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This directive was reviewed and certified as current and necessary by (Enter Name), (Enter Title) Director, Office of Management, Budget and Evaluation/Chief Financial Officer, XX-XX-XXXX.

FEDERAL TECHNICAL CAPABILITY MANUAL

Supporting the Improvement and Maintenance of Technical Capability in the Department of Energy's Defense Nuclear Programs

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U.S. DEPARTMENT OF ENERGY

Office of Management and Administration

Distribution:
All Departmental Elements

Initiated By:
Office of Training and Human Resource Development

FEDERAL TECHNICAL CAPABILITY MANUAL

1. PURPOSE. The Department of Energy (DOE) is committed to developing and maintaining a technically competent workforce to accomplish its missions in a safe and efficient manner through the Federal Technical Capability Program. It is DOE policy that the program and functions described in this Manual be used to recruit, deploy, develop, and retain a workforce that can ensure this occurs. The Department will strive to recruit and hire technically capable personnel, continuously develop the technical expertise of its existing workforce, and, within the limitations of executive policy and Federal law, retain critical technical capabilities within the Department at all times.

   The program and processes described in this Manual support requirements established in DOE P 426.1, FEDERAL TECHNICAL CAPABILITY POLICY FOR DEFENSE NUCLEAR FACILITIES and DOE O 360.1A, FEDERAL EMPLOYEE TRAINING.

2. CANCELLATION. None.

3. APPLICABILITY. This Manual applies to those offices and organizations performing functions related to the safe operation of defense nuclear facilities, including the National Nuclear Security Administration. Other organizations within the Department may also apply elements of the program on an optional basis.

4. CONTACT. Questions concerning this Manual should be directed to the Office of Training and Human Resource Development at (202) 426-1506.

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BY ORDER OF THE SECRETARY OF ENERGY

T.J. GLAUTHIER
DEPUTY SECRETARY

FEDERAL TECHNICAL CAPABILITY MANUAL

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CHAPTER I

OVERVIEW OF THE FEDERAL TECHNICAL CAPABILITY PROGRAM

The Secretary of Energy issued DOE P 426.1, FEDERAL TECHNICAL CAPABILITY POLICY FOR DEFENSE NUCLEAR FACILITIES, to institutionalize the Federal Technical Capability Program. This program specifically applies to those offices and organizations performing functions related to the safe operation of defense nuclear facilities, including the National Nuclear Security Administration. It applies to all aspects of recruitment, deployment, development, and retention of Federal employees in these organizations.

Other DOE offices and organizations must ensure their Federal employees are appropriately trained and technically capable when carrying out their responsibilities. Although these offices and organizations fall outside the Defense Nuclear Facilities Safety Board (Board) jurisdiction, DOE is committed to ensuring that the employees are trained and technically capable of performing their duties. When appropriate, these offices and organizations should implement applicable portions of the Federal Technical Capability Program.

The objective of the Federal Technical Capability Program is to recruit, deploy, develop, and retain Federal personnel with the necessary technical capabilities to safely accomplish the Department's missions and responsibilities. The Department has identified guiding principles to accomplish that objective and identified four general functions of the Federal Technical Capability Program. The guiding principles and general functions are identified in DOE P 426.1.

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The Federal Technical Capability Panel (Panel) is responsible for overseeing the overall implementation of the Federal Technical Capability Program. Headquarters and field elements are responsible for implementing specific activities within the program. Some activities addressing technical capability functions apply complex-wide; for example, the Department's Policies, Orders, and Standards, which promulgate requirements and guidelines for the administration of technical training. Other mechanisms vary from site to site or between program offices. For example, in implementing an Order directed at developing the technical capabilities of its workforce, each field office and Headquarters program office develops and implements a program that meets the complex-wide requirements defined in the Order. However, the offices are then free to customize implementation details to meet the needs defined by line management at each site or program office.

The Department recognizes that activities may impact and affect multiple functions. For example, technical needs might be identified during the development of staffing plans, which occurs during the recruitment function. However, in the integrated model, the development of staffing plans also affects activities identified under the personnel development and retention functions. For example, once line

management completes an analysis that projects a shortage in a set of critical technical capabilities, they might decide that the Department has enough time to develop the necessary technical skills in its existing workforce. The staffing plan then serves as a driver to direct resources to mechanisms aimed at developing those technical capabilities. In that scenario, the staffing plan is also a driver for line management to focus reward, incentive, and retention mechanisms on personnel with those critical capabilities to ensure that the Department retains its current capabilities while new personnel with those capabilities can be developed or recruited.

The conceptual model incorporating the Federal Technical Capability Program functions is illustrated below. This shows the interrelationship and interdependence among the functions; for the Federal Technical Capability Program to succeed, *all* functions must succeed.

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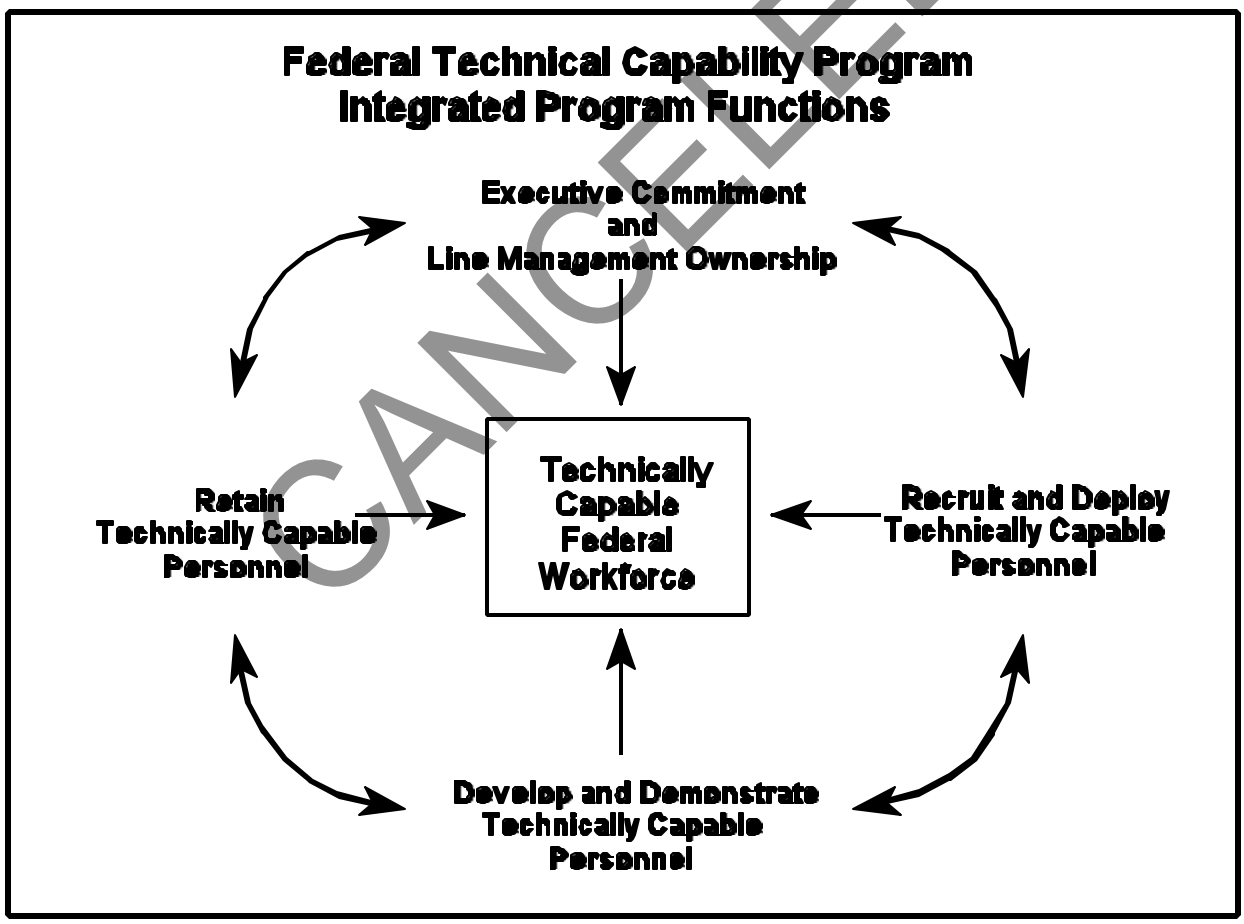

CHAPTER II

FEDERAL TECHNICAL CAPABILITY PANEL

1. OVERVIEW. The Department developed the Federal Technical Capability Program for Federal technical employees with safety responsibilities at defense nuclear facilities, including the National Nuclear Security Administration. The Federal Technical Capability Panel (Panel) was chartered recognizing that corporate leadership and line management ownership are essential to successfully implementing a program to recruit, develop, deploy, and retain technical capability at defense nuclear facilities.

   The Panel consists of senior managers designated as Agents to represent Headquarters and field elements with defense nuclear facility responsibilities, including the National Nuclear Security Administration. The Panel reports to the Deputy Secretary and is responsible for overseeing and resolving issues affecting the Department's Federal Technical Capability Program. This includes overseeing the Senior Technical Safety Manager (STSM) Program, conducting periodic assessments of the effectiveness of the Federal Technical Capability Program using internal and independent experts, and providing recommendations to senior Departmental officials regarding DOE technical capability.

2. PANEL MEMBERSHIP. The Manager/Assistant Secretary/Deputy Administrator, National Nuclear Security Administration of each office listed below designates a senior manager to serve as the office representative (Agent) on the Federal Technical Capability Panel. With the exception of the Office of Management and Administration, these Agents must be qualified as STSMs. To maintain consistency on the Panel, Agents must serve for a minimum of one year.

   - Albuquerque Operations Office
   - Idaho Operations Office
   - Nevada Operations Office
   - Oak Ridge Operations Office
   - Oakland Operations Office
   - Ohio Field Office
   - Office of River Protection
   - Richland Operations Office
   - Rocky Flats Field Office
   - Savannah River Operations Office
   - Office of Defense Programs
   - Office of Environment, Safety and Health
   - Office of Environmental Management
   - Office of Management and Administration

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Additionally, the Office of the Chief Financial Officer, the Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board, and the Office of Congressional and Intergovernmental Affairs has senior representation at each meeting, as required. The Panel receives advice and support from the Office of the Deputy Secretary and other supporting organizations as appropriate.

3. PANEL LOGISTICS.

- The Federal Technical Capability Panel reports to the Deputy Secretary.
- The Federal Technical Capability Panel selects one of its members to serve as the Chair of the Panel. The Chair serves for at least one year and no more than two.
- The Office of Management and Administration Agent serves as, or designates, the Executive Secretary for the Panel.
- The Panel meets at least once a quarter and more often as the need arises. The Panel may meet via teleconferences and tele-video conferences. Typically, the Panel will have two face-to-face meetings per year.
- The Panel submits an annual report to the Secretary of Energy that summarizes the status, issues, and actions taken to improve and preserve the Department's critical technical capabilities.

4. RESPONSIBILITIES.

a. Panel Responsibilities.

- overseeing and resolving issues affecting the Federal Technical Capability Program,
- developing and maintaining a Federal Technical Capability Policy for the Department,
- overseeing implementation of the Department's STSM Program and Technical Leadership Development Program (TLDP) as described in this Manual,
- performing or overseeing periodic assessments of the effectiveness of the Federal Technical Capability Program using internal and external experts,
- conducting periodic meetings with the Defense Nuclear Facilities Safety Board and its staff to communicate issues and expectations regarding execution of the Federal Technical Capability Program, and,
- providing recommendations to senior Departmental officials regarding the improvement of DOE technical capability, including issuing an annual report to the Secretary of Energy.

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b. Agent Responsibilities.

- Coordinating development of the annual Workforce Analysis and Staffing Plan for their organizations.
- Participating in the recruitment and selection of Senior Technical Safety Managers in their organizations.
- Overseeing implementation of the Technical Qualification Program for their organizations.
- Participating in or overseeing Federal Technical Capability Program assessments and Technical Qualification Program assessments within their organizations.
- Soliciting information and feedback from personnel in their organizations regarding the improvement of technical capability of the Department's workforce.
- Keeping personnel in their organizations informed of the progress/problems associated with execution of the Federal Technical Capability Program, and seeking support from senior officials regarding successful implementation.

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CHAPTER III

RELATED PERSONNEL PROGRAM COMPONENTS

1. OVERVIEW. Recruitment, hiring, and retention of high-quality staff are essential in performing the DOE mission. Hiring and retaining high-quality staff are often major challenges confronting line managers. Several tools, collectively referred to as administrative flexibilities, are available to provide options in Federal employment actions. These tools are described in DOE G 426.1-1, RECRUITING, HIRING, AND RETAINING HIGH-QUALITY TECHNICAL STAFF: A MANAGER'S GUIDE TO ADMINISTRATIVE FLEXIBILITIES. Line managers and servicing personnel offices should reference this Guide for information about recruitment, hiring, and retention.

2. EXCEPTED SERVICE. Two Excepted Service appointment authorities, the National Defense Authorization Act for 1995 and the Department of Energy Organization Act, are available as important tools for Headquarters and field organizations to recruit and retain high-quality technical staff. Use of the Excepted Service authorities can expedite the hiring process and provide pay flexibilities to enhance recruitment and retention of key technical staff. The Excepted Service authorities may be particularly useful to organizations undergoing restructuring and associated skills mix concerns.

   The National Defense Authorization Act for 1995 includes the authority to fill up to 200 scientific, engineering, and technical positions relating to the safety of DOE defense nuclear facilities and operations. This authority can only be used to hire personnel for scientific, engineering, or technical defense positions related to the safety of nuclear facilities

   The Excepted Service appointment authority found in Section 621(d) of the Department of Energy Organization Act is available for use in hiring up to 200 high-quality individuals who may otherwise be difficult to attract and retain under current competitive service rules and procedures. Although primarily intended for scientific, engineering, and technical positions, this authority may also be used for professional and administrative positions and positions in operations not related to defense nuclear facilities safety.

   Pay under both Excepted Service personnel authorities may be established up to an amount provided for by Executive Level III. Pay administration in the Excepted Service is governed by broad salary bands in contrast to pay ranges established under the more traditional GS/SL/SES systems.

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3. BONUSES AND INCENTIVES. Bonuses and incentives are available to assist in both hiring and retaining highly competent technical personnel; several of these are described below. Line managers and servicing personnel office staffs should work together closely to determine the applicable bonuses and incentives to consider and to ensure that the proper authorization and approval are obtained before offering these to potential candidates.

   a. Recruitment Bonus. Recruitment bonuses of up to 25 percent of basic pay may be paid to high-quality candidates who would otherwise be lost because the normal entry salary is non-competitive with others in the labor market. The recruitment bonus must be justified by demonstrating difficulties encountered in filling the position with a high-quality candidate, including information about the success or failure in recent recruitment efforts. (Such justification may include offer acceptance rates, proportions of positions filled, length of time required to fill similar positions, etc.) The justification must also consider how the bonus might affect the morale of current employees.

      The amount of the bonus is based on the candidate's current salary and salary history, current benefits in comparison to those offered by the Federal government, other earned income, and salary increases already scheduled. The bonus amount can also reflect other bona fide job offers the candidate has received, salaries offered to others for the same or similar positions in the local commuting area, and special skills and qualifications required to meet a specific need. A service agreement of not less than six months is required. The recruitment bonus may be combined with critical pay, dual compensation restriction waivers, superior qualifications appointments above the minimum rate, and special salary rates.

   b. Relocation Bonus. Relocation bonuses of up to 25 percent of basic pay may be paid to attract high-quality candidates or employees to positions that are difficult to fill or keep filled. The relocation bonus may be used for Federal employees who must relocate to different commuting areas and who are appointed to positions without time limitations or to temporary appointments of at least two years. The amount of the bonus is based on the comparison between the existing and new areas, whether the position is in a shortage category, special qualifications of the employee, and special DOE need. A service agreement is required at the new duty station. The bonus cannot exceed 25 percent of basic pay. The relocation bonus may be combined with critical pay, dual compensation restriction waivers, retention allowances, and special salary rates.

   c. Retention Allowance. Retention allowances of up to 25 percent of basic pay may be paid to high-quality employees who would otherwise leave the Federal Government. Retention allowances may be used for current employees who are likely to leave Federal Service and whose services the Department considers essential. The need for retention allowances is shown by the determination that the employee is likely to leave Federal Service, how the employee's leaving would affect the Department's ability to conduct essential activities/functions, and data on the success or failure to recruit and retain high-quality candidates for the position or a similar position.

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The amount of the allowance is based on whether a special need exists within the Department and whether the allowance is cost effective, funds are available, and the allowance is sensible in terms of overall organizational goals and staffing allocations. The retention allowance may be combined with critical pay, dual compensation restriction waivers, recruitment and relocation bonuses (provided no service agreements are in effect), and special salary rates.

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CHAPTER IV

STAFFING PLANS AND PRESERVATION OF CRITICAL TECHNICAL CAPABILITIES

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1. OVERVIEW. Senior managers must conduct an annual workforce analysis of their organizations and develop a staffing plan that identifies critical technical capabilities and positions that ensure safe operations at defense nuclear facilities. The staffing plan identifies:

   - critical safety needs and actions taken to address recruitment and deployment issues;
   - projected staffing needs for technical positions;
   - and the use of methods such as Excepted Service Authorities, redeployment, and the Technical Leadership Development Program (TLDP) to fill those positions with the best qualified individuals.

   Each Federal Technical Capability Agent coordinates the conduct of the analysis and development of the resulting staffing report for his or her office. The Federal Technical Capability Panel is responsible for ensuring that the workforce analysis is conducted and the results are analyzed and included in the Panel's annual report to the Secretary.

2. RESPONSIBILITIES.

   a. Field Element Managers, Principal Secretarial Officers, and the Administrator, National Nuclear Security Administration . Ensure that their organizations conduct an annual workforce analysis to identify critical technical capabilities and positions that must be maintained to ensure safe operations at defense nuclear facilities.

   b. Federal Technical Capability Agents. Coordinate the annual workforce analysis and resulting staffing plan for their organizations and ensure that the staffing plan is submitted to the Federal Technical Capability Panel.

   c. Federal Technical Capability Panel (Panel).

      - Review and analyze results of the workforce analysis and staffing plans and develop a Departmental report summarizing the results of the organizational reports.
      - Use results of the workforce analysis and staffing plans to provide recommendations to the Secretary of Energy in the Panel's Annual Report.

3. IDENTIFICATION OF CRITICAL TECHNICAL CAPABILITIES. The workforce analysis identifies the critical technical capabilities that must be maintained to ensure safe operation of defense nuclear facilities. A position determined to have critical technical capabilities must meet the following two criteria:

   - be technical in nature with responsibilities related to the safe operation of defense nuclear facilities, and
   - the critical capabilities associated with the position represent a specialized skill set that could not typically be replicated in 90 days through the use of formal training or external recruiting.

   Additionally, positions identified as possessing critical technical capabilities must meet at least one of the following criteria:

   - the position requires a qualification or certification unique to the DOE mission (e.g., Facility Representative), or
   - proficiency in the position requires critical capabilities that can only be obtained through a lengthy period of on-the-job training (e.g., longer than six months), or
   - the position requires specialized skills from a limited talent pool (e.g., criticality experts or nuclear weapon design/safety experts), or
   - loss of the technical capabilities resident within a position would jeopardize the Department's ability to meet safety or regulatory requirements.

4. WORKFORCE ANALYSIS AND STAFFING PLAN REPORT. The workforce analysis is used as a basis for developing the staffing plan for the organization. The following information is included in each organization's Workforce Analysis and Staffing Plan Report.

   Section One briefly describes the current mission(s) of the organization to frame the need for technical capabilities in the organization. It also describes probable or potential changes to the mission(s) of the organization that may affect the required critical technical capabilities/positions for the organization. This may include new missions, changing missions, downsizing, facility startup, facility shutdown, etc.

   Section Two identifies the Critical Technical Capabilities/Positions for the organization and the minimum number of personnel/positions required in each area. Preparation of this section requires a review and validation of the information submitted in the report from the previous year.

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Section Three identifies the current shortages, what is (or will) be done to fill the shortage (including any compensatory measure), and the anticipated date that the shortage will be filled.

Section Four identifies the projected shortages or surpluses in critical technical capabilities/positions over the next three years. These projections should be based on mission changes indicated in Section One and vacancies created due to retirements, changing demographics, etc. This section also briefly describes how the organization will deal with the changing requirements.

Section Five identifies any general concerns or recommendations related to ensuring that critical technical capabilities/positions are maintained for the organization or the Department overall.

The Workforce Analysis and Staffing Plan Report is transmitted to the Chair of the Federal Technical Capability Panel, with a copy to the Executive Secretary in December of each year. The transmittal should be signed by the senior manager of the organization submitting the report and include an effective date. The Panel reviews the individual reports and uses them as a basis for their Annual Report to the Secretary of Energy.

5. PRESERVATION OF CRITICAL TECHNICAL CAPABILITIES. Organizations use the Workforce Analysis and Staffing Plans as a basis for recruitment and development programs, and as part of the strategy to reduce the potential effects of downsizing on technical capabilities. In the reduction in force (RIF) process, the agency must establish competitive levels based on regulations found in Title 5, Code of Federal Regulations Part 351.40, which defines a competitive level as:

> *...all positions in a competitive area which are in the same grade (or occupational level) and classification series, and which are similar enough in duties, qualification requirements, pay schedules, and working conditions so that an agency may reassign the incumbent of one position to any of the other positions in the level without undue interruption.*

In some cases, especially critical technical positions with unique duties and qualification requirements, the organization may have to establish separate competitive levels based on documentation of special qualification requirements beyond those published by the Office of Personnel Management. For competitive levels to be properly established, position descriptions must document the duties and functions performed as well as the knowledge required to accomplish the duties of the position, especially if qualifications should be expanded through the use of selective placement factors. Selective placement factors, along with the unique nature of the duties and functions of the position, distinguish a position as unique for competitive level purposes and for qualification determinations during the RIF process.

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Appropriate selective placement factors must be incorporated into the knowledge required by the position and used to determine basic qualifications for job entry. In addition, inclusion of these selective placement factors, along with the unique nature of the duties and functions of the position, support establishment of unique competitive level codes. Selective placement factors, when incorporated into the knowledge required for job accomplishment, and when supported by the duties and responsibilities of the position, extend the qualification requirements for initial entry into the position as well as entry into the position during a RIF.

DOE G 426.1-1 provides a specific example of how competitive levels can be established for the Facility Representative position. This process can be used to establish competitive levels for other critical technical positions identified in Workforce Analysis and Staffing Plan reports.

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CHAPTER V

SENIOR TECHNICAL SAFETY MANAGER PROGRAM

1. OVERVIEW. The Department's most critical objective is to ensure that work is done safely and efficiently with regard to public health, worker safety, and the environment. Senior Technical Safety Managers (STSMs) are key to meeting this objective.

   By definition, the STSM is that person, usually at the GS/GM-15 or Senior Executive Service (SES) level, who is assigned direct line responsibility for activities impacting the safe operation of defense nuclear facilities including:

   - managing technical programs and associated resources and,

   - providing assistance, direction, guidance, oversight, or evaluation of contractor technical activities through the contracting officer or pursuant to some specific contract delegation.

   It is imperative that STSMs be technically competent as well as good managers. Selecting STSMs is a complex process. This chapter provides direction for selecting applicants or assessing the competency of incumbents for STSM positions. This chapter is intended to complement local merit staffing procedures, the provisions of which still apply. The Lead Program Secretarial Officers (LPSOs), Principal Secretarial Officers (PSOs), and Field Element Managers (FEMs) are encouraged to adopt a formal process, similar to that described in this chapter, to ensure that personnel selected for STSM positions have the highest level of technical competence obtainable. This Manual also defines mechanisms for independently monitoring LPSO/PSO/FEM implementation of the STSM program.

2. RESPONSIBILITIES.

   a. Field Element Managers, Principal Secretarial Officers, and the Administrator, National Nuclear Security Administration. FEMs, PSOs, and LPSOs play a critical role in ensuring that DOE has adequate numbers of qualified STSMs. Specifically, they are responsible for:

      - identifying the STSM positions for their offices;

      - ensuring that individuals filling STSM positions, whether incumbents or candidates for new or vacant positions, meet the technical competency criteria (only in rare cases may compensatory measures be relied upon);

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- establishing a process to recruit, screen, and hire competent technical personnel to fill STSM positions;

- developing detailed office/facility-specific technical competencies for each of the STSM positions in their organizations.

b. Federal Technical Capability Panel. Included in the Panel's charter is the responsibility to oversee implementation of the STSM Program across the Department. This includes:

- approving additions or deletions to the list of STSM positions;

- overseeing the process for evaluating the qualification of personnel filling STSM positions to ensure that these individuals meet the technical competency criteria;

- providing feedback to the Deputy Secretary regarding the STSM positions and the qualification of personnel selected to fill those positions; and

- reviewing and approving the STSM Functional Area Qualification Standard and any other related selection or qualification requirements for STSMs.

c. Federal Technical Capability Agents. These Agents, who make up the Panel, are responsible for coordinating and overseeing implementation of the Federal Technical Capability Program at their offices. Specifically, they are responsible for:

- assisting the FEM/PSO/LPSO in establishing a formal STSM Program for the organization;

- facilitating recruitment to fill open positions with technically competent individuals;

- concurring with STSM vacancy announcements to ensure the inclusion of adequate selection criteria; and

- presenting to the Panel the office's justification for its identification and qualification of STSM incumbents.

3. MONITORING STSM POSITIONS.

The Executive Secretary to the Panel maintains and publishes the approved list of STSM positions, and monitors changes to the list. The Agent representing the changes must notify the Panel of the changes at the first meeting that takes place after the changes are made. The notification must address any of the following that apply:

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- change in position title,
- organizational change in position responsibilities,
- addition or removal of a position from the list,
- selection of a new individual for an STSM position.

Any concern raised by the Panel must be resolved to the satisfaction of the Panel. Any issue that cannot be resolved will be referred to the Deputy Secretary, the LPSO, and the PSO for their information and action, as appropriate.

4. FILLING STSM POSITIONS.

a. Background and Experience. STSMs must possess a scientific or engineering degree with a major in an academic area that supports the functional responsibilities of the position. Exceptions to this requirement should be considered only in rare circumstances, and then in accordance with Office of Personnel Management qualification standards for the 800 and 1300 classification groups. An advanced technical degree is desirable. Professional credentials (i.e., Professional Engineer) and industry or governmental qualifications/certifications (i.e., Facility Representative) should weigh heavily in favor of the applicant or incumbent. Additionally, the applicant should have demonstrated management and leadership skills.

The applicant's resume or work history should show a demonstrated capability to manage technical issues using an integrated and systematic approach at the level that the position requires. For example, a management position that is narrow in scope with significant detail work requires a level of expertise close to that of a subject matter expert. Conversely, a management position that is very broad in scope requires an interdisciplinary background and demonstrated technical competence. In both cases, direct operational experience should be requisite. Applicants should have three or more years experience in an equivalent position or a position one level below the position for which the applicant has applied.

In summary, both demonstrated technical expertise and managerial skills are necessary for STSM positions.

b. Position Descriptions. STSM position descriptions must clearly identify the position as an STSM position and be written to ensure that the requisite education, experience, and requirements are included. STSM position descriptions must reflect the prerequisites of:

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- a technical degree,
- three or more years of experience in the technical work area(s) related to the position,
- recognition as a subject matter expert in a technical area.

To ensure the integration of safety management within the organization, incumbent STSMs should be used as subject matter experts to assist the servicing human resource office in developing position descriptions. The Agent representing the office should also review and concur with the STSM position descriptions for the office.

c. Knowledge and Experience Determination. If an existing position is identified as an STSM position, the individual assigned to fill the position must be evaluated to determine if he or she meets the technical prerequisites of the position. In addition to verifying that the individual meets the education and experience requirements of the position, the extent of the individual's understanding of safety management concepts and issues must be determined. To do this, experienced supervisors or an interview board consisting of individuals with strong safety management backgrounds must interview the individual. The FEM, PSO, or LPSO could also conduct an extensive documentation review and/or interview. Any interviews performed should include the following kinds of questions, and facility-specific safety questions relating directly to the STSM position.

- Why are Safety Analysis Reports (SARs) written?
- What is done with the SARs after they are written and approved?
- What are "requirements" and how do they compare to regulations and rules?
- How are requirements translated into policies, plans, and procedures?
- What is a "safety envelope?"
- How does the "safety envelope" influence design and operation?
- What is the significance of "Conduct of Operations" principles?
- How does the systematic approach to training, qualifications, and personnel certifications relate to operations?
- Define what is meant by line management responsibility for safety.
- What is "defense in depth?" How does it apply to high risk facilities?
- What is the role of Unreviewed Safety Questions in safety management?

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- What are examples of significant Occupational Safety and Health Administration (OSHA) requirements?
- How does one balance safety, security, fire, and emergency procedures?
- Explain how all the various aspects of safety management interact and fit together to form a safety culture.

It is imperative that the interview be structured to evaluate the individual adequately so that, upon interview completion, the personnel conducting the interview have complete faith that the STSM has sufficient relevant knowledge to carry out the duties and responsibilities associated with the position.

Upon determination that the individual understands safety management concepts and has the experience necessary to qualify for an STSM position, the competencies of the STSM Qualification Standard are then used to develop training and qualification records. These records may take the form of technical qualification records, individual development plans, or similar documents. They are designed to ensure that an STSM acquires and maintains qualifications necessary to support Departmental safety management concerns in relation to the STSM position he or she holds.

d. STSM Vacancy Announcements. Vacancy announcements should identify the position as an STSM position. The announcement should fully reflect position requirements based on the guidelines in this Manual, the position description, and specific technical requirements associated with the job. Well-written vacancy announcements, including specialized experience and skill requirements, will help ensure that the people who apply have the requisite technical skills. The vacancy announcement should be posted over a wide geographic area. This can be accomplished through the use of advertisements in professional publications, newspapers, and other proven means to attract a diverse pool of highly qualified applicants. The crediting plan should be written to include the specific education, experience, and technical competencies required of the position to ensure that the most qualified individual is selected.

Incumbent STSMs should serve as subject matter experts to help the servicing human resources office develop the vacancy announcement and the crediting plan. The Agent representing the office should review and concur with the vacancy announcement and crediting plan before the position is posted.

e. Hiring Process. The FEM/PSO/LPSO responsible for hiring the applicant should ensure that each applicant's credentials are thoroughly reviewed using a centrally managed screening process as described in the following paragraphs. In this Manual, hiring also includes transfers and promotions.

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Human Resources office personnel, with assistance from qualified STSMs, should evaluate the applications to develop a list of candidates who clearly meet the position requirements. Successfully screened applicants should then be further reviewed under the direction of the FEM/PSO/LPSO. A suggested process is as follows.

- The FEM/PSO/LPSO should consider establishing a review board comprising of individuals who themselves meet the selection criteria for STSM positions. The Agent should always be a member of the review process/board. If the Agent is a candidate for the position, another Agent should be included.

- Whether a review board is used or not, the review process must include comprehensive interviews with the applicants, and should include verification of resumes and evaluations from previous employers to validate technical knowledge, managerial competence, and operational experience.

- Interviews must evaluate the applicant's technical and operational competence, understanding of integrated safety management principles, experience in dealing with a technical work force, breadth of interdisciplinary background, and leadership and management skills. The questions contained in the "Knowledge and Experience Determination" section should be considered for this interview.

- In addition to interviews, the selecting official should conduct comprehensive reference checks.

The process should conclude with the FEM/PSO/LPSO or Agent reviewing or interviewing those applicants considered the best qualified.

5. COMPENSATORY AND ALTERNATIVE MEASURES. If the incumbent in an identified STSM position does not meet the education or experience requirements contained in the STSM Qualification Standard, management has various options for addressing or compensating for the deficiency. In developing and implementing compensatory measures, management has the responsibility for creating an unbroken chain of fully qualified STSMs in positions of authority. Various examples of compensatory measure options include the following.

   - Maintain the incumbent in the respective position and have a fully qualified STSM assigned to the office to be responsible for technical aspects of decisions. This may be advisable if the incumbent is in place to address administrative or legal issues. This option may also be desirable if the incumbent is a political appointee.

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- Change the position description to specify that the incumbent in the position does not decide technical issues. Document that a member of the individual's staff (e.g., Deputy or senior staff officer) is responsible for the technical aspects of decision making for the work unit. Include that the non-technical STSM overlays administrative, legal, or other implications, without changing the technical decisions of the work unit. Any technical issue on which the two individuals cannot agree must be referred to the next senior qualified STSM in the office.

- Provide training and development support to the individual so that he or she can eventually qualify as an STSM.

- Request that the Deputy Secretary review the STSM's qualifications and the organizational situation to determine if the situation dictates an exception to policy. In such cases, the Deputy Secretary must find that, due to the unique qualifications of the incumbent and the duties of the position, the individual—although not meeting the strict requirements of the STSM Qualification Standard—should remain in the position because his/her unique qualifications contribute to and ensure safety.

- Reassign the individual to a position that does not require him/her to qualify as an STSM.

6. QUALIFICATION PROCESS. The STSM Qualification Standard applies to all Department STSMs identified in the approved list maintained by the Panel. This Standard, which is issued through the Department's Technical Standards Program, contains the competencies associated with a typical STSM position in DOE. Additional competencies specific to the office or facility for which the STSM is responsible should also be considered. Personnel designated as STSMs participate in the Technical Qualification Program and are required to satisfy the requirements of the program as defined by DOE M 360.1A-1, FEDERAL EMPLOYEE TRAINING MANUAL.

Personnel should be hired, transferred, or promoted into STSM positions using the process described in Paragraph 5 above, "Filling STSM Positions." Upon being placed in the position, they must complete the requirements identified in the STSM Qualification Standard and any other local requirements established for the position.

Training and qualification records must be maintained for STSMs as defined by DOE M, 360.1A-1 FEDERAL EMPLOYEE TRAINING MANUAL.

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CHAPTER VI

FACILITY REPRESENTATIVE PROGRAM

1. OVERVIEW. The DOE Facility Representative is the "eyes and ears" of DOE management within the hazardous facilities owned by the Department. DOE line management is responsible for safety at DOE facilities, and well-managed, well-trained Facility Representatives are an important line management tool for ensuring safe operations. Facility Representatives perform oversight of their assigned facilities to ensure that:

   - the contractor operates facilities safely and efficiently (i.e., within the boundaries of those controls invoked in the facility authorization basis);
   - the contractor's management system is effectively controlling conduct of operations and implementing Integrated Safety Management objectives, principles and functions;
   - DOE Line/Program Managers are cognizant of the operational performance of facility contractors; and
   - effective lines of communication between DOE and its operating contractors are maintained during periods of normal operation and following reportable events, in accordance with DOE Orders and requirements.

2. Program Requirements. Facility Representatives must have independent and direct access to contractor personnel, facilities, and records, as necessary, to carry out their assigned responsibilities. The Facility Representative should have access to the program/line manager to provide information related to the assigned facilities. A Facility Representative must be qualified by education, experience, and training to carry out the duties and responsibilities of the position. Facility Representatives are required to meet stringent and comprehensive qualification standards. Cognizant Secretarial Officers and Field Element Managers are responsible for providing developmental and career opportunities for Facility Representatives.

   Field elements with hazardous facilities must establish a formal Facility Representative Program using the guidelines established in DOE-STD-1063 *Facility Representatives*.

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CHAPTER VII

TECHNICAL LEADERSHIP DEVELOPMENT PROGRAM

1. OVERVIEW. The Department of Energy's Technical Leadership Development Program (TLDP) is designed to provide a continuing source of highly competent technical personnel with the skills and knowledge to meet the Department's current and future technical staffing needs, while also nurturing their potential as future leaders and managers within the Department. The TLDP is designed to attract recent college graduates (entry level), current employees, and private-sector candidates with 3-5 years experience.

   The program consists of general and specific technical training activities, management and leadership development activities, and rotational work experience in a variety of functional programs and program support areas (at various Headquarters offices, field or area offices, laboratories, and/or contractor organizations). After the first three years, 12 months of graduate education may be made available to TLDP participants for study in a technical specialty area appropriate to the mission(s) of the home organization and/or the Department.

2. RESPONSIBILITIES.

   a. The Federal Technical Capability Panel. The Panel collaborates with the Office of Management and Administration to provide policy oversight and guidance for the TLDP. Decisions relative to the direction of the TLDP will be made by the Panel. Panel oversight includes but is not limited to validating the overall effectiveness of the program, course curriculums, learning activities, and other program objectives. Panel agents are also charged with ensuring that management support and resources are available to achieve program goals within their home organizations.

   b. Office of Management and Administration (MA). The Director, Office of Human Resources Management (MA-3), assigns a program manager for overall administrative coordination of the TLDP. The TLDP Program Manager:

      - oversees the national recruitment effort; the coordination of centralized training activities; and the contracting, development, and maintenance of the Applied Engineering Fundamentals Course, Leadership/Management Learning Activities, and Mentoring Course;

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- oversees the Applied Engineering Fundamentals Course, Leadership/Management Activities, and Mentoring Course delivery, including appointment of a class supervisor to manage participants while on detail to these learning activities;

- coordinates rotational assignments among Headquarters, field, laboratories, and/or contractor coordinators.

c. Field Element Managers, Principal Secretarial Officers, and the Administrator, National Nuclear Security Administration. FEMs, PSOs, and LPSOs ensure the availability of appropriate resources to support the TLDP. This includes but is not limited to funding, full time equivalents (FTEs), training, mentoring, and other activities that will ensure the success of the program. They also assign home organization TLDP coordinators for their organizations.

d. Home Organization Management/TLDP Coordinator. Line management provides the necessary support and resources to meet the objectives and goals of the TLDP. Home organization TLDP coordinators are responsible for coordinating all TLDP activities within their organizations and with other offices. Every effort will be made to ensure that TLDP participants are fully integrated into the Technical Qualification Program. Learning activities, rotational assignments, and other TLDP-planned activities should assist the participants in fulfilling the Technical Qualification Program and Home Organization objectives.

e. Mentors. Mentoring activities are a vital component of the TLDP. Home organizations will assign a mentor to each TLDP participant. Participants will be matched with a mentor to guide them during the program while adapting to a new environment and following the program throughout to completion. Mentors assist participants in developing the skills necessary to be successful in their chosen fields. Each home organization mentor will be required to attend the Departmental Mentoring Course before assuming duties as a mentor.

3. RECRUITMENT.

a. Staffing Needs. Staffing needs are identified through the home organization TLDP coordinator and the TLDP Program Manager. The needs of all Headquarters and field organizations should be addressed and targeted during each recruitment trip or effort. Generic position descriptions are developed as templates at Headquarters to assist other offices in developing their position descriptions as required.

b. Vacancy Announcements. The recruitment effort uses all available competitive and Excepted Service authorities. The area of consideration is nationwide/all sources. Interdisciplinary positions (GS-7, GS-9, GS-11, and GS-12) in the engineering/physical science area are targeted. Opening and closing dates are coordinated through the TLDP

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program managers and the home organization TLDP coordinators. Rating and selection dates are established upon closing of the vacancy announcements. Conditions of employment include security clearance, drug testing, and proof of draft registry. Geographic locations are provided on the vacancy announcement so that the applicant can identify geographic preference.

c. Sources for Candidates. Candidates are recruited through several sources. Diverse technical institutions are identified through a variety of sources, including data bases from colleges and universities and from the DOE publication, *Diversity Employment and Recruitment Sources for Workforce 21*. Once these institutions are identified, staff personnel begin recruitment trips to colleges and universities. Candidates are recruited through job fairs and special mailings. As appropriate, advertisements are placed in engineering and professional journals, newspapers, and other publications. The TLDP program manager and home organization TLDP coordinators work together to address Headquarters and field office staffing needs.

d. Recruiters. Headquarters and participating field office representatives recruit nationally or locally. It is recommended that three recruiters be used for each recruiting event, including a personnel specialist from a Headquarters or field organization, a mentor or other technical/administrative staff member, and an intern/graduate of the TLDP program.

A recruitment package is available to the candidates on all recruitment trips. This package includes information on benefits, salary, the Department of Energy, the TLDP, and the local area. Resumes are collected on these recruitment trips and provided to the appropriate HQ or field personnel specialist for rating, ranking, screening, and referral to selecting officials.

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4. SELECTION CRITERIA AND PROCESS.

a. Applications and Resumes. Applications, resumes, and other required documentation are received from recruiters, by direct mailings, personal delivery, and by concerned managers at Headquarters and in the field. A personnel specialist in the organization receiving the application or resume will perform a basic qualifications screening, including application or resume review/analysis; qualifications analysis; matching of knowledge, skills, and abilities with job requirements; and grade level determination.

b. Rating and Ranking. Rating and ranking give consideration and clearance to those individuals eligible for selection under provisions of the Career Transition Assistance Plan (CTAP), Reemployment Priority List (RPL), Interagency Career Transition Assistance Plan (ICTAP), and re-promotion of eligible employees (affected by reduction in force). The delegated examiner provides a list of eligibles, if applicable, to a panel of three or more subject matter experts/technical managers who, along with a personnel specialist, review,

rate, and rank the applications. Upon completion of these activities, selection certificates are issued to the appropriate selecting official(s) by the designated personnel specialist.

c. Interviews and References. The hiring organization issues and funds invitational travel requests and conducts interviews and reference checks using knowledgeable and qualified Headquarters and/or field representatives depending upon the nature and location of the position and organizational requirements.

d. Selections/Non-Selections. Selectees receive a tentative job offer from the Office of Management and Administration or the hiring organization, normally within seven days. Non-selectees are notified as soon as possible that a selection has been made and whether the recruitment action has been canceled or the position re-announced.

e. Job Offers. Tentative offers of employment within either the General Schedule or the Excepted Service may be made only in writing and only by a personnel specialist, with a return receipt required. If the offer is accepted, the personnel specialist will establish an effective date of employment, notify non-selectees, and arrange for a permanent change of station if applicable. If the offer is declined, the personnel specialist, in consultation with appropriate management officials, may offer incentives such as Advanced In-Hire Rate and/or Recruitment and Relocation Bonuses as appropriate.

5. BUDGET AND FULL-TIME EQUIVALENTS.

a. Designation of Full-Time Equivalents. Upon entering the TLDP, individual TLDP candidates are assigned to the responsible program and field elements that recruited and selected them. Accordingly, program and field elements electing to participate in the program are normally required to dedicate positions (and associated FTEs) from within their staffing targets to support their TLDP hires.

b. Funding. Program and field elements electing to establish TLDP positions are required to formulate budgets and provide funding to cover the costs of salaries, benefits, and travel expenses for their program participants.

Additionally, to ensure the continued success of the program, a centralized, reliable source of funding is required to cover expenses associated with those aspects of the program that are best managed centrally. Included are costs for centralized recruitment and advertising, development and administration of the Applied Engineering Fundamentals Course, and maintenance of a central staff to administer the program.

The Office of Management and Administration is responsible for formulating and executing all budgets associated with administering the centralized aspects of the program. Therefore,

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the Office of Management and Administration and the Office of the Chief Financial Officer must work together to develop a budget strategy for acquiring the funding needed to support the program. In developing such a strategy, these organizations should assess the propriety of including the TLDP as a line item in the Department's budget request.

6. SERVICE OBLIGATION.

A service obligation of three years for each year of graduate study completed while in the TLDP program or funded by DOE is incurred by TLDP participants.

7. PROGRAM CONTENT. The TLDP is designed to last for up to four years. The first three years are comprised of training, rotational assignments, and developmental activities within the home organization. During the fourth year participants may, depending on the availability of resources and competing training priorities, attend advanced education in a technical discipline (i.e., graduate study).

a. Orientation. The 6-month orientation phase activities provide the TLDP participant with the Department's history and organizational structure, mission, core values, and vision; and the home organization's structure, mission, core values, and vision. Orientation is conducted by the home organization and includes the following activities:

- completing employment paperwork;
- badging activities including security, intelligence, and employee conduct briefings;
- introduction to the supervisor of record and organizational group employees;
- information about roles and responsibilities as they relate to the participant's assigned job and duty station;
- introduction to the home organizational TLDP coordinator, who provides additional information on the program;
- selection of applicable Technical Qualification Standards;
- initiation of performance and development/individual development/training plan;
- assignment of a home organization mentor.

b. Rotational Assignments. To achieve the Department's goals, participants need additional professional and technical skills and knowledge to begin productive careers. Rotational work assignments provide practical, real-life experiences and an opportunity to see the interactions between the assigned duty station and other elements of the Department.

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Three rotational work assignments are required. Each is designed to maximize exposure to the range of responsibilities of DOE activities and aid in development of confident, highly qualified, knowledgeable technical staff members. Rotational assignments must be structured work assignments at the host location and are to be completed as follows:

- one rotation at another field or area office;
- one rotation at a contractor or laboratory location;
- one rotation at Headquarters.

Rotational assignments are developed by the TLDP participant and home organization TLDP coordinators, who coordinate the activity with the TLDP program manager. All rotational assignments must provide meaningful work for the participant and include the following information as a minimum:

- field/program office mission,
- major goals associated with the field/program office strategic plan,
- major issues of concern at the field/program office,
- participant's duties/responsibilities,
- participant's expectations of the assignment,
- participant's performance measures, and
- how the field/program office assignment contributes to the development of the participant.

An on-site mentor and work supervisor will be assigned to the participant to ensure the above information is included as part of the participant's rotation.

c. Applied Engineering Fundamentals Course (AEF). An Applied Engineering Fundamentals Course provides a bridge between academic training and education and the Department's missions. The AEF enables TLDP participants to integrate and apply varied technical disciplines to topical DOE problems and situations. Acquisition of interdisciplinary knowledge and reliance on teamwork skills are also emphasized.

A class supervisor is appointed to manage the TLDP participants while on detail to the course. The class supervisor is responsible for ensuring that all coordinated learning activities are completed with integrity and for providing guidance to program participants as requested or required.

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d. Leadership/Management Training. Leadership/management training enables TLDP participants to assume leadership positions in the Department in the future. It covers such subjects as technical project management, program management, and contract administration for technical representatives. Leadership/management training is offered at a central location and is coordinated by the Office of Training and Human Resource Development (MA-31).

e. Technical Qualification Program. The Technical Qualification Program is the Department's program for ensuring the technical competence of its workforce. All TLDP participants are required to meet the requirements of their assigned technical qualification standard(s) in accordance with Technical Qualification Program requirements established by local procedure.

f. Advanced Education. The opportunity for graduate study in a technical discipline, up to 12 months full-time or the part-time equivalent, may be made available to TLDP participants who do not already possess graduate degrees. Graduate studies provide participants with advanced skills and knowledge in support of the Department's current or projected missions. Participants maintain full-time employee status during the graduate study phase of the TLDP.

Home organizations may consider other developmental assignments for TLDP participants who already hold graduate degrees, such as extended details to other Federal, private sector, or international organizations. As with graduate education, the purpose of such a developmental assignment is to provide participants with advanced skills and knowledge in support of the Department's current or projected missions.

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CHAPTER VIII

TECHNICAL QUALIFICATION PROGRAM

1. OVERVIEW. Training, education, and experience combine to provide a workforce that ensures safe operations of defense nuclear facilities. The Technical Qualification Program establishes a process to objectively determine that individuals performing activities related to the technical support, management, oversight, or operation of defense nuclear facilities possess the necessary knowledge, skills, and abilities to perform their assigned duties and responsibilities.

   The Technical Qualification Program specifically applies to DOE technical employees whose duties and responsibilities require them to provide assistance, guidance, direction, oversight, or evaluation of contractor activities that could impact the safe operation of a defense nuclear facility. This includes personnel designated as Senior Technical Safety Managers and employees on detail or temporary assignment. Technical Qualification Programs may be established for other Departmental employees with safety, health, and environmental responsibilities for facilities and programs to ensure that they have the required competencies to perform their duties effectively.

2. RESPONSIBILITIES.

   a. Field Element Managers, Principal Secretarial Officers, and the Administrator, National Nuclear Security Administration.

      - Implement formal training and qualification programs for personnel who provide management direction or oversight of contractor technical activities that could impact the safe operation of a defense nuclear facility.

      - Designate the positions and/or individuals in their respective organizations required to participate in the Technical Qualification Program and the Technical Qualification Standard(s) that apply to them.

   b. Federal Technical Capability Panel.

      - Oversee the overall implementation of the Technical Qualification Program across the Department.

      - Review and approve the Technical Qualification Standards for use throughout the Department as guides.

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- Review Technical Qualification Program Plans and assess Technical Qualification Programs

c. Federal Technical Capability Agents. Oversee implementation of the Technical Qualification Program within their respective organizations.

d. Office of Management and Administration.

- Coordinate the development, revision, and approval of Department-wide Functional Area Qualification Standards.

- Coordinate the development and revision of training and qualification programs throughout DOE for personnel who provide management direction or oversight of contractor technical activities that could affect the safe operation of a defense nuclear facility.

3. OBJECTIVES AND PRINCIPLES. The objectives of the Technical Qualification Program are as follows:

- to identify and document the functional competencies that individual employees must possess to ensure that DOE defense nuclear facilities and programs are operated in accordance with applicable safety, health, and environmental requirements;

- to establish a program that clearly identifies and documents the process used by senior line management to demonstrate employee technical competence, consistent with applicable industry standards for similar occupations;

- to ensure that employees maintain their technical competence;

- to maintain a cycle of continuous performance improvement through structured, individualized training and development programs and through review and assessment of Headquarters and field element programs.

Each Headquarters and field element, including the National Nuclear Security Administration, with defense nuclear facilities responsibility is required to establish a Technical Qualification Program for its organization. This will allow a flexible approach to upgrade the technical capabilities of personnel to achieve the site's mission. Although the programs may be designed to meet the unique needs and responsibilities of each organization, the following principles will be used as the basis for all Technical Qualification Programs.

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- Demonstration of Competence: The program must clearly identify and document the process used to demonstrate employee technical competence (e.g., professional certification, qualification cards, background and experience, etc.).

- Competency Levels: The competency levels within the program must be clearly defined and consistent with applicable industry standards for similar occupations.

- Plans and Procedures: Plans and procedures must be developed and implemented to govern the administration of the program.

- Qualification Tailored to Work Activities: The program must clearly identify unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish the work.

- Credit for Existing Technical Qualification Program(s): The program should be structured to allow credit, where appropriate, for other technical qualification program accomplishments to date.

- Transportability: Competency requirements identified as having Department-wide applicability must be transferable.

- Measurable: The program must contain sufficient rigor to demonstrate compliance to the principles.

4. TECHNICAL QUALIFICATION PROGRAM PLANS. Each organization must document its Technical Qualification Program requirements in a Technical Qualification Program Plan. Technical Qualification Program Plans must be approved by the head of the element and include the process and requirements for:

   - identifying personnel and/or positions required to participate in the Technical Qualification Program;
   - identifying, developing, approving, revising, and updating Technical Qualification Standards or individual qualification requirements, as appropriate;
   - evaluating employees against Technical Qualification Standards and documenting the approval of equivalencies for Department-wide competencies;
   - establishing and/or updating individual development plans, training plans, qualification cards, or related records to document the learning activities that an individual must accomplish to satisfy established competencies;

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- implementing continuing training and requalification programs;
- maintaining training and qualification records.

5. TECHNICAL QUALIFICATION PROGRAM REQUIREMENTS. Each organizational element must use Technical Qualification Standards 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 the following.

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

   Headquarters and field element managers, including the National Nuclear Security Administration, must designate the positions and/or individuals in their respective organizations required to participate in the Technical Qualification Program and the qualification requirements that apply to them. A senior training official and/or a senior line management official(s) must be designated as responsible for program direction and performance. Technical Qualification Program employees must satisfy the qualification requirements assigned to them in accordance with a defined schedule established by line management.

   Equivalencies may be granted to personnel who satisfy competencies indicated in Technical Qualification Standards based upon objective evidence of previous education, training, certification, or experience.

   Personnel who complete applicable qualification requirements must continue their professional development and maintain proficiency through participation in continuing training, education, and other developmental activities.

   The duties and responsibilities contained in an individual position description drive participation in the Technical Qualification Program. They determine which functional area standards and individual competencies in the Technical Qualification Program are appropriate for the position. Individual performance standards should reflect and note that individual's particular requirements under the Technical Qualification Program.

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Workforce deployment, including reorganizations, must recognize the performance requirements of covered positions and maintain the safety, health, and environmental management technical competency requirements of the workforce.

6. DEVELOPMENT AND REVISION OF TECHNICAL QUALIFICATION STANDARDS.

A key element of the Technical Qualification Program is a set of common Functional Area Qualification Standards (Standards). These Standards are developed for various functional areas of responsibility in the Department. For each functional area, the Standards identify the recommended duties and responsibilities, background, technical competencies, and supporting knowledge and skills for a typical SME working in the area. Although adherence to these Standards is not mandatory, organizations across the Department may use them in developing their Technical Qualification Programs.

a. General. Each Standard has a sponsor organization, which is usually a Headquarters or field office. The Executive Secretary of the Federal Technical Capability Panel maintains the list of sponsor organizations for the Panel. The sponsor organization is responsible for coordinating the development, update, and revision of the Standard in accordance with the guidance contained in this Manual.

The Executive Secretary of the Federal Technical Capability Panel also maintains a list of subject matter experts (SMEs) for each Standard. Each Headquarters and field office participating in the Technical Qualification Program can submit the names of two SMEs for each Standard. If an office does not have an SME for a Standard, they need not submit a name. The names and contact information for the SMEs are provided to the sponsor organization to help develop, revise, and/or review Standards. Maintaining an up-to-date and valid list of SMEs is essential to ensuring technically adequate and accurate Standards.

Technical Qualification Standards will be reviewed, approved and issued through the Departments Technical Standards Program in accordance with the requirements of that program. The Technical Qualification Standards will not be issued until approved by the Federal Technical Capability Panel.

b. Process for Developing or Revising a Functional Area Qualification Standard.

(1) Conduct an SME Working Group Session to gather data. (Note: At the sponsor's discretion, this step is optional for revising an existing Standard.)

The sponsor organization coordinates a face-to-face working group session at a location readily accessible by the SMEs. Approximately five SMEs from across the complex should participate in this session. The sponsor solicits volunteers from the list

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of SMEs maintained by the Panel. The preferred make-up of the group is three SMEs from the field and two from Headquarters, with all the SMEs from different organizations. The purpose of the session is to establish the following for a typical SME working in the functional area:

- duties and responsibilities associated with the functional area,
- technical competencies required to perform the roles and responsibilities,
- knowledge and skills associated with the competencies,
- appropriate continuing education or proficiency opportunities, and
- applicable continuing education and/or proficiency requirements.

(2) Develop a draft Standard using data from the SME Working Group Session. (Note: This step may be done as part of the workshop described above, if time allows.) The sponsor develops the draft Standard in the format described in this Manual. The sponsor does research as necessary to expand upon the information obtained in the working group session to ensure that competency statements and supporting knowledge and skills are technically adequate and accurate.

(3) The sponsor sends the draft Standard to the SMEs from the working group for review and comment. The sponsor revises the Standard as applicable based on the SME's comments.

(4) The sponsor transmits the Standard to the Technical Standards Organization for formal review and comment using the process established by that program. The sponsor ensures that the SMEs designated by the Panel are informed that the Standard is in the Technical Standards process, and encourages them to review and comment on the Standard through that process.

(5) The sponsor will work with the Technical Standards organization to resolve comments in accordance with the process established by that program. The sponsor reviews all comments and catalogs them in a comment resolution document. The comment resolution document is a three-column document that shows the organization that made the comment, the comment, and the sponsor's resolution of the comment. The draft Standard is revised as applicable based upon the comments received.

(6) After completing all requirements of the Technical Standards Program, the sponsor transmits the final draft Standard and the comment disposition document to the

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Executive Secretary of the Federal Technical Capability Panel. After ensuring that the Standard is consistent in format with all other Standards, the Executive Secretary transmits the final draft Standard and the final comment resolution document to Panel members for review and approval. Once the Standard is approved by the Panel, the Executive Secretary of the Panel transmits it to the Technical Standards Program for distribution throughout the Department.

c. Technical Qualification Standard Format. Sponsors who develop and revise Functional Area Qualification Standards must ensure that they are consistent in form and format, which makes them easier to use throughout the Department. To do this, sponsors must ensure that Standards have the content described below. A template (with standardized language) for a Functional Area Qualification Standard is maintained by the Office of Training and Human Resource Development.

- Approval Page. Indicate that the Federal Technical Capability Panel has approved the Standard.

- Table of Contents. Develop a table of contents identifying all sections required for the Standard.

- Acknowledgment. Name the organization sponsoring the Standard and list the names and organizations of the personnel who acted as SMEs and/or reviewers.

- Purpose. Describe the Technical Qualification Program, the purpose of the Standard, and some guiding principles for using Standards in the personnel processes.

- Applicability. Briefly indicate who should use the Standard and the relationship of the Standard to office/facility-specific Standards and other parts of the Technical Qualification Program.

- Implementation. Describe competency requirements and the level of knowledge necessary to meet the Standard; also describe the process by which participants may use equivalencies, training, experience, or other means to meet requirements.

- Evaluation Requirements. Briefly describe any specific documentation requirements necessary to complete the qualification process.

- Continuing Education, Training, and Proficiency. Briefly describe the need to maintain proficiency through continuing education, training, or other activities; also refer the reader to Appendix A of the Standard, which suggests a list of activities that may be used to maintain proficiency upon completion of the competencies in the Standard.

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SMEs who developed the Standard are to develop the list and suggest a level of continuing education, training, or participation in other activities that is necessary to maintain proficiency. SMEs may use a point system or other means to establish the level of continuing education necessary.

- Duties and Responsibilities. List and describe the typical duties and responsibilities of an individual working in the functional area. This section also provides the framework for the remainder of the Standard. The recommended background and technical competencies should support the identified duties and responsibilities.

- Background and Experience. (Note: the U.S. Office of Personnel Management's Qualification Standards Handbook establishes minimum education, training, experience, or other relevant requirements applicable to a particular occupational series/grade level, and alternatives to meeting specified requirements.) Provide additional guidance related to the preferred background of an individual in terms of specific education credentials and experience related to the particular functional area.

- Required Technical Competencies. Identify the specific technical competencies an individual should have to work within the functional area. This section should identify only those competencies that would be common throughout DOE within the functional area. It should not identify non-technical competencies, such as those related to communication, leadership, personnel management, etc., unless they have some unique feature specifically related to the functional area.

  Supporting knowledge and/or skill statements are identified for each competency statement. The purpose of the knowledge and skill statements is to further define the competency statement.

- Appendix A. List suggested activities for maintaining proficiency upon completion of the competencies in the Standard. The SMEs who developed the Standard are to develop the list and suggest a level of continuing education, training, or participation in other activities that is necessary to maintain proficiency.

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CHAPTER IX

ASSESSMENTS

1. OVERVIEW. The Federal Technical Capability Program provides for the recruitment, deployment, development, and retention of Federal personnel with the demonstrated technical capability to safely accomplish the Department's missions and responsibilities. The Federal Technical Capability Panel periodically assesses the effectiveness of the four functions of the Federal Technical Capability Program using both internal and independent experts. In addition to Federal Technical Capability Program assessments, Headquarters and field elements conduct periodic self-assessments of Technical Qualification Program implementation within their organization.

   This chapter establishes the guidance and criteria for conducting Federal Technical Capability Assessments and Technical Qualification Program Assessments. Regardless of the type of assessment conducted, or who conducts the assessment, the objectives and criteria within this Manual are used as a basis for the assessment. Objectives and criteria must be used consistently to establish baselines and to track and trend performance.

2. RESPONSIBILITIES.

   a. Federal Technical Capability Panel.

      - Review the results of Federal Technical Capability Assessments and Technical Qualification Program Assessments and make recommendations for improvement as appropriate.
      - Charter Independent Federal Technical Capability Assessments when the potential exists for a performance problem in an area of the Federal Technical Capability Program, or the need for an independent review of an organization or program is indicated.

   b. Federal Technical Capability Agents. Coordinate Internal Federal Technical Capability Assessments and Technical Qualification Program Assessments within their respective organizations and ensure that assessment results are forwarded to the Federal Technical Capability Panel.

3. FEDERAL TECHNICAL CAPABILITY ASSESSMENTS. Within the context of this Manual, Federal Technical Capability Assessments are classified as either internal assessments or independent assessments, and either local assessments or Departmental assessments.

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a. Internal Federal Technical Capability Assessments. Experts from within DOE conduct Internal Federal Technical Capability Program Assessments. Although experts from other organizations may be part of the assessment team, internal assessments are typically conducted by personnel from within that organization or program. Internal assessments are led by a senior manager from within the organization.

b. Independent Federal Technical Capability Assessments. Independent Federal Technical Capability Assessments are conducted using experts from outside the Department, or experts from within the Department that have no involvement with the organization or program being assessed. External experts may include independent consultants, personnel from other agencies, or experts from industry organizations. The independent assessment team may be lead by an external expert or an independent DOE expert.

c. Local Federal Technical Capability Assessments. Biennially, each DOE office with safety responsibilities for defense nuclear facilities conducts a Local Federal Technical Capability Assessment covering all of the objectives and criteria in this Manual. This includes field elements and Headquarters offices. Local Federal Technical Capability Assessments should be led by a Senior Technical Safety Manager, who reports directly to the office manager for the purpose of the assessment. Although local assessments may be internal or independent assessments, usually they are internal assessments.

The Panel reviews the results of all of the local assessments. Based upon their findings, the Panel may charter a Departmental assessment team to review the implementation of select objectives and criteria throughout DOE.

d. Departmental Federal Technical Capability Assessments. Departmental Federal Technical Capability Assessments are conducted across multiple DOE offices and may be conducted internally or independently. Departmental assessments may cover the entire Federal Technical Capability Program, or they may cover a single aspect of the program, such as recruitment or the intern program.

The Federal Technical Capability Panel charters Departmental Federal Technical Capability Assessments when the potential exists for a performance problem in an area of the Federal Technical Capability Program, and on a periodic basis. Departmental assessments are conducted based upon the objectives and criteria in this Manual, but the Panel may add objectives and criteria to the scope of the assessment. The Panel selects the Departmental assessment team leader and determines if external experts will be used on the team. Departmental assessments conducted in the same year as local assessments should be conducted after the local assessments are completed and evaluated by the Panel. This enables the Departmental assessment team to use the results of the local assessments to assist in their assessment.

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4. TECHNICAL QUALIFICATION PROGRAM ASSESSMENTS. To ensure effective implementation of the Technical Qualification Program, Headquarters and field elements conduct periodic self-assessments of the program. Typically, these self-assessments are conducted by an internal Technical Qualification Program Assessment Team lead by a senior line manager. The results of these assessments are used by the local organization to determine if improvements are required. The Panel also reviews the results of TQP assessments and determines if further action is necessary on a Departmental level.

5. ASSESSMENT TEAM MEMBERS - Choosing the proper assessment team leader is a key element to ensuring a successful assessment. Local assessment team leaders are selected by the organization manager, and Departmental assessment team leaders are typically selected by the Panel. Key attributes of an assessment team leader include:

- If internal to the Department, the individual is a senior level (GS-15 or above) line manager with knowledge of, and experience with, the program being assessed. The assessment team leader should be a Senior Technical Safety Manager.
- If external to the Department, the individual is highly respected within the professional community in areas and programs similar to that being assessed.
- The individual has experience leading an evaluation or project team.
- The individual, by virtue of reputation, background, and/or experience, will be respected by the organization being assessed.

The roles and responsibilities of the assessment team leader are as follows:

- serves as the project manager for all assessment team activities and acts as the primary point-of-contact with the organization being assessed;
- coordinates assessment team activities and ensures they are performed in a competent and professional manner;
- for local assessments, prepares and submits the final report to the office manager, who approves and forwards it to the Federal Technical Capability Panel;
- for Departmental assessments, prepares and submits the final report to the Panel.

The assessment team leader has primary responsibility for selecting team members. The importance of this task cannot be overemphasized. No other task so directly affects the overall quality of the assessment. The assessment team may consist of members from the organization being assessed, other DOE Headquarters or field elements, and/or independent experts. The

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number and type of personnel on the team vary based upon the scope of the assessment. Typically, an assessment team will have a team leader and three to five team members.

The following guidelines should be used when selecting team members.

- Assessment team members should have technical experience relevant to their assignment and should also have some experience conducting program assessments. This experience provides the background for team members to work independently at an unfamiliar location, gather information quickly, and make objective recommendations.
- Use of the Core Technical Group should be considered when assembling the assessment team.
- The team leader should determine whether any conflict of interest, actual or perceived, exists for any potential team member. If so, that individual must not be considered further.
- Team members, by virtue of their reputation, background, and/or experience, should be respected by the organization requesting the assistance.

6. REPORTING THE RESULTS OF ASSESSMENTS. To facilitate the review and evaluation of assessment results by the Federal Technical Capability Panel, the results of all assessments must be documented in a consistent manner. The assessment report covers the status of complying with the objectives and criteria listed in this Manual. The assessment report is approved by the assessment team leader. The format of the assessment reports is as follows.

C Cover Page. Include the title of the report, the name of the office assessed, and the date of the report.

C Executive Summary. Limit this section to one page that provides a short overview of the team composition, dates of the assessment, and methodology. The executive summary should briefly describe assessment results, including strengths and weaknesses.

C Introduction. Provide relevant background information and describe the purpose and format of the report.

C Scope and Methodology. Describe the make-up of the team in general terms (referring to Attachment A of the report for more detail), describe the scope of the assessment referencing the use of the objectives and criteria, and briefly describe the methodology applied.

C Results. Address the overall program and each of the applicable objectives listed in this chapter, describe the status of the effort to achieve the objective, and identify any strengths

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or weaknesses. Addressing each criterion for the objectives is not necessary; however, any criterion that is not achieved should be identified as a deficiency for that objective.

C Attachments. Include the following:

- objectives and criteria;
- listing of team leader and team members, including a brief description of their background and experience;
- list of personnel contacted and documents reviewed; and
- any other pertinent information.

7. FEDERAL TECHNICAL CAPABILITY PROGRAM ASSESSMENT OBJECTIVES AND CRITERIA.

a. FTC-1, Executive Commitment and Line Management Ownership. Line management is actively involved in all aspects of technical employee recruitment, retention, development, and deployment.

Criteria:

1.1 Line managers are aware of the requirements and administrative flexibilities associated with recruiting, hiring, and retaining high-quality technical employees.

1.2 Senior line management supports the continuous technical development and improvement of employees.

1.3 Supporting organizations (personnel, training, contracts, finance, etc.) recognize line managers as customers and effectively support them in achieving and maintaining technical excellence.

1.4 The applicable Level One and/or field level Functions, Responsibilities, and Authorities Manual (FRAM) clearly defines Federal line management responsibilities in the area of technical capability.

1.5 Achieving and maintaining technical competence is reflected in the goals and objectives of the organization and the position descriptions and performance evaluation plans of senior managers.

1.6 Technical Capability programs and processes are institutionalized through Policy, Orders, Standards, and procedures.

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1.7 Management uses the results of previous Federal Technical Capability Assessments as a tool to improve the program.

b. FTC-2, Recruiting Technically Capable Personnel. An effective process is implemented to attract highly competent technical personnel to fill key positions in the Department.

Criteria:

2.1 Excepted Service Authorities are considered as a tool to attract highly competent technical personnel to fill key safety positions.

2.2 Intern programs, such as the Technical Leadership Development Program, are recognized as an effective method to attract technically competent personnel to the Department.

c. FTC-3, Staffing and Deployment. Technical staffing plans are developed, maintained, and used as the basis for recruiting, developing, and deploying personnel to ensure that critical safety positions are filled with technically competent personnel.

Criteria:

3.1 Technical staffing plans are developed and maintained to identify critical safety positions and other key technical positions within the organization.

3.2 Technical staffing plans form the basis for recruiting, developing, and deploying technical personnel in the organization.

3.3 Personnel in critical safety positions and other key technical positions possess the requisite education, training, experience, and background for the position.

3.4 The Senior Technical Safety Manager Program is effectively implemented in the organization.

d. FTC-4, Development of Technically Capable Personnel. Programs and processes are effectively implemented to encourage the continuous improvement of technical personnel.

Criteria:

4.1 The Technical Qualification Program is effectively implemented. (Note: This program is evaluated using the Technical Qualification Program objectives and criteria.)

4.2 Fellowship programs and other continuing education processes are effectively used to enhance the continuous improvement of technical personnel.

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4.3 Personnel are encouraged to join professional organizations, write professional papers, and pursue professional certifications.

e. FTC-5, Retaining Technically Capable Personnel. DOE is an organization where technically competent personnel are respected and want to work.

Criteria:

5.1 Technical personnel are assigned positions and responsibilities that allow them to effectively use their education, training, experience, and background in a fulfilling way.

5.2 Career path planning and succession planning are effectively used to help retain technically capable personnel.

5.3 Technical performance is used as a basis for performance reviews, promotions, recognitions, rewards, etc.

5.4 An effective process is in place to preserve critical technical capabilities during a reduction in force (RIF).

8. TECHNICAL QUALIFICATION PROGRAM ASSESSMENT OBJECTIVES AND CRITERIA.

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

Criteria:

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

1.2 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.

1.3 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.

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

Criteria:

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

2.2 Subject Matter Experts help establish competency requirements.

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

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

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

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

Criteria:

3.1 Senior management is committed to the Technical Qualification Program.

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

3.3 Roles and responsibilities for implementing the Technical Qualification Program are clearly defined and understood by all involved.

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

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

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

Criteria:

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

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

4.3 The program supports the mission needs of the office.

e. 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 formally validated, approved, and documented.

f. 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.

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

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

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

Criteria:

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

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

7.3 The Technical Qualification Program provides for continuing training.

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CHAPTER X

ANNUAL REPORT TO THE SECRETARY OF ENERGY

1. Overview. The Federal Technical Capability Panel prepares an annual report to the Secretary of Energy, based in part on the staffing plans described in this Manual. The report summarizes actions taken to address the Department's hiring and deployment needs and identifies future actions to preserve critical technical capabilities to ensure safe operations of defense nuclear facilities. The report is typically submitted through the Deputy Secretary in the second quarter of the calendar year.

2. REPORT FORMAT. The format of the report is as follows.

   - Introduction. Briefly describe the background and purpose of the report and indicate the period covered by the report.

   - Status of Critical Technical Capabilities and Staffing Related to Safe Operations of Defense Nuclear Facilities. Provide an overview of the results of the workforce analyses and staffing reports submitted by each organization as described in Chapter IV of this Manual; describe the analysis process and indicate how many positions are identified as critical technical capabilities in the Department, how many vacancies currently exist, and any other particulars associated with the staffing report results.

   - Accomplishments Related to Improving Technical Capability. Briefly describe each of the accomplishments from the previous year.

   - Issues Related to Improving Technical Capability. Briefly describe the issues or problems associated with improving technical capability.

   - Recommendations to Maintain or Improve Technical Capability. Provide specific recommendations (as applicable) related to improving or maintaining technical capability in the Department.

   - Attachment. Provide a summary, by organization, of the results of the workforce analyses and resulting identification of critical technical capabilities for safe operations of defense nuclear facilities. The attachment is a four-column table indicating each organization, the number of critical technical capabilities identified for each organization, the current number of vacancies in each organization, and applicable comments for each organization.

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