



**Department of Energy**  
Washington, DC 20585

September 8, 1999

MEMORANDUM FOR: STEVEN D. RICHARDSON  
CHAIR, FEDERAL TECHNICAL CAPABILITY PANEL

A handwritten signature in black ink, appearing to read "Jim Owendoff", with the date "9/13/99" written below it.

FROM: JAMES M. OWENDOFF  
PRINCIPAL DEPUTY ASSISTANT SECRETARY FOR  
ENVIRONMENTAL MANAGEMENT

SUBJECT: DNFSB RECOMMENDATION 93-3 – EM HEADQUARTERS  
PHASE II ASSESSMENT

The office of Environmental Management (EM) has conducted its Phase II Assessment of the Technical qualification Program (TQP). The Assessment, copy attached, was conducted in response to one of the internal actions to be taken to meet a commitment made in the Department's revised Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*. The Assessment was conducted by a team established by the Office of Training and Education (EM-13), EM's organization responsible for implementing the TQP and other DNFSB Recommendation 93-3 requirements. The Assessment relied on the objectives and criteria developed by the Federal Technical Capability Panel (FTCP), the Office of Management and Administration (MA), and a series of interviews of employees currently enrolled in the program. The assessment also reviewed the status of actions taken as a result of the Phase I Assessment submitted to the FTCP in October 1998.

In general, the Assessment found the EM has made progress since the Phase I Assessment and that progress is being made to fully implement the program at Headquarters. Progress has been made in fully qualifying employees in Senior Technical Safety Manager/Advisor (STSMA/A) positions and in implementing the overall Technical Capability Program in accordance with the EM Technical Capability Program Implementation Plan submitted to the FTCP in December 1998. Clearly, there is more work necessary to fully implement the EM Headquarters program. I am committed to making the EM program a viable program that meets the Panel's expectations.

If you have any questions, please contact Barry R. Clark, Acting Deputy Assistant Secretary for Management and Evaluation, on 202-586-1665, or Michael Kleinrock, Acting Director of Training and Education, on 202-586-4604.

Attachment

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**U.S. DEPARTMENT OF ENERGY**  
**OFFICE OF ENVIRONMENTAL MANAGEMENT**

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**Technical Qualification Program**  
**Phase II Assessment**

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**Office of Management and Evaluation**  
**Office of Training and Education**  
**September 1999**

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## EXECUTIVE SUMMARY

The Office of Environmental Management (EM) has conducted a self-assessment of its approved Technical Capability Program (TCP). The assessment was conducted to meet commitment 5.4.2 of the revised Department of Energy (DOE) Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*.

EM was in the process of developing a Technical Qualification Program (TQP) when concerns were raised by the National Treasury Employees Union (NTEU). Those concerns included the appropriateness of such a program when employees hired under Civil Service Rules were already considered to be qualified for the positions to which they were selected and that such a program might be used to determine staff that might be separated during a Reduction in Force. Because the issues could not be resolved at the time, the EM TQP was put on hold in April 1996. These issues were resolved in December 1998, with the approval of the *EM Technical Capability Program (TCP) Implementation Plan*, which provides for implementing the Senior Technical Safety Manager/Advisor (STSM/A) Program (a subset of the TQP) as a mandatory program for selected safety-critical positions, and a voluntary program for all other EM technical personnel. This approach was coordinated with the NTEU.

One year ago, EM had no formal TQP. EM did have a functional STSM/A activity and a Technical Capability Program Improvement Team (TCPIT) with bargaining unit participation. Today EM has an approved Implementation Plan for a comprehensive TCP with many elements in place or in draft. While this program is not completely implemented, progress according to the plan has been made and areas for improvement have been identified.

For the mandatory STSM/A Program, as of the latest Quarterly Report (June 24, 1999), of the 24 present positions—incumbents and compensatory measures, completions for all criteria are a combined 88 percent. The program enjoys senior management support; however, interviews with selected incumbents indicate some areas of concern and opportunities for improvement. The voluntary portion of the program is just beginning at the time of this assessment.

A small team was assembled to conduct the Phase II Assessment. The assessment generally relied on interviews and the use of record reviews to identify program strengths, deficiencies, and general recommendations for improving the Program at EM Headquarters. The assessment identified some measurable progress since the approval of the Implementation Plan in December 1998, and a number of initiatives that are works-in-progress to achieve the ultimate goal to have a valid, effective, and an efficient human resource development program for both technical and nontechnical employees. The EM TCP is essentially a new program developed to meet the needs of EM Headquarters, satisfy the concerns raised by the NTEU, and meet the requirements of the Department and its commitments to the

DNFSB. The results of this assessment will be used to continue to develop and implement the TCP for EM Headquarters.

## I. INTRODUCTION

### Background

The Department of Energy (DOE) Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (DNFSB) Recommendations 93B3, *Improving the Technical Capability in Defense Nuclear Facilities Programs*, and 92B7, *Training and Qualification*, was issued November 4, 1993, and accepted by the Board on November 5, 1993. Included in the DNFSB Recommendation 93B3 IP was the creation of the TQP. The TQP, which was implemented by DOE Order 360.1, *Training*, dated May 31, 1995, applies to DOE Federal technical employees performing activities related to the technical management, oversight or operation of defense nuclear facilities. The Order required participants to complete the program by May 31, 1998.

The TQP consists of a three-tiered qualification process:

- \$ A General Technical Base Qualification Standard (GTBQS), which includes core technical competencies applicable to all TQP participants;
- \$ A Functional Area Qualification Standard (FAQS) which includes technical competencies applicable to most DOE technical positions (participants were presented with 24 functional area qualification standards from which to identify and participate in the one most appropriate to their duty position); and
- \$ A locally designed Office/Facility-specific Qualification Standard (OFSQS) to supplement the Departmental functional area qualification standards applicable to a specific position and Office or Field location.

By April 1996, EM had implemented a formal TQP. EM had enrolled and was tracking 50 Headquarters employees. On April 25, 1996, EM issued a memorandum suspending the development of Individual Development Plans (IDPs) and the TQP for all bargaining unit employees. This action was based on the impending negotiation between the DOE and the NTEU on the implementation of both the IDP Program and the TQP. On August 20, 1996, the DOE and NTEU signed a Memorandum of Understanding (MOU) in support of the continuation of the IDP process and the suspension was lifted by EM on September 11, 1996. This MOU did not affect the suspension of the TQP, but the suspension became irrelevant after the EM TCPIT developed a two-part TCP consisting of a *mandatory* STSM/A part for non-bargaining unit employees, and a *voluntary* program for all other Technical employees. An implementation plan for the EM TCP was approved by EM senior management in December 1998.

In 1997, EM implemented (and continues to implement) its STSM/A program, a subset of the TQP. EM identified 24 positions, all of which are non-bargaining unit positions, for inclusion in the STSM/A program. The program was designed to meet an action taken by the Department during the joint DOE/DNFSB off-site Conference held in June 1996. Currently, there are 15 employees who have

STSM/A responsibility for the 24 STSM/A positions. Cumulatively, the interimly qualified STSM/A participants have completed 88 percent of the STSM/A requirements. Compensatory measures are in place for incumbents holding STSM/A positions and not yet qualified under the program. Three additional STSM/A positions have been proposed and incumbents are beginning the qualification process.

In a letter to the Secretary dated April 2, 1997, the DNFSB expressed concern that 40 percent of the DNFSB Recommendation 93B3 IP commitments had not been met. In response, the Secretary of Energy recommitted the Department to improve Federal technical capabilities in a letter to the Board dated May 5, 1998, which also forwarded the revised DNFSB Recommendation 93B3 IP. Included in the revised Implementation Plan is the commitment to evaluate the existing TQP by conducting Phase I and Phase II Assessments, addressing identified problem areas, and modifying the program accordingly.

The responsibility for implementing DNFSB Recommendation 93-3 in EM was assigned to the Office of Management and Evaluation's (EM-10's) Office of Training and Education (EM-13).

### **Purpose**

The purpose of the EM Phase II Assessment was to evaluate the status of EM's TCP and to identify weaknesses and areas for improvement. The results of the Phase II Assessment will assist EM management in implementing/improving the EM TCP, determining the future direction of program implementation, and enhancing staff development activities as necessary.

The assessment was designed to evaluate the following:

- (1) Extent to which EM TCP policy and procedures have been implemented in accordance with DOE O 360.1, *Training*;
- (2) Perceived TCP strengths and weaknesses, including any proposed actions that might be considered to maintain strengths and mitigate weaknesses;
- (3) Whether TCP activities satisfy the principles and commitments in the revised DNFSB Recommendation 93B3 IP, meet the technical qualification needs of each EM participant, and support the mission requirements of EM; and
- 4) Effectiveness of EM staff development activities in supporting the TCP.

## **II. SCOPE AND METHODOLOGY**

### **Scope**

The EM Phase II Assessment was conducted based on the seven objectives outlined by the Federal Technical Capability Panel (FTCP) in its *Technical Qualification Program Assessment Guidance and Criteria*, July 1998. The objectives of the assessment are:

- \$ demonstration of competence;
- \$ competency levels;
- \$ plans and procedures;
- \$ qualification tailored to work activities;
- \$ credit for existing technical qualification programs(s);
- \$ transportability; and
- \$ measurable.

The objectives and criteria (see Appendix A) were designed to evaluate the TQP of a Headquarters or Field office and are to be used consistently across the complex so that the results can be rolled-up and the Department can determine the general effectiveness of the TQP in ensuring the technical capability of the workforce at its defense nuclear facilities.

### **Methodology**

The methodology was based upon a follow-up of the recommendations and shortcomings identified in the Phase I Assessment Report and the status of implementation of the approved EM TCP Implementation Plan.

The objectives and criteria outlined in the FTCP *Technical Qualification Program Assessment Guidance and Criteria*, July 1998, were used to evaluate the STSM/A program. In addition, interviews with selected STSM/A participants and key EM-13 personnel were conducted.

### **Assessment Team**

The Phase II Assessment was conducted over a one week period. The actual assessment team was lead by Mr. Henry Himpler, a Certified Lead Auditor from the Office of Waste Management's Office of Technical Services (EM-37) who is also the EM-30 representative to the EM TCPIT. He also served as the NTEU representative to the original EM TQP. Other team members included: Ms. Joni Boone, EM-13; Mr. Randall Smyth, EM-46; and Mr. Edward Blackwood, Office of Nuclear and Facility Safety, EH-3, who also provided for independent oversight of the assessment process. Mr. David Roth, Office of Human Resources Management, MA-3, was designated as the team mentor, but was unable

to participate actively because of schedule conflicts with other, ongoing, Phase II Assessments. Brief biographies of the team members are included in Appendix C.

### III. PHASE II ASSESSMENT RESULTS

#### 1. Phase I Assessment Recommendations Status

In October 1998, EM completed its Phase I Assessment of the TQP as required under the revised DNFSB Recommendation 93-3 IP. Several observations and deficiencies were noted. The Phase II Assessment also reviewed the status of actions taken to address those observations and deficiencies. As mentioned in the methodology section, one of the objectives of the Phase II Assessment was to measure the progress of the EM TCP and to correct shortcomings identified in the Phase I Assessment. The results of the EM Phase I Assessment provided the following recommendations:

- \$ Human resource management and human resource development activities need to be integrated;
- \$ Senior EM management will need to decide which positions are to be included in the new program on a mandatory basis, if appropriate;
- \$ Formal written procedures need to be developed;
- \$ Internal review groups will need to be established to review competency self-assessment packages;
- \$ Feedback mechanisms need to be put into place;
- \$ Office-specific standards will need to be built to afford the maximum amount of transferability;
- \$ Sufficient funding for technical training will need to be maintained in the budget process to develop and maintain the technical competency of EM Headquarters employees;
- \$ More communication between the participants, management, and the implementors is needed; and
- \$ Most importantly, the concerns of the NTEU will need to be resolved if there is any hope that an effective, meaningful, and valid program can be implemented for the EM Headquarters organization.

Of the nine recommendations listed in the EM Phase I Assessment Report, three are closed, one is deferred and five are continuing. The current status of each of these recommendations, as determined by the results of Phase II Assessment interviews and document reviews, are as follows:

- \$ 

Organizational changes have not been implemented since the Phase I Assessment. However, through the judicious use of the EM TCPIT, other Federal resources, and technical contractor support, progress has and continues to be made in the implementation of the EM TCP. Organizational changes are likely to occur since the new Assistant Secretary was appointed in mid July 1999.

**Recommendation Deferred.**

\$ Senior EM management has determined the mandatory and critical positions and reported them to both the FTCP and the DNFSB.

**Recommendation Closed.**

\$ Formal written procedures are in the development process. Drafts of the procedures were being reviewed during the course of this assessment.

**Recommendation Continued.**

\$ Internal review groups have been established on an as-needed basis to review the competency self-assessment packages.

**Recommendation Closed.**

\$ Feedback mechanisms have been addressed as part of the written procedures cited above.

**Recommendation Continued.**

\$ EM Office -Specific Standards (OSS) development commenced in January 1999 and are now nearing completion. Draft OSSs for EM technical offices are presently in the review process.

**Recommendation Continued.**

\$ Sufficient funding for training has not yet been a problem. **Recommendation Continued.**

\$ Communication continues to be an issue and is being addressed in the written procedures cited above.

**Recommendation Continued.**

\$ Concerns of the NTEU were successfully resolved by the decision to make the program voluntary for all

bargaining unit members and the objective to continue to develop the EM TCP into a true career development program embracing both technical and nontechnical personnel.

**Recommendation Closed.**

2. Phase II Assessment

The Phase II Assessment used the criteria published in the TQP Assessment Guidance and Criteria. Each criterion is addressed below and is based on interviews and document reviews.

**TQP-1: Demonstration of Competence**

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

Criteria

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

The TCP Implementation Plan defines mandatory positions as STSM/A and critical positions for purposes of DNFSB Recommendation 93-3. Critical positions were submitted to MA-3 and the FTCP in October 1998, and additional critical positions were petitioned in January 1999. With respect to the STSM/A program, the 24 positions identified in DOE's *The Handbook for Senior Technical Safety Manager Positions*, May 1997, are still being tracked. Currently, 15 employees have STSM/A responsibility for those positions. Other positions where an incumbent is not interimly qualified or where the incumbent cannot meet the requirements contained in *The Handbook for Senior Technical Safety Manager Positions* have compensatory measures in place. However, current incumbents are working toward qualifying.

*TQP-1.2 Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities that each individual shall participate in to satisfy competencies.*

DOE Order 360.1, *Training*, requires that supervisors, in conjunction with their employees, develop IDPs. Until now, and for reasons associated with downsizing events and issues raised by the NTEU, implementation of the IDP process was suspended. Recently, EM senior management issued direction

to implement the IDP process at Headquarters, which requires that IDPs be prepared no later than September 30, 1999, and in conjunction with the revised performance appraisal process. Progress to accomplishment includes the incorporation of the annual IDP process into the EM TCP Implementation Plan, the posting of Departmental Guidance and a downloadable IDP form on the EM Home Page, and the development of the Technical Employee Capability Recordkeeper (TECR) application for tracking and monitoring TCP activities with a future integrated module for electronically recording IDPs.

Other training records are continually being updated. EM-13 has staff that registers employees in approved training courses and ensures that supervisors complete the required training forms at the completion of the training, but there is little in the way of measuring competency based on the training taken between supervisor and employee.

The 15 incumbents who have STSM/A responsibility have been interviewed by a 3-member panel where it was determined that all are qualified. Three incumbents were encouraged, however, to further enhance their knowledge of the specific safety bases at defense nuclear facilities for which they were directly responsible. The 15 incumbents in the original baseline are collectively 88% complete with correcting their identified competency deficiencies for the GTBQS and the STSM Qualification Standard.

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

The formal evaluation process identified in the EM TCP Implementation Plan includes evaluation by a peer panel of subject matter experts, supervisors, and EM-13. Independent reviews have been conducted by an Advisory Peer Review Panel that have helped to ensure that the competencies, equivalencies, and exemptions are applied consistently across the program. The criterion for evaluating the participants is commensurate with the level and responsibilities of the position.

## TQP-2: Competency Levels

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

### Criteria

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

The EM TCP utilizes the GTBQS, the STSM Qualification Standard and an FAQS of the incumbent's choice for the mandatory part of the program. OSSs are in development. Voluntary participants have access to all of the standards above as well as the revised FAQS being developed under the auspices of the FTCP through the Technical Personnel Coordinating Committee (TPCC).

*TQP-2.2 Subject matter experts are involved in establishing competency requirements.*

Office-specific standards were developed through in-depth interviews with Subject Matter Experts (SMEs). Several EM SMEs are participating in the development of both new and revised functional area qualification standards.

*TQP-2.3 Consideration of related professional certification requirements is included in the program as applicable.*

Consideration was given to related professional certifications in the original development of the EM TQP and the subset STSM/A Program. The new EM TCP does allow for professional certifications for consideration for meeting appropriate competencies.

*TQP-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: includes basic fundamental knowledge of radiation protection, occupational safety, chemical safety, nuclear safety, environmental regulations, and other areas.

Technical Discipline Competency: Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) which can be demonstrated by education, professional certification, examination or on-the-job performance.

Position Knowledge, Skills, and Abilities: Specific to the position and the office.

These competency requirements were included in the EM TQP prior to its suspension and are included in the new EM TCP program.

**TQP-3: Plans and Procedures**

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

Criteria

*TQP-3.1 The Technical Qualification Program has the commitment of senior management.*

There was little or no activity being taken because of the suspension of the EM TQP. Most recently, however, EM management has committed to the program as stated in the Phase I Assessment Report. In addition to the EM-1 approved TCPIT Charter and EM TCP Implementation Plan, EM-1 has held STSM/A participants accountable for completing their respective qualifications in the STSM/A program.

*TQP-3.2 Written procedures that adequately define the processes and requirements to implement the Technical Qualification Program are in place.*

The EM TCP Implementation Plan serves as the office procedure for participating in the EM TCP while more specific procedures are being developed. Currently, the STSM/A program follows the process described by the FTCP in *The Handbook for Senior Technical Safety Manager Positions*. For both the STSM/A program and the voluntary program, a consistent process has been applied to all applicants to the program and will continue while detailed procedures (now in draft) are refined and approved.

*TQP-3.3 Roles and responsibilities for the implementation of the Technical Qualification Program are clearly defined and understood by all involved.*

Although briefings were conducted both early in the TQP and subsequently for STSM/A participants, roles and responsibilities for both the voluntary TCP and the STSM/A program are neither well defined nor universally understood. It was clear from interviews of selected STSM/A participants that they lacked comprehensive details about the program, were unclear on the program bases, and did not share the same understanding as the senior managers who were interviewed. Those interviewed acknowledged that EM-13 was responsible for implementing the program, however, there was insufficient communication between the implementors and the participants.

*TQP-3.4 The procedures that govern the implementation of the Technical Qualification Program are understood by all involved, and are being implemented as written.*

Written procedures for the STSM/A program are still in draft; however, the program is being implemented consistently among the participants in accordance with *The Handbook for Senior Technical Safety Manager Positions*. Procedures for the voluntary program are still in development.

*TQP-3.5 A training and qualification records system is established for each employee in the Technical Qualification Program.*

Prior to the suspension of the TQP, hard copy records were being maintained by the respective offices. EM is currently using TQR Baseline for the STSM/A program and has recently completed development of the Technical Employee Capability Recordkeeper (TECR) -- an improved, more user-friendly relational database version of the TQR Baseline. In addition, EM uses the Department's Departmental Training Inventory System (DTIS) system for maintaining training records, and will use the Corporate Human Resource Information System (CHRIS) when it is implemented.

**TQP-4: Qualification Tailored to Work Activities:**

The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.

Criteria

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

For the STSM/A program, each participant had the flexibility to choose, in addition to the GTBQS and STSM Qualification Standard (which incorporated a Headquarters office-specific standard), his/her functional area standard. Generally, the functional area chosen was based on the EM program the participant was in, e.g., environmental restoration, waste management, etc. There was not necessarily a match to the duties and responsibilities of the position. The voluntary program, per the EM TCP Implementation Plan, is being designed to include EM Headquarters specific requirements in a modified GTBQS and OSS as well. OSSs are presently in draft. The EM Modified GTBQS (MGTBQS) will be completed after the rewrite of the TQP GTBQS.

*TQP-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.*

OSS development started in January of 1999 and are presently in draft. Task lists and recommended OSSs are currently being formatted and will be implemented when approved.

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

The STSM/A program generally supports the mission and needs of EM. However, there is a need to better define the work of a Headquarters organization and recast functional area and OSSs to match

that work. Senior management has directed that IDPs for ALL employees be completed not later than 9/30/99. These will be tied directly to the voluntary program by the EM TCP.

**TQP-5: Credit for Existing Technical Qualification Program(s)**

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

Criteria

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

It was always the intent of the TQP, and certainly the STSM/A program, to give credit for previous training, education, and certifications. The participants, in their self-evaluation, declare equivalency and provide the appropriate documentation to support their declaration for the record (participants= declaration for the record can also be used to seed the CHRIS with update and verified training and personnel information). This will continue to be the case in the EM TCP.

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

In the STSM/A program, participants prepared their self-evaluation. Participants to any new program that is developed will also be required to do so. Documentation of such equivalency was required for the record. The self-evaluation package and the records provided were then objectively reviewed by an internal EM panel. After the panel's review, the complete packages were sent to the FTCP for review and approval. An internal review process will be institutionalized in the EM Headquarters TCP.

*TQP-5.3 Equivalencies are validated, approved and documented in a formal manner.*

There was a formal STSM/A process in place in as much as there was an internal review group reviewing all qualification packages before sending them to the FTCP. EM is currently maintaining records appropriately in TQR Baseline for the original STSM/A incumbents, and in the Technical Employee Capability Recordkeeper (TECR) for more recent incumbents and the voluntary participants. The Technical Capability Records (TCRs) are being maintained and updated electronically and EM-13 is also maintaining hard copy qualification packages for all incumbents.

## **TQP-6 Transportability**

Competency requirements that are identified as having Department-wide applicability are transferable.

### Criteria

*TQP-6.1 The program includes all of the competencies that have been identified as having Department-wide applicability.*

The GTBQS that is being used is completely transferable, as are the FAQs. The original EM TQP and the STSM/A program relied on the Department's standards. OSSs, by definition, would have transportability limited to common aspects of EM programs only.

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

TQR Baseline, TECR, and DTIS are currently being used as formal documentation for the STSM/A Program. These systems are transferable over different software platforms. EM Headquarters has developed TECR, an enhanced record keeping system to phase out TQR Baseline. EM Headquarters will conform to CHRIS, the new department-wide tracking system, when it is implemented.

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

There has been some integration between human resource and human resource development activities. For example, STSM requirements have been incorporated into STSM/A designated position descriptions. Also, recent vacancy announcements for STSM/A positions have included STSM requirements. However, EM is still in a state of flux because of the recent downsizing activities, and an impending realignment under a new Assistant Secretary. Position descriptions will need to be evaluated against the work that is/will be performed and new position descriptions will need to be prepared as appropriate. The new position descriptions will include competencies commensurate with job tasks. In addition, IDPs are being developed to ensure an effective human resource management and development program is in place.

**TQP-7: Measurable**

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

Criteria

*TQP-7.1 The technical competency of personnel who have completed the requirements of the Technical Qualification Program is adequate and appropriate.*

With respect to the STSM/A program, the recent interview process generally found that there was adequate competence. It also found, however, that there were areas that needed attention by the participants. A process is in place to ensure that competence is enhanced. The STSM/A participants are cumulatively 88 percent complete. The voluntary program is just beginning.

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

Feedback on self-evaluation has been provided by an SME Panel to STSM/A participants. Progress is reported quarterly. Communication improvements have been identified as a program need.

*TQP-7.3 The Program includes provisions for continuing training.*

Obtaining training is generally not problematic in the EM Headquarters organization. Sufficient funds are budgeted to be used to enhance the technical capabilities of EM Headquarters employees. However, there needs to be mechanisms put into place to ensure that training is identified in the IDP process, and that funds are not being spent on meaningless training that does not enhance technical capability. Recently, a memorandum was issued by the Acting Deputy Assistant Secretary (DAS) for the Office of Management and Evaluation, EM-10, that provides sufficient guidance to meet that requirement. Additionally, the training organization has initiated an STSM/A Environment, Safety and Health (ES&H) related training module update internally and is participating in new/revised FAQS updates.

**IV. PROGRAM STATUS SUMMARY AND RECOMMENDATIONS****Summary**

There is an approved EM TCP Implementation Plan for the EM Headquarters organization and the program is being implemented, albeit in its infancy stages. The IDP process has been directed to be implemented in EM not later than 9/30/99. With respect to the STSM/A program, real progress has been made since mid-1997. Incumbents have been interimly qualified, interviews have been held,

completions of required competencies have made satisfactory progress, and it is generally believed that the program is adequate. However, there are still areas needing improvement.

**Recommendation**

It is clear that human resource management and human resource development activities need to be better integrated. Currently, the Director of the Office of Administrative Services, EM-12 (the EM Office responsible for personnel activities and processes), is also serving as the Acting Director of EM-13. It is likely that these two offices will be merged in a future reorganization to facilitate the integration process. Position descriptions will need to be evaluated against the work expectations of the EM Headquarters organization, modified as appropriate, and competency requirements built against the modified position descriptions to measure the technical capability of EM Headquarters employees.

Specific recommendations include:

- \$ Completion of formal written procedures, currently in draft, require approval and implementation;
- \$ Feedback mechanisms should be enhanced and built into procedures;
- \$ Office Specific Standards need to be finalized and approved;
- \$ Enhanced communication processes need to be developed and implemented to promote increased program awareness and understanding;
- \$ Processes for maintenance of capabilities and qualifications need to be more formally addressed;
- \$ Integration of IDP and TCP processes need to be implemented; and
- \$ Training opportunity needs to be better focused on technical capability requirements and program missions.

**APPENDIX A**

**PHASE II ASSESSMENT  
OBJECTIVES AND CRITERIA  
and  
ASSESSMENT PLAN**

**TECHNICAL QUALIFICATION PROGRAM  
ASSESSMENT OBJECTIVES AND CRITERIA**

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 participants in the Technical Qualification Program.
- 1.2 Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities that each individual shall participate in to satisfy competencies.
- 1.3 A formal evaluation process is in place to objectively measure the technical competency of personnel. The rigor of the evaluation process is commensurate with the responsibilities of the position.

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

Criteria

- 2.1 Competency requirements include clearly defined knowledge, skill, and ability elements.
- 2.2 Subject matter experts are involved in establishing competency requirements.
- 2.3 Consideration of related professional certification requirements is included 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).
  - C Basic Technical Knowledge: This includes basic fundamental knowledge of radiation protection, occupational safety, chemical safety, nuclear safety, environmental regulations, and other areas.

- C Technical Discipline Competency: Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) which can be demonstrated by education, professional certification, examination or on-the-job performance.
- C Position Knowledge, Skills, and Abilities: Specific to the position and the office.

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

Criteria

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

TQP-4 **Qualification Tailored to Work Activities**: The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.

Criteria

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

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

Criteria

- 5.1 Credit (equivalency) is granted for previous training, education, experience and completion of related qualification/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 validated, approved and documented in a formal manner.

TQP-6 **Transportability:** Competency requirements that are identified as having Department-wide applicability are transferable.

Criteria

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

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

Criteria

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

**ASSESSMENT PLAN**

- Assessment Title:** Phase II Assessment of the Implementation of the Environmental Management Technical Capability Program (EM TCP)
- Assessment Org.:** Office of Administrative Management (EM-10)
- Org. Assessed:** Office of Environmental Management (EM)
- Location:** DOE Headquarters (Forrestal & Cloverleaf)
- Dates:** August 2 - 6, 1999
- Team Members:** H. P. Himpler, EM-37, Certified Lead Auditor, Team Leader  
David R. Roth, MA-3, Training Manager, Team Mentor  
Joni E. Boone, EM-12, Management Analyst, Auditor  
Edward B. Blackwood, EH-3, Director, Radiological Protection Staff  
Randall C. Smyth, EM-46, S&H Manager, Auditor
- Purpose:** To satisfy the DOE obligation to improve implementation of the DOE Technical Qualification Program, as described in the revised DOE Implementation Plan (3/98) in response to DNFSB Rec. 93-3, and to upgrade the EM TCP based upon a formal assessment process, in accordance with commitment 5.4.2.
- Scope:** The EM TCP, as documented in the approved Implementation Plan of December, 1998, is to be reviewed and assessed in accordance with the TQP Assessment Guidance and Criteria as published by the FTCP and the Office of Human Resources and Administration (MA) in July, 1998. In addition, issues raised in the Phase I Assessment Report of October, 1998, and all new initiatives and results, will likewise be assessed.
- The assessment will consist of document and record reviews and interviews with selected TCP participants [management and staff], as well as representatives of support contractor and Process Improvement Team representatives.
- Schedule:** Pre-Assessment Meeting - Teleconference week of July 26, 1999. (TBD).  
Conduct Assessment - 8/2-6/99  
Team Meetings - daily 4:00 PM  
Debrief Management - daily 8:30 AM

**APPENDIX B**

**SURVEY QUESTIONNAIRES**

## **EM HQ 93-3 Phase II Assessment STSM Interview Questions**

### Understanding

1. How do you perceive your level of cognizance of 1) the STSM qualification program and 2) the EM HQ TCP program?
2. What procedures, programs, and plans are in effect for EM HQ STSM and TCP program?

### Personal Experience

3. Why were you selected and how do you perceive your role as an STSM?
4. How have expectations for STSM obligations and execution been communicated to you?
5. Are you serving as a compensatory STSM for any position(s)? Has your expertise been solicited in decision making?
6. How long have you been enrolled as an STSM? What percent complete are you in the process? If not 100%, when do you expect completion?
7. What type of time commitment was necessary to achieve your current level of STSM qualification? Were you given the resources and time to achieve your goals?
8. How has completion of the STSM program enhanced your managerial and technical capabilities?
9. How do you plan to maintain and increase your technical capabilities - post STSM qualification? How do you select training opportunities?

### Program Effectiveness

10. Do you find the EM approach to STSM qualification effective - why/why not?
11. How does management communicate their commitment to the TCP and STSM program?
12. How would you improve communication?

### Links to Other Management Functions

13. Is the STSM position and commensurate functions, knowledge, skills, and abilities reflected in your job description and/or any other formalities which describe your functional position within the organization?
14. Do you feel adequate time and attention is offered to enhancement of technical qualifications? What do you feel is reasonable and prudent?
15. How are you going to address the time and resource commitment when your staff joins the EM HQ TCP?
16. Do you feel your designation/status as a qualified STSM is transportable to other DOE locations here at HQ or in the field? Why or why not?

Thoughts and Recommendations/Final Wrap-up

17. What can EM-13 do to enhance the STSM and TCP program?
18. EM has been working toward enhanced capability and STSM qualification for well over one year. By observation and/or experience, are you able to cite any examples of more informed technical decisions and understanding of issues based on improved technical capability and attributable to the TCP program?

**APPENDIX C**  
**BIOGRAPHIES**

## BIOGRAPHIES OF TEAM MEMBERS

**Henry P. Himpler**, Assessment Team Leader, currently serves as the Safety and Health Team Leader in the Office of Waste Management's Office of Technical Services (EM-37). He is also matrixed to the Office of Safety and Health (EM-4) on a part time basis where his principal assignment is follow-up and coordination for EM on the DNFSB Recommendation 93-3. He is a Certified Lead Auditor who has participated in numerous assessments, Operational Readiness Reviews, Nuclear and Technical Safety Appraisals, Tiger Teams, and ISMS Verifications throughout the DOE complex over the past twenty years. He has been assigned as both the EM-30 and EM-4 representative to the original Technical Qualification Program EM Implementing Team and the TCPIT. He has a B.S. in both Electrical Engineering and Industrial Technology, has more than forty years professional experience in engineering, management, safety and quality assurance; over half of which has been dedicated to DOE programs.

**Joni Boone** currently serves as a program manager in EM-13. Her primary duties include managing the implementation of EM's 93-3 and STSM/A programs and EM's educational grant programs, and has been involved in the development of the Department's Corporate Human Resource Information System. She was instrumental in developing the EM TQP prior to its suspension in April, 1996. She has 22 years of experience in the personnel and training field in several Governmental agencies.

**Edward B. Blackwood** currently serves as the Director, Radiological Protection Staff in the DOE Office of Nuclear and Facility Safety (EH-3). His primary duties include advising the Deputy Assistant Secretary on radiological safety and management programs. As the Agent to the DOE Federal technical Capability Panel (FTCP), he represents the Assistant Secretary for ES&H in panel efforts to improve technical capabilities of Federal technical employees and led the office-wide assessment of its Technical Qualification Program. Previously, he served as Director, Radiological Oversight Division and the Deputy Director, Office of Nuclear Safety. Prior to joining DOE in 1988, Mr. Blackwood was a consultant to nuclear utility companies for three years. Earlier, he served for ten years with the NRC in engineering and management. Prior to the NRC Mr. Blackwood served as an Engineering Officer in the U.S. Navy. Mr. Blackwood has degrees in Nuclear Science from the U.S. Naval Academy and an M.B.A. from the University of Maryland.

**Randall C. Smyth** is currently assigned as Acting Director, Office of Special Projects (EM-46), in the EM Office of Environmental Restoration. Since joining DOE in 1990, he has served in several EM Offices in Safety and Health management. He is an active participant in the EM TCP STSM/A program and is a certified Lead Auditor and Accident Investigator. Prior to joining DOE, Mr. Smyth had more than 16 years experience in Nuclear and Industrial Safety and Health, Environmental Science, and Quality Assurance functions. Mr. Smyth has a Bachelor's in Environmental Science, has participated in Graduate Studies in that field, and was a 1994-95 Fellow of the Council of Excellence in Government.

**APPENDIX D**  
**EM TECHNICAL CAPABILITY PROGRAM**  
**IMPLEMENTATION PLAN**