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United States Government | Department of Energy
Oak Ridge Office

memorandum

DATE: February 25, 2009

REPLY TO ATTN OF: SE-32:Allen

SUBJECT: **FINAL REPORT – TECHNICAL QUALIFICATION PROGRAM ACCREDITATION SELF-EVALUATION REPORT**

TO: Larry Kelly, ORO FTCP Manager, SE-30

In accordance with the Office of Science Integrated Assessment Schedule and the Oak Ridge Office (ORO) Integrated Assessment Schedule and requirements of DOE Manual 426.1-1A, *Federal Technical Capability Manual*, DOE Order 360.1B, *Federal Employee Training*, and DOE Manual 360.1-1B, *Federal Employee Training Manual*, an ORO Technical Qualification Program (TQP) Self-Evaluation has been completed, and the self-evaluation report is attached.

This self-evaluation was conducted in accordance with the *Technical Qualification Program Accreditation Process and Criteria*, which was developed by the DOE Federal Technical Capability Panel. A draft of this report has been reviewed by the team for factual accuracy with all comments resolved. In addition, the ORO TQP Self-Evaluation Team wishes to express its appreciation for the support received from the TQP participants and managers across the Oak Ridge Office.

Overall, the ORO TQP meets the accreditation criteria, and the integrity of the program is sound. The results of the self-evaluation show that some enhancements are necessary and include the following areas of improvement:

- ORO is inconsistently applying the TQP participation criteria.
- The Office of Science Integrated Support Center TQP Manual does not adequately define certain TQP elements.
- There are some inconsistencies and weaknesses in the implementation of the TQP.
- Some TQP files were missing supporting documentation.

Several strengths were also noted during the assessment and include the following:

- The ORO TQP is a Senior Management commitment and is a priority.
- ORO Human Capital Assessment Group has shared information and provided significant support to other Office of Science sites to develop and establish technical qualification programs.
- A very structured process is used to hold organizations and individuals accountable for completing the TQP requirements.

In addition to the areas of improvement and strengths noted above, several observations were identified and are documented in the attached report.

If you have any questions, please contact me at (865) 576-0411 or the ORO TQP Manager, Patty Dockery, at (865) 576-1875.

David R. Allen
Team Lead
Senior Technical Safety Manager

Attachment

cc w/attachments:
Kevin Farris, ORISE
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Mark Sundie, YSO
Dan Wilken, AD-40
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Concurrence
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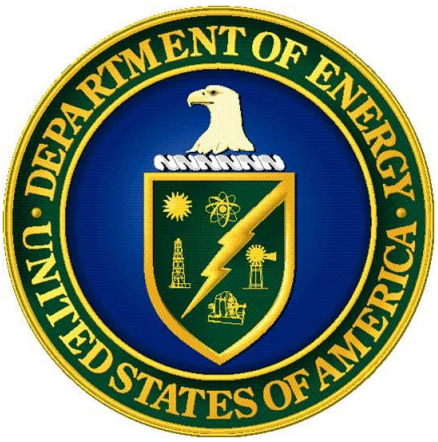
Department of Energy
Oak Ridge Office

TECHNICAL QUALIFICATION PROGRAM

Accreditation Self-Evaluation Report



February 2009

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Acronyms

AFI	Area for Improvement
AM	Assistant Manager
BSO	Berkeley Site Office
AMA	Assistant Manager for Administration
AMEM	Assistant Manager for Environmental Management
AMNFS	Assistant Manager for Nuclear Fuel Supply
AMS	Assistant Manager for Science
AMSEM	Assistant Manager for Security and Emergency Management
CH	Chicago Office
CHP	Certified Health Physicist
CIH	Certified Industrial Hygienist
DNFSB	Defense Nuclear Facilities Safety Boards
DOE	U.S. Department of Energy
EM	Environmental Management
ES&H	Environment, Safety, and Health
ESS	Employee Self Service
FAQS	Functional Area Qualification Standard
FPD	Federal Project Director
FR	Facility Representative
FTCP	Federal Technical Capability Panel
GTB	General Technical Base
HCAG	Human Capital Assessment Group
HRD	Human Resources Division
IDP	Individual Development Plan
INPO	Institute for Nuclear Power Operations
ISC	Integrated Support Center
MPA	Mandatory Performance Activity
NE	Nuclear Energy
OFS	Office/Facility-Specific (refers to Qualification Standards)
OLC	Online Learning Center
OPF	Official Personnel File
ORNL	Oak Ridge National Laboratory
ORO	Oak Ridge Office
PD	Position Description
PII	Personally Identifiable Information
PNSO	Pacific Northwest Site Office
QA	Quality Assurance
QO	Qualifying Official
SB	Safety Basis
SC	Office of Science
SCMS	Office of Science Management System
SME	Subject Matter Expert
SSI	Safety, Security and Infrastructure (SC-31)
SSO	Safety System Oversight
STSM	Senior Technical Safety Manager
TJSO	Thomas Jefferson Site Office
TQP	Technical Qualification Program

Executive Summary

The Technical Qualification Program (TQP) was formalized by U.S. Department of Energy (DOE) Order and issuance of Department-wide qualification standards and implemented at the Oak Ridge Office (ORO) in May 1995. The ORO TQP reflects the guidance and requirements of the Revised Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*; DOE O 360.1B, *Federal Employee Training*; DOE M 360.1-1B, *Federal Employee Training Manual*; DOE M 426.1-1A, *Federal Technical Capability Manual*; and the *Office of Science Integrated Support Center Technical Qualification Program Manual*. ORO has currently enrolled about 164 of its federal staff, including managers and supervisors, to participate in the program.

Moreover, in response to DNFSB Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations,* Implementation Plan Commitment 13, the DOE established "*a corporate accreditation process and plan based on the Institute for Nuclear Power Operations (INPO) model for the Technical Qualification Program (TQP).*" Since the accreditation process is voluntary, ORO has deferred to pursue accreditation and instead has chosen to conduct a robust self-evaluation of its TQP. This self-evaluation addressed the accreditation criteria from DOE M 426.1-1A.

This self-evaluation was led by an ORO senior technical safety manager and supported by five staff members, two of whom were loaned from the National Nuclear Security Administration Y-12 Site Office. The team represents over 150 combined years of experience in DOE and industry operations, training, and education. The assessment methodology consisted of conducting interviews of ORO management and staff and reviewing the applicable ORO training and qualification records, reports, and directives. This report documents the results of ORO's self-evaluation.

The ORO TQP meets the accreditation criteria. The integrity of the program is sound. The results of the self-evaluation show that some program enhancements are necessary. In addition, strengths and observations were noted during the assessment.

Strengths:

- The ORO TQP is a Senior Management commitment and is a priority.
- The ORO Human Capital Assessment Group (HCAG) support is exemplary.
- ORO HCAG has shared information and provided significant support to other Office of Science (SC) sites to develop and establish technical qualification programs.
- A very structured process is used to hold organizations and individuals accountable for completing the TQP requirements.

Areas for Improvement:

- ORO is inconsistently applying the TQP participation criteria and is not compliant with the ORO Manager's direction.
- The Office of Science Integrated Support Center TQP Manual does not adequately define certain elements of the TQP.
- There are some inconsistencies and weaknesses in the implementation of the program.
- Some TQP files were missing supporting documentation.

Observations:

- The HCAG Safety Basis and Facility Representative Websites need to be updated.
- The ORO office/facility-specific qualification standards need some editorial changes.

- The DOE Federal Technical Capability Panel should consider TQP credit for some professional certifications.
- There is a lack of technical training support for Assistant Manager for Nuclear Fuel Supply and Assistant Manager for Science Facility Representatives.
- The use of feedback questionnaires for TQP participants would be beneficial to help evaluate the program by the participants.
- Continuing education activities are limited by lack of available travel funds.

1.0 INTRODUCTION AND SUMMARY

1.1 Introduction

The U.S. Department of Energy (DOE) Technical Qualification Program (TQP) was formalized by DOE Order and issuance of Department-wide qualification standards and implemented at the Oak Ridge Office (ORO) in May 1995. The ORO TQP reflects the guidance and requirements of the Revised Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*; DOE O 360.1B, *Federal Employee Training*; DOE M 360.1-1B, *Federal Employee Training Manual*; DOE M 426.1-1A, *Federal Technical Capability Manual*; and the Office of Science (SC) Integrated Support Center (ISC) Technical Qualification. ORO has currently enrolled 164 of its federal staff, including managers and supervisors, to participate in the program.

Further, in response to the DNFSB Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*, Implementation Plan Commitment 13, the DOE established "*a corporate accreditation process and plan based on the Institute for Nuclear Power Operations (INPO) model for the Technical Qualification Program (TQP).*" The accreditation of the TQP enables both Headquarters and field organizations in DOE to demonstrate that they have an effective program in place to ensure technical competency of DOE employees whose duties and responsibilities require them to provide assistance, guidance, direction, oversight, or evaluation of contractor activities that could have an impact upon the safe operation of defense nuclear facilities. However, since the accreditation process is voluntary, ORO has deferred and instead has chosen to conduct a robust self-evaluation of its TQP.

At ORO, the TQP applies to all technical staff who oversee nuclear and non-nuclear (high, medium, and low hazard) facilities and is directed by the ORO Federal Technical Capability Panel (FTCP), which consists of a core group of senior technical managers representing the key technical assistant manager offices. The Panel, in its oversight role of the FTCP, of which the TQP is part, coordinates the assessment of the implementation of the TQP. The TQP has been evaluated at least six times since 1997, and found to be satisfactory. These results will be part of the data that will be reviewed during this accreditation self-evaluation.

1.2 Mission

DOE's ORO is rich in history, dating back to World War II when the organization played a major role in the production of enriched uranium for the Manhattan Project. Since then, the ORO has expanded far beyond that first mission and today is responsible for major DOE programs in science, environmental management (EM), energy efficiency, nuclear fuel supply, reindustrialization, and national security and support is provided to science laboratories and facilities operated by DOE throughout the United States. ORO also provides support to national security activities managed by the National Nuclear Security Administration, and the SC sites: Berkeley Site Office (BSO), Chicago Office (CH), Pacific Northwest Site Office (PNSO), Office of Safety, Security and Infrastructure (SSI) (SC-31), SLAC Site Office, and Thomas Jefferson Site Office (TJSO).

The majority of ORO programs are performed at facilities located on the 33,699-acre Oak Ridge Reservation located in Anderson and Roane Counties in East Tennessee. The Oak Ridge facilities are located at the Oak Ridge National Laboratory (ORNL); the Y-12 National Security Complex; and the East Tennessee Technology Park. Also, Oak Ridge is the home for the American Museum of Science and

Energy and the Oak Ridge Institute for Science and Education. Approximately 13,000 employees work at the Oak Ridge facilities.

1.3 Organization

ORO consists of eleven major organizations:

- ORO Manager's Office
- Assistant Manager for Science (AMS)
- Assistant Manager for Environmental Management (AMEM)
- Assistant Manager for Nuclear Fuel Supply (AMNFS)
- Assistant Manager for Environment, Safety and Health
- Assistant Manager for Administration (AMA)
- Assistant Manager for Security and Emergency Management (AMSEM)
- Assistant Manager for Financial Management
- Chief Counsel
- Public Affairs Office
- Partnerships and Program Development

Of these, the first seven listed above participate in the TQP, having assigned employees. The Human Capital Assessment Group (HCAG) in the Human Resources Division (HRD) administers the TQP for ORO.

2.0 PURPOSE

The purpose of this self-evaluation is to determine ORO's readiness for accreditation (should it choose to do so) and to measure the effectiveness of ORO's implementation of the TQP policies and practices.

3.0 INTERNAL AND EXTERNAL ASSESSMENTS

ORO has conducted periodic assessments of its TQP as required by DOE M 426.1-1A. These assessments include the 2005 Gap Analysis, 2004 FTCP-TQP Assessment Report, TQP assessments conducted annually from 1997 through 2001, several vulnerability analyses, and correlation analyses of the ORO TQP with TQP support to SLAC Site Office, BSO, PNSO, TJSO, and SSI. Related to these assessments are the ORO critical technical capabilities analyses conducted in 1999 and 2000 and the ORO annual technical workforce analysis and staffing reports that ORO continues to submit to the FTCP Panel.

4.0 SCOPE AND METHODOLOGY

4.1 Self-Evaluation Objectives

The criteria used during this self-evaluation reflected the criteria from the DOE M 426.1-1A, *Federal Technical Capability Manual*, and the DOE Federal Technical Capability Panel Technical Qualification Program Accreditation Process and Criteria guidance document. These criteria corresponded to the following accreditation objectives. The specific approach and lines of inquiry are based on the TQP accreditation criteria which are shown in Attachment 8.1.

Objective TQP-1, Demonstration of Competence. The program clearly identifies and documents the process used to demonstrate employee technical competence.

Objective TQP-2, Competency Levels. Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.

Objective TQP-3, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.

Objective TQP-4, Qualification Tailored to Work Activities. The program identifies unique Department- and position-specific work activities and specifies the knowledge and skills necessary to accomplish that work.

Objective TQP-5, Credit for Existing Technical Qualification Program(s). The program is structured to allow credit, where appropriate, for other Technical Qualification Program accomplishments.

Objective TQP-6, Transportability. Competency requirements identified as applying throughout the Department are transferable.

Objective TQP-7, Measurable. The program contains sufficient rigor to demonstrate compliance to the principles.

4.2 Approach

The general methodology of this self-evaluation consisted of the self-evaluation team, led by an ORO Senior Technical Safety Manager (STSM), determining how the self-evaluation criteria are met and identifying any strengths and areas for improvement (AFIs) (and corresponding recommended corrective actions). The team included members of the HCAG and to add independence, two persons from another DOE office. Prior to the team convening, team members reviewed the specific lines of inquiry (Attachment 8.1) and carried out their assigned data collection tasks. In doing so, and to facilitate reporting responsibilities, the team was divided into three subteams, and the team leader clustered the criteria and assigned them to each subteam. This clustering is shown in Attachment 8.2. This evidential data was collected, reviewed, compiled and reported by the team members, using terminology consistent with the DOE TQP accreditation guidance document. The team assessed each accreditation criterion and documented its findings. Subsequently, the team members prepared a self-evaluation report and presented the results to ORO Management.

4.3 Schedule

Self-evaluation planning began in the fall of 2008 with the data collection beginning in February 2009, followed by data analysis and reporting.

4.4 Documents Reviewed

- DOE M 360.1B, *Federal Employee Training Manual*
- DOE M 426.1-1A, *Federal Technical Capability Manual*
- DOE Memorandum, G. Malosh, Chief Operating Office, Office of Science, to Distribution, Subject: *Technical Qualification Program*, dated April 7, 2007
- DOE O 151.1C, *Comprehensive Emergency Management System*
- DOE O 226.1A, *Implementation of the Department of Energy Oversight Policy*
- DOE O 360.1B, *Federal Employee Training*

- DOE O 425.1C, *Startup and Restart of Nuclear Facilities*
- DOE O 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*
- DOE Federal Technical Capability Panel Technical Qualification Program Accreditation Process and Criteria
- *DOE Office of Science Integrated Support Center Technical Qualification Program Manual – A Desktop Reference for Supervisors and Participants*
- DOE TQP Accreditation Process and Criteria, December 2005
- DOE-STD-1063-2006, *Facility Representatives*
- DOE-STD-1137-2007, *Fire Protection Engineering Functional Area Qualification Standard*
- DOE-STD-1138-2007, *Industrial Hygiene Functional Area Qualification Standard*
- DOE-STD-1146-2007, *General Technical Base Qualification Standard*
- DOE-STD-1151-2002, *Facility Representative Functional Area Qualification Standard*
- DOE-STD-1175-2006, *Senior Technical Safety Manager Functional Area Qualification Standard*
- DOE-STD-1179-2004, *Technical Training Functional Area Qualification Standard*
- ORO Annual Training Needs Assessment Reports, FY 2007 through FY 2009
- ORO Annual Training Reports, FY 2005 through FY 2008
- ORO Emergency Management Office/Facility-Specific Qualification Standard, February 2008
- ORO Environmental Management Office/Facility-Specific Qualification Standard, February 2008
- ORO Memorandum, G. Boyd to Distribution, Subject: *ORO TQP Manual and Qualifying Officials*, dated October 14, 2008
- ORO Office of Assistant Manager for Environment, Safety, and Health Office/Facility-Specific Qualification Standard, October 2007
- ORO Office of Assistant Manager for Nuclear Fuel Supply, Office/Facility-Specific Qualification Standard, December 2007
- ORO Office of Assistant Manager for Science, Office/Facility-Specific Qualification Standard, January 2008
- ORO Position Description – Deputy Manager
- ORO Position Description – Facility Representative
- ORO Position Description – General Engineer (4)
- ORO Position Description – Industrial Security Specialist
- ORO Position Description – Lead Environmental Scientist
- ORO Position Description – Lead General Engineer
- ORO Position Description – Physical Scientist
- ORO Safeguards and Security Office/Facility-Specific Qualification Standard, February 2008
- ORO Safety Basis Office/Facility-Specific Qualification Standard, February 2008
- ORO Safety System Oversight Office/Facility-Specific Qualification Standard, June 2005
- ORO Senior Technical Safety Manager, Office/Facility-Specific Qualification Standard, August 2008
- ORO Staffing Management Plan Fiscal Years 2004 - 2009
- ORO Technical Training Office/Facility-Specific Qualification Standard, January 2008
- ORO Training Record, Chief, Materials Control and Accountability and Information Security
- ORO Training Record, Deputy Assistant Manager for Environmental Management
- ORO Training Record, Director, Mission Integration and Projects Division - in progress STSM
- ORO Training Record, EM Facility Representative Team Leader
- ORO Training Record, Environment, Safety, and Health (ES&H) Senior Technical Advisor
- ORO Training Record, Facility Representative

- ORO Training Record, Facility Representative – in progress
- ORO Training Record, In Progress - Emergency Management
- ORO Training Record, Subject Matter Expert (SME), Criticality Safety
- ORO Training Record, SME, Environmental Compliance
- ORO Training Record, SME, Fire Protection Engineer
- ORO Training Record, SME, Information Security
- ORO Training Record, SME, Occupational Safety
- ORO Training Record, SME, Quality Assurance (QA)
- ORO Training Record, SME, Technical Training
- ORO Training Record, SME, Waste Management
- ORO Qualifying Official Briefing (Draft)
- ORO Vacancy Announcement – Director, Operational Oversight Division
- ORO Vacancy Announcement – Health Physicist
- ORO Vacancy Announcement – Lead General Engineer (2)
- ORO Vacancy Announcement – Physical Scientist
- ORO Vacancy Announcement – Supervisory General Engineer

4.5 Interviews Conducted

- AMEM Training Consultant
- Assistant Manager for Administration
- Assistant Manager for Environment, Safety and Health
- Assistant Manager for Nuclear Fuel Supply
- Assistant Manager for Science
- Assistant Manager for Security and Emergency Management
- Branch Chief, Access Authorization
- Deputy Director of Human Resources
- Deputy Manager
- Director of Human Resources
- Director of Information Resources Management Division
- Division Director AMEM Facility Operations and Safety Management
- Division Director, Technical Support and Assessment
- Facility Representative – in progress (2)
- Facility Representative (4)
- ORO TQP Manager
- Safety System Oversight – Fire Protection
- Senior Technical Safety Manager – in progress (3)
- Senior Technical Safety Manager (4)
- SME, Criticality Safety
- SME, Cyber Security
- SME, Deactivation and Decommissioning
- SME, Electrical Systems
- SME, Environmental Compliance
- SME, Fire Protection
- SME, Industrial Hygiene
- SME, Instrumentation and Control

- SME, Occupational Safety
- SME, Quality Assurance (2)
- SME, Radiation Protection
- SME, Safeguards and Security
- SME, Transportation and Traffic Management
- SME, Waste Management (2)
- SME, Nuclear Safety Specialist (3)
- Team Lead, Emergency Management

4.6 Activities Observed

No technical training or qualification activities were scheduled during this self-evaluation, hence none was observed.

5.0 ASSESSMENT RESULTS

5.1 TQP-1, Demonstration of Competence

The program clearly identifies and documents the process used to demonstrate employee technical competence.

5.1.1 **TQP-1.1**: At a minimum, personnel providing management direction or oversight that could impact the safe operation of a defense nuclear facility have been identified as TQP participants.

Discussion

Prior to 2007, ORO administered the TQP with procedures, ORO O 360 and ORO TQP Manual. In 2007, the DOE SC required all SC sites to convert to an Organization-wide manual. In response, the SC ISC *Technical Qualification Program Manual* was issued in March 2007 to administer the TQP. The ORO Manager issued a memorandum in October 2008 which required all technical positions who oversee both nuclear and non-nuclear operations to be included in the TQP.

The SC ISC *Technical Qualification Program Manual*, Section II, has a well-defined process for identifying employees to participate in the TQP. The process consists of an algorithmic series of steps to determine if the individual's position is a TQP position. The Program Manual also allows for optional participation/implementation for "TQP Like" programs. The employee and supervisor then complete a TQP Assignment Memorandum, which requires the participant, Division Director (or equivalent), and Assistant Manager or Site Manager to sign the memorandum. The completed form is then sent to the TQP Manager and placed in the TQP record file. Overall, the process for designation of TQP participants is well defined and compliant with requirements; however, the reviewer noted the following issues.

To validate that TQP participants are properly identified, a representative sampling of 28 out of 168 TQP record files were reviewed. A total of 7 files (25%) did not contain documentation to identify the individuals as TQP participants. This is an area for improvement, as discussed in criterion TQP 1.3. In addition, the Material Control and Accountability/Information Security Team Leader position did not contain complete TQP records. There is insufficient evidence to

show these individuals were designated to participate in the TQP program and have completed all the qualification requirements.

Interviews were conducted with several Senior ORO Managers who supervise TQP participants. All of the ORO Senior Managers acknowledged that the TQP status of their employees is reviewed during performance appraisal reviews. All Senior Managers related to the reviewers that the HCAG, that manages the TQP, provides exemplary support to them and their staff members and cited several instances where HCAG has exceeded their expectations on service and support. This is a strength.

During discussions about the ORNL Site Office TQP participation, five individuals with technical backgrounds were identified as not participating in the TQP. Likewise, two positions currently being competed in the Office of Nuclear Fuel Supply with technical backgrounds were not identified as TQP positions. Based on the direction provided by the ORO Manager's October 2008 memorandum, these organizations are not compliant. No evidence was found that exempted these individuals from the program. This is an AFI.

Strengths

STR 1.1-1 The HCAG that manages the TQP has provided exemplary support to ORO Senior Management and their staff members and several instances were cited where HCAG has exceeded their expectations on service and support.

Area(s) for Improvement

AFI 1.1-1 Several individuals from the ORNL Site Office and the Office of Nuclear Fuel Supply with technical backgrounds and duties are not TQP participants as directed by the ORO Manager's October 2008 memorandum.

This criterion is met.

5.1.2 **TQP-1.2:** Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities required for each individual to satisfy competencies.

Discussion

The ORO prepares an Annual Training Needs Assessment that typically represents 100% of the ORO employees' IDPs. According to the past four ORO Annual Training Reports, 100% of the ORO employees have submitted IDPs for each of the past four years. There is detailed guidance on the ORO HCAG Website for completion and processing of IDPs.

The TQP records are generated by the participants with the completion of their qualification and requalification cards and are supplemented by training course completion records, such as annual access training, annual compliance training, and other specific training completed pursuant to their IDPs.

Based on discussions with participants and their supervisors, it appears that changes to functional area and Office/Facility-Specific (OFS) qualification standards are not addressed or factored into

continued training. The exception to this is for the Senior Technical Safety Manager and Facility Representative (FR) positions, which require requalification activities to address changes in the DOE standards and directives. Some participants indicated that they were not informed of these changes and, therefore, did not address them. See also discussion under Criterion TQP 7.3.

Strengths

None.

Area(s) for Improvement

AFI 1.2-1 Changes to DOE and ORO qualification standards and embedded directives are not routinely addressed by TQP participants for potential incorporation into the TQP qualification cards.

This criterion is met.

5.1.3 **TQP-1.3:** A formal evaluation process is in place to objectively measure the technical competency of employees. The rigor of the evaluation process is commensurate with the responsibilities of the position.

Discussion

Prior to 2009, the ORO process for formal evaluation of TQP participants relied primarily on first and second level supervisors, who consulted with Subject Matter Experts to formally evaluate TQP competencies and packages through the use of equivalencies. Currently, the ORO ISC is transitioning to use a Qualifying Officials (QOs) approach to provide formal evaluations of TQP participants, as an additional method of knowledge evaluations.

Due to this recent shift by the ORO Manager to utilize a more formalized ORO ISC QO, some participants have not yet been briefed on their new roles and responsibilities; however, a briefing module is in development and planned for release in March 2009. During the interviews, one participant said the option of oral checkouts from QOs was not given as an option to equivalencies and corresponding justification (see additional comments in criterion TQP-3.4). ORO has shared these draft QO briefing materials with the Chicago Site Office (the other ISC), in anticipation of providing a formal evaluation process, which will be consistent across the SC.

During these briefings, each QO will examine a Five-Step Process of examining TQP competencies and packages. This process was developed from lessons learned and feedback during in-person QO briefings at the DOE BSO and with select ORO AMSEM QOs. This process allows QOs to use their discretion in using varied methods of formal evaluation, given the level of expertise and experience of the participant. Interviews with SMEs, FRs, Nuclear Safety Specialists, and Senior Technical Safety Managers were conducted and are consistent with indicating a variety of techniques used to evaluate and verify the TQP competencies and packages. Examples during the interviews included written and oral examinations for the FRs and evaluations written justification paragraphs for many SMEs.

The ORO ISC QO Assignments and Roles and Responsibilities are located on the HCAG Website. All topical areas of the ORO TQP are represented by a Primary QO and most with a Secondary QO, representing all ORO TQP participating organizations.

The review of the formal evaluation process at ORO presented some inconsistencies and was, in some cases, reported as less rigorous than expected; however, the rigor of the evaluation process was generally commensurate with the responsibilities of the position. As an example, the AMEM FRs have a formal evaluation process that is well above standard and includes development of qualification cards, written examinations, development of OFS competencies accompanied by walk downs, oral boards, and a final check out with the FR Team Lead prior to signing off on the final TQP package. Other participants complete the equivalency process with no formal interview.

During an interview with an Instrumentation and Control Subject Matter Expert, she mentioned that she had changed her position/job over five years earlier but had not yet been assigned to the new corresponding TQP functional area qualification. She had been working as a Technical Program Manager but had not been formally assigned to the applicable Functional Area Qualification Standard (FAQS) for this topical area (see additional comments in criterion TQP-3.4).

In an examination of the ISC TQP Manual, a requirement was found that indicated the submittal of developmental activities, equivalencies, and corresponding justification within 6 months of TQP assignment. According to the TQP Manager, due to TQP Employee Self Service (ESS) database programming issues associated with the numbering convention of developmental activities, it is not enforced at ORO (see additional comments in criterion TQP-3.4).

Strengths

STR 1.3-1 The ORO has shared the QO process and TQP implementation information with the other ISC (Chicago Office) to ensure consistence across the SC.

Area(s) for Improvement

None.

Observations

OBS 1.3-1 There is a lack of technical training support for AMNFS and AMS FRs.

OBS 1.3-2 The ORO Safety Basis (SB) and FRs Websites content needs to be reviewed and updated. This includes the SB exams, as they reference dated material.

OBS 1.3-3 A process for distributing new OFS updates should be developed so participants can complete the new versions.

This criterion is met.

5.2 TQP-2, Competency Levels

Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.

5.2.1 TQP-2.1: Competency requirements include clearly defined knowledge, skill, and ability elements.

Discussion

DOE developed and established the competencies (and supporting knowledge and skills) for 31 DOE qualification standards.

Similarly, ORO prepared OFS qualification standards. There are ten ORO OFS qualification standards along with over 25 OFS qualification standards that are unique for the FRs.

The ORO OFS qualification standards include the following offices or topics:

- Emergency Management
- Environmental Management
- Environment, Safety and Health
- Nuclear Fuel Safety
- Science
- Safeguards and Security
- Safety Basis
- Safety System Oversight
- Senior Technical Safety Manager
- Technical Training

Each qualification standard contains relevant knowledge and skills. In addition, the more recent (since late 2006) DOE FAQS now contain mandatory performance activities (MPAs) for key working and expert level competencies. As well, most of the ORO specific qualification standards contain MPAs for the working-level competencies.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.2.2 TQP-2.2: Recognized experts help establish competency requirements.

Discussion

ORO has relied upon the DOE SMEs who developed and established the competencies (and supporting knowledge and skills) for the 31 DOE qualification standards.

Similarly, ORO SMEs prepared, with their management, the OFS qualification standards. There are ten ORO OFS qualification standards, along with over 25 OFS qualification standards that are unique, for the FRs.

The Oak Ridge specific qualification standards include the following offices or topics:

- Emergency Management
- Environmental Management
- Environment, Safety and Health
- Nuclear Fuel Safety
- Science
- Safeguards and Security
- Safety Basis
- Safety System Oversight
- Senior Technical Safety Manager
- Technical Training

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.2.3 TQP-2.3: Related professional accreditation requirements are considered in the program as applicable.

Discussion

ORO staff hold professional technical certifications such as registered professional engineer, registered environmental manager, certified industrial hygienist (CIH), certified health physicist (CHP), certified safety professional, certified hazardous material manager and fire protection engineer. Generally, these certifications complement but do not supplant or fulfill specific TQP competencies. However, there are some exceptions; for example, an industrial hygienist who is a CIH "should be granted equivalencies to competencies one through 17, 22, and 23 of the Standard." As noted in the *ORO Staffing Management Plan Fiscal Years 2004 - 2009*, ORO maintains a multi-talented workforce, each with unique skills and competencies. Technical employees hold 27 Associates degrees, 200 Bachelor's degrees, 98 Master's degrees, and 7 doctoral degrees. In addition, ORO employees maintain 223 licenses and certifications, which

include those noted above. Further, federal project directors (FPD) who hold FPD certification through the DOE Project Management Career Development Program may use the FPD program as their primary FAQS.

ORO encourages membership and participation in professional societies and organizations. This statement of support is illustrated in Appendix C of the DOE SC ISC TQP Manual.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.2.4 **TQP-2.4**: Competency requirements are identified in the areas listed below.

- Basic Technical Knowledge – Competency in areas such as radiation protection, occupational safety, chemical safety, nuclear safety, and environmental regulations.
- Technical Discipline Competency – Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) that can be demonstrated by education, professional accreditation, examination, or on-the-job performance.
- Position Knowledge, Skills, and Abilities – Competencies specific to the position, facility, or program and the office.

Discussion

In accordance with DOE M 426.1-1A, *Federal Technical Capability Manual*, and the SC ISC TQP Manual, ORO participants are required to complete the following three levels of qualification:

- The General Technical Base (GTB) competencies, taken directly from DOE-STD-1146-2007, *General Technical Base Qualification Standard*, dated December 2007, include the basic technical knowledge.
- The FAQS competencies are taken from the appropriate DOE standards, depending on the individual's job function. Examples include Technical Trainer, Nuclear Safety Specialist, and Facility Maintenance Management. The FAQS establish the DOE-defined competencies, knowledge, and skills associated with the individual qualification areas.
- The Oak Ridge specific qualification standards include the following offices or topics:
    - Emergency Management
    - Environmental Management
    - Environment, Safety and Health
    - Nuclear Fuel Safety
    - Science
    - Safeguards and Security
    - Safety Basis

- Safety System Oversight
- Senior Technical Safety Manager
- Technical Training

Upon completion of the qualification package, the individual is interviewed and evaluated by his/her supervisor/manager and the card and supporting evidence are verified by the ORO Training Manager. The final step in the qualification process is a review and approval by the second-level manager.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.3 TQP-3, Plans and Procedures

Plans and/or procedures are developed and implemented to govern administration of the program.

5.3.1 TQP-3.1: Senior management is committed to the TQP.

Discussion

Several layers of management were interviewed during the process of this self-assessment. The interviews conducted with Assistant Managers (AM) indicated that they were very committed to having a robust and accurate TQP program. This was evident by the discussion and other documents and or processes that were implemented in each organization. In some cases, Assistant Managers were tracking the TQP status of their respective staffs on a weekly basis. The Administration organization, where the HCAG resides, provides data each week in their weekly report. In addition, a report titled "ORO TQP Participants Scheduled Commitments" is sent weekly to the DOE FTCP Agent who distributes to applicable AMs. This information is then used at the senior board meeting to query other AMs when the data indicates individuals are nearing due dates.

Interviews were conducted with ORO Senior Management and Division Directors.
The management of the Federal Training Program, including the TQP, is the responsibility of the HCAG, who reports to the AMA through the Director, HRD. The HRD issues weekly status updates to senior management and highlights overdue training on a case-by-case basis when needed. The HRD also issues position descriptions (PD) for TQP positions. When a new PD is required or an existing one needs revision, the supervisor generates the document and submits it to HRD for processing. HRD reviews the PD and resolves any comments with the supervisor; if the position is a TQP position, the supervisor must provide the necessary documentation. The use of weekly performance status reports, application of appropriate resources to the TQP, and the

inclusion of the TQP requirement in the PDs indicate a solid commitment to managing and maintaining the TQP.

Each Assistant Manager interviewed was actively involved in not only his or her own STSM re-qualification but was also very knowledgeable of the status of their individuals at or in different levels of TQP completion. All Assistant Managers indicated that the Manager and Deputy Manager supported fully the TQP program and they were even challenged or questioned by the Manager and or Deputy Manager concerning their organization's TQP status in senior meetings.

Strengths

STR 3.1-1 A very structured process is used to hold organizations and individuals accountable for completing the TQP requirements.

Area(s) for Improvement

None.

This criterion is met.

5.3.2 **TQP-3.2**: Written procedures that adequately define the processes and requirements to implement the TQP are in place.

Discussion

Prior to 2007, ORO administered the TQP with procedures, ORO O 360 and ORO TQP Manual. In 2007, the DOE SC required all SC sites to convert to an organization-wide manual. In response, the SC ISC Technical Qualification Program Manual was issued in March 2007 to administer the TQP. The ORO Manager issued a memorandum in October 2008 which required all technical positions who oversee both nuclear and non-nuclear operations to be included in the TQP. The Technical Program Manual and memorandum were reviewed. The Manual defines steps for selecting and approving TQP participants, the functional area and office specific standards, completing the TQP, requirements for continuing training and requalification, and requirements for recordkeeping and reporting. The manual also includes a process for generating and approving exemptions and equivalencies. Overall, the TQP Program Manual meets the TQP requirements; when evaluated against the requirements in the ORO Program Plan and the DOE M 426.1-1A FTCP Manual, the SC Program Manual does not adequately define the following elements of the TQP:

- The Manual does not specify the roles and responsibilities and training requirements of the QOs,
- Requalification for Nuclear Safety Specialists and the GTB is not included in the Manual,
- There is not a formal feedback and improvement process.

Strengths

None.

Area(s) for Improvement

AFI 3.2-1 When evaluated against the requirements in the ORO Program Plan and the DOE M 426.1-1A FTCP Manual, the SC Program Manual does not adequately define several elements of the TQP as follows:

- The Manual does not specify the roles and responsibilities and training requirements of the QOs.
- Requalification for Nuclear Safety Specialists and the GTB is not included in the Manual.
- There is no formal feedback and improvement process.

This criterion is met.

5.3.3 **TQP-3.3**: Roles and responsibilities for implementing the TQP are clearly defined and understood by all involved.

Discussion

The review team interviewed a cross section of individuals from Senior Management, Division Directors, FRs, Safety System Oversight, Supervisors, and Subject Matter Experts. While there were a few individuals who did not understand the process for implementing the TQP, generally individuals at all levels had a good and clear understanding of roles and responsibilities for implementing the TQP. These roles and responsibilities are defined in the SC ISC Technical Qualification Program Manual, dated March 2007 and implemented December 31, 2008. As an example, one of the assessment teams interviewed sixteen SMEs and a supervisor. Fourteen persons were able to articulate a good understanding of the TQP roles and responsibilities and processes. Two individuals expressed little understanding of the program and were not aware of the local office specific qualification standards or the relationship between the IDP process and the TQP process.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.3.4 **TQP-3.4**: The procedures that govern implementation of the TQP are understood by all involved and are being implemented as written.

Discussion

As discussed in criterion TQP-3.3, numerous TQP participants were interviewed and represent various levels of organization and TQP qualifications. With very few exceptions, procedures that

govern implementation of the TQP were understood with two exceptions, as covered in criterion TQP-1.1. The procedures were also implemented as written, where the procedures were understood, the appropriate level of management had not implemented the procedures and guidances written and approved by senior officials. Several other areas involving implementation of different components of the TQP were also noted as having weaknesses. Those include inconsistent check-out of individuals in the TQP program, lack of formal training for QOs, changes to the TQP standards not being addressed with the possibly affected individuals, position reassignments not being evaluated regarding the TQP, continuing training of TQP individuals between requalification, and the six-month requirement in the DOE SC ISC TQP manual documenting equivalency and exemption requirements is not being completed.

Strengths

None.

Area(s) for Improvement

AFI 3.4-1 TQP implementation in certain areas is less than adequate. Those areas include:

- Inconsistent check-out of individuals in the TQP program
- Lack of formal training for QOs
- Changes to the TQP standards not being addresses with the possibly affected individuals
- Position reassignments not being evaluated regarding the TQP, continuing training of TQP individuals between requalification
- Six-month requirement in the DOE SC ISC TQP manual documenting equivalency and exemption requirements is not being completed

While any one of these is insignificant, together they represent an overall AFI.

This criterion is met.

5.3.5 **TQP-3.5**: A training and qualification records system is established for each employee in the TQP.

Discussion

The ORO TQP records are maintained by HCAG in the Training Center. They are kept in locked cabinets with access restricted to a need-to-know basis. Because training and qualification records are considered QA records, they need to be in fire-proof cabinets or in a fire-protected area. There is no apparent fire-protection system in the Training Center. According to the maintenance department manager, there is no sprinkler system and the fire protection measure is the use of fire extinguishers. There are no fire extinguishers in the Training Center; however, there is one unit in the hallway outside the main door to the Training Center.

The assessment team reviewed over 65 training records. Generally, each record included sections for the IDP, Emergency Management Cadre Training, Training Records from the Employee's Official Personnel File (OPF), Technical Qualification Records, and training certification and other evidence documents. The OPF folder contained training request forms from early in the

individual's career and, as such, contained some Personally Identifiable Information (PII). The team found several omissions on TQP records that were originated in the mid 1990s, which was early with the implementation of ORO's TQP. One participant's file did not contain complete TQP records, which according to the TQP manager was likely misplaced during the recent and numerous audits by DOE Headquarters' organizations. Once noted, the individual produced a copy of his TQP record.

The TQP records were last reviewed for quality and accuracy in 2003. It appears that the records should be reviewed regularly.

Strengths

None.

Area(s) for Improvement

AFI 3.5-1 There are omissions in the TQP record files and embedded documentation.

This criterion is met.

5.4 TQP-4, Qualification Tailored to Work Activities

The program identifies unique Department- and position-specific work activities and specifies the knowledge and skills necessary to accomplish that work.

5.4.1 TQP-4.1: An analysis has been performed to identify the related knowledge, skill, and ability elements to accomplish the duties and responsibilities for each TQP functional area or position.

Discussion

ORO has relied upon the DOE SMEs who developed and established the competencies (and supporting knowledge and skills) for the 31 DOE qualification standards.

Similarly, ORO SMEs prepared with their management the OFS qualification standards. There are ten ORO OFS qualification standards along with over 25 OFS qualification standards that are unique for the FRs.

The Oak Ridge specific qualification standards include the following offices or topics:

- Emergency Management
- Environmental Management
- Environment, Safety and Health
- Nuclear Fuel Safety
- Science
- Safeguards and Security
- Safety Basis
- Safety System Oversight
- Senior Technical Safety Manager
- Technical Training

According to the participants interviewed, their assignment to the TQP was a supervisor decision and based in part on the TQP designation in the PDs. Gap analyses, as requested, have been conducted with the new participants to determine not only the general ORO TQP requirements but also the need for developmental activities or justification and evidence for equivalencies. The ORO training organization has considerable experience performing these analyses, so much so that six SC sites requested ORO's assistance in establishing and supporting implementation of the TQP.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.4.2 **TQP-4.2**: The TQP includes job-specific requirements related to the rules, regulations, codes, standards, and guides necessary to carry out the mission of the office.

Discussion

Job-specific TQP requirements are contained in the OFS qualification standards. ORO has issued 10 office specific standards as follows:

- Emergency Management
- Environmental Management
- Office of Assistant Manager for Environment, Safety, and Health
- Office of Assistant Manager for Nuclear Fuel Supply
- Office of Assistant Manager for Science
- Safeguards and Security
- Safety Basis
- Safety System Oversight
- Senior Technical Safety Manager
- Technical Training

All the standards contained office-, facility-, and/or job-specific qualification requirements and are formatted as required by the DOE M 426.1-1A FTCP Manual and all are signed by either the FTCP Agent or Site Manager. All the standards are compliant with the FTCP Manual; the following observations were noted.

- Most of the OFSs identify practical factors as "Mandatory Performance Activities"; however, the knowledge and skill statements of these practical factors do not include the words "Demonstrate the Ability" or "Perform."
- The EM OFS does not contain mandatory performance activities, yet the competencies contain activities such as performing assessments of EM programs.

- The AMNFS OFS does not contain any mandatory performance activities, yet the knowledge and skill statements include actions such as "demonstrate the ability to conduct productive meetings" and "perform facility condition assessments."
- The Safety System Oversight OFS does not contain any specific mandatory performance activities. Given that the primary function of a System Engineer is to have a working level of knowledge of specific systems in specific facilities/sites, there should be performance activities listed to demonstrate this knowledge.
- The Safety System Oversight OFS was last revised in June 2005, it is recommended to review this standard for possible revision when the FAQS is issued.
- The Technical Training OFS, Competency 9 – recommend revising the competency to clarify Technical Training personnel shall demonstrate a working level of knowledge of "Training Requirements" associated with startup and restart of facilities. There are additional topical areas in the DOE 425.1C startup order that Technical Training personnel do not review.
- The Technical Training OFS has an incorrect reference to DOE Order 5480.20A in Competency 10a.
- Several of the ORO OFS standards have revision levels identified, some do not; recommend a consistent designation of revision level (or not) be used on the documents.

Strengths

None.

Area(s) for Improvement

None.

Observations

OBS 4.2-1 As a result of the review of ORO Office/Facility Specific Qualification Standards, the following observations were noted:

- All the OFS identify practical factors as "Mandatory Performance Activities," yet the definition of these practical factors is "Demonstrate the Ability."
- The EM OFS does not contain mandatory performance activities, yet the competencies contain activities such as performing assessments of EM programs.
- The ES&H OFS does not have a revision level assigned to the document.
- The AMNFS OFS does not contain any mandatory performance activities, yet the knowledge and skill statements include actions such as "demonstrate the ability to conduct productive meetings" and "perform facility condition assessments."
- The Safety System Oversight OFS does not contain any specific mandatory performance activities. Given that the primary function of a System Engineer is to have a working level of knowledge of specific systems in specific facilities/sites, there should be performance activities listed to demonstrate this knowledge.
- The Safety System Oversight OFS was last revised in June 2005, it is recommended to review this standard for possible revision when the next revision to the FAQS is issued,
- The Senior Technical Safety Manager OFS does not have a revision level.
- The Technical Training OFS, Competency 9 – recommend revising the competency to clarify Technical Training personnel shall demonstrate a working level of knowledge of

"Training requirements" associated with startup and restart of facilities. There are additional topical areas in the DOE 425.1C startup order that Technical Training personnel do not review.

- The Technical Training OFS has an incorrect reference to DOE Order 5480.20A in Competency 10a.

This criterion is met.

5.4.3 **TQP-4.3**: The TQP supports the mission needs of the office.

Discussion

The interviews of Assistant Managers and the Manager/Deputy Manager indicated that mission needs of the ORO were given consideration. The ORO not only supports three major program sponsors, SC, EM, and Nuclear Energy (NE) but also serves as an ISC for the SC facilities across the Department. This has served as one of the driving forces to the Oak Ridge Policy of including all technical individuals in the TQP. The thought being that technical staff should have technical qualifications to do technical oversight, and staff should be able to support wherever needed. Robert Brown, Deputy Manager, stated "We can't have a mission without a TQP." As the ISC ORO staff have been utilized in various programs to provide significant support to SLAC Site Office and SLAC National Accelerator Laboratory, BSO and Lawrence Berkeley National Laboratory, PNSO and Pacific Northwest National Laboratory through CH, and New Brunswick Lab through CH, the ORO has relied upon their programs to establish the qualifications of numerous individuals covering several different areas.

Strengths

STR 4.3-1 The Oak Ridge Office's inclusion of all technical individuals in the TQP has allowed the office to support many different offices with qualified individuals.

Area(s) for Improvement

None.

This criterion is met.

5.5 TQP-5, Credit for Existing Technical Qualification Programs

The program is structured to allow credit, where applicable, for other TQP accomplishments.

5.5.1 **TQP-5.1**: Credit (equivalency) is granted for previous training, education, experience, and completion of related qualification/accreditation programs, where applicable.

Discussion

Consistent with the ISC TQP Manual, ORO TQP participants possess the necessary skills and knowledge for competency in their topical area(s) and receive credit by completing an

equivalency narrative in the Employee Self Service TQP system. The process continues by submitting the narratives with supporting evidence of previously completed education, training, and/or experience to their supervisors and/or QOs for evaluation purposes, then to the ORO HCAG for audit review and recordkeeping.

Credit (equivalency) is granted for the following activities, per the receipt of substantial objective evidence to prove the justification.

- Formal training documentation/records
- Course completion certificates
- University/college transcripts or grade reports
- Professional licenses/certificates/registrations
- Examination results
- Performance appraisals
- Work products
- PDs
- Course syllabus for completed courses
- In-depth interviews
- Attestations
- Walkthroughs and walk downs
- PD and statement of time on the job
- Publications authored
- Feedback from customers

It is important to note that the newly implemented approach to use QOs to sign off on competencies will likely change this process and could, in the future, impact the way equivalencies are formally validated, approved, and documented.

Strengths

None.

Area(s) for Improvement

None.

Observations

OBS 5.1-1 The DOE FTCP should consider giving TQP credit for completion of professional certifications; e.g., CHP, CIH, etc.

This criterion is met.

5.5.2 **TQP-5.2**: Equivalency is granted based upon a review and verification of objective evidence, such as transcripts, course certificates, test scores, or on-the-job experience.

Discussion

Appropriate credit is given for past TQP-related training and experience. TQP packages examined during the records review process provided for review and verification of objective evidence including previous education (college transcripts), training histories, certification documentation, test items, and detailed experience of work products. The records included PDs, employment related information, and in some cases, included PII.

In some cases, validation of knowledge was completed by SMEs and Supervisors through interviews and walk downs of facilities. This, along with the collection of other objective evidence, was reviewed in the process of considering competency completion.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.5.3 **TQP-5.3**: Equivalencies are formally validated, approved, and documented.

Discussion

The validation, approval, and documentation of the equivalencies and experience justifications are evidenced in the signing of the ESS TQP records by the TQP participant's First and Second Level Supervisors or QO. Signatures are required for the Summary of Equivalency and Summary of Exemption reports, and TQP packages were reviewed to verify this action. The documentation of this process is maintained in the participant's official TQP record located at the Oak Ridge Federal Office Building.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.6 TQP-6, Transportability

Competency requirements identified as applying throughout the Department are transferable.

5.6.1 **TQP-6.1**: The program includes all competencies that have been identified as applying throughout the Department.

Discussion

ORO requires all TQP participants to complete their GTB and FAQS in their entirety. The only exception to this is with the Safeguards and Security FAQS which requires a core set of competencies that are supplemented by specific functional competencies that relate to specific duties and responsibilities.

Because the ORO supports the DOE SC, EM, and NE, the assigned qualification standards reflect the diversity of these Offices' missions. Nearly all the thirty FAQS have been assigned to participants at ORO, as determined by a review of the ORO TQP quarterly status report. All participants have completed the GTB Qualification Standard and most have completed the recent Addendum to the GTB Standard, through the DOE Online Learning Center (OLC).

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.6.2 **TQP-6.2**: Formal documentation of the completion of Department-wide competencies is maintained in a manner that allows for easy transferability.

Discussion

ORO employees enter their TQP data into the DOE Employee Self-Service TQP Module by competencies. All supporting evidence documentation is maintained in the Training Center in the individual employee's training file. The assessment team reviewed 65 TQP participants' training and qualification records maintained in the Training Center by the HCAG staff. Nearly all the records were complete with regard to having appropriate completion certificates, assignment memoranda, qualification cards and other supporting qualification evidence. The team found a few instances of errors in the use of exemptions on qualification cards, missing assignment memoranda, and an omission of an OFS qualification standard. These specific instances were for TQP records established early in the implementation of the TQP. Records for participants completing the program in the past ten years were complete. See also the discussion under Criterion TQP 3.5.

For a recent transfer to another DOE site, the person's TQP and other training records were forwarded through the ORO Human Resources office to the DOE site. This person's GTB and occupational safety function area qualification standards were sent to the DOE office for incorporation into that office's TQP. Conversely, a TQP participant who transferred from the Los Alamos Site Office to ORO in the past year had his GTB and waste management qualification standards along with his federal project director certification transferred with him and have been applied to his TQP. Similarly, an ORO employee transferred from the DOE Idaho Site Office, and his TQP records transferred with him.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.6.3 **TQP-6.3**: The TQP is integrated with personnel-related activities, such as PDs, vacancy announcements, recruiting, and performance appraisals.

Discussion

Human Resource interests are adequately represented in the TQP. The HRD is using a PD (PDs form that displays a check-box format for such designators as TQP, STSM, Critical Technical Capabilities (CTC), Safety System Oversight (SSO), Acquisition Career Development Program, and Drug Testing Designated Position (see the example PD form in Attachment 8.3). The team reviewed a sample of ten PDs and six vacancy announcements. Seven of the ten PDs indicated by a checkbox or in the narrative that the positions were designated to be in the TQP. The three PDs without the TQP designation contained technical responsibilities and it was not clear why these positions were not so designated. Five of the six vacancy announcements indicated that the position "is included in the DOE TQP." The one that didn't is for a position at Portsmouth that oversees a lease administration. The announcement indicated that the position provides senior technical and administrative expertise for management of the lease agreement. When discussed with one of the managers, she indicated that there is another vacancy announcement that is similar and not designated as a TQP position; however, as she said, "If it needs to be, then we will put them in." Again, it is not clear why the position is not so designated. Refer also to the discussion under Criterion TQP 1.1 for additional information.

In coordination with the HRD, ORO prepares an annual workforce analysis and staffing plan. The 2008 Workforce Analysis and Staffing Plan Report, submitted January 30, 2009, listed 157 technical staff on board and showed seven technical staff who were not addressed in the report.

Strengths

None.

Area(s) for Improvement

None.

This criterion is met.

5.7 TQP-7, Measurable

The program contains sufficient rigor to demonstrate compliance to the principles.

5.7.1 TQP-7.1: The technical competency of personnel who have completed the requirements of the TQP is adequate and appropriate.

Discussion

Supervisors and QOs at ORO allow for flexibility in the process of evaluating TQP competencies and packages, while maintaining rigor in the final qualification review. It is the role of the TQP participant's supervisor to ensure that technical competencies through verification are met. This action is currently completed by evaluation of written justifications that are paralleled with the competency statements in the TQP Standard; however a QO may conduct an oral or written evaluation at his discretion. Given this, the process allows for adequate and appropriate implementation of the TQP.

There are three fulfillment options, in addition to requests for extensions of qualification periods. These include:

- Equivalencies
- Exemptions (which require a written justification statement)
- Developmental Activities (The use of developmental activities in the TQP process is not currently utilized at ORO due to TQP ESS database programming issues associated with the numbering convention of activities, therefore it is not enforced)

A review of TQP records identified that the process in place is sufficient to ensure technical competency, as verified by using the equivalency and exemption techniques. The review confirmed qualification on three levels, including the:

- GTB,
- FAQS, and the
- OFS Qualification Standard.

A review of these records, along with interviews with a sample of TQP participants, confirmed adequate levels of competence for all applicable requirements.

Reviews of non-FRs' and FRs' initial and requalification records were also conducted to verify the evaluation methodologies used to ensure technical competency. Rigorous requirements were observed in the review of the AMEM FR records. Specifically, records for the AMEM FRs included comprehensive written examinations, proof of facility walk downs, ORION reports, oral

board results and final walk down evaluation notes that were transcribed for documentation purposes.

In addition, it was verified during interviews that FRs and Senior Technical Safety Managers and Nuclear Safety Specialists are required to requalify. Participants also have been asked to requalify on the GTB and this was verified by completion of the GTB Addendum Online Course via the DOE OLC.

Strengths

STR 7.1-1 The TQP has been renewed across the SC and various site offices are seeking technical training assistance from ORO to help become compliant per the mission and goals of the Office of Science Management System (SCMS) methodology.

Area(s) for Improvement

None.

This criterion is met.

5.7.2 **TQP-7.2**: The program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the mission of the office.

Discussion

The ORO TQP Manager is the designated person for TQP feedback. This feedback is not solicited, but an online form for customer feedback may be submitted on the ORO HCAG Website. As a result of the lack of a formal feedback process, no feedback for the TQP has been received in recent years.

The ORO TQP Manager has worked with the BSO, the Chicago Site Office, the SLAC Site Office, and others at DOE to implement new or reinvent TQP programs across the SC. This periodic self evaluation is used to ensure the ORO TQP meets the needs of DOE and the mission of ORO on a regular basis.

The feedback and improvement process is not institutionalized in the TQP Manual. This manual should contain all aspects of the TQP, but according to recent SCMS guidance, they should not be referenced if they are referenced elsewhere in DOE Orders, Manuals, or guidance (see additional comments in criterion TQP-3.4). Consideration should be given to developing a SC TQP Manual supplement for ORO to include the following:

- QO Roles, Responsibilities, and Guidance
- Requalification Guidance
- Gap Analysis Process
- Continuing Training Process
- Remedial Activities

Strengths

None.

Area(s) for Improvement

None.

Observations

OBS 7.2-1 The use of feedback questionnaires for TQP participants would be beneficial to help evaluate the program by the participants.

This criterion is met.

5.7.3 TQP-7.3: The TQP provides for continuing training.

Discussion

As stated in the ISC TQP Manual, participants who have completed applicable qualification requirements must maintain their proficiency and continue their professional development through ongoing participation in additional, relevant training, education, and developmental activities. Additionally, the Manual cites continuing training activities to include new competencies in revised standards. Currently, there is no mechanism in place to ensure TQP participants complete these competencies and there is no method to ensure changes to FAQS competencies are completed by TQP participants (see additional comments in criterion TQP-1.2).

The FAQS include appendices that represent suggested continuing education, training, and other opportunities that are available for DOE personnel after completion of their competency requirements in the technical FAQS. It is extremely important that personnel in specific functional areas maintain their proficiency primarily by regularly demonstrating their competency through on-the-job performance, supplemented with continuing education, training, reading, or other activities, such as, workshops, seminars, and conferences.

In addition, the TQP participant, with guidance from their supervisor, utilizes the IDP (and annual performance appraisal) process as the vehicle to define and implement continuing training and development. As an example, the continuing training requirement is validated by examining the ORO Annual Training Needs Assessment. The assessment which displays the aggregate data compiled from employees' IDPs routinely references TQP-related courses and appears annually in the top tier of requested courses for the upcoming training needs cycle.

Strengths

None.

Area(s) for Improvement

None.

Observations

OBS 7.3-1 Continuing Education activities are limited by lack of available travel funds.

This criterion is met.

6.0 CONCLUSIONS

The ORO TQP meets the accreditation criteria. The integrity of the program is sound. The results of the self-evaluation show that some program enhancements are necessary. In addition, strengths and observations were noted during the assessment.

Strengths:
- The ORO TQP is a Senior Management commitment and is a priority.
- The ORO HCAG support is exemplary.
- ORO HCAG has shared information and provided significant support to other Office of Science sites to develop and establish technical qualification programs.
- A very structured process is used to hold organizations and individuals accountable for completing the TQP requirements.

Areas for Improvement:
- ORO is inconsistently applying the TQP participation criteria and is not compliant with the ORO Manager's direction.
- The Office of Science Integrated Support Center TQP Manual does not adequately define certain elements of the TQP.
- There are some inconsistencies and weaknesses in the implementation of the program.
- Some TQP files were missing supporting documentation.

Observations:
- The HCAG Safety Basis and Facility Representative Websites need to be updated.
- The ORO office/facility-specific qualification standards need some editorial changes.
- The DOE FTCP Panel should consider TQP credit for some professional certifications.
- There is a lack of technical training support for AMNFS and AMS FRs.
- The use of feedback questionnaires for TQP participants would be beneficial to help evaluate the program by the participants.
- Continuing education activities are limited by lack of available travel funds.

7.0 REFERENCES

- DOE M 360.1B, *Federal Employee Training Manual*
- DOE M 426.1-1A, *Federal Technical Capability Manual*
- DOE Memorandum, G. Malosh, Chief Operating Office, Office of Science, to Distribution, Subject: *Technical Qualification Program*, dated April 7, 2007
- DOE O 151.1C, *Comprehensive Emergency Management System*
- DOE O 226.1A, *Implementation of the Department of Energy Oversight Policy*
- DOE O 360.1B, *Federal Employee Training*

- DOE O 425.1C, *Startup and Restart of Nuclear Facilities*
- DOE O 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*
- *DOE Office of Science Integrated Support Center Technical Qualification Program Manual – A Desktop Reference for Supervisors and Participants*
- *DOE TQP Accreditation Process and Criteria*, December 2005
- ORO Memorandum, G. Boyd to Distribution, Subject: *ORO TQP Manual and Qualifying Officials*, dated October 14, 2008

8.0 ATTACHMENTS

8.1 ORO Accreditation Self-Evaluation Plan
8.2 Clustering the Criteria by Team
8.3 Example ORO PD Form

Attachment 8.1

DOE Technical Qualification Program
Accreditation Self-Evaluation Plan
February 2009

ORO Approval:

/S/
Larry C. Kelly, February 9, 2009

Introduction

In response to the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations,* Implementation Plan Commitment 13, the Department of Energy (DOE), established "*a corporate accreditation process and plan based on the Institute for Nuclear Power Operations (INPO) model for the Technical Qualification Program (TQP).*" The accreditation of the TQP enables both Headquarters and field organizations in DOE to demonstrate that they have an effective program in place to ensure technical competency of DOE employees whose duties and responsibilities require them to provide assistance, guidance, direction, oversight, or evaluation of contractor activities that could have an impact upon the safe operation of defense nuclear facilities. However, since the accreditation process is voluntary, the ORO has deferred and instead has chosen to conduct a robust self-evaluation of its TQP.

At the ORO, the TQP applies to those personnel who oversee nuclear and other hazardous material facilities and is directed by the ORO Federal Technical Capability Program (FTCP) Panel, which consists of a core group of senior technical managers representing the key technical assistant manager offices. The Panel, in its oversight role of the FTCP, of which the TQP is part, coordinates the assessment of the implementation of the TQP. The TQP has been evaluated at least six times since 1997, and found to be satisfactory. These results will be part of the data that will be reviewed during this accreditation self-evaluation.

Purpose

The purpose of this self-evaluation is to determine ORO's readiness for accreditation (should it choose to do so) and to measure the effectiveness of ORO's implementation of the TQP policies and practices.

Scope and Methodology

Self-Evaluation Objectives

The criteria to be used during this self-evaluation reflect the criteria from the DOE M 426.1-1A, *Federal Technical Capability Manual,* and are shown in the Attachment and correspond to the following accreditation objectives. The specific approach and lines of inquiry are based on the TQP accreditation criteria.

> **Objective TQP-1, Demonstration of Competence. The program clearly identifies and documents the process used to demonstrate employee technical competence.**
>
> **Objective TQP-2, Competency Levels. Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.**

Objective TQP-3, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.

Objective TQP-4, Qualification Tailored to Work Activities. The program identifies unique Department- and position-specific work activities and specifies the knowledge and skills necessary to accomplish that work.

Objective TQP-5, Credit for Existing Technical Qualification Program(s). The program is structured to allow credit, where appropriate, for other Technical Qualification Program accomplishments.

Objective TQP-6, Transportability. Competency requirements identified as applying throughout the Department are transferable.

Objective TQP-7, Measurable. The program contains sufficient rigor to demonstrate compliance to the principles.

Approach

The general methodology of this self-evaluation consists of the self-evaluation team, led by an ORO Senior Technical Safety Manager (STSM), determining how the self-evaluation criteria are met and identifying any strengths and AFIs (and corresponding recommended corrective actions). The team will include members of the HCAG and to add some independence, several persons from other DOE offices. Prior to the team convening, team members will review the specific lines of inquiry (attached) and carry out their assigned data collection tasks, such as conducting specific interviews, reviewing records, or generating status reports. This evidential data will be collected, reviewed, compiled, and reported by the team members, and presented at the table-top review. The team will assess each accreditation objective and document its findings. Subsequently, the team members will prepare a self-evaluation report and present the results to the ORO Manager. The following table presents the self-evaluation approach by objective.

Objective & Criteria	General Approach	Specific Approach
TQP-1 (1.1 - 1.3)	Table-top review of the objective against the collected data	Team interviews 2 Assistant Managers (AMs), and checks records and reports.
TQP-2 (2.1 - 2.4)	Table-top review of the objective against the collected data	Team interviews the HCAG manager, an AM, and 2 line managers, and checks records and reports.
TQP-3 (3.1 - 3.5)	Table-top review of the objective against the collected data	Team interviews the Deputy Manager, HCAG manager, and HCAG staff responsible for records, and checks records and reports.
TQP-4 (4.1 - 4.3)	Table-top review of the objective against the collected data	Team interviews 3 AMs and checks records and reports.
TQP-5 (5.1 - 5.3)	Table-top review of the objective against the collected data	Team interviews 4 line managers, and checks records and reports.
TQP-6 (6.1 – 6.3)	Table-top review of the	Team interviews 2 transferred participants (from

Objective & Criteria	General Approach	Specific Approach
	objective against the collected data	other sites), and checks records and reports.
TQP-7 (7.1 – 7.3)	Table-top review of the objective against the collected data	Team interviews 3 AMs and 4 line managers, and checks records and reports.
Overall Program Effectiveness	Team interviews G. Boyd for overall commitment, understanding, and oversight of the Program.	

Schedule

Self-evaluation planning began in the fall of 2008, with the data collection beginning in February 2009, followed by data analysis and reporting.

Report

The team will prepare a report to document the results of the self-evaluation and to provide justification for the team's recommendations. The report will identify any strengths and areas for improvement found during the review. The self-evaluation report will be formatted as follows.

- Cover Page – includes the title and date of the report and the names of the self-evaluation team members.
- Signature Page – documents the team leader's approval and the team members' concurrence.
- Table of Contents – identifies all sections and subsections of the report, illustrations, tables, charts, figures, and attachments.
- Introduction and Summary – provides relevant background information including significant organizational issues, strategic planning, and management's commitment to the TQP.
- Scope and Methodology – describes the purpose and format of the report, the composition of the team, the scope of the self-evaluation referencing the use of the objectives and criteria, and briefly describes the methodology applied.
- Mission and Organization – describes the current and projected mission, issues that have or could have an impact on the TQP, and the current organizational structure.
- Self-Evaluation Results by Objective – addresses each of the accreditation objectives, describing the status of the effort to achieve the objective and any strengths or areas for improvement.
- Attachments – includes the following:
  - Objectives and criteria
  - Listing of team leader and team members, including a brief description of their background and experience
  - List of personnel contacted and documents reviewed
  - Other pertinent information

References

- DOE O 360.1B, *Federal Employee Training*
- DOE M 360.1-1B, *Federal Employee Training Manual*
- DOE P 426.1, *Federal Technical Capability Policy for Defense Nuclear Facilities*
- DOE M 426.1-1A, *Federal Technical Capability Manual*
- ORO M 220.1, *Oak Ridge Office Assessment Manual*
- ORO O 360, *Employee Education and Training*
- ORO M 411.1-1H, *Manual of Safety Management Functions, Responsibilities, and Authorities, Level III, for Oak Ridge Office* (also known as the ORO Functions, Responsibilities, and Authorities Manual
- ORO Strategic Plan
- *ORO Technical Qualification Program Manual – A Desktop Reference for Supervisors and Participants*

Attachment

TQP Accreditation Objectives, Criteria, and Lines of Inquiry

TQP-1, Demonstration of Competence. The program clearly identifies and documents the process used to demonstrate employee technical competence.

Criteria:

1.1 At a minimum, personnel providing management direction or oversight that could impact the safe operation of a defense nuclear facility have been identified as Technical Qualification Program participants.
1.2 IDPs, training plans, technical qualification records, or other related documents are updated to reflect the activities required for each individual to satisfy competencies.
1.3 A formal evaluation process is in place to objectively measure the technical competency of personnel. The rigor of the evaluation process is commensurate with the responsibilities of the position.

Lines of Inquiry

1. What are the participation criteria and the percentage of participants who meet the criteria?
2. How are TQP qualification records and plans maintained? To what extent is CHRIS and ESS used?
3. How does the IDP process relate to the TQP?
4. What type of evaluations are conducted during the course of competency completion?
5. What guidance exists for the use of evaluations in the fulfillment of TQP requirements?
6. What guidance exists for the preparation and administration of knowledge and performance evaluations?
7. What is the approval process for in-house and vendor course exams?
8. Do the course examinations (including tests and quizzes) meet HCAG's expectation for exam format, content, accuracy, and applicability?
9. What percentage of the competencies fulfilled were evaluated by an instructor or line manager?
10. What percentage of the fulfillment options are coursework, task performance, or prior experience?
11. What type of evaluation is conducted by line management of the employee when the employee completes the TQP or a qualification standard?
12. How many of the competency skills and knowledge are assessed prior to awarding qualification?

TQP-2, Competency Levels. Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.

Criteria:

2.1 Competency requirements include clearly defined knowledge, skill, and ability elements.
2.2 Subject Matter Experts help establish competency requirements.
2.3 Related professional accreditation requirements are considered in the program as applicable.
2.4 Competency requirements are identified in the areas listed below. (Note: this does not imply that three separate documents are required.)

- Basic Technical Knowledge. Competency in areas such as radiation protection, occupational safety, chemical safety, nuclear safety and environmental regulations.
- Technical Discipline Competency. Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) that can be demonstrated by education, professional certification, examination, or on-the-job performance.
- Position Knowledge, Skills, and Abilities. Competencies specific to the position and the office.

Lines of Inquiry

1. How are local qualification standards developed and approved?

2. Do the local qualification standards define KSAs?

3. Are other accreditation standards (such as for college credit) used?

4. How are the SMEs used in this process?

5. How are the levels of qualification standards being implemented? What are the statistics?

6. How are professional certifications addressed in the TQP? In the IDPs? Other?

7. Are there opportunities for professionals in a given field or focus area to associate with peers through periodic professional activities? Does management encourage such activities? Are there incentives or rewards for technical personnel to pursue professional certifications?

8. Are technical managers and their technical employees writing professional papers on a regular basis? Are technical personnel taking leadership roles in local or national chapters of professional organizations? Are technical personnel guest speakers at professional organization meetings? Are technical personnel drawing on the experience, technical standards and contacts made from professional organizations?

TQP-3, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.

Criteria:

3.1 Senior management is committed to the Technical Qualification Program.
3.2 Written procedures that adequately define the processes and requirements to implement the Technical Qualification Program are in place.
3.3 Roles and responsibilities for implementing the Technical Qualification Program are clearly defined and understood by all involved.
3.4 The procedures that govern implementation of the Technical Qualification Program are understood by all involved and are being implemented as written.
3.5 A training and qualification records system is established for each employee in the Technical Qualification Program.

Lines of Inquiry

1. Questions for Senior Management
   a. What is your personal involvement in the Technical Qualification Program?
   b. What is the flowdown of ORO mission requirements into the TQP. (Check ORO mission statements and strategies, and senior manager commitment statements.)
   c. How would you characterize senior ORO management's commitment to the TQP? How about your own? [Review and verify with ORO senior management that they endorse and are committed to the TQP. Ask about evidence of their commitment (e.g., staff memos, subordinates' performance plans.)]
   d. How are people in your organization assigned to the program? (Ask the managers how they assign employees to the program and approve their functional areas. Ask about the process for evaluating employees against the competencies.)
   e. How do you determine that a candidate has acquired a TQP competency?
   f. How do you monitor your employees' progress toward qualification completion?
   g. What confidence do you have that your people will meet the qualification completion schedule as required by the DOE Order?
   h. How are your employees fulfilling their completion requirements (e.g., exemptions, equivalencies, courses, test-outs, self-study, etc.)?
   i. One expectation within the program is to include TQP competencies in rewrites of the Federal employee PDs. Has this been done in your organization, or are there plans to do so?
   j. What is your assessment of the support you are receiving from HCAG?
   k. What is your assessment of the TQP in terms of its worth and its effectiveness?

2. Have the deficiencies identified in earlier Technical Qualification Program (TQP) assessments been corrected? If not, is there a plan in place to do this, and is it being implemented?

3. Is the Panel Agent actively involved in monitoring the Technical Qualification Program?

4. How are TQP participants enrolled and how do they know their responsibilities?

5. How is the ORO TQP governed? Is it institutionalized in ORO or HCAG policies or procedures?

6. How are the TQP records managed?

TQP-4, Qualification Tailored to Work Activities. The program identifies unique Department- and position-specific work activities and specifies the knowledge and skills necessary to accomplish that work.

Criteria:

4.1 An analysis has been performed to identify the related knowledge, skill, and ability elements to accomplish the duties and responsibilities for each Technical Qualification Program functional area or position.
4.2 The program includes job-specific requirements related to the rules, regulations, codes, standards, and guides necessary to carry out the mission of the office.
4.3 The program supports the mission needs of the office.

Lines of Inquiry

1. How are qualification standards and competencies assigned to TQP participants?

2. How do local qualification standards address the required local, DOE, and U.S. rules and regulations?

3. How do the ORO mission needs and requirements flow down to the TQP participants and their qualification standards?

TQP-5, Credit for Existing Technical Qualification Program(s). The program is structured to allow credit, where appropriate, for other Technical Qualification Program accomplishments.

Criteria:

5.1 Credit (equivalency) is granted for previous training, education, experience, and completion of related qualification/accreditation programs, where applicable.
5.2 Equivalency is granted based upon a review and verification of objective evidence, such as transcripts, course certificates, test scores, or on-the-job experience.
5.3 Equivalencies are formally validated, approved, and documented.

Lines of Inquiry

1. What guidance exists for TQP participants and their supervisors for taking equivalencies?

2. What percentage of the fulfillment options are equivalencies?

3. Do the narrative justifications relate specifically to each competency?

4. How are equivalencies evaluated and approved?

TQP-6, Transportability. Competency requirements identified as applying throughout the Department are transferable.

Criteria:

6.1 The program includes all competencies that have been identified as applying throughout the Department.
6.2 Formal documentation of the completion of Department-wide competencies is maintained in a manner that allows for easy transferability.
6.3 The Technical Qualification Program is integrated with personnel-related activities, such as position descriptions, vacancy announcements, recruiting, and performance appraisals.

Lines of Inquiry

1. To what extent are TQP participants completing all the DOE-level competencies in their assigned qualification standards?

2. How has ORO addressed the transfer of TQP participants and their qualifications from other DOE offices?

3. How has ORO addressed the promotion or transfer of TQP participants within ORO?

4. How is the TQP factored into HR-related initiatives (such as workforces analyses) and documentation?

TQP-7, Measurable. The program contains sufficient rigor to demonstrate compliance to the principles.

Criteria:

7.1 The technical competency of personnel who have completed the requirements of the Technical Qualification Program is adequate and appropriate.
7.2 The program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the mission(s) of the office.
7.3 The Technical Qualification Program provides for continuing training.

Lines of Inquiry

1. Does line management obtain feedback from the training organization regarding how well the employee fulfilled his/her competencies?

2. What type of evaluation is conducted by line management of the employee when the employee completes the TQP?

3. Does the employee's job duties reflect the competencies of the fulfilled qualification standard?

4. Are the fulfilled competencies addressed in the individual performance planning process?

5. How often does line management assess the worth and benefits of the TQP?

6. How often does line management inform senior management of the TQP worth and benefits?

7. How does the employee and line management rate the TQP as to its contribution to the employee's skills and knowledge and ability to carry out the assigned safety duties and tasks?

8. To enhance or improve personnel performance, does line management monitor the following (describe how):
   a. Industry events and accidents?
   b. Facility events and unusual occurrences?
   c. Industry events and unusual occurrences?
   d. Personnel performance errors?

9. How are job scope changes addressed in the context of a completed TQP?

10. How are the employee's skills and knowledge maintained? (Ask this of the employee and supervisor.)

11. What opportunities exist for skill and knowledge enhancement?

12. Is there a formal policy or procedure for continuing education? Is there a feedback process to assess the quality and effectiveness of continuing training?

13. Has senior management communicated to personnel the commitment for continuing education and the importance and the benefits of professional activities and certifications?

Attachment 8.2

Clustering the Criteria by Subteam

Criteria	Subteam
1.1 At a minimum, personnel providing management direction or oversight that could impact the safe operation of a defense nuclear facility have been identified as Technical Qualification Program participants. 3.1 Senior management is committed to the Technical Qualification Program. 3.2 Written procedures that adequately define the processes and requirements to implement the Technical Qualification Program are in place. 3.3 Roles and responsibilities for implementing the Technical Qualification Program are clearly defined and understood by all involved. 3.4 The procedures that govern implementation of the Technical Qualification Program are understood by all involved and are being implemented as written. 4.2 The program includes job-specific requirements related to the rules, regulations, codes, standards, and guides necessary to carry out the mission of the office. 4.3 The program supports the mission needs of the office.	1
1.3 A formal evaluation process is in place to objectively measure the technical competency of personnel. The rigor of the evaluation process is commensurate with the responsibilities of the position. 5.1 Credit (equivalency) is granted for previous training, education, experience, and completion of related qualification/accreditation programs, where applicable. 5.2 Equivalency is granted based upon a review and verification of objective evidence, such as transcripts, course certificates, test scores, or on-the-job experience. 5.3 Equivalencies are formally validated, approved, and documented. 7.1 The technical competency of personnel who have completed the requirements of the Technical Qualification Program is adequate and appropriate. 7.2 The program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the mission(s) of the office. 7.3 The Technical Qualification Program provides for continuing training.	2
1.2 Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities required for each individual to satisfy competencies. 2.1 Competency requirements include clearly defined knowledge, skill, and ability elements. 2.2 Subject Matter Experts help establish competency requirements. 2.3 Related professional accreditation requirements are considered in the program as applicable. 2.4 Competency requirements are identified in the areas listed below. (Note: this does not imply that three separate documents are required.) • Basic Technical Knowledge. Competency in areas such as radiation protection, occupational safety, chemical safety, nuclear safety and environmental regulations. • Technical Discipline Competency. Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) that can be demonstrated by	3

education, professional certification, examination, or on-the-job performance. • Position Knowledge, Skills, and Abilities. Competencies specific to the position and the office. 3.5 A training and qualification records system is established for each employee in the Technical Qualification Program. 4.1 An analysis has been performed to identify the related knowledge, skill, and ability elements to accomplish the duties and responsibilities for each Technical Qualification Program functional area or position. 6.1 The program includes all competencies that have been identified as applying throughout the Department. 6.2 Formal documentation of the completion of Department-wide competencies is maintained in a manner that allows for easy transferability. 6.3 The Technical Qualification Program is integrated with personnel-related activities, such as position descriptions, vacancy announcements, recruiting, and performance appraisals.	

Attachment 8.3

Example ORO Position Description Form

PART I: TO BE COMPLETED BY THE SUPERVISOR

ORGANIZATION:

[Insert Organization Title here]

Yes	No		
❒	❒	Technical Qualification Program (TQP)	If TQP, STSM, CTC, and/or SSO are checked yes, the position description must document the duties and functions performed which are the basis of such determination as well as the knowledge required to accomplish the duties of the position. Knowledge requirements must include any items which will form the basis for selective placement factors under recruitment or reduction-in-force processes.
❒	❒	Senior Technical Safety Manager (STSM)	
❒	❒	Critical Technical Capabilities (CTC)	
❒	❒	Safety System Oversight (SSO)	
❒	❒	Acquisition Career Development Program	
❒	❒	Drug Testing Designated Position	
❒	❒	HRP Designated Position	
❒	❒		

SUPERVISORY CERTIFICATION: I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships, and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false of misleading statements may consider violations of such statues or their implementing regulations.

Signature and Title of Immediate Supervisor:	Date

PART 2: TO BE COMPLETED BY THE HUMAN RESOURCES OFFICE

Classification Title:	Pay Plan	Series	Grade

CHRIS Position Number:	CHRIS Job Code:

CLASSIFICATION CERTIFICATION: I certify that this position, as described below, has been classified by a Departmental Official to whom classification authority has been officially delegated.

Signature and Title of Official Exercising Classification Authority:	Date: