

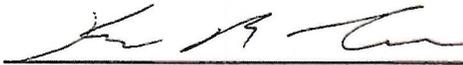
**U.S. Department of Energy
National Nuclear Security Administration
Office of the Associate Administrator
for
Safety and Health**



**Technical Qualification Program
Self Assessment Report**

December 2013

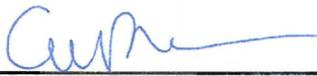
NA-SH TQP Self Assessment Report Signature Page and Approval

Team Member Kevin Carr: 

1. TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.

Team Member Rex Borders: 

2. TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.

Team Member Carl Sykes: 

3. TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.

Team Member David Hall: 

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

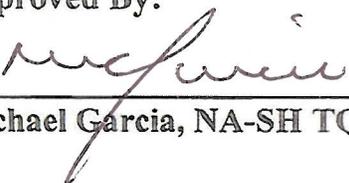
Team Member Tim Orr: 

5. TQP-5, Credit for Existing Technical Qualification Programs.

Team Member Lynn Maestas: 

6. TQP-6, Transportability. Competency requirements identified as applying throughout the Department are transferable.
7. TQP-7, Measurable. The program contains sufficient rigor to demonstrate compliance to the requirements.

Approved By:


Michael Garcia, NA-SH TQP Self Assessment Team Leader

12/19/13
Date

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Executive Summary Statement

Though five of the seven Technical Qualification Program (TQP) Self Assessment (SA) objectives were met, there were substantive Program related issues identified that will require a concerted effort to address. Moreover, once individual program elements are updated, additional time will be necessary to fully implement the procedures and processes. The goal must be to establish an Office of the Associate Administrator for Safety and Health (NA-SH) TQP that is fully sustainable given mission objectives and available resources.

I. Introduction

The Department of Energy (DOE) Federal Technical Capability Panel (FTCP) provides the requirements for the recruitment, deployment, development, and retention of federal personnel with demonstrated technical capability to safely accomplish the Department's missions and responsibilities. This Program applies to the National Nuclear Security Administration (NNSA) Headquarters (HQ) and Field organizations that have safety responsibilities for defense nuclear facilities. The FTCP is designed to continue the assessment, monitoring, and improvement of the capabilities of the federal technical workforce.

The NA-SH TQP applies to those personnel who oversee defense nuclear facilities, to support the mission of NNSA. The requirement for this SA comes from DOE O 426.1A that states "Headquarters and Field Elements must conduct self-assessment of TQP and FTCP implementation within their organization at least every 4 years."

As required, this NA-SH SA was led by a Senior Technical Safety Manager, who reports directly to the Deputy Associate Administrator for Safety and Health (NA-SH-2). This SA used the appropriate FTCP TQP objectives and criteria to evaluate the effectiveness of implementation of the NA-SH TQP.

The remaining sections of this SA Report provide the results, an overview of the assessment scope and methodology, the schedule of the assessment, and supporting information.

Objective

This document reports the results of the NNSA NA-SH TQP SA. This SA was led by Michael Garcia, NNSA Alternate FTCP Agent with Allen Tate serving as Team's Senior Advisor for this six-member SA Team. The SA was conducted from November 12 through 26, 2013.

The TQP SA was completed in accordance with an approved Review Plan. The Review Plan for this SA/Review was built from the requirements of the FTCP Technical Qualification Program Accreditation Process and Criteria as of September 20, 2011 in accordance with the criteria of DOE DOE O 426.1A, *Federal Technical Capability*, as the TQP Accreditation Process Self Assessment Objectives and Criteria. This SA evaluated the effectiveness of the implementation of the NA-SH TQP.

Approach

This SA evaluated seven (7) TQP objectives. The SA methodology included examining documents, conducting limited interviews, and observing limited activities according to the Criteria, Review, and Approach Documents (CRADs) (See Appendix A and B).

Overview of the SA/Review Results by Self Assessment Objective

1. **TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.**

Overall, NA-SH does meet this objective. NA-SH has developed a TQP Supplemental Directive (SD) that would allow work to proceed towards accreditation. From a top looking down perspective, there is good evidence that senior management (i.e., NA-SH-1/2) is committed to the TQP. Conversely, there is ample evidence of a disconnect from the senior management commitment to the TQP in multiple breakdowns in the implementation of the NA-SH TQP Supplemental Directive.

NA-SH is adequately identifying TQP participants to support the nuclear complex support missions. Record reviews and NA-SH interviews show that NA-SH is active in meeting the TQP competency requirements. However, the NA-SH TQP does not meet the overall requirements for the training of Qualifying Officials (QOs) based on undeveloped training material.

2. **TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.**

Overall, NA-SH does not meet this objective. Although written procedures and processes exist for the implementation of the TQP they contain numerous errors, incorrect references, and inconsistencies. The errors were deemed serious enough that the Program could not be implemented as written. There was a general lack of understanding of the requirements in these procedures and processes by the TQP participants. Several TQP Participant records were reviewed and compared to the requirements of the procedures and several were found be less than adequate.

3. **TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.**

Overall, NA-SH does meet this objective. NA-SH selects from the expansive set of adequate DOE Functional Area Qualification Standards (FAQS), approved by the FTCP, to implement competency requirements (with a few exceptions noted). Within this objective, there are areas for improvement, most notably developing a process to encourage the attainment and maintenance of professional certifications. As described in Objective 4, NA-SH has room for improvement with respect to ensuring the proper FAQS are assigned to each employee based on individual and organizational responsibilities.

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

Overall, NA-SH does meet this objective. NA-SH relies upon the DOE developed TQP General Technical Base (GTB) and job-specific Functional Area Qualification Standards (FAQS) to identify the rules, regulations, codes, standards, and guides necessary for the individual position. NA-SH conducted annual staffing analyses and merged input with other NNSA Headquarters (HQ) organizations. A review of the past FTCP Annual Staffing Analyses reveals these analyses are conducted in a perfunctory manner, with offices essentially reporting the status quo, addressing only iterative changes that become necessary due to retirements and personnel transfers.

The current NA-SH organization is populated with personnel from the former NNSA Service Center, Office of Technical Services, and other NNSA HQ organizations. The legacy Position descriptions that originated in those different organizations have not been updated to reflect either the current job description or assigned TQP FAQ. NA-SH personnel routinely provide subject matter expertise to the NNSA enterprise outside their assigned TQP functional area. Although senior management stated that it was not necessary to have personnel qualified in those TQP functional areas, it is illogical for an organization to have those responsibilities without the corresponding expertise. NA-SH has designated TQP QOs for functional areas where NA-SH does not have TQP participants. However, NA-SH personnel who have expertise in multiple areas could be assigned secondary FAQs that would cover many of those functional areas.

5. TQP-5, Credit for Existing Technical Qualification Programs.

Overall, NA-SH does not meet this objective. Due to a lack of a consistent record keeping practices and the use of the equivalency process required by NA-SH SD 426.1, the objective of an effective credit/equivalency process for existing qualifications is not met.

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

Overall, NA-SH does meet this objective. Competency requirements identified as applying throughout the Department are adequately documented and appear to be transferable. Issues were noted with the quality of the documentation of positions. Questions also arose regarding the disposition of records associated with persons that have left NA-SH.

The issues identified do not impact the transferability of the qualification provided the incumbents maintain their records when they move to a new position.

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

Overall, NA-SH does meet this objective. The TQP Participants that have completed documentation of their qualifications were determined to be qualified. Even though there are identified weaknesses with the overall process, the process as currently defined provides sufficient rigor to document compliance with the requirements.

II. Methodology

Self Assessment Objectives and Criteria

The following TQP Objectives and Criteria were used for this NNSA Self Assessment:

1. **TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.**

Criteria:

1.1 Senior Management is committed to the TQP.

1.2 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.

1.3 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.

1.4 A formal evaluation process (e.g. select and train Qualifying Officials) 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.

2. **TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.**

Criteria:

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

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

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

2.4 A training and qualification records development and maintenance process is established for each employee in the TQP.

3. **TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.**

Criteria:

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

3.2 Recognized experts help establish competency requirements.

3.3 Related professional accreditation requirements are considered in the program as applicable.

3.4 Competency requirements are identified in the areas listed below. (Note: this does not imply that three separate documents are required.)

- Basic Technical Knowledge
- Technical Discipline Competency
- Position Knowledge, Skills, and Abilities

4. TOP-4, Qualification Tailored to Work Activities. The program identifies unique Department and position-specific work activities and specifies the knowledge, skills, and abilities 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. The program supports the mission needs of the office.

5. TOP-5, Credit for Existing Technical Qualification Programs.

Criteria:

5.1 Credit (equivalency) is granted for previous training, education, experience, and completion of related technical qualification 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. Equivalencies are formally validated, approved, and documented.

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

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

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.

Summary of Self Assessment Specifics

The overall approach included the review of applicable NA-SH documentation and interviews of a spectrum of NA-SH staff. For these objectives and criteria, the Assessment Team Members used applicable lines of inquiry (LOIs), tailored to NA-SH for specific assessment objectives and criteria. These LOIs formed the basis of the interview questions as well as points for consideration in the review of documentation.

The results of interviews were correlated with the review of documents and other evidentiary data, and collated, reviewed, and compiled by the team to prepare this Report. A list of interviews and documents reviewed is also included in the Appendices of this Report.

Schedule

Planning for this NA-SH TQP Self Assessment began in June 2013, with preparations in July through October for the review to be accomplished in November 2013.

The Review Schedule included:

November 12, 2013:

NA-SH TQP Self Assessment (NNSA TQP SA) Report: December 2013

- 09:00 In-Brief and Coordination (393CR/N)

November 12-15, 2013:

- Review of Documentation and Interviews/Observations with at 1600 Daily Team Meeting to Summarize Progress and Results (393CR/N)

November 15, 2013:

- Completion of Basic Review of Records/Interviews/Observations and Draft Report

November 18- December 5, 2013

- Prepare the Final Report

Definitions of Key Terms Used for this Self Assessment

These definitions are drawn and adapted from the FTCP Technical Qualification Program Accreditation Process and Criteria as of September 20, 2011, for this NNSA NA-SH TQP Self Assessment:

Area for Improvement – A TQP-related issue or problem that contributes to an accreditation objective or requirement not being fully met or that adversely impacts future TQP effectiveness is an area for improvement.

Strength – This is an objective-level positive aspect of the TQP that is key to achieving superior performance. A strength adds significant value or improves organizational performance, as demonstrated by the following elements: enhanced ability of the organization to implement the TQP; successful implementation based on results; efficient use of organizational resources; and potential to serve as a model for other organizations to emulate.

Noteworthy Information – This refers to comments included in the discussion section of the report that describe the quality of the TQP and provide perspective on the effectiveness of the program. Noteworthy information may be positive, but not a strength. It also may be a less significant problem or precursor to a more significant problem. For example, positive noteworthy information could be an aspect identified during a self-evaluation that is not considered strong enough to be called a strength. Conversely, negative noteworthy information could be a problem that is not substantial enough to be considered an area for improvement. Noteworthy information provides additional management perspective that can be of value for accreditation.

References

The basic references for this NNSA NA-SH TQP Self Assessment included, but were not limited to:

- NA-SH SD 426.1, *Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*
- NA-SH PD 426.1-1, *Selection of Technical Qualification Program Participants and Initial Qualification Process*
- NA-SH PD 426.1-2, *Selection of Training and Approval of Qualifying Officials for TQP Participants*
- NA-SH PD 426.1-3, *Technical Qualification Program for Continuing Training and Requalification*
- NA-SH PD 426.1-4, *TQP Competency Evaluation Requirements for Qualifying Officials*
- NA-SH PD 426.1-5, *TQP Requalification Process for STSMs and Other Select Functional Areas*
- NA-SH Management System Description/Quality Assurance Program

NA-SH TQP Self Assessment (NNSA TQP SA) Report: December 2013

- NA-SH Business Plan
- Position Evaluation Questionnaire Form (PEQ)
- Qualifying Official Attestation Form
- TQP Progress Tracker
- TQP Competency Equivalency Evaluation Form

Other References:

- DOE O 360.1C, *Federal Employee Training*
- DOE O 426.1A, *Federal Technical Capability*
- DOE G 226.1-2, *Federal Line Management Oversight of Department of Energy Nuclear Facilities*
- DOE-STD-1063-2011, *Facility Representatives*
- DOE-STD-1070-94, *Guidelines For Evaluation of Nuclear Facility Training Programs*
- NNSA NA-1 SD 450.2, *Functions, Responsibilities, and Authorities*
- Technical Qualification Program Project Plan (2010-2012)
- Technical Qualification Program User's Guide, December 2011
- Technical Qualification Program User's Guide, November 2013
- Continuing Training User's Guide, December 2010
- Selected TQP Participants' training records

III. Self Assessment Results

The criteria associated with each objective were reviewed as appropriate to evaluate the evidence of how each objective was met or not met. This consideration included applicable directives and policies, how the objective has been institutionalized, the review of records and reports, and the summary of the results of the interviews with NA-SH Management and Staff.

Overview Summary of Results for the NNSA NA-SH TQP Self Assessment

From a broad perspective, the requirements for the NA-SH TQP Self Assessment evaluated the NA-SH TQP accomplishments, documentation, effectiveness, health, success, and sustainability consistent with requirements and mission objectives. The SA identified significant concerns with the implementation of current Program procedures and documentation of key records. Though five of the seven TQP Objectives were met, additional work will be necessary to update and fully implement essential Program elements.

IV. Self Assessment Conclusions

Results by Objective

- 1. TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.**

Criterion 1.1 is met. NA-SH developed a TQP Supplemental Directive (SD) that would get the organization close to the accreditation level if implemented by senior management. Additional data for assessment consideration to the Team Leader on this subjective criterion is clarified as follows based on team discussion:

This criterion lacks defined measures of what constitutes adequate commitment and judging whether it is met is quite subjective. Even the term ‘senior management’ can be viewed from different perspectives, e.g., are the NA-SH Office Directors, first line supervisors ‘senior management’ (perspective of the senior advisor to this team, but not viewed as senior by the Associate Administrator for Safety and Health (NA-SH-1), who believes NA-SH-1 and NA-SH-2 comprise the ‘senior management’ of NA-SH).

From a top looking down perspective, there is much evidence that senior management (i.e., NA-SH-1/2) is very committed to the TQP:

- Assigning NA-SH-2 as the NNSA FTCP lead agent and his energetic leadership with the NNSA FTCP community is evidence of senior management commitment to the TQP.
- The decision to pursue TQP accreditation as a NA-SH priority, publishing it in the NA-SH Business Plan, and expending resources to initiate the accreditation process demonstrates senior management commitment. There is no forcing function from outside of NA-SH for NA-SH to get TQP accredited; this is purely a result of a motivated leadership for the TQP.
- The inclusion of a TQP Specific Performance Objective (SPO) in every NA-SH employee’s performance plan, one of only 3 SPOs per employee. The TQP SPO carries as much weight as the SPO for doing one’s job, arguably is at least as important as attaining, maintaining qualifications and training and supporting the training of others.
- The allocation of primary duties to both Band V NA-SH employees in Albuquerque to TQP/FTCP related functions. Band V employees are a scarce commodity and the application of the Albuquerque Band V employees to FTCP/TQP/Safety Basis Professional Program duties is a demonstration of commitment.
- The support of other individuals in NA-SH to support the administrative functions for TQP as a collateral duty and to support DOE’s TQP training as a whole (i.e., support for multiple NA-SH personnel to become DOE National Training Center (NTC) certified instructors and teach TQP classes) is also evidence of senior NA-SH Management commitment to the TQP.

Conversely, there is ample evidence of a disconnect from the senior management commitment to the TQP in multiple breakdowns in the implementation of the NA-SH TQP Supplemental Directive. This would tend to indicate the senior management commitment to the TQP does not fully permeate throughout the NA-SH organization. The breakdowns begin to originate at the Office Director level, which, as noted, are viewed by many as ‘senior management,’ and at the very least are the conduits from NA-SH-1/2 to the rest of NA-SH.

Director and employee interviews indicated that the NA-SH SD is not up to date and reflects an older Service Center style organization. As noted under areas of improvement, there are cases of the NA-SH TQP Coordinator and NA-SH Directors are aware of NA-SH SD requirements not being met but not notifying the NA-SH FTCP agent. There is also a concern that the new Senior Technical Safety Managers (STSMs) have not completed any specific STSM competencies and are not given enough time to focus on their STSM requirements. NA-SH-1 was not aware of any positive or negative feedback in the NA-SH TQP over the past year.

Areas for Improvement

1. Upper management has not assessed TQP completion progress for supervised individuals based on the current TQP matrix. The matrix is not updated and does not serve as an effective management tool. New STSM supervisors are behind on their competencies. Employees were issued TQP-Like Continuity of Operations (COOP) qualification cards and have not completed any competencies past the due dates with supervisor knowledge.
2. The NA-SH TQP Coordinator self-identified during the assessment that all duties are not being performed under NA-SH SD including TQP training files, developing and maintaining QO training materials, tracking and reporting status of employees to supervisors, and notifying supervisors of upcoming expiration of initial and requalification guidelines.
3. NA-SH Directors did not notify the NA-SH FTCP agent of known deficiencies in the Program over the past year that would result in a feedback mechanism essential to program accreditation. Director interviews reflected that TQP is not normally discussed in NA-SH staff meetings.
4. The NA-SH SD requires a five year GTB renewal for TQP participant's qualification which is not reflected in the TQP Tracking Matrix. Most NA-SH employees are required to complete this five year GTB renewal in January 2014 based on the previous GTB gap approvals under the Service Center. The five year GTB renewal is not required under DOE O 426.1.
5. Employees are not aware of and are not implementing their requirements under NA-SH SD 426.1 including the updating of TQP competency completion and providing copies of TQP related documents with the NA-SH TQP Training Coordinator.

Recommendation

1. Suggest that NA-SH perform a quarterly TQP status meeting.

Criterion 1.2 is met. NA-SH is adequately identifying TQP participants to support the nuclear weapons complex mission. Position descriptions and record reviews overall did show a focus on identifying TQP required participants at the time of hiring actions. There are several cases of position descriptions reflecting inaccurate current TQP related duties based upon an outdated position description. For example, there are old position descriptions from previous organizations and assignment duties not reflect of current TQP supervisor expectations.

Area for Improvement

1. Employee position description need to be evaluated with current TQP related duties and updated to meet the current NA-SH mission requirements.

Criterion 1.3 is met. NA-SH is adequately updating TQP related documents to reflect activities required for each individual to satisfy competencies. Record reviews and NA-SH interviews show that NA-SH is actively meeting the TQP competency requirements.

Criterion 1.4 is not met. NA-SH is selecting and approving qualifying officials in accordance with all TQP requirements. Overall technical competencies of employees are approved and documented through various means including written exams, personal

QO notes, and written documentation on the employee's competency card. There have been a few QOs approved in the past that have not completed the FAQ associated with the competencies, but were suggested by the supervisor. There are also level of rigor STSM competency card documentation concerns based on the grandfathering of older competency cards and NA-SH TQP Coordinator implementation problems. The NA-SH TQP program does not meet the overall requirements for the training of QOs based on undeveloped training material.

Areas for Improvement

1. NA-SH STSM qualification cards do not show a clear level of rigor for senior management based on previous TQP approvals in other NNSA organizations.
2. The NA-SH TQP Coordinator has not developed and maintained QO training materials as defined in the NA-SH SD 426.1, item 3g(7).
3. NA-SH FTCP responsibilities under NA-SH SD 426.1 require NA-SH TQP QOs to be trained in accordance with DOE O 426.1, Change 1. DOE O 426.1 does not provide specific training information for QOs.

Recommendation

1. NA-SH should consider elaborating on the supervisor and FTCP approval justifications for QOs that do not have completed TQP qualification in the specific area.
2. **TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.**

Although written procedures and processes exist for the implementation of the TQP program, they contain numerous errors, incorrect references, and inconsistencies. The errors were deemed serious enough that the program could not be implemented as written. There was a general lack of understanding of the requirements in these procedures and processes by the TQP participants. Several TQP Participant records were reviewed and compared to the requirements of the procedures and several were found be less than adequate. Based on the issues identified, the objective is not met.

Criterion 2.1 is not met. NA-SH relies on the Office of the Associate Administrator for Management and Budget (NA-MB) to receive multiple TQP products, including qualification exams, monthly training packages, website status, qualification cards, etc. In general, the quality of the products from NA-MB are adequate for use for NASH TQP functions, but over the past year there have been multiple instances where NA-MB TQP products are inadequate for use without modification, and in some cases major modification. These include:

- An STSM final qualification exam that was completely inadequate due to (1) a lack of questions/material related to nuclear safety and (2) questions poorly worded to the extent a proper answer could not be reasonably expected. The test was poor enough that a person passing the test would not have demonstrated a capability of competencies necessary to be an STSM. Similarly, a person who did possess the capabilities of competencies to be an STSM could easily fail the exam due to the lack of examination of STSM nuclear safety functions.
- An STSM Qualification card for the revised DOE STD-1175-2013 posted on the TQP website lacked the competency for the Defense Nuclear Facilities Safety Board (DNFSB) interactions that is included in the standard.

- A monthly continuous training module distributed for use on DOE Guide 421.1-2A Documented Safety Analysis (DSA) guide that contained multiple pages of material covering topics that were not in the guide and were technically incorrect.
- Multiple instances of TQP progress information that is/was incorrect.

A review of the NA-MB organization chart indicates that their Training Operations Division (NA-MB-42) has no personnel that are qualified in the TQP, including the individual who is responsible for distributing TQP products. Most of these products are developed by service support contractors and then distributed by NA-MB without review by an STSM or TQP qualified individual. If the TQP materials provided by NA-MB are not systematically reviewed by NA-SH prior to use, inadequate products such as those listed above can be implemented/used, resulting in misinformation being disseminated, improper/inadequate execution of the TQP, etc. This also results in a situation where important elements of TQP execution are being controlled by service support contractor personnel, with no qualified review by NNSA personnel.

NA-SH SD 426.1 and its attendant implementing instructions have no provisions for the review and vetting of NA-MB provided TQP materials. From a Quality Assurance (QA) perspective, this is akin to a lack of commercial grade dedication for the use of commercially available products for use in nuclear applications.

Criterion 2.2 is not met. Several NA-SH staff members were interviewed and did not know of the existence of the TQP SD or related Process Descriptions (PD). Others knew of their existence but were unable to locate the documents.

NA-SH Supplemental Directive NA-SH SD 426.1, *NA-SH Technical Qualification Program* includes a listing of responsibilities for most key positions and participants in the TQP program (Section 3). The directive lists requirements for the Technical Training Competency Program (TTCP) Manager but the responsibilities for this position are not discussed in the responsibility section.

Several TQP participants did not understand their responsibilities. For example, Section 3.f.(3) requires that each participant coordinate with the TQP Coordinator to ensure all elements of the matrix are correct. Several staff members were quizzed on this requirement and most were unaware of the requirement or how to access the matrix.

There is conflicting guidance on who is responsible to update the TQP matrix maintained on the Albuquerque Complex TQP Intranet site. NA-SH SD 426.1 states that TQP Participants are to coordinate with the NA-SH TQP Coordinator to ensure all elements of the matrix are correct (4.f.(3)); however, NA-SH PD 426.1 step 5 states that the Technical Qualification Program Participant (TQPP) updates the matrix. NA-SH PD-4 states that the Supervisor and/or the NNSA HQ FTCP Agent facilitate timely entry of progress in the matrix. In reality, the matrix can only be edited by NA-MB staff and cannot be edited by NA-SH staff.

NA-SH SD 426.1, *NA-SH Technical Qualification Program* references a Process Description (PD) for implementation of the TQP-like program. No such PD exists.

The SD and related PDs need to be rewritten to eliminate inconsistencies and accurately reflect the program operations. Staff should be trained on the revised documents.

Criterion 2.3 is not met. NA-SH SD 426.1, *NA-SH Technical Qualification Program* requires the update of a matrix of training records and dates. The TQP Matrix was reviewed and the following was noted:

1. Five personnel are listed as exceeding a current training deadline.
2. In most cases the last Continuing Training (CT) completed is 2012. CT for 2014 has been issued and this should reflect the 2013 cycle.
3. The matrix does not list a Primary FAQs for several persons.
4. Several information blocks on the matrix which should be filled in are blank, such as initial date issued and last CT completed.

The NA-SH Supplemental Directive requires a five year requalification date for GTB certification (Section 4.a.(2).(f).(i)). Several staff members were unaware of this requirement and some of the staff had exceeded this five year requirement. The TQP matrix does not include the GTB Qualification date or requalification due date.

An interview with the TQP Coordinator noted that contrary to the requirement to track and report on the status of the NA-SH TQP participants to the NNSA HQ FTCP Agent and participant's supervisors, no such report has been prepared. Additionally, the requirement to notify NA-SH TQP supervisors of upcoming expiration of initial qualification or requalification timelines has not been implemented. These deficiencies may have resulted in several staff members being behind in their assigned COOP training responsibilities.

The NA-SH SD fails to provide guidance to personnel or address implementation of TQP-Like qualification assignments. At least three people are assigned TQP-Like qualification requirements for COOP. A reference to Process Description 006, *Selection of Participants and Initial Qualification for the Technical Qualification Program-Like (TQPL)* is improper as no such PD exists. Furthermore, the SD requires records to be maintained in accordance with PD-006.

The TQP matrix should be updated to include complete and correct information. The requalification requirements for GTB should be clarified. The requirements of the SD should be implemented where they are not being fulfilled. A PD for the TQP-like program should be developed.

Criterion 2.4 is not met. The NA-SH SD and related PDs discuss requirements for records maintenance. The TQP Coordinator maintains individual files for each TQP Participant. Examples of the files were reviewed and several discrepancies were noted:

1. The NA-SH SD requires maintenance of all signed qualification cards and TQP qualification certificates. Contrary to this requirement, some records did not include GTB qualification information.
2. Some copies of certificates identified in employee files were not signed, contrary to the requirement.
3. The NA-SH SD requires copies of equivalency forms, if used with objective evidence as a basis for granting the equivalency. Contrary to this requirement, records were identified with no such copies when personal copies were known to exist.

The TQP Coordinator has recently completed a document inventory exercise (i.e., Table of Contents effort) and noted additional missing records. No actions to correct these discrepancies was underway at the time of the SA.

The TQP files do not meet the requirements of the NA-SH Supplemental Directive.

Area for Improvement

1. NA-SH processes do not include provisions to review and ensure TQP products received from NA-MB are of adequate rigor and quality for use in the NA-SH TQP.

Recommendation

1. Revise NA-SH SD 426.1 and/or implementing processes to include a requirement/process to review and validate TQP products accepted from NA-MB.

3. TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.

This objective is met, with two of the four criteria met, one non-applicable, and one not met. NA-SH selects from the expansive set of adequate DOE FAQs, approved by the FTCP, to implement competency requirements (with a few exceptions noted). Within this objective, there are areas for improvement, most notably developing a process to encourage the attainment and maintenance of professional certifications. As described in Objective 4, NA-SH has room for improvement with respect to ensuring the proper FAQs are assigned to employees based on individual and organizational responsibilities.

Criterion 3.1 is met. NA-SH exclusively uses the FTCP approved FAQs to define competency requirements that describe Knowledge, Skills and Abilities (KSA) elements. There is room for improvement in the FAQs, but it would be counterproductive for NA-SH to expend resources to develop a unique TQP competency system for NA-SH itself.

While the DOE TQP FAQs are adequate for NA-SH in general, there are, a few NA-SH functions for which there is no related FTCP FAQs. These include Human Subjects Research (HSR) and Bio-safety Laboratory (BSL) oversight function. It is not clear whether the HSR function is primarily contact oversight in nature (and thus requires no special qualifications); the lack of expertise/qualification in BSL laboratories is a vulnerability (there is a single competency related to BSL in the Industrial Hygiene FAQs, but hardly a comprehensive FAQs for BSL). Additionally, one NA-SH participant has the former Service Center Explosives Site Specific FAQ card that falls outside of the DOE FTCP FAQs (noting, though, that part of this included competencies within the NES FAQs).

A discussion of the need for an overall NA-SH site specific FAQs is included in Criterion 3.4.

Criterion 3.2 is non-applicable. This criterion has little applicability to the NA-SH TQP since NA-SH exclusively or primarily uses the FTCP FAQs. NA-SH personnel qualify to one of the over two dozen approved FAQs. The Office of Nuclear Safety (NA-SH-80) staff primarily qualifies to STSM FAQs; The Office of Safety Analysis (NA-SH-60) personnel primarily qualify as Nuclear Safety Specialists (NSS); other NA-SH personnel are qualified to at least one of the two dozen FAQs approved by the FTCP. A discussion of how NA-SH uses staffing analysis for assigning FAQs is

included in Criterion 3.4, as is a discussion on the need for site-specific qualification competencies.

Criterion 3.3 is not met. NA-SH has no formal mechanism in place to consider professional accreditation requirements nor has any formal mechanisms in place to encourage or sponsor professional certifications (e.g., maintaining Professional Engineer license, CHP, etc.). The Office of Occupational Health (NA-SH-70) supervisor indicated he encourages employees in his group to include continuing training requirements for professional certifications within the IDP process and supports those training efforts. Two other NA-SH supervisor interviewed (the Office of Corporate Management Systems (NA-SH-40) and NA-SH-80) do not use IDPs to encourage professional certification.

Criterion 3.4 is met. As described in Criterion 3.1, NA-SH uses the DOE TQP FAQs as an adequate system to identify competency requirements. NA-SH TQP participant's (nearly all of NA-SH is in the TQP) competencies are encompassed within the DOE TQP FAQs.

DOE O 426.1 requires that each DOE Headquarters, field or organizational element determine whether office/site/facility-specific qualification standards technical competencies are needed for TQP participants. A senior NA-SH advisor recommended a site-specific qualification standard/card for NA-SH, noting the accredited Service Center TQP had included a site-specific card. However, the NA-SH Office Directors concluded there is no compelling need or driver for the standard/card or identified problem the site-specific card would rectify. Ultimately, NA-SH-1 signed a White paper that concluded no site-specific competency was needed *at this time*, but that the decision would be evaluated as part of the NA-SH TQP SA, and noted a decision would be based not just on this CRAD, but on the effectiveness of the CTP evaluated in objective 7. The CTP criterion in objective 7 was evaluated as met; the value of pursuing a site-specific NA-SH qualification standard/card is discussed in the next few paragraphs.

There are two main downsides of implementing a NA-SH site-specific qualification card; there is no clear benefit from the qualification card that warrants the expenditure of resources and there are no NA-SH site-specific competencies that would preclude a DOE TQP qualified individual from outside NA-SH coming into the organization and performing the NA-SH functions.

A review of the proposed NA-SH site-specific qualification card indicates it is comprised of two competencies, the first of which is a near verbatim repeat of the first competency of the STSM qualification card (communication skills). While communication skills are important, there is nothing NA-SH specific about the communication skills competency and the benefit of documenting communications as a competency is not clear and would not justify the expended opportunity cost for NA-SH resources in completing the competency. The second competency principally addresses the topic of Differing Professional Opinion (DPO), replicating what is in another STSM competency and adding additional material. While knowledge of the DPO process is important for all NA-SH and NNSA personnel, the knowledge itself could be attained through training and as with the first competency; there is no clear benefit for NA-SH personnel documenting completion of these competencies.

Areas for Improvement

1. NA-SH lacks documented competency requirements for a few specific functions (HSR, BSL, non-nuclear explosives) that are not encompassed within a DOE FAQS.
2. NA-SH lacks a process for identifying, attaining and maintaining professional certifications.
3. NA-SH lacks definitive documentation that an office specific qualification card/standard is not required.

Recommendations

1. NA-SH should evaluate the necessity of developing function specific competencies for the few NA-SH functions (HSR, BSL, non-nuclear explosives) that are not encompassed within a DOE FAQS.
2. NA-SH should identify professional certifications that will enhance supporting the NA-SH mission and develop a process/plan to encourage and support attaining and maintaining the certifications.
3. NA-SH should document and clearly articulate that a NA-SH site-specific qualification card/standard is not warranted.

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

The objective is met. NA-SH relies upon the DOE developed TQP GTB and job-specific FAQ standards to identify the rules, regulations, codes, standards, and guides necessary for the individual position. NA-SH has conducted annual staffing analyses and merged input with other NNSA HQ organizations. A review of the past FTCP annual staffing analyses reveals these analyses are conducted in a perfunctory manner, with offices essentially reporting the status quo, addressing only iterative changes that become necessary due to retirements and personnel transfers.

NA-SH personnel routinely provide subject matter expertise to the NNSA enterprise outside their assigned TQP functional area. Although senior management stated that it was not necessary to have personnel qualified in those TQP functional areas, it is illogical for an organization to have those responsibilities without the corresponding expertise. NA-SH has designated TQP QO for functional areas that NA-SH does not have TQP participants. However, NA-SH personnel who have expertise in multiple areas could be assigned secondary FAQs that would cover many of those functional areas.

Criterion 4.1 is met. DOE O 426.1, *Federal Technical Capability*, requires that DOE offices and organizations must ensure that their Federal employees are appropriately trained and technically capable of carrying out their responsibilities. The Technical Qualification Program (TQP) specifically applies to DOE technical employees whose duties and responsibilities require them to provide assistance, guidance, direction, or oversight that could affect the safe operation of a defense nuclear facility, including evaluation of contractor activities at those facilities. NA-SH does not have primary

responsibility for the operation of defense nuclear facilities, but does provide significant levels of assistance and oversight to all NNSA nuclear facilities.

DOE O 426.1, 4.b. (4) requires that “Each organizational element must use FAQs or other appropriate means to document technical qualification requirements for the position. These requirements must be established using the systematic approach to training methodology and include (c) Position Knowledge, Skills, and Abilities specific to the position, facility, program, and/or office, as determined by responsible Headquarters or Field Element Managers (FEM).” DOE O 426.2, Chapter I, 4.a., states that “The basic elements of a systematic approach to training include a systematic analysis of the jobs to be performed.”

DOE O 426.1, 4.b. (5) says that “Headquarters and FEMs must implement their TQP Plans.” And that (f) “The supervisor, in conjunction with the organizational FTC Program Agent, determines and documents if each position and/or individual must participate in the TQP based on the duties and responsibilities of the position description. If the position is required to participate in the TQP, they must also identify the appropriate FAQs and individual competencies for that position.”

The current NA-SH organization is populated with personnel from the former NNSA Service Center, Office of Technical Services, and other NNSA HQ organizations. DOE O 426.1, 4.b. (5) (g) states that “Workforce deployment, including reorganizations, must recognize the performance requirements of covered positions and maintain the safety, health, security, and environmental management technical competency requirements of the workforce.” The legacy position descriptions that originated in those different organizations have not been updated to reflect either the current job description or assigned TQP FAQ. A sampling of NA-SH personnel position descriptions revealed a wide range of discrepancies.

NA-SH personnel routinely provide subject matter expertise to the NNSA enterprise outside their assigned TQP functional area. For example, the Chief of Defense Nuclear Safety (CDNS) biennial reviews of Field Office implementation of nuclear safety oversight include functional areas that have no NA-SH personnel qualified in the TQP. Although senior management stated that it was not necessary to have personnel qualified in those TQP functional areas, it is illogical for an organization to have those responsibilities without the corresponding expertise. Senior management also noted that NA-SH personnel do not typically provide direction to the Field Office or contractor, and thus the corresponding TQP requirements do not apply. Those requirements are not limited to providing direction, and include providing assistance and guidance. It was also noted that NA-SH has designated TQP QOs for functional areas that NA-SH does not have TQP participants. However, NA-SH has an extraordinary group of personnel who have expertise in multiple areas who could be assigned secondary FAQs that would cover many of those functional areas without much additional effort.

The current NA-SH organization is populated with personnel from the former NNSA Service Center, Office of Technical Services, and other NNSA HQ organizations. The

legacy position descriptions that originated in those different organizations have not been updated to reflect either the current job description or assigned TQP FAQ.

Areas for Improvement

1. NA-SH personnel position descriptions do not always identify the incumbents' actual job duties and responsibilities, or the appropriate TQP functional area.
2. NA-SH personnel provide assistance, guidance, and oversight to NNSA nuclear facilities in functional areas that do not have any NA-SH personnel assigned to those TQP topics.

Recommendations

1. NA-SH should conduct a comprehensive review of the PDs for TQP participants and revise them to accurately reflect both the incumbents' job responsibilities and the appropriately assigned TQP functional area.
2. NA-SH should consider assigning secondary FAQs to personnel that have subject matter expertise in topics that are not currently covered by NA-SH personnel. (For example, emergency management, waste management, etc.)

Criterion 4.2 is met. NA-SH relies upon DOE developed TQP GTB and job-specific FAQs to identify the rules, regulations, codes, standards, and guides necessary for the individual position. NA-SH does not have a DOE O 426.1 based need for a set of site-specific or local qualification standards.

As required by DOE O 426.1, NA-SH conducts an Annual Staffing Analysis and merged input with other NNSA HQ organizations. A review of the past FTCP Annual Staffing Analyses, coupled with interviews of Office Directors and individuals who prepare the FTCP staffing analyses reveals these analyses are conducted in a perfunctory manner, with offices essentially reporting the status quo, addressing only iterative changes that become necessary due to retirements and personnel transfers.

The FTCP sends a letter out each year to DOE organizations and includes guidance for field elements on a methodology on how to prepare the staffing analysis. No guidance is provided for Headquarters organizations. The resultant NA-SH Staffing Analysis, prepared without a structured methodology, provides little useful information.

Area for Improvement

1. The past NA-SH FTCP Annual Staffing Analysis lacks rigor, is not based on any systematic evaluation of mission needs, and provides no meaningful information related to the TQP functional areas required to accomplish the NA-SH mission.

Recommendations

1. Revise NA-SH SD 426.1 and associated implementing processes to include a methodology for performing periodic workforce staffing analyses that results in a meaningful analysis of TQP functional needs to accomplish the NA-SH mission.
2. For the Fiscal Year 14 FTCP Annual Staffing Analyses, conduct a more structured review for NNSA HQ, evaluating staff needs based on (1) historic labor requests for NA-SH support based on Replicon data, (2) Cognizant Secretarial Officer responsibilities, (3) CDNS responsibilities as delineated in DOE O 410.1, (4) interviews with NNSA HQ management.

5. TOP-5, Credit for Existing Technical Qualification Programs

Criteria 5.1 and 5.2 are not met. A 100% review of available qualification records for all NA-SH personnel was conducted to determine the subset of personnel that had used the equivalency process to fulfill competency requirements on their functional area qualification card. Of the 40 qualification records reviewed, seven indicated the use of the equivalency process. Review of these records and interview of associated personnel indicated that objective evidence was not maintained as part of the qualification record, and objective evidence had to be obtained from each individual.

Review of individual objective evidence files indicated differing, but adequate documentation for equivalency. However, a supervisor analysis/evaluation of objective evidence to provide verification of equivalency was absent in all cases. Moreover, the TQP Competency Equivalency Evaluation Form required by NA-SH SD 426.1 had not been used for candidates qualifying after its effective date, and there was no equivalent documentation for candidates qualified prior to the effective date of the procedure. Due to a lack of consistent record keeping practices and use of the process required by the NA-SH SD, the NA-SH TQP is determined to not meet this objective.

Due to a lack of (1) consistent record keeping practices and (2) use of the equivalency process required by NA-SH SD 426.1, the objective of an effective credit/equivalency process for existing qualifications is not met.

Areas for Improvement

1. Records of objective evidence and supervisor evaluation/verification of claimed equivalencies are not provided to the TQP Coordinator and maintained by NA-SH as required by NA-SH 426.1.

Supporting documentation had to be obtained directly from five of the seven candidates who claimed equivalencies in their functional area qualification card.

For two of seven candidates, supporting documentation was available in the O drive repository, but was not maintained in the primary candidate qualification folder and was not easily identifiable.

2. The TQP Competency Equivalency Evaluation Form is not being used to perform evaluation/verification of claimed equivalencies as required by NA-SH SD 426.1. Therefore, there is no direct evidence of performance of the evaluation/verification of equivalencies other than supervisory signature on the respective qualification card competency.

All of the seven candidates possessing equivalencies and supporting documentation did not have a completed equivalency evaluation form. Note: For four of seven personnel, qualification was completed prior to the establishment of NA-SH and the requirement to use the form, however, there is no equivalent document showing evaluation/verification by a supervisor. For three of seven personnel who are recently qualified, the form was not used. At the time of this report, the NA-SH-80 Office Director had completed the appropriate forms to document his prior evaluation for two of the three recently qualified personnel and submitted to records, the one other person is not part of NA-SH-80.

3. Records are not easily auditable and are not supportive of the equivalency process or an accredited qualification program or records deficiencies identified in a 100% sample of candidate qualification records – 40 personnel. Note: These deficiencies were noted as a byproduct of reviewing records for equivalency documentation. Moreover, this review does not constitute a rigorous records review, but is indicative of further issues).

Ten of 40 candidate qualification records did not possess a completed/signed functional area qualification card.

None of the objective evidence supporting equivalency was available in the candidate qualification folders and had to be obtained directly from the candidates themselves.

Numerous candidate qualification records contain outdated and irrelevant site specific qualification cards or secondary functional area qualification cards for functional areas not relied upon for their NA-SH position.

Several functional area qualification cards had missing signatures, missing evaluation methods, or missing pages.

Candidate qualification records were overloaded with numerous documents that are non-essential in demonstrating qualification. Further, these documents are not consistently labeled and are not consistently organized.

One candidate's qualification record contained qualification documentation for another candidate.

Recommendations

1. NA-SH should eliminate the use of the TQP User's Guide and the TQP Project Plan for the equivalency process. These are NA-MB-42 documents and are not official directives. Further, NA-SH should directly incorporate desired portions of NA-MB-42 documents (Table 11-1 of the User's Guide, guidance for equivalency evidence, and the Equivalency Evaluation Form) into NA-SH SD 426.1 to promote consistency in objective evidence and

to drive documented supervisory evaluation/verification.

2. NA-SH should determine the minimum set of records required to demonstrate the applicable qualification required by the NA-SH position and eliminate redundant or unnecessary documentation which makes qualification records difficult to audit or to retrieve information.

3. NA-SH should consider a memorandum for the record issued by a member of management to document acceptability of equivalencies used for qualification of individuals prior to the effective date of the NA-SH SD.

4. NA-SH should ensure that any candidates qualified after the effective date of the NA-SH SD that claimed equivalency have a completed TQP Competency Equivalency Evaluation Form.

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

This objective is met. Competency requirements identified as applying throughout the Department are adequately documented and appear to be transferable. Issues were noted with the quality of the documentation of positions. Questions also arose regarding the disposition of records associated with persons that have left NA-SH.

The issues identified do not impact the transferability of the qualification provided the incumbents maintain their records when they move to a new position.

Criterion 6.1 is met. All reviewed records include all GTB and FAQS competencies.

Criterion 6.2 is met. Documentation of each TQPP signed qualification cards was available for review. NA-SH TQP participants within the Albuquerque Complex maintain their own signed qualification cards (generally a FAQS and GTB Cards). For current employees, these records were available and sufficient. NA-SH-80 TQP participants completed and signed qualification cards are maintained by the NA-SH-80 Office Director.

The disposition of TQP records held by TQP participants that have left NA-SH is unclear. The records that were held by former Service Center NA-SH staff in the TQP are not being maintained by NA-SH.

Areas for Improvement:

1. The original signed qualification cards for persons that have left NA-SH were not available for review.
2. Multiple copies of TQP documentation are maintained by the TQPP, the NA-SH TQP Coordinator and Learning and Career Development Department (LCDD). It is unclear which document is to be considered the official TQP “record.”
3. QOs maintain a varying degree of documentation regarding QO duties.

Criterion 6.3 is not met. NA-SH Office Directors work with human resources to develop position descriptions and vacancy announcements to hire NA-SH staff. A checklist is in place that includes whether or not TQP applies to the position. It was noted that position descriptions for some recent hires did not include TQP as part of the position description as required.

Several of the reviewed position descriptions for existing staff were out of date. It was noted that the position descriptions did not accurately reflect the organization or duties of the employee. Most of the position descriptions were observed to have been edited by NA-MB without a notation of what was changed or when the change was made. The position descriptions provided by NA-MB were not consistent with the position descriptions in the NA-SH TQP files or with what is posted in NA-SH TQPP electronic official personnel file (eOPF).

Areas for Improvement

1. The NA-SH position descriptions are out dated and do not accurately reflect the incumbent's current position or TQP related requirements.
2. The original signed qualification cards for persons that have left NA-SH were not retained by NA-SH as a record.

Recommendations

1. Work with LCDD to clarify record retention requirements between LCDD, NA-SH and the TQPP. Ensure files are adequately maintained for persons leaving NA-SH.
2. Work with NA-MB to update all NA-SH position descriptions that are out of date.
3. Establish a NA-SH-1/2 discussion regarding qualification documentation requirements with QOs.

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

This objective is met. The TQP participants that have completed documentation of their qualifications were determined to be qualified. Even though there are identified weaknesses with the overall process, the process as currently defined provides sufficient rigor to document compliance with the requirements.

Criterion 7.1 is met. The technical competency of personnel who have completed the requirements of the TQP was deemed to be adequate and appropriate. NA-SH serves several functions within NNSA. Many members of the staff are viewed as experts in their areas and their expertise is frequently called upon within NNSA. Based on discussions with NA-SH management, no issues with staff technical competency were raised. The possibility of assigning additional FAQs was discussed and the value of expanded TQP participation was acknowledged. Negative comments from NA-SH customers are rare and are usually based on staff availability and are not related to staff technical competence.

Criterion 7.2 is met. With the exception of this Self Assessment, no specific efforts to formally collect feedback and periodic evaluation over the past year were provided. Based on discussion with the TQP Coordinator, a review of NA-SH processes created by the former Coordinator, identified several deficiencies that need to be corrected prior to initiating accreditation (e.g., clarification of records responsibilities).

Based on a discussion with LCDD, all newly issued qualification standards include a form

on the last page to solicit feedback from each TQP participants as they complete the qualification process. It was suggested during the interview that LCDD could provide a similar form on the annual continuing training progress trackers to solicit additional feedback from the participants.

Quarterly metrics for NA-SH TQP status are developed for all of NNSA that include NA-SH TQP status. The current NA-SH procedures do not accurately reflect the current process to update the TQP Matrix. The process has changed and participants can no longer update their own status and need to submit updates to LCDD.

Area for Improvement:

1. The TQP Matrix is not kept up to date with the NA-SH TQP status.

Criterion 7.3 is met. Continuing training is referenced in NA-SH SD 426.1 as part of the requalification process for STSM, NSS, and GTB requalification. All TQP participants that have completed FAQs receive an annual list of requirement documents that have changed that are associated with their FAQs from LCDD. This is used in conjunction with an annual IDP to ensure continuing training is planned for and documented when it occurs.

Areas for Improvement

1. One weakness that was noted is that TQP participants were not always aware of the NA-SH TQP requirements documents that are posted on PowerPedia. It is suggested that as these documents are updated, that they be identified as required reading for anyone that is required to follow each process.
2. The TQP Matrix is not kept up to date with the NA-SH TQPP status.

Recommendations

1. As TQP processes are revised and added to PowerPedia, inform staff that they are available and add to required reading list as appropriate.
2. Work with TQPP to update TQP Matrix. Revise NA-SH processes to depict the new process.
3. TQPP were not always aware of the NA-SH TQP requirements documents that are posted on PowerPedia.

Appendix A
NA-SH TQP Self Assessment
November 2013

NNSA NA-SH TQP Review Plan Objectives and Criteria

1. **TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.**

Criteria:

1.1 Senior Management is committed to the TQP.

1.2 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.

1.3 IDPs, training plans, technical qualification records, or other related documents are updated to reflect the activities required for each individual to satisfy competencies.

1.4 A formal evaluation process (e.g. select and train Qualifying Officials) 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.

2. **TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.**

Criteria:

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

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

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

2.4 A training and qualification records development and maintenance process is established for each employee in the TQP.

3. **TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.**

Criteria:

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

3.2 Recognized experts help establish competency requirements.

3.3 Related professional accreditation requirements are considered in the program as applicable.

3.4 Competency requirements are identified in the areas listed below. (Note: this does not imply that three separate documents are required.)

- Basic Technical Knowledge
- Technical Discipline Competency
- Position Knowledge, Skills, and Abilities

4. TOP-4, Qualification Tailored to Work Activities. The program identifies unique Department and position-specific work activities and specifies the knowledge, skills, and abilities 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. The program supports the mission needs of the office.

5. TOP-5, Credit for Existing Technical Qualification Programs.

Criteria:

5.1 Credit (equivalency) is granted for previous training, education, experience, and completion of related technical qualification 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. Equivalencies are formally validated, approved, and documented.

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

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

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.

For these objectives and criteria, the Assessment Team Members used their own applicable LOIs, tailored for NNSA NA-SH for specific assessment objectives and criteria. The results of the review of documents and interviews are discussed in this Self Assessment Report.

Appendix B

NNSA NA-SH TQP Self Assessment Review Team Member Assignments

1. TQP-1, Structured Program. The program clearly identifies and documents the process used to demonstrate employee technical competence.

NNSA NA-SH Self Assessment Team Member Assignment: Kevin Carr

2. TQP-2, Plans and Procedures. Plans and/or procedures are developed and implemented to govern administration of the program.

NNSA NA-SH Self Assessment Team Member Assignment: Rex Borders

3. TQP-3, Competency Requirements. Competency requirements are clearly defined and consistent with applicable DOE standards for similar industrial occupations.

NNSA NA-SH Self Assessment Team Member Assignment: Carl Sykes

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

NNSA NA-SH Self Assessment Team Member Assignment: David Hall

5. TQP-5, Credit for Existing Technical Qualification Programs.

NNSA NA-SH Self Assessment Team Member Assignment: Tim Orr

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

NNSA NA-SH Self Assessment Team Member Assignment: Lynn Maestas

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

NNSA NA-SH Self Assessment Team Member Assignment: Lynn Maestas

Note: Self Assessment Team Member Synoptic Biographies follow:

Self Assessment Team Leader: Michael Garcia, NA-SH-70

Captain, U.S. Navy Reserves (Ret.), Director, NA-SH-70; Alternate NNSA Agent.

Degrees: Bachelor of Science (BS), Biology, University of New Mexico; Master of Science (MS) Industrial Hygiene, University of Central Missouri.

Certifications: STSM Qualified, December 2006; Re-qualified, December 2011

Upon completion of undergraduate studies from the University of New Mexico, Mr. Garcia worked for the Los Alamos National Laboratory (LANL) in the assessment of chemical and radiological exposures for the Industrial Hygiene Chemical Section. Following completion of the Industrial Hygiene MS program at University of Central Missouri, he was employed as a Project Manger for the National Institute for Occupational Safety and Health (NIOSH) in the Criteria Documents Development Branch. His next assignment was with the General Electric Company (GE), Aircraft Engine Group Plant (AEGP) where he worked as the Plant Safety and Health Program Manager. Specifically, while working for the GE AEGP, a major industrial manufacturing facility with 1,800 employees, he managed a comprehensive Safety and Health program that included the following elements: Industrial Hygiene, Occupational Medicine, Industrial Safety, Industrial Security, Physical Security and Fire Protection.

Mr. Garcia was hired by DOE in 1984 as a staff Industrial Hygienist. Work assignments with DOE included participation as a Team Leader or Team member on conducting OSH type inspections, Health and Safety Appraisals (e.g. Industrial Hygiene, Occupational Medicine and Industrial Safety), Technical Assistance Reviews, Accident Investigations, Voluntary Protection Program (VPP) Reviews, and Operational Readiness Reviews. Mr. Garcia has served as the Chairman of the DOE Industrial Hygiene Coordinating Committee, Executive Secretary of the Albuquerque Location (AL) Toxic Materials Coordinating Committee, and as a member of the DOE Secretarial Beryllium Rule-making Committee.

As Director NA-SH-70, Mr. Garcia has responsibility for the management of Health Protection staff with expertise in the following specialty areas: Health Physics, Criticality Safety, Bio-surety, Occupational Medicine, Industrial Hygiene and Emergency Response. The work includes providing necessary technical support to the NNSA Field and HQs organizations. Specific responsibilities include the coordination of necessary mission related work for the NNSA Field Offices include the completion of assessments, readiness reviews, program reviews and investigations.

Self Assessment Senior Advisor: Allen Tate, Sandia Field Office

Mr. Tate has over 30 years of federal government experience, including nuclear plant operations; aircraft operations; command and control; nuclear weapons logistics support; and contractor field-level oversight. Mr. Tate retired from the US Military, serving in both the US Navy and the US Air Force for over 25 years. Mr. Tate currently works at Sandia Field Office as the Contractor Training and Qualification Oversight Specialist, the Nuclear Facility Maintenance Oversight Engineer, and the Instrumentation and Control Safety System Oversight Engineer. Mr. Tate is also the field office TQP Coordinator. Mr. Tate holds a Master's Degree in Engineering Mechanics from the New Mexico Institute of Mining and Technology and a

Bachelor's Degree in Sociology from the State University of New York.

Team Member: Rex Borders, NA-SH-70

MS, Nuclear Engineering, University of New Mexico, 1994 (9 credit hours post Master's degree)

BS, Health Physics, Elizabethtown College, 1984

Naval Nuclear Power School with Electrician and Engineering Laboratory Technician qualifications

Certified Health Physicist with American Board of Health Physicists

Mr. Borders has been in the DOE Environment, Safety and Health organization in its various manifestations since initial employment with DOE. Currently in NA-SH-70, Safety and Health organization Mr. Border's holds the TQP Radiation Protection FAQ. Mr. Borders has participated in the CT aspects of the TQP. In this position, support is provided for safety and health activities of the division including leading the Division's Radiation Protection Operational Awareness Activities.

Mr. Borders is responsible for oversight of DOE contractor implementations of 10 CFR 835, *Occupational Radiation Protection* and DOE Order 458.1 *Radiation Protection of the Public and the Environment*. In this capacity Mr. Borders has led and/or participated as a team member in related subject matter assessments, appraisals and audits. Also, Mr. Borders has developed audit criterion, associated lines of inquiry and has written or contributed to reports following these various assessments.

Mr. Borders has managed the DOE Federal staff radiation dosimetry program for a number of years prior to transfer of these duties to the Oak Ridge Radiation Exposure Management System (REMS).

Mr. Borders has excellent computer skills in standard office software and is currently the administrator for the NA-SH Replicon Project Management/Timekeeping Computer Program. Prior to that, Mr. Borders was an administrator of the DOE Task Tracker program and was responsible for developing a Microsoft (MS) Access Database used for staff time keeping activities.

Mr. Borders has knowledge of DOE facilities and commercial nuclear power facilities. For example, he recently filled in for a Sandia Field Office employee during extended medical absence and spent many hours at the Sandia Z-machine facility. Mr. Borders has been to most DOE facilities in various capacities.

Mr. Borders has supported administrative duties including procedure development, white paper preparation, and staff training.

Babcock and Wilcox, Naval Nuclear Fuel Division (1989-September 1990)

As the Radiation Protection Manager for this facility, he supervised a staff of about 40 professionals and technicians at this facility.

Three Mile Island (TMI) Nuclear Station (1980-1989)

Mr. Borders worked at TMI during facility cleanup following the TMI accident in March 1979. He ended employment there as the Radiation Protection Shift Supervisor in Unit 1. Prior to that, he was a Radiation Protection staff training instructor for the TMI Training Department.

US Navy, Nuclear Power Program (1972-1980)

Mr. Borders was a qualified Engineering Watch Supervisor and Engineering Laboratory Technician (ELT) in the Naval Nuclear Power Program. His last assignment was as a training instructor at the Navy training facility in West Milton, NY.

Following qualification in the program, he served two years on the USS Swordfish SSN 579 as an ELT.

Team Member: Kevin Carr, NA-SH-50

BS, Industrial Engineering, 1984; Master of Business Administration (MBA), 1996

TQP Qualified in Occupational Safety and Health since 2009.

Mr. Carr serves as an explosives and occupational safety and health engineer for NNSA. Mr. Carr provides explosives safety support including site planning, accident investigation, pressure safety, and general occupational safety and health. Also, he serves as the DOE primary representative to the DoD technical working groups for hazard classification, explosives characterizations, and explosives test standards. Mr. Carr serves as the DOE Primary Representative to the Nuclear Transportation Working Group in regards to the same transportation and storage of nuclear weapons in support of stockpile maintenance.

Team Member: David Hall, NA-SH-70

BS, Health Physics, University of Nevada

Mr. Hall is a Physical Scientist assigned to the Office of Occupational Health, NA-SH-70, at the NNSA Albuquerque Complex, and provides subject matter expertise to the NNSA complex on issues of Radiation Protection, Emergency Management, and other Nuclear Safety related disciplines.

Mr. Hall has more than 21 years of federal experience in radiation protection programs, emergency management, and safety management programs for DOE and NNSA. As a Health Physicist at the Nevada Operations Office (NV), Mr. Hall provided radiation protection guidance, regulatory interpretation, and technical recommendations to NV, NV contractors, and Nevada Test Site (NTS) user organizations.

Mr. Hall was the Crisis Response Program Manager for certain elements of the DOE Radiological National Emergency Response Assets at NV and was a Team Leader or Team member in numerous radiological emergency response deployments. He also served as the Emergency Management Response Program Manager at the NTS and was responsible for oversight and evaluation of the NTS Emergency Management response elements.

Mr. Hall has been a team member on a number of DOE Type-B investigations, NNSA Biennial reviews (CDNS), Operational Readiness Reviews (ORR), Readiness Assessments (RA), and

Functional Area Reviews assessing radiation protection, emergency management, safety management programs, training and qualification, and radioactive waste management.

Mr. Hall has been qualified in the DOE TQP for the GTB and the Radiation Protection functional area since the TQP inception in 1997.

Team Member: Lynn Maestas, NA-SH-40

BS, Physics, Kenyon College; MBA University of Richmond; Completed Sandia National Laboratories Weapon Intern Program

Certifications: Quality Assurance Functional Area Qualification

Upon completion of undergraduate studies from Kenyon College, Mrs. Maestas worked as a Physics Teacher for St. Christopher's School in Richmond Virginia while completing her MBA at the University of Richmond. She completed her MBA at the University of Maryland whilst starting her career with the Department of Energy.

Mrs. Maestas started her career with DOE working in the areas of Budget, Human Resources and Procurement. She transferred to Western Area Power Administration and spent a year working on the Power Marketing and Rates staff followed by a year with the Department of Energy Office of Environmental Management.

In 1992 Mrs. Maestas transferred to the AL. She has worked for AL and its successor organizations since that time. During her tenure at AL, she has encumbered a variety of positions. She served as the Operational Surety Site Liaison for Kansas City Plant, Waste Isolation Pilot Plant, Pinellas Plant, and Mound Plant. She concurrently served as program manager for Performance Indicator, Occurrence Reporting, Corrective Action Management, and Lessons Learned Programs. She also served as the AL Standards Program Manager. She worked with each AL Site to ensure that the contractor(s) had appropriate standards management systems in place (e.g., Work Smart Standards, and Directives Based Process). During this time she also served as the ALO Technical Standards Manager and was on the DOE Technical Standards Committee. She also lead Weapons Safety Basis Review Teams and served as an Independent Review Team Leader, for the NNSA Service Center, Nuclear Safety and Support Divisions (formerly the Independent Safety Review Division). During this time she provided technical assistance and oversight to NNSA Site Offices and Contractors. She has participated on NNSA HQ Reviews, Operational Readiness Reviews, Integrated Safety Management System Verifications, Safety Basis Reviews and other technical review teams (e.g., Standards and Requirements, Federal Technical Capabilities, Quality Assurance, Safety Basis, Conduct of Operations).

Team Member: Tim Orr, NA-SH-70

MBA with a Finance Emphasis from Webster University.

Master of Engineering Administration in Industrial and Systems Engineering from Virginia Polytechnic Institute and State University.

BS in Engineering Physics from Miami University.

Mr. Orr is also a Licensed Professional Engineer in the State of New Mexico.

Mr. Orr has over 25 years experience in the management, conduct, and assessment of nuclear operations, engineering, maintenance, and training and qualification activities. Mr. Orr currently

serves as a Senior Technical Advisor on the Chief of Defense Nuclear Safety Staff providing advisory services to the NNSA Administrator, Central Technical Authority, and NA-SH regarding nuclear operations, safety, and regulatory compliance issues. Concurrently, Mr. Orr serves as the Management Representative responsible for all aspects of the implementation of an ISO 9001 quality management system for the NA-SH organization.

Prior to joining NNSA, Mr. Orr served as Chief Operating Officer for H&P, Inc., a 50-person consulting firm, providing technical support services at three national laboratories and various other Department of Energy sites across the U.S. In this capacity, Mr. Orr was responsible for nationwide business development and technical staff recruitment for H&P, and overall administration of the company's business operations. In addition to corporate responsibilities, Mr. Orr served as a Senior Technical Advisor to Lawrence Livermore National Laboratory Nuclear Materials Technology Program and SuperBlock Facility Management and Los Alamos National Laboratory (LANL) Nuclear and High Hazard Operations Directorate for conduct of operations, safety basis implementation, and readiness, performing periodic reviews and technical assistance efforts.

Before joining H&P, Mr. Orr worked for Digital Systems International Corporation where he supported DOE's Albuquerque Operations Office in the oversight and readiness review of weapon-related programs at Pantex Plant.

Prior to starting his professional career, Mr. Orr served 7 years active duty in the U.S. Navy in various operations and staff assignments within the nuclear submarine warfare community.

Team Member: Carl Sykes, Director, NA-SH-80

Mr. Sykes is the Office Director of NA-SH-80. NNSA is a separately organized branch of the DOE responsible for maintaining the United States nuclear weapon stockpile, as well as national nuclear non-proliferation programs. Under the Atomic Energy Act (AEA), NNSA functions are the owner and regulator of nuclear weapons production facilities and laboratories, which are operated by contractor organizations. Mr. Sykes directs the CDNS staff in providing expert advice to the NNSA Administrator for nuclear safety regulatory, oversight and policy issues and decisions.

Mr. Sykes has 30 years of experience in nuclear operations and related safety management fields, including experience as an officer on a nuclear submarine, and field experience at DOE/NNSA facilities at Rocky Flats (now defunct nuclear weapon production facility) and the Los Alamos National Laboratory.

Appendix C List of Interviews and Documents Reviewed

This Appendix lists Interviews and Documents Reviewed.

Interviews included, but were not limited to:

- Associate Administrator for Safety and Health, NA-SH-1
- Director, NA-SH-40
- Director, NA-SH-50
- Director, NA-SH-70
- Director, NA-SH-80
- NA-SH FTCP Agent
- NA-SH TQP candidate
- NA-SH TQP participants
- NA-MB-42 personnel
- NA-SH TQP Training Coordinator

Documents reviewed included, but were not limited to:

- NA-SH SD 426.1, *Technical Qualification Program Plan for Federal Personnel with Safety Responsibilities at Defense Nuclear Facilities*
- NA-SH PD 426.1-1, *Selection of Technical Qualification Program Participants and Initial Qualification Process*
- [NA-SH PD 426.1-2, Selection of Training and Approval of Qualifying Officials for TQP Participants](#)
- [NA-SH PD 426.1-3, Technical Qualification Program for Continuing Training and Requalification](#)
- [NA-SH PD 426.1-4, TQP Competency Evaluation Requirements for Qualifying Officials](#)
- [NA-SH PD 426.1-5, TQP Requalification Process for STSMs and Other Select Functional Areas](#)
- NA-SH Management System Description/Quality Assurance Program
- NA-SH Business Plan
- [Position Evaluation Questionnaire Form \(PEQ\)](#)
- [Qualifying Official Attestation Form](#)
- [TQP Progress Tracker](#)
- [TQP Competency Equivalency Evaluation Form](#)
- STSM Exam provided by NA-MB-42 for Safety Basis Professional Program Lead
- Monthly training materials for DOE G 421.1-2A (original version before correction)
- Originally posted STSM Qualification Card for DOE STD 1175-2013