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FEB 03 2010

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NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA SITE OFFICE
(NNSA/NSO) TECHNICAL QUALIFICATION PROGRAM (TQP) ACCREDITATION

NNSA/NSO recently completed the attached TQP Self-Assessment. Based on the completion of this self assessment, I am formally requesting TQP Accreditation from your office. Barry L. Mellor, NNSA/NSO Training Manager, has been working with Ali H. Ghovanlou in preparation for this event. We would like to schedule the accreditation team for June, 2010.

If you have any questions regarding this plan, please contact Barry Mellor at (702) 295-1456.

Raeferd L. Phifer, Jr.
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NNSA/NSO FTC Agent

AMBCM:BLM-10069
HUM 03-02

Attachment:
As stated

cc w/o atch:
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Las Vegas, NV
NSO MGR Read File

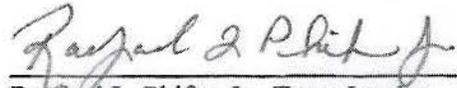
**U. S. Department of Energy
National Nuclear Security Administration
Nevada Site Office**



**Final Report
of the
Technical Qualification Program
Accreditation Self-Assessment**

October 2009

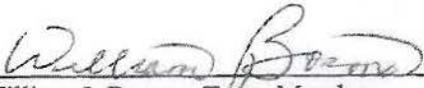
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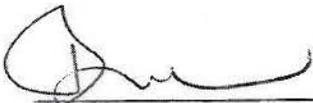
Raeford L. Phifer, Jr., Team Leader



Mark A. Alsdorf, Team Member



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Executive Summary

An accreditation assessment of the National Nuclear Security Administration Nevada Site Office (NNSA/NSO) Technical Qualification Program (TQP) was conducted during the week of October 5-8, 2009. The accreditation of the TQP will enable NSO to demonstrate that they have an effective program in place to ensure the technical competency of the individuals performing these activities. In order to initiate the accreditation process, a comprehensive self-assessment of the TQP against the objectives and supporting criteria is required. This report documents the details and conclusions of that self-assessment. The assessment team consisted of:

- Ray Phifer, Assistant Manager for Safeguards and Security and Federal Technical Capability Program (FTCP) Agent, NSO – Team Leader
- Mark Alsdorf, NNSA TQP Manager, SC – Team Member – Objectives TQP-1, and -6
- Barry Mellor, Training Advisor, DOE Office of Civilian Radioactive Waste Management – Team Member, Objectives TQP-2, -4, and -7
- Bill Bosma, Consultant, NSO – Team Member. Objectives TQP-3, -4, and -5

This assessment utilized the seven TQP objectives and related criteria set forth in DOE M 426.1-1A, *Federal Technical Capability Manual*, Chapter IV, *Continuous Improvement and Reporting*, Section 2, *Assessments*.

Six findings (F), five opportunities for improvement (OFI), and two noteworthy practices (NP) resulted from the assessment:

Of the seven objectives, one was not met (TQP-1, *Demonstration of Competence*).

Scope and Methodology

The TQP establishes a process to objectively determine that individuals performing activities related to the technical support, management, oversight, or operation of defense nuclear facilities possess the necessary knowledge, skills, and abilities to perform their assigned duties and responsibilities.

An effective TQP has many elements, as described in DOE M 426.1-1A. They ensure:

- (1) Identification and documentation of the functional competencies that individual employees must possess to ensure that DOE defense nuclear facilities and programs are operated in accordance with applicable safety, health, and environmental requirements.
- (2) Establishment of a program that clearly identifies and documents the process used by senior line management to demonstrate employee technical competence, consistent with applicable industry standards for similar occupations.
- (3) Assurance that employees maintain their technical competencies.
- (4) Maintenance of a cycle of continuous performance improvement through structured, individualized training and development programs and through review and assessment of Headquarters and field element programs.

This assessment of the NSO TQP was designed to determine the extent to which the framework is in place to meet the 7 TQP objectives identified in DOE M 426.1-1A, and therefore determine the readiness of the NSO to initiate the accreditation process.

This assessment covered activities implemented for the NSO TQP. The breadth of review was based directly on the requirements in DOE M 426.1-1A, *Federal Technical Capability Manual*, Chapter IV, *Continuous Improvement and Reporting*, Section 2, *Assessments*. This breadth is consistent with the draft *Technical Qualification Program Accreditation Process and Criteria*.

Findings:

F-TQP-1.1. The rigor of the NSO TQP competency evaluation process is not commensurate with the responsibilities of the position.

F-TQP-2.1 Position specific qualifications do not exist for all positions (Site preference) and many Site/Facility specific qualification standards need revisions to match current Site/Facility configuration.

F-TQP-2.2 NSO M 426.1-1A, Technical Qualification Program Plan, allows for exemptions to competencies identified in qualification standards. Exemptions are not authorized for the General Technical Base and Functional Area Qualification Standards.

F-TQP-2.3 Position Specific Qualification Standard, Supervisory Engineer/Physical Scientist, does not specify evaluation criteria for the successful completion of the qualification standard.

F-TQP-4.1 No analyses could be located for the Site/Facility/Position specific qualification standards.

F-TQP-5.1 No objective evidence to justify the granting of equivalency for competencies is included in the training records.

Opportunities for Improvement:

OFI-TQP-1.1: The evaluation of all NSO technical positions for inclusion/exclusion in the TQP would demonstrate that all positions which could impact the safety of nuclear facilities were considered.

OFI-TQP-4.1 The TQP does not appear to be integrated into the conduct of work for the NSO. The TQP appears to be a parallel program that is not effectively linked to work control (duty limitations until fully qualified), nor are organization/facility continuing training efforts linked back to the TQP.

OFI-TQP-7.1 Qualifying officials are not conducting evaluation activities consistently.

OFI-TQP-7.2 Feedback from TQP participants is not sought.

OFI-TQP-7.3 Minimal continuing training to meet TQP requirements is being conducted, however, Site/Facility/Position specific continuing training is inconsistent. Additionally, continuing training that is occurring is not being adequately documented for TQP participants.

Noteworthy Practices:

NP-TQP-1.1 The NSO qualification records are well organized, follow a standardized format, and significantly contribute to the transferability of qualification.

NP-TQP-7.1 The continuing training program established by the FRs is commendable. Assignment of personnel to develop the continuing training and clear guidance related to the development of the training ensure topics are relevant and provide FRs with practical information.

Results

Objective 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 TQP 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 employees. The rigor of the evaluation process is commensurate with the responsibilities of the position.

Activities Observed:

- Laser Safety Facility Representative (FR) Competency Evaluation

Discussion of Results:

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.

A comprehensive review of all NSO TQP participant training files revealed a position evaluation questionnaire (PEQ) for each TQP position is on file in the TQP Coordinator's office signed by the position's supervisor and validated by the site FTCP agent. The position supervisor uses this questionnaire to evaluate a position for inclusion/exclusion in the TQP and identify the applicable functional area qualification standard.

DOE M 360.1-1B, *Federal Employee Training*, chapter V, paragraph 5.a.(1) and chapter V, paragraph 6.a.; DOE M 426.1-1A, *Federal Technical Capability Manual*, Chapter III, paragraph 3; NA-1 M 426.1-1A, *Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*, paragraph 4.c.; and NSO Manual 426.1-1A, *Technical Qualification Program*, attachment 1; require positions that could affect the safe operation of a defense nuclear facility to be analyzed to determine participation in the TQP. This requirement implies that technical positions will be analyzed that are negative as well as positive. Therefore, the absence of some negative PEQs conveys that not all technical positions that could impact the safe operation of a defense nuclear facility have been considered. **This is an OFI. OFI-TQP-1.1: The evaluation of all NSO technical positions for inclusion/exclusion in the TQP would demonstrate that all positions which could impact the safety of nuclear facilities were considered.**

This criterion has been met.

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.

A review of all NSO TQP participant individual development plans (IDPs) revealed the integration of TQP training in individual plans. The use of IDPs in obtaining training for TQP competencies is required in DOE M 360.1-1B, *Federal Employee Training*, chapter I, paragraph 4.c.(1) and chapter V, paragraph 5.a.(4), DOE M 426.1-1A, *Federal Technical Capability Manual*, Chapter III, paragraph 3, NA-1 M 426.1-1A, *Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*, paragraph 4.f.

There is no NSO training plan. Each DOE element is required to have a training plan per DOE O 360.1B, *Federal Employee Training*. DOE interprets elements to include NSO, however, discussions between NNSA and DOE reveal differing opinions on the definition of "elements." These discussions should result in a clarification of training plan development applicability and its effects on the NSO. Currently, NNSA OHCMS/LCDD produces an annual training plan that includes all NNSA sites and has been used in the past to meet this requirement.

The NSO qualification records are well organized in an easy-to-audit format. Qualification records are kept on-site with copies of signed qualification cards and completion certificates sent to LCDD for inclusion in NNSA TQP files. LCDD forwards these documents to the Enterprise Training Services department for inclusion in individual permanent training files. **This is a Noteworthy Practice. NP-TQP-1.1 The NSO qualification records are well organized, follow a standardized format, and significantly contribute to the transferability of qualification.**

This criterion has been met.

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.

A formal evaluation process is in place to objectively measure the technical competency of employees. Qualifying officials (QOs) are heavily relied on to ensure the rigor of the evaluation process is commensurate with the responsibilities of the position. Each QO signed a qualifying official attestation form indicating understanding of the responsibilities of a qualifying official as delineated in the NNSA TQP User's Guide and NA-1 M 426.1-1A, *Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*. The NSO qualification process is described in NSO Manual 426.1-1A, *Technical Qualification Program*, attachment 2. Step 7 of this process states that supervisors/qualifying officials "will verify completion of competencies (e.g., completion of examination(s) on GTB competencies) or will conduct oral evaluations (e.g., knowledge checkouts) in accordance with guidance in the NNSA TQP User's Guide." Additionally, NSO Manual 426.1-1A, chapter II, paragraph 5, states

that the QO responsibilities are to “perform QO responsibilities set forth in the NNSA TQPP, Section 5 (now paragraph 4), and the User’s Guide, Section 6.”

Paragraph 4.g, NA-1 M 426.1-1A, requires: “Upon completion of one or a set of learning activities, the employee’s attainment of competencies is evaluated by a QO. This evaluation may be an observation of performance, a written examination, an oral evaluation, or an evaluation of equivalency documents.” Additionally, this paragraph states that “Written examinations or notes on oral evaluation or observations of performance shall be maintained on site”.

Section 6 of the NNSA TQP User’s Guide states: “QOs shall:

- review any objective evidence to determine if the documents provided satisfy the competency statement requirements;
- verify that a participant can demonstrate the ability to meet competencies outlined in the qualification standard;
- conduct evaluations per the Qualifying Official Orientation subsections;
- take notes on participant’s responses during the evaluation and maintain them in a secure location where they cannot be tampered with and where the privacy of the participant is protected; and
- sign the qualification card for the competency statement requirements that the participant satisfied.”

Attachment 4 of the NNSA TQP User’s Guide, *Qualifying Official Orientation*, states the following QO responsibilities:

“QOs are responsible for performing the following:

- Determining whether the participant has competence in his or her assigned area of responsibility and documenting any determination of insufficient competence
- Meeting with participants to evaluate qualifications
- Preparing for qualification evaluations by reviewing applicable references and obtaining necessary materials
- Conducting evaluations according to the guidance provided in this orientation
- Ensuring that participants can demonstrate proficiency in the applicable competencies
- Documenting and signing the qualification card when the participant meets or performs the applicable competencies
- Participating as a qualification oral board member according to the Conduct of Oral Evaluation Guidance subsection
- Assisting in the development of the exam bank for their area of expertise
- Maintaining a working knowledge of the TQP in their technical area”

NSO final qualification activities, principally comprehensive written examination are documented with the results maintained in the TQP Coordinator’s files. However, for individual competency evaluation, the NSO TQP support contractor provides a synopsis of equivalency, learning methods and prior experience as a subsection within each competency on individual qualification cards. NSO QOs use this information to evaluate and sign for competency completion, often without discussing the knowledge requirements with the participant or documenting the evaluation. Qualification cards typically list EQ (equivalency) and WE (written examination) as methods of individual competency evaluation, but no documentation is available of either of these methods. As a result, validation of the application of an appropriate level of rigor in the evaluation process cannot be confirmed. NSO Manual 426.1-1A, *Technical*

Qualification Program, is not implemented as written. **This is a Finding. F-TQP-1.1 The rigor of the NSO TQP competency evaluation process is not commensurate with the responsibilities of the position.**

This criterion has not been met.

Issues:

F-TQP-1.1. The rigor of the NSO TQP competency evaluation process is not commensurate with the responsibilities of the position.

OFI-TQP-1.1: The evaluation of all NSO technical positions for inclusion/exclusion in the TQP would demonstrate that all positions which could impact the safety of nuclear facilities were considered.

Noteworthy Practice:

NP-TQP-1.1 The NSO qualification records are well organized, follow a standardized format, and significantly contribute to the transferability of qualification.

Conclusion:

This objective has not been met.

Objective 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 Recognized experts help establish competency requirements.
- 2.3 Related professional certification 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, facility, or program and the office.

Discussion of Results

2.1 Competency requirements include clearly defined knowledge, skill, and ability elements.

A review of site office training record files and the TQP Progress Matrix administered by the SC indicates that NSO correctly incorporates the GTBQS and FAQss into the program. Office/facility/position specific qualification standards have been established for FRs, SSO personnel, S&S personnel, and one supervisory engineer position as required by the FTCP Manual. The office/facility/position specific qualification standards correctly include clearly defined knowledge, skill, and ability elements.

This criterion has been met.

2.2 Recognized experts help establish competency requirements.

Interviews and review of qualification standards confirms that recognized experts are involved in determining FAQs applicability and development and approval of site/facility/position specific qualification standards.

This criterion has been met.

2.3 Related professional certification requirements are considered in the program as applicable.

Certifications and licenses, such as Certified Health Physicist and Professional Engineer, are encouraged and considered in competency completion. Review of a sampling of training records confirms that certifications and licenses are considered and incorporated into qualification cards.

This criterion has been met.

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, facility, or program and the office.*

A review of site office training record files confirms that NSO correctly incorporates the GTBQS and FAQs into the program. Development and implementation of office/facility/position specific qualification standards has only been completed for FRs, SSO personnel, S&S personnel, and one supervisory engineer position as required by the FTCP Manual. The site plans to develop additional position specific qualification standards, however there is no schedule or prioritization for this effort. **This is a finding. F-TQP-2.1: Position specific qualifications do not exist for all positions (Site preference) and many Site/Facility specific qualification standards need revisions to match current Site/Facility configuration.**

DOE M 426.1-1A, *Federal Technical Capability Manual*, requires that the GTBQS and FAQs be used without modification or additions. The NSO TQP plan allows for exemption to these qualification standards. **This is a finding. F-TQP-2.2: NSO M 426.1-1A, Technical Qualification Program Plan, allows for exemptions to competencies identified in qualification standards. Exemptions are not authorized for the General Technical Base and Functional Area Qualification Standards.**

A review of the Position Specific Qualification Standard, *Supervisory Engineer/Physical Scientist*, identified that it does not specify evaluation criteria for the successful completion of the qualification standard. DOE M 426.1-1A, *Federal Technical Capability Manual*, requires that attainment of individual competencies be evaluated and documented by a qualifying official. **This is a finding. F-TQP-2.3: Position Specific Qualification Standard, Supervisory Engineer/Physical Scientist, does not specify evaluation criteria for the successful completion of the qualification standard.**

This criterion has been met.

Issues

F-TQP-2.1: Position specific qualifications do not exist for all positions (Site preference) and many Site/Facility specific qualification standards need revisions to match current Site/Facility configuration.

F-TQP-2.2: NSO M 426.1-1A, Technical Qualification Program Plan, allows for exemptions to competencies identified in qualification standards. Exemptions are not authorized for the General Technical Base and Functional Area Qualification Standards.

F-TQP-2.3: Position Specific Qualification Standard, Supervisory Engineer/Physical Scientist, does not specify evaluation criteria for the successful completion of the qualification standard.

Conclusion

NSO satisfactorily implements the requirements of the TQP and appears to be consistent with applicable industry standards for similar occupations. The identified findings are relatively minor in nature and do not diminish the overall implementation of the TQP.

This objective has been met.

Objective 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 TQP.
- 3.2 Written procedures that adequately define the processes and requirements to implement the TQP are in place.
- 3.3 Roles and responsibilities for implementing the TQP are clearly defined and understood by all involved.
- 3.4 The procedures that govern implementation of the TQP 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 TQP.

Discussion of Results

3.1 Senior management is committed to the TQP.

The NSO Manager is the former FTCP Agent, and his commitment to and enthusiasm for the TQP is very evident. Interviews were conducted with three Assistant Managers and two Deputy Assistant Managers. These interviews included questions regarding management commitment to the TQP. All individuals demonstrated a clear understanding of the TQP process and are directly involved with the qualification of participants they supervise. Line management responsibilities related to the TQP are documented in NSO M 426.1-1A, *Technical Qualification Program Plan*. The NSO FTCP Agent has overall responsibility for the TQP and is responsible for approving site office qualification standards and selecting NSO Qualifying Officials (QOs).

This criterion has been met.

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

The site office has an approved procedure to manage its TQP, NSO M 426.1-1A, *Technical Qualification Program Plan*, dated November 11, 2008. This procedure identifies TQP participation requirements, the process for qualification, and roles and responsibilities. It is approved by the NSO Manager.

NSO M 426.1-1A was reviewed against NS-1 M 426.1-1A, *NNSA Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*, dated May 19, 2008. With one exception, the NSO procedure accurately reflects the requirements in the NNSA program plan. The NNSA program plan requires that all competencies in the General Technical Base Qualification Standard and the Functional Area

Qualification Standard be completed by all NNSA TQP participants. The NSO procedure allows tailoring through exemptions. **This is a finding. See Finding F-TQP-2.2.**

This criterion has been met.

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

Roles and responsibilities for implementing TQP are clearly stated in NSO M 426.1-1A. Interviews with AMs, QOs, and TQP participants indicate that TQP responsibilities are generally understood. Supervisors understood their responsibilities for ensuring that technical personnel are appropriately selected and trained, and maintain their qualification. Technical staff understood their qualification responsibilities.

This criterion has been met.

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

Review of TQP records and interviews with AMs, QOs, and TQP participants indicate that the TQP process, as written in the NSO TQPP, is understood and is being implemented as written. A site-specific Qualification Standard is being piloted, and, once approved, will be assigned to all TQP participants.

This criterion has been met.

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

A review of site office training records and the TQP Progress Matrix administered by the SC indicates that NSO has an adequate records system for each employee in the TQP. All 51 record files were reviewed. The files are in good order and contain the appropriate TQP-related documentation and evidence required by the FTCP Manual.

This criterion has been met.

Issues:

None

Conclusion:

This assessment found clear indications that NSO management is fully committed to establishing a viable TQP that is designed to properly train and qualify site office technical staff members.

NSO has implemented a TQP manual to manage and administer the program. The TQP process is fully integrated into employee development plans. Progress toward full qualification and required re-qualification is regularly tracked.. Management team members understand their responsibilities for ensuring that technical personnel are selected, trained, and qualified according to the requirements stated in the NSO TQPP.

This objective has been met.

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.

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 TQP 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.

Discussion of Result

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.

DOE M 426.1-1A, *Federal Technical Capability Manual*, requires that, “the program must clearly identify unique Department and position-specific work activities and the knowledge and skills necessary to accomplish the work.” Additionally, the manual requires, “...requirements must be established using the systematic approach to training methodology and include...competencies specific to the position, facility, or programs, and the office.” Documented analyses for the site specific qualification standard and position specific qualification standards do not exist. **This is a finding. F-TQP-4.1: No analyses could be located for the Site/Facility/Position specific qualification standards.**

This criterion has not been met.

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.

A review of the site specific, FRs, SSO, and S&S personnel qualification standards reveals that NSO correctly incorporates job-specific requirements related to the rules, regulations, standards, and guides necessary to carry out the NSO mission.

This criterion has been met.

4.3 The program supports the mission needs of the office.

Based on interviews with TQP participants and qualifying officials, the TQP does not appear to be integrated into the conduct of work for the NSO. The TQP appears to be a parallel program that is not effectively linked to work control. For example, while the TQP plan requires the establishment of duty limitations for personnel until full qualification, no evidence of those restrictions could be found. A few personnel who were not fully qualified indicated that they were under no duty limitations. A TQP integrated with the work control process should ensure that personnel are not performing duties for which they are not qualified without appropriate compensatory measures. Another example of poor integration of the TQP with the site mission is continuing training. Continuing training is occurring in the field by a number of organizations, but is not being incorporated into the TQP to satisfy continuing training requirements. Better integration of the TQP with work would allow for satisfying both the TQP participants continuous improvement needs, but also the TQP requirements. **This is an OFI. OFI-TQP-4.1: The TQP does not appear to be integrated into the conduct of work for the NSO. The TQP appears to be a parallel program that is not effectively linked to work control (duty limitations until fully qualified), nor are organization/facility continuing training efforts linked back to the TQP.**

This criterion has been met.

Issues

F-TQP-4.1: No analyses could be located for the Site/Facility/Position specific qualification standards.

OFI-TQP-4.1: The TQP does not appear to be integrated into the conduct of work for the NSO. The TQP appears to be a parallel program that is not effectively linked to work control (duty limitations until fully qualified), nor are organization/facility continuing training efforts linked back to the TQP.

Conclusion

While the NSO TQP identifies unique Department- and position-specific work activities and specifies the knowledge and skills necessary to accomplish that work, not all positions have been analyzed and the underlying analyses of existing qualification standards have not been documented. This lack of documentation will continue to be problematic and may lead to future questions related to the rigor and adequacy of the NSO TQP.

This objective has been met.

Objective TQP-5, Credit for Existing Technical Qualifications

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

Criteria

5.1 Credit (equivalency) is granted for previous training, education, experience, and completion of related qualification/certification 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.

Discussion of Results

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

A sample of qualification cards was reviewed. For individual competency evaluation, the NSO TQP support contractor provides a synopsis of equivalency, learning methods, prior experience, etc. of TQP participants as a subsection within each competency on individual qualification cards. The synopsis is reviewed by the supervisor/QO who determines whether or not the intent of the competency has been met. Approval is documented by supervisor/QO initials on the qualification card.

This criterion has been met.

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.*

For individual competency evaluation, the NSO TQP support contractor provides a synopsis of equivalency, learning methods, prior experience, etc. of TQP participants as a subsection within each competency on individual qualification cards. NSO QOs use this synopsis to evaluate and sign for competency completion, often without discussing the knowledge requirements with the participant or performing an independent evaluation of the evidence. **This is a Finding. F-TQP-5.1 No objective evidence to justify the granting of equivalency for competencies is included in the training records.**

This criterion has not been met.

5.3 *Equivalencies are formally validated, approved, and documented.*

The validation of equivalencies is accomplished by the NSO TQP support contractor. The candidate's supervisor or QO approves these equivalencies and documents this approval by initialing the qualification card.

This criterion has been met.

Issues:

F-TQP-5.1 No objective evidence to justify the granting of equivalency for competencies is included in the training records.

Conclusion:

This objective has been met.

Objective 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 TQP is integrated with personnel-related activities, such as position descriptions, vacancy announcements, recruiting, and performance appraisals.

Discussion of Results

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

NSO M 426.1-1A, *Technical Qualification Program Plan*, requires TQP participants to complete the DOE GTBQS and a position-applicable FAQS. A comprehensive review of all the TQP training records revealed that TQP participants are assigned the GTBQS and an applicable FAQS to ensure all competencies that have been identified as applying throughout DOE are completed.

This criterion has been met.

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

Standardized FTCP-approved qualification cards are provided to TQP participants as part of an initial qualification package. These cards are completed by participants and supervisors to document validation of competency attainment. When complete, copies are provided to the TQP coordinator, who forwards them with other supporting qualification materials to LCDD, who validates the process and forwards the materials to the Enterprise Training Services organization for inclusion in the individual's permanent training file. The NSO TQP Coordinator also maintains a file for each individual in the TQP as a backup. All original documents are retained by the individual. This policy ensures transferability across the Department.

However, attachment 2 of NSO M 426.1-1A, *Technical Qualification Program Plan*, states that "Working together, the supervisor/QO and candidate will assess the candidate's previous

knowledge/education, experience, and skills against the GTBQS and FAQs to identify and document any equivalencies or exemptions in accordance with the guidance in the NNSA TQPP (e.g., tailoring through professional certification and other equivalencies, tailoring through exemptions). The supervisor may adjust the competency levels to align with the participant's job assignments and provide justification on the QC."

DOE M 426.1-1A, *Federal Technical Capability Manual*, strictly prohibits the use of exemptions, or tailoring of DOE FAQs. Specifically, paragraph 2.b, chapter III, states that "Competency requirements identified as having Department-wide applicability must be transferable. For ease of transportability of qualifications between DOE elements, the DOE General Technical Base Qualification Standard and the various DOE FAQs must be used without modification or additions."

Several competencies within approved NSO qualification cards reflected the use of exemptions and modifications to competency levels. This practice results in qualification cards that do not include all the competencies identified as applying throughout the complex and do not meet the transferability requirements stated in DOE M 426.1-1A, *Federal Technical Capability Manual*. **This is a FINDING. See Finding F-TQP-2.2.**

This criterion has not been met.

6.3 The TQP is integrated with personnel-related activities, such as position descriptions, vacancy announcements, recruiting, and performance appraisals.

The TQP is very well integrated with personnel-related activities. A comprehensive review of all the NSO TQP position descriptions (PDs) revealed a consistent approach in referencing technical qualification program admission requirements. If not specifically stated in the PD, a position description addendum was available. These addendums, however, were not attached to the PD, but kept in a separate file. They should be attached to each TQP PD. A spot check of vacancy announcements also revealed a consistent application of TQP requirements. All interviewees indicated that completion of TQP requirements was included in their performance plans. There is no indication that the TQP is being used as a potential recruiting tool.

This criterion has been met.

ISSUES:

F-TQP 6.1. The use of exemptions and the tailoring of Department-wide competencies results in qualification cards that do not include all the competencies identified as applying throughout the Department and do not meet the requirements for transferability stated in DOE M 426.1-1A, *Federal Technical Capability Manual*.

CONCLUSION:

This objective has been met.

Objective 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 TQP 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 missions of the office.
- 7.3 The TQP provides for continuing training.

Discussion of Results

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

Minimal evaluation of technical competence was conducted based on interviews and observations of work activities. Based on this limited evaluation, technical competence appears adequate. Qualifying officials are used to verify technical competence of TQP personnel as required by the TQP plan. Based on interviews and review of records, qualifying officials are not consistently performing the evaluation function. For example, some qualifying officials train the TQP participant on a particular competency and then approve their qualification card without verifying the participant actually has attained the competence level. Participants noted that some qualifying officials are easier than others when conducting evaluations, again creating inconsistencies in the qualifying process. The training provided by the SC for qualifying officials consists of reading documents and may not be sufficient to ensure consistency across qualifying officials. **This is an OFI. OFI-TQP-7.1: Qualifying officials are not conducting evaluation activities consistently.**

This criterion has been met.

7.2 The program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the missions of the office.

Assessments are conducted on the program on a recurring basis. Assessment results have been used to address deficiencies and make program improvements. Based on interviews, a review of records, and a search of the corrective action program, feedback from participants and management on the TQP is not solicited in any formal manner. This was identified in a previous assessment. **This is an OFI. OFI-TQP-7.2: Feedback from TQP participants is not sought.**

This criterion has been met.

7.3 *The TQP provides for continuing training.*

A review of training records indicates NSO utilizes the continuing training program established by the SC for the GTBQS and FAQs. The NSO TQP plan defines examples of continuing training, but does not define the process for implementing the continuing training program. Interviews with personnel reveal that continuing training occurs both formally and informally, however those efforts are not consistently documented in the TQP files. **This is an OFI. OFI-TQP-7.3: Minimal continuing training to meet TQP requirements is being conducted, however, Site/Facility/Position specific continuing training is inconsistent. Additionally, continuing training that is occurring is not being adequately documented for TQP participants.** Additionally, site/facility/position specific continuing training is inconsistent. For example, the FR program includes a robust continuing training program, but other TQP areas have no site/facility/position specific continuing training. **This is a Noteworthy Practice. NP-TQP-7.1 The continuing training program established by the FRs is commendable. Assignment of personnel to develop the continuing training and clear guidance related to the development of the training ensure topics are relevant and provide FRs with practical information.**

This criterion has been met.

Issues

OFI-TQP-7.1: Qualifying officials are not conducting evaluation activities consistently.

OFI-TQP-7.2: Feedback from TQP participants is not sought.

OFI-TQP-7.3: Minimal continuing training to meet TQP requirements is being conducted, however, Site/Facility/Position specific continuing training is inconsistent. Additionally, continuing training that is occurring is not being adequately documented for TQP participants.

Noteworthy Practice

NP-TQP-7.1 The continuing training program established by the FRs is commendable. Assignment of personnel to develop the continuing training and clear guidance related to the development of the training ensure topics are relevant and provide FRs with practical information.

Conclusion

The NSO TQP has adequate records and processes. However, weaknesses in the qualifying official rigor and continuing training programs affects both the integrity of the TQP and confidence of participants, management, and assessors in the effectiveness of the program.

This objective has been met.

Appendix A NSO TQP Self Assessment Team Member Assignments

**TECHNICAL QUALIFICATION PROGRAM
ASSESSMENT OBJECTIVES AND CRITERIA**

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

Assigned Team Member: Mark Alsdorf

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

Assigned Team Member: Barry Mellor

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

Assigned Team Member: Bill Bosma

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.

Assigned Team Member: Barry Mellor/ Bill Bosma

5. TQP-5, Credit for Existing Technical Qualifications. The program is structured to allow credit, where appropriate, for other TQP accomplishments.

Assigned Team Member: Bill Bosma

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

Assigned Team Member: Mark Alsdorf

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

Assigned Team Member: Barry Mellor

Appendix B NSO TQP/FR Self Assessment Team Member Biographies

Raeford L. Phifer

Mr. Phifer is the Assistant Manager for Safeguards and Security and the Federal Technical Capability Panel (FTCP) Agent for the NNSA/NSO. He has over 30 years of leadership and management experience in Special Operations and National Security Response. He graduated *magna cum laude* from Liberty University with a Bachelor of Science in General Studies.

Mark A. Alsdorf

Mr. Alsdorf, stationed at the SC, is the NNSA TQP Manager. He has over 30 years of nuclear missile experience (in the U. S. Air Force) and training development experience. Recent experience includes managing the NNSA Los Alamos Site Office training program as a Senior Engineer for Epsilon Systems Solutions, Inc. Since joining DOE in October 2006, he oversees the integration, effective implementation, and administration of the corporate NNSA TQP.

William J. Bosma

Mr. Bosma has over 40 years experience in Naval Nuclear Propulsion (during a 24-year Naval career) and DOE nuclear safety management. He has led or served on many teams conducting Management Assessments, Readiness Reviews, and Technical Assists at Los Alamos National Laboratory, Idaho National Laboratory, Y-12 National Security Complex, and the NTS. He holds a B.S. in Liberal Arts from SUNY Albany, and an M.S. in Management of Technology (Environmental Treatment) from Murray State University.

Barry Mellor

Mr. Mellor is a Training Advisor for the U.S. Department of Energy, Office of Civilian Radioactive Waste Management Program. He has over 24 years experience in the development, implementation, and evaluation of training and qualification programs supporting the U.S. Air Force, the commercial nuclear industry, the Department of Energy, the Department of Defense, as well as the private sector. He has primarily worked as a training manager, instructor, or consultant to these industries establishing, implementing, and assessing training and qualification programs for operators, maintainers, technical staff, and instructors for both reactor and non-reactor nuclear facilities and has spent considerable time supporting training efforts at Oak Ridge, Savannah River, Plant Vogtle, VC Summer, PANTEX, DOE Headquarters, the Nevada Test Site, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratory. He has also provided support at two Ukrainian nuclear power plants — Khmelnytskyi and Rivne. He graduated *magna cum laude* from Columbia Southern University with a B.S. in Business Administration.

Appendix C Documents Reviewed

DOE P 426.1, *Federal Technical Capability Policy for Defense nuclear Facilities*, December 10, 1998
DOE M 426.1-1A, *Federal Technical Capability Manual*, May 18, 2004
DOE O 360.1B, *Federal Employee Training*, October 11, 2001
DOE-STD-1063-2006, *Facility Representatives*, April 2006
Technical Qualification Program Accreditation Process and Criteria, Draft
NSO M 111.XH, *Functions, Responsibilities, and Authorities Manual*, May 11, 2009
NSO M 426.1-1A, *Technical Qualification Program Plan*, November 12, 2008
NNSA/NSO FRG-01, *Facility Representative Procedure*, Rev. 0, October 1, 2009
NNSA/SC TQP Tracking Database
Individual Development Plans
Position Descriptions
Vacancy Announcements
Qualification Standards for selected Technical Staff
Professional Certification Records
Staff Biographies