		03/12/99	OTR		
Program Sponsors	Designate Program Sponsors		02/01/99	MGR		
Develop & Implement TDQS			05/26/99	OTR		
	Identify TDQS		02/05/99	OTR		
	Write Task to develop TDQS.		02/19/99	OTR		
	Select SMEs		02/19/99	OTR		
	Develop TDQS		04/23/99	OTR		
	Review TDQS		05/14/99	OTR		
	Approve TDQS		05/21/99	OTR		
	Develop TDQS Exam banks		05/21/99	OTR		
	Review available training courses for applicability to TDQS.		05/21/99	OTR		
	Develop & Distribute TDQS study materials		05/21/99	OTR		
Integrate Facility Representative Training Program into TQP			03/19/99	WOD OTR		

REVISED TOP IMPLEMENTATION SCHEDULE

Task	Sub Task	Sub ² Task	Due date	Action	Related Tasks	Remarks
Identify and implement DNFSB 95-2 Integrated Safety Management System requirements into TQP.			06/11/99	OTR		
	Identify requirements.		03/19/99	ESH OTR		
	Develop ISMS TQP Plan		04/16/99	ESH OTR		
	Review ISMS TQP Plan.		04/02/99	ESH		
	Implement ISMS TQP Plan.		05/21/99	OTR		
	Develop ISMS Exam banks		06/04/99	OTR		
	Review available training courses for applicability to ISMS.		06/04/99	OTR		
	Develop & Distribute ISMS study materials		06/04/99	OTR		
Identify and implement DNFSB 97-2 Criticality Safety Management (CSMS) System requirements into TQP.			06/11/99	OTR		
	Identify requirements.		03/19/99	ESH OTR		
	Develop CSMS TQP Plan		04/16/99	ESH OTR		
	Review CSMS TQP Plan.		04/02/99	ESH		
	Implement CSMS TQP Plan.		05/21/99	OTR		
	Develop ISMS Exam banks		06/04/99	OTR		
	Review available training courses for applicability to ISMS.		06/04/99	OTR		
	Develop & Distribute ISMS study materials		06/04/99	OTR		
Update Course to Competency Matrix			01/29/99 03/26/99 07/02/99 10/01/99	OTR		

REVISED TOP IMPLEMENTATION SCHEDULE

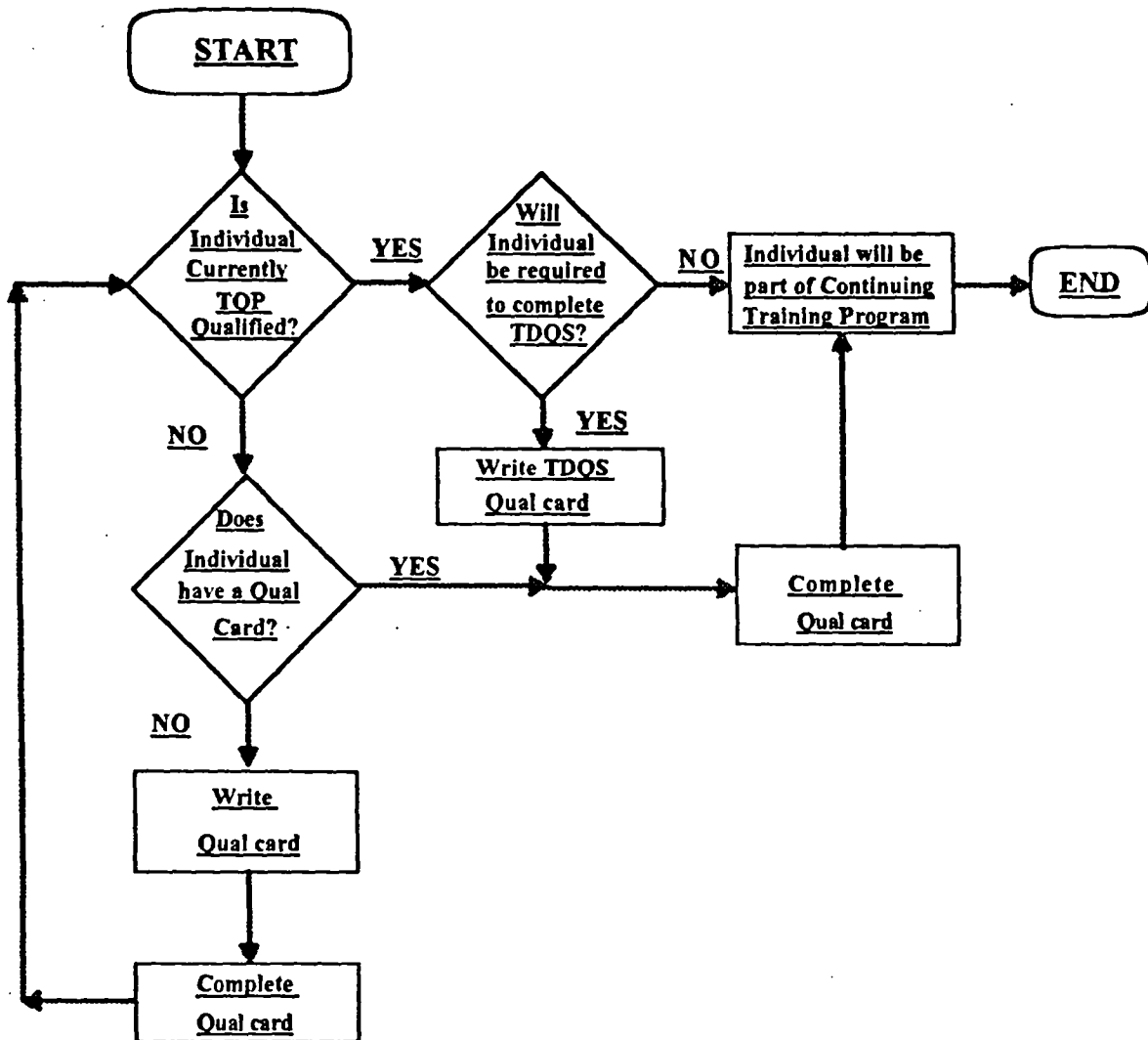
Task	Sub Task	Sub ² Task	Due date	Action	Related Tasks	Remarks
Identify requirements, develop & implement TQP Continuing Training Program (CTP).			10/01/99	OTR		
	Identify requirements.		05/07/99	OTR		
	Develop Continuing Training Program (CTP).		06/18/99	OTR		
	CTP Plan.		06/25/99	OTR		
	Implement CTP Plan.		07/02/99	OTR		
	Develop CTP Exam banks		09/24/99	OTR		
	Review available training courses for applicability to CTP.		09/17/99	OTR		
	Develop & Distribute CTP study materials		09/17/99	OTR		
	Conduct CTP Orientation Training		09/99	OTR		
	Issue CTP Schedules.		10/01/99	OTR		
Identify requirements, develop & implement TQP Training Update Program (TUP).			10/01/99	OTR		
	Identify requirements.		05/07/99	OTR		
	Develop Continuing Training Program (TUP).		06/18/99	OTR		
	CTP Plan.		06/25/99	OTR		
	Implement TUP Plan.		07/02/99	OTR		
	Develop TUP Exam banks		09/24/99	OTR		
	Review available training courses for applicability to TUP.		09/17/99	OTR		
	Develop & Distribute TUP study materials		09/17/99	OTR		
	Conduct TUP Orientation Training		09/99	OTR		
	Issue TUP Schedules.		10/01/99	OTR	CTP training	

REVISED TOP IMPLEMENTATION SCHEDULE

Task	Sub Task	Sub ² Task	Due date	Action	Related Tasks	Remarks
Develop & implement TQP administrative requirements into CHRIS system.			10/01/99	OTR		
				OTR		

Appendix Five
to DOE Richland Operations Office
Technical Qualification Program
Implementation Plan

Flow Chart of Individual Required Actions between Revised TQP and TQP



Relationship between original TQP and Revised TQP
Qualification Standards

