

**[SOE LETTERHEAD]**

November 4, 1993

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W.  
Washington, D.C. 20004

Dear Mr. Conway:

In response to the Department's acceptance of Defense Nuclear Facilities Safety Board Recommendations 93-3 and 92-7, we are pleased to forward the Department of Energy Implementation Plan for Improving Technical Capability in Defense Nuclear Facilities Programs and Training and Qualification. The basis of our response to these Recommendations is contained in our July 23, 1993, letter to you.

The Implementation Plan was developed by an ad hoc work group. It presents a broadly based program that responds to the specific initiatives contained in the two recommendations. In keeping with our agreement, this Implementation Plan has been prepared to serve as an umbrella document under which previous Board recommendations for training and qualification are addressed.

There are significant changes underway to the Department's mission, budget, and projected staff size. The plan contains a provision for change control. This provision, discussed in Task 8 of the Implementation Plan, provides a method to address significant changes in the Department's baseline assumptions and resulting Implementation Plan adjustments.

The Department appreciates your staff's dedication and support during the development of this Plan. We believe that the Department has made a good faith effort to formulate an integrated plan to address technical competence of Federal staff and operating contractor personnel.

Sincerely,

*Hazel R. O'Leary*

Enclosure

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**DEPARTMENT OF ENERGY**

**IMPLEMENTATION PLAN FOR**

**DNFSB RECOMMENDATIONS 93-3 AND 92-7**

**IMPROVING THE TECHNICAL CAPABILITY**

**IN DEFENSE NUCLEAR FACILITIES PROGRAMS**

**AND**

**TRAINING AND QUALIFICATION**

**November 4, 1993**

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**EXECUTIVE SUMMARY**

Defense Nuclear Facilities Safety Board (DNFSB) [Recommendation 93-3](#) was issued [June 1, 1993](#), and subsequently accepted by the Department of Energy (DOE) on [July 23, 1993](#). The recommendation discusses the need to improve the technical ability of Federal employees associated with defense nuclear facilities. The 93-3 Implementation Plan addresses the Department's initiatives to respond to Board Recommendation 93-3

and also covers Board Recommendation 92-7. Recommendation 92-7 addresses training and qualification of management and operating (M&O) contractors and Federal employees associated with defense nuclear facilities.

The initiatives and commitments contained in this Implementation Plan represent a significant and fundamental change in the training and qualification programs within DOE. The Department recognizes that assuring the technical capability of the contractor and Federal technical workforce is an essential component of a sound safety program. The DNFSB in its last three annual reports has observed that: "*...the most important and far reaching problem affecting the safety of DOE defense nuclear facilities is the difficulty in attracting and retaining personnel who are qualified by technical education and experience to provide the kind of management, direction and guidance essential to safe operation of DOE's defense nuclear facilities.*"

Addressing this issue is one of DOE's most important challenges. The Department must build on successful initiatives in training and qualification and expand them throughout the entire defense nuclear facility complex.

The urgency of these issues has focused immediate attention on near-term initiatives to address the most pressing needs, to establish centralized support and leadership and an infrastructure upon which the initiatives in the plan can be built. The Department is aggressively pursuing many actions as a demonstration of its understanding of the issues and a willingness to aggressively correct the root causes. Significant initiatives completed to date include the appointment of the Technical Personnel Program Coordinator, the initiation of Excepted Service negotiations, the issuance of a Technical Excellence Policy, and the holding of numerous briefing sessions with stakeholders to reach concurrence on the plan.

The Implementation Plan builds on successful initiatives in training and qualification and expands them to the entire defense nuclear facility complex. To facilitate this integration, the plan establishes strong centralized leadership under the direction of the Assistant Secretary of Human Resources and Administration to provide the focal point for cooperation and coordination. The primary point of contact for the implementation of this plan is the Technical Personnel Program Coordinator located in the Office of the Assistant Secretary for Human Resources and Administration.

The 93-3 Implementation Plan is designed to act as an umbrella for previous DNFSB recommendations in training and qualification, particularly Recommendation 92-7. The 93-3 Implementation Plan does not supersede existing initiatives in other DNFSB accepted implementation plans but is designed to be compatible with and complement other plans.

The initiatives in the Implementation Plan are organized into the following eight task areas:

- Organization and Policy
- Recruitment and Retention
- Education and Career Planning
- DOE Technical Employee Training and Qualification
- Contractor Training
- External Assessment
- Reporting Requirements
- Change Control

**Task 1, Organization and Policy**, establishes clear-cut internal leadership to ensure continual improvement in the technical capability of DOE employees and its contractors who are performing safety-related tasks at defense nuclear facilities. This task discusses the policy of technical excellence, the establishment of a Technical Excellence Executive Committee, clarification of oversight roles and responsibilities, and the

responsibilities of the Technical Personnel Program Coordinator.

**Task 2, Recruitment and Retention**, improves and expands technical personnel recruitment and retention programs. This task discusses the strategies for improving recruitment and retention programs. A key initiative involves the innovative use of an Excepted Service System to fill appropriate positions.

**Task 3, Education and Career Planning**, develops and expands existing formal technical education opportunities for technical and technical management positions while establishing an integrated career and succession planning program. This task highlights the initiatives related to the pursuit of graduate technical educational programs and personnel development initiatives (educational incentives, succession planning, and career path guidance).

**Task 4, DOE Technical Employee Training and Qualification**, establishes a formal and structured training and qualification program for DOE technical employees associated with the defense nuclear facilities. This task involves significant initiatives in training and qualification standards, interim guidance, the development of new training courses, institutionalizing the training and qualification process, issuing guidance for DOE evaluation of contractor training and qualification, and guidance for performance appraisal standards. Comprehensive information management systems will allow senior managers to integrate their goals and objectives to assure cost effective implementation, to track progress, and to take appropriate corrective actions.

**Task 5, Contractor Training**, increases DOE senior management involvement and improves the quality and pace of implementing Department Orders governing the training and qualification of M&O contractor personnel who operate the defense nuclear facilities in the complex. This task addresses the M&O contractor issues contained in DNFSB Recommendation 92-7. These initiatives include accelerating the approval of Training Implementation Matrices (TIMs) and validating the status of Training Program Accreditation Plans (TPAPs). Additional actions include revising DOE Orders 5480.18A and 5480.20, sharing lessons learned among M&O contractors and field offices, and providing expanded and enhanced guidance to M&O contractors.

**Task 6, External Assessment**, establishes independent external assessment capability.

**Task 7, Reporting Requirements**, establishes and describes the requirement for quarterly reports updating the progress and significant accomplishments made in implementing the 93-3 Implementation Plan initiatives. The quarterly reports will contain updated performance indicators (as available) and discussions on the progress of various initiatives. The report will review completion dates and upcoming milestones, as well as the upcoming quarter's activities and any concerns.

**Task 8, Change Control**, addresses the flexibility needed to address changes in commitments, actions, or completion dates when modifications are necessary, due to additional information, project refinements, or changes in DOE's baseline assumptions.

A glossary and list of acronyms and abbreviations follows the task initiatives.

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## **INTRODUCTION**

On June 1, 1993, the Defense Nuclear Safety Board issued Recommendation 93-3, Improving the Technical Capability in Defense Nuclear Facilities Programs, dealing with the technical capability of Federal employees associated with defense nuclear facilities. The Department of Energy informed the DNFSB on June 14, 1993, that it would use the Implementation Plan for Recommendation 93-3 as the umbrella under which the Department could bring together the training and qualification components of all Board recommendations, for

both DOE personnel and M&O contractors . On July 1, 1993, the DNFSB agreed that using the response to Recommendation 93-3 as an umbrella was appropriate and that the specific response to Recommendation 92-7 (Training and Qualification) should be enhanced and included as an integral part of the response to Recommendation 93-3. The Department accepted Recommendation 93-3 on July 23, 1993. The 93-3 Implementation Plan does not supersede existing initiatives or commitments under other DNFSB accepted implementation plans; however, it is designed to be compatible with and/or complement other plans.

This Implementation Plan is based on the premise that an effective technical training and qualification program must be constructed within the framework of a comprehensive human resource management and professional development program, that is derived from and is consistent with the Department's goals and objectives. Such a plan needs to take a broad view of training and qualification, that includes recruitment and retention, education, career planning, and other professional development activities; performance appraisal; and ongoing internal and external evaluation.

In addition to addressing the DNFSB recommendations on recruitment, training, qualification, education, and development of technical personnel, the Plan supports the related DOE principles embodied in the following policy documents:

- DOE Mission Statement and Core Values
- Environment, Safety and Health Policy for the DOE Complex
- Technical Excellence Policy
- DOE Nuclear Safety Policy
- DOE Order 5700.6C, Quality Assurance

In summary, these principles include:

- Achieving the highest standards of scientific, engineering and technical excellence
- Continuous improvement
- Personnel empowerment through training, qualification, and education
- Emphasis on recruiting, retention, and career planning

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### **NEAR-TERM INITIATIVES**

The Department recognizes the importance and magnitude of the changes discussed in this Implementation Plan. Aggressive efforts have started to complete near-term initiatives that can quickly achieve momentum and demonstrate success in implementing this plan. Both DOE and DNFSB established working groups to facilitate the development of an acceptable implementation plan. Discussions between the DNFSB and DOE confirm that the completion of near-term activities is paramount to commencing a significant long-term effort.

An experienced Senior Executive Service manager was selected on September 21, 1993, to serve as the Technical Personnel Program Coordinator (TPPC). He will provide continuity by having served as a key member responsible for developing the plan and being the departmental agent responsible for coordinating its implementation. It should be noted that the primary responsibility for completing these initiatives lies with line management. The Technical Excellence Policy has been developed and negotiations have been initiated on

Excepted Service authority.

A conference on Technical Training Excellence was held in September 1993. Three of five site training surveys have been completed and a Training Implementation Matrix workshop was held in October 1993. The Oak Ridge Operations Office has established and staffed a training office and the Albuquerque Operations Office has committed to accelerating training initiatives at the Pantex Plant to facilitate compliance with DOE Order 5480.20 and to address Federal employees training and qualification.

The Implementation Plan was presented to stakeholders across the entire complex in four briefing sessions and was subsequently distributed for comments. Twenty-two packages of comments were received and considered. This Implementation Plan reflects comments incorporated from numerous stakeholders, including the DNFSB working group.

To continue aggressive efforts, a number of initiatives will be completed in the next six months. A select number, which are contained in the plan, are listed below:

October 1993

- **Technical Excellence Policy**

Issue the DOE Technical Excellence Policy statement committing the Department to upgrading the technical expertise of employees and contractors. (Commitment 1.1)

December 1993

- **Training Implementation Matrices**

Determine the status of development, submittal, approval and implementation for Training Implementation Matrices (TIMs) required by DOE Order 5480.20. (Commitment 5.1.1)

February 1994

- **External Assessment**

Complete an external assessment plan for providing the Department with independent, candid and timely feedback on its efforts to increase the technical capability of its employees. (Commitment 6.1)

January 1994

- **Interim Report to the DNFSB**

Issue an interim report to the DNFSB containing an update of all activities occurring between the issuance of the Implementation Plan and the end of the calendar year. (Commitment 7.1)

February 1994

- **Interim Guidance**

Establish interim guidance to verify the adequacy of, or to establish as necessary, Individual Development Plans (IDPs) or their equivalents, for technical employees and managers. (Commitment 4.2.1)

February 1994

- **Oversight Roles and Responsibilities**

Issue Department policy and guidance to define training and qualification program oversight roles and responsibilities for line management and the Office of Environment, Safety and Health. (Commitment 1.4)

January 1994

- **Technical Personnel Coordinating Committee**

Establish a Technical Personnel Coordinating Committee to facilitate intrasite and intersite communications, coordinate initiatives, share resources and lessons learned, and facilitate progress. (Commitment 5.5)

January 1994

- **Near-Term Recruitment Strategy**

Establish policy and guidance for developing a near-term strategy to attract competent, well-qualified technical candidates to fill critical technical personnel shortages. (Commitment 2.4)

April 1994

- **Training Program Accreditation Plans**

Determine the status of contractor implementation for the Training Program Accreditation Plans (TPAPs) required by DOE Order 5480.18A. (Commitment 5.2)

May 1994

- **Administrative Processes**

Issue guidance for identifying and communicating to line managers selected administrative processes to enhance recruitment, retention, and performance management of Federal technical staff. (Commitment 2.2)

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## **TASK INITIATIVES**

### **TASK 1. ORGANIZATION AND POLICY**

Establish clear-cut internal leadership to ensure continual improvement in the technical capability of DOE employees and contractors who are performing safety-related tasks at defense nuclear facilities.

**Purpose:**

To ensure the cost effective, coordinated execution of Department initiatives in training, qualification, development, recruitment, and retention of DOE technical staffs, and to provide an integrated approach to contractor technical training and qualification programs.

**Discussion:**

The Department of Energy has made progress in a number of areas important to improving the technical capability of contractor and Federal technical staff. While some significant gaps exist, we recognize that one of the most notable shortcomings in the Department's effort to date has been the lack of centralized consistent direction and the fragmented approach to implementing and coordinating these efforts Department-wide. Lessons learned from one training effort have been slow to be transferred to related facilities; materials developed under one program have been, to a limited extent, duplicated in other programs, and priorities have not been coordinated from the departmental perspective.

This has had the effect of impeding the progress of initiatives in technical proficiency. While the responsibility for the technical competence of staff must fundamentally rest with supervisors who assign responsibilities to individuals, much can be done to coordinate and facilitate the timely, cooperative, and cost effective execution of these initiatives. Additionally, generic requirements can be centrally coordinated to promote consistency and assure efficiency.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 1 with assistance from Cognizant Secretarial Officers and Operations Office managers.

**Commitment 1.1** - Develop and issue a technical excellence policy demonstrating the Department's commitment to upgrade the technical expertise of its employees and contractors to ensure the health and safety of the workforce and the Nation.

Deliverable: Developed policy

Due Date: October 1993

**Commitment 1.2** - Obtain top management commitment to and involvement with Federal technical excellence. A Technical Excellence Executive Committee will be chartered to develop and document the formal management process under the leadership of the Assistant Secretary for Human Resources and Administration.

Deliverable: Chartered committee established

Due Date: February 1994

**Commitment 1.3** - Establish an organization to coordinate Department efforts to maintain the technical capability of personnel performing safety-related duties at defense nuclear facilities. This organization will be headed by a Technical Personnel Program Coordinator reporting directly to the Assistant Secretary for Human Resources and Administration. The Technical Personnel Program Coordinator's organization will expedite recruitment of superior talent and coordinate the development, training and qualification of Federal technical employees with a parallel focus on M&O contractor technical employee training and qualification. In addition, the Technical Personnel Program Coordinator scope will also extend to other technical programs throughout the department including non-nuclear programs.

The Technical Personnel Program Coordinator was selected in September 1993 and is tasked with coordinating the following activities:

- development of effective recruitment strategies, in cooperation with the Office of Personnel and the departmental elements under this plan.



- a systematic approach to Federal technical training and qualification.
- a departmental perspective of the technical needs and capabilities within the Department.
- developmental and educational processes to support changing technical needs and organizational career planning and development.
- integration of Federal training activities into a systematic, cost-effective program.
- review of contractor technical training programs to ensure that efficiencies are achieved in sharing contractor and Federal training lessons learned.
- establishment of proper internal and external independent feedback on the quality and consistency of these initiatives.
- development of management information systems to ensure that integrated milestones and priorities are established across the Department, that progress can be regularly tracked by senior management, that resources can be realistically determined and allocated, and that corrective actions can be determined.
- review of new and revised directives before issuing any new training requirements.
- process for audits and reviews to promote the proper maintenance of readily auditable records (in accordance with Recommendation 92-7 and DOE Order 5480.20).

Deliverable: Establishment of Technical Personnel Program Coordinator position and selection of Technical Personnel Program Coordinator candidate

Due Date: The position was established and the Technical Personnel Program Coordinator was selected in September 1993

**Commitment 1.4** - Develop and issue departmental policy and guidance that will clearly state the roles and responsibilities within DOE for the following functions:

- Providing management direction and guidance to M&O contractors related to technical training and qualification program structure and implementation.
- Evaluating contractor training and qualification programs by line management organizations and the Office of Environmental Safety and Health.
- Evaluating Federal employee technical training and qualification programs.

Deliverable: Approved policy and guidance document

Due Date: February 1994

Target date for implementation of policy and guidance: Fourth Quarter 1994

**Commitment 1.5** - Develop and issue policy and guidance related to the infrastructure of DOE training organizations in Operations Offices and Headquarters. This guidance and policy will facilitate effective coordination and standardization of departmental technical training programs and activities by Headquarters and Operations Office line management. The policy and guidance will address organization (including the establishment of a central point for coordination in each operations and program office), procedures, and management systems.

Deliverable: Approved policy and guidance document

Due Date: June 1994

Target date for implementation of policy and guidance: Fourth Quarter 1994

Target date for completion of actions necessary to put into place revised organizational responsibilities, authorities, staffing, and reporting requirements: Fourth Quarter 1995

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## **TASK 2. RECRUITMENT AND RETENTION**

Improve and expand technical personnel recruitment and retention programs. Creative use of Excepted Service provisions and innovative recruitment and retention strategies will be used to achieve these ends.

### **Purpose:**

To build and sustain a technically competent and inquisitive professional workforce.

One of the primary purposes of the tasks related to DOE personnel in the near-term, is to ensure that federal technical staff in Defense Programs, Environmental Restoration and Waste Management, and Environment, Safety and Health are qualified for their incumbent positions and are capable of performing technical tasks which impact safety.

### **Discussion:**

With changes in Department programs, recruitment opportunities will be limited. Therefore, one emphasis is to improve technical capability through the training and development of DOE staff. The Department will utilize current opportunities, and those that become available, to recruit new technically qualified employees. As opportunities arise, the Department will strengthen its ratio of technical to non-technical positions. The Department agrees with the Board that using excepted service authority, as well as staffing and pay flexibilities in the current and future personnel system are key elements in recruiting and retaining qualified technical experts and technical managers in DOE's defense nuclear facilities programs, as well as safety oversight programs.

In addition, flexibilities arising from the National Performance Review (NPR) and internal DOE initiatives will be used to the maximum extent possible to recruit and retain technical personnel. Flexibilities arising from the NPR action items related to performance management will also be fully used to develop a DOE performance appraisal system that will give managers maximum authority to recognize and reward outstanding performance, as well as to train, reassign, demote, or remove employees who do not meet minimum standards. Currently available administrative options, such as retention allowances and relocation bonuses, will be used near term, as appropriate, to maximize the placement of technical experts in critical need positions, particularly in the field.

An Excepted Service System to enhance the Department's technical capabilities will be established. The system will use creative personnel processes, such as those envisioned in the NPR for classification and staffing, to empower managers to acquire the technical talent essential to the Department's success. It is intended that the Department system will ultimately converge with actions resulting from the NPR.

The process to identify critical technical positions, as a part of Excepted Service, began in September 1993. A plan to review and approve positions for inclusion in Excepted Service is being developed. The process for implementing the Department's early retirement and separation bonus programs will include consideration of these critical technical positions.

A personnel initiative to recruit and assemble a limited group of senior technical experts with outstanding credentials will be undertaken promptly. These experts, assigned to various organizational units, will be viewed as a Department resource. These experts will be assigned to focus on detailed technical problems facing the Department, as well as to provide mentoring for developing technical leaders. They may not be required to devote time to other managerial duties normally associated with positions at these senior levels.

Additionally, we will initiate a program to centralize the intern program under the Assistant Secretary for Human Resource and Administration. This will be helpful in providing consistency in recruitment, training, education, and advancement opportunities. This structured program for entry level technical staff will help to assure intern candidates and the Department early career development opportunities. The Department has successfully used cooperative education and intern programs in the past and will continue to do so to augment these technical program initiatives.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the overall responsibility for Task 2. The Cognizant Secretarial Officers and Operation Office managers will have responsibility for implementing the policy and guidance documents.

**Commitment 2.1** - Establish an Excepted Service System for appropriate safety-related positions as soon as possible after the approval for such a system is given by the Office of Personnel Management, the Office of Management and Budget, and Congress, and/or as soon as possible after the approval of an associated system by the Secretary. Such authority will be used to fill selected key engineering and scientific positions in DOE Headquarters and Operations Offices with technical experts having outstanding credentials. The Department will establish procedures to review the current mix of technical and non-technical positions and establish milestones utilizing the flexibilities of the Excepted Service System and the NPR, for moving to a target ratio that will meet the technical requirements of the Department's mission.

Deliverable: Excepted Service System

Due Date: As soon as possible after receipt of excepted service authority

Target dates for implementing excepted service and NPR recruitment initiatives will be developed by January 1994 and March 1994, respectively, and communicated to the Board under Task 7 (Reporting).

Deliverable: Establish milestones for technical/non-technical position ratio

Due Date: March 1994

**Commitment 2.2** - Identify and communicate to line managers selected administrative processes to enhance recruitment, retention, and performance management of Federal technical staff. Processes will include those that are currently available, such as recruitment and relocation bonuses and retention allowances, as well as new authorities that will result from actions initiated by the NPR. Programs developed under the new authorities, e.g., the performance appraisal system, will be designed to effectively reward outstanding performance as well as to train, reassign, demote, or remove employees who do not meet minimum standards, and management will be supported in the use of such systems.

Deliverable: Approved guidance document, and strategy for implementation

Due Date: May 1994

Target date for implementation of guidance: Third Quarter 1995

**Commitment 2.3** - Establish an entry level technical recruitment policy and centrally managed technical intern program which fully uses administrative authorities available to attract top quality technical talent. Upon receipt of excepted service authority, the Department will utilize the flexibilities in the authority, as needed and as appropriate to enhance the effectiveness of entry-level staffing programs.

Deliverable: Approved policy and guidance document

Due Date: March 1994

Target date for implementation of policy and guidance: August 1994

Deliverable: Integration of excepted service as appropriate, for entry-level recruitment.

Due Date: As soon as possible after receipt of excepted service authority.

**Commitment 2.4** - Develop a near-term strategy to attract competent, well qualified technical candidates to fill critical technical personnel shortages; e.g., by aggressively seeking high caliber candidates available through the Defense Outplacement Referral system, by taking advantage of the source of potential candidates available due to downsizing in private sector defense related industries, and by filling critical positions via vacancies created as a result of the early retirement and separation bonus programs.

Deliverable: Near-term strategy to take advantage of immediately available opportunities

Due Date: January 1994

Deliverable: Approved policy and guidance document

Due Date: Full implementation by March 1994

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### **TASK 3. EDUCATION AND CAREER PLANNING**

Develop and expand existing formal technical education opportunities for technical and technical management positions while establishing an integrated career and succession planning program.

**Purpose:**

- A. To improve the Department's technical capabilities by providing opportunities for Federal employees to pursue advanced degree programs in academic disciplines related to the work of the Department.
- B. To increase the number of qualified candidates for selection and advancement into technical and technical management positions within the Department by providing a more structured approach to career planning, and better communicating organizational opportunities and requirements for Department leadership opportunities.

**Discussion:**

Successful implementation of these objectives will result in a higher level of technical capability in the Department's technical and technical managerial work force. This will support an increase in formal education and add credibility and structure to the process of building internal leadership resources through better communicated, defined, and executed career paths. A dual career track for supervisory and non-supervisory technical personnel is envisioned for the Department's technical personnel. Succession planning assures the Department that sufficient numbers of qualified candidates exist for vacancies in technical staff and technical management positions.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 3 with assistance from Cognizant Secretarial Officers and Operations Office managers.

**Commitment 3.1** - Expand the present graduate technical educational programs and create additional educational opportunities. This will promote individual technical competence and target disciplines that are significant to the Department. Creative programs and concepts will be developed, expanded and continuously evaluated for effectiveness:

- Expand the scope and concept of the current Defense Programs Fellowship Program to a Department-wide basis, targeting particular technical disciplines.
- Establish educational and research programs at selected universities that focus on significant Department needs to achieve technical excellence (such as environmental science and engineering related to cleanup of the weapons complex).
- Identify, establish, employ, and evaluate learning methodologies that use alternative instructional modes of learning (e.g., interactive computer technology) other than formal classroom delivery methods for effectiveness, speed, and reliability.
- Establish relationships with universities and colleges around the DOE complex that offer degree and educational programs focused on Department needs. Include in this area the attainment of advanced degrees, and education leading to professional licenses, and certifications.
- Initiate, establish, and evaluate other programs with selected accredited universities that enhance general and specific technical and technical management capabilities as required by management direction or regulatory oversight.

The initiatives associated with this commitment will be adopted and approved by October 1994.

Deliverable: A report highlighting the progress and status of these new programs and initiatives will be discussed in the third quarter 1994 Quarterly Report.

Due Date: October 1994

**Commitment 3.2** - Develop performance indicators related to individual educational achievements and specific performance elements for appraisal plans of supervisory and non-supervisory technical personnel. This will be completed in conjunction with Commitments 4.7 and 4.8.

Deliverable: Copies of performance indicators and samples of performance elements will be attached to the appropriate quarterly report

Due Date: June 1994 for implementation of a Performance Indicators Program  
November 1994 for performance elements

**Commitment 3.3** - Develop and implement program guidance on technical succession planning and career path development by September 1994.

Deliverable: Guidance developed and promulgated to Program and Operations Offices

Due Date: September 1994

Target date for implementation of guidance in program offices and the field: First Quarter 1995

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#### **TASK 4. DOE TECHNICAL EMPLOYEE TRAINING AND QUALIFICATION**

Establish a formal and structured training and qualification program for DOE technical employees associated with defense nuclear facilities.

##### **Purpose:**

To strengthen the technical capability of the professional Federal work force and to instill a culture of continuous improvement and technical proficiency. The Department has a responsibility to its employees to ensure that they are prepared for success in the performance of their duties and sufficient numbers of personnel are available to fill management and senior technical positions.

##### **Discussion:**

The Department of Energy recognizes that the changing roles and responsibilities of the Federal technical work force coupled with changing technologies has resulted in the need for enhanced and structured training of new and incumbent employees. Unlike contractor requirements, the DOE Orders regarding the training of Federal employees are not sufficiently specific on the subject of technical training. Although several worthy initiatives have been undertaken in parts of the complex, the design, development and implementation of technical training has not been consistently structured, administered or aggressively pursued. The commitments that the Department is making in this area will assure that a formal and organized technical training and qualification program is developed, implemented, and centrally coordinated in a cost effective manner.

The basic tenets of a performance-based, systematic program will be utilized in establishing this program. The structure of a training program for professional employees differs from the structure of a true performance-based training program for task-based workers such as facility operators or technicians. Raising the technical competence of the work force requires an integrated approach including training, education, professional development, experience, and other activities described in this implementation plan.

The training and qualification program methodology described in this task will eventually be the basis for all technical employees in DOE. Currently there are several other initiatives under way that include training and qualification activities. The training and qualification activities in these areas will continue as a near-term measure to upgrade these programs. These activities will be integrated with Recommendation 93-3 initiatives in accordance with implementation schedules described in this plan.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 4 with assistance from Cognizant Secretarial Officers and Operations Office managers.

**Commitment 4.1** - Strengthen and improve the qualifications of DOE personnel responsible for the implementation of Federal employee technical training programs and the evaluation of M&O contractor training and qualification programs by taking the following actions:

**Commitment 4.1.1** - Develop and issue guidance to operations and program offices regarding the establishment of a systematic program and process for the evaluation of contractor training and qualification programs in conjunction with Commitments 1.4 and 1.5.

Deliverable: Approved policy and guidance document

Due Date: June 1994

Target date for implementation of policy and guidance: Fourth Quarter 1994

**Commitment 4.1.2** - Establish selection, training, and qualification requirements for DOE technical staff responsible for evaluating contractor training and qualification programs consistent with the process identified in Commitment 4.4. This includes line management personnel performing assessments and Environmental, Safety and Health personnel performing oversight.

Deliverable: Approved selection, training, and qualification requirements

Due Date: September 1994

**Commitment 4.1.3** - Establish selection, training, and qualification requirements for personnel responsible for implementing Federal employee technical training programs (i.e., training staffs) consistent with the process identified in Commitment 4.4.

Deliverable: Approved selection, training, and qualification requirements

Due Date: October 1994

Target date for completion of first round of training: Second Quarter 1995

**Commitment 4.1.4** - Bring operations and program offices into compliance with the new requirements noted above.

Deliverable: Compliance verified by selected self-assessments and oversight reviews.

Due Date: June 1995

**Commitment 4.2** - Implement the following initiatives to improve the overall level of technical knowledge within the defense nuclear complex as an interim measure prior to the establishment of Department-wide performance-based qualification standards (see Commitment 4.4).

**Commitment 4.2.1** - Promulgate guidance to all technical organizations to verify the adequacy of, or to establish as necessary, Individual Development Plans (IDPs), or their equivalents, for technical employees and managers. At a minimum, a documented supervisory determination for each employee will identify interim areas of training necessary to meet performance expectations for the respective position in advance of qualification standards (see 4.4). Supervisors will advise their respective training organizations on the prioritized training needs. Formal training will be scheduled in the most cost-effective and timely manner.

Deliverable: Guidance as indicated above developed and issued

Due Date: February 1994

Deliverable: IDPs completed for all appropriate technical personnel

Due Date: October 1994

Target date for verified implementation of upgraded IDP Program: Second Quarter 1995

**Commitment 4.2.2** - Identify currently available and new potential sources of training, both inside and outside the Department, that have been reviewed for adequacy of content and applicability. This training will be documented in a DOE Technical Training Course Catalog that will be issued in April 1994 and periodically updated thereafter.

Deliverable: DOE Technical Training Course Catalog

Due Date: April 1994

**Commitment 4.3** - Develop and issue a DOE training standard that encompasses the principles of the systematic approach to training and establishes firm requirements for the training process required for Federal technical employees.

Deliverable: DOE technical training standard

Due Date: September 1994

**Commitment 4.4** - Design, develop, and implement a formal and structured technical qualification program for DOE technical personnel performing activities related to the management, oversight, or operation of nuclear facilities. Develop technical qualification standards based upon an analysis of job performance requirements and a subsequent identification of supporting knowledge, skills and abilities. The qualification standards will identify requirements for selection criteria, initial training, continuing training, and performance evaluation.

**Commitment 4.4.1** - Develop and issue guidance for the design, development, and implementation of technical qualification standards to ensure consistent application across the Department.

Deliverable: Guidance document developed and issued

Due Date: June 1994

**Commitment 4.4.2** - Develop and issue the General Technical Base Qualification Standard that covers



appropriate disciplines.

Deliverable: General Technical Base Qualification Standard developed and issued for implementation

Due Date: August 1994

**Commitment 4.4.3** - As a pilot program, develop and issue Technical Manager Qualification Standard that covers the technical and managerial competencies required to provide guidance and direction to contractors and to manage technical programs.

Deliverable: Technical Manager Qualification Standard developed and issued for implementation

Due Date: October 1994

**Commitment 4.4.4** - Develop and issue Technical Specialist Qualification Standard that contain Department-wide and facility/site/program specific requirements for a position.

Deliverable: Technical Specialist Qualification Standards developed and issued for implementation

Due Date: December 1994

**Commitment 4.4.5** - Complete and implement the technical qualification standards process for new employees and job incumbents.

Deliverable: Implementation verified by selected self-assessments and oversight reviews

Due Date: December 1995

**Commitment 4.5** - Coordinate the development and implementation of formal technical training courses to cover the knowledge, skills and abilities identified in the technical qualification standard developed in Commitment 4.4. Existing training courses will be evaluated to determine if they sufficiently cover the identified learning objectives in these qualification standards. Courses will be modified and developed as necessary to support the technical qualification standards. Human Resources and Administration will coordinate the development and implementation of Department-wide technical training courses, with full involvement of cognizant Headquarter's managers and input from the field.

Deliverable: Updated version of DOE Technical Training Course Catalog indicating Department-wide courses that meet Technical Qualification Standard requirements.

Due Date: December 1994

Target date for completion of necessary course development and modifications to reflect update:  
Fourth Quarter 1995

**Commitment 4.6** - Institutionalize the Technical Training and Qualification Program for Federal technical

employees by developing and issuing a Department Order and related guidelines covering the process and requirements.

Deliverable: DOE Order and related guidelines approved and issued.

Due Date: December 1994

**Commitment 4.7** - Develop and issue policy and guidance for upgrading the language in performance appraisal standards for technical personnel required to complete training and qualification requirements, for supervisors of technical personnel that must complete qualification requirements, and for personnel that oversee or evaluate Federal and contractor technical training and qualification activities.

Deliverable: Approved policy and guidance document

Due Date: December 1994

**Commitment 4.8** - Coordinate the development and implementation of management information systems to monitor and assess the effectiveness of both Federal and contractor training and qualification initiatives. Standard reporting requirements, including specific performance indicators, will be established to ensure that DOE senior management is cognizant of activities and progress and is able to make changes when necessary to ensure that initiatives stay on schedule and are being implemented as intended.

Deliverable: Conduct report format and performance indicator development workshops and issue first report

Due Date: April 1994  
First workshop conducted in October 1993

Deliverable: Specific performance indicators established

Due Date: June 1994

Deliverable: Performance indicator system fully implemented

Due Date: December 1994

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### **TASK 5: CONTRACTOR TRAINING**

Increase DOE senior management involvement and improve the quality and pace of implementing Department orders governing the training and qualification of management and operating (M&O) contractors who operate the defense nuclear facilities in the complex.

#### **Purpose:**

To assure effective and disciplined execution of the training and qualification of M&O contractor personnel. This will improve the integrity of defense nuclear programs and protect the health and safety of workers and the public as well as safeguard the environment.

**Discussion:**

The Department recognizes the necessity of trained, qualified, and technically competent employees for the operation of defense nuclear facilities. The policies and requirements for managing and executing effective M&O contractor technical training and qualification programs have been documented by the Department in DOE Orders 5480.18A, "Accreditation of Performance Based Training for Category A Reactors and Nuclear Facilities," and 5480.20, "Personnel Selection, Qualification, Training and Staffing Requirements at DOE Reactor and Non-Reactor Nuclear Facilities." These Orders are based upon comparable requirements in the commercial nuclear industry. Although the requirements are generally considered to be comprehensive and adequate, revisions will provide additional clarification and will update responsibilities and applicability.

Some facilities within the complex, such as Building 559 at Rocky Flats, and the K-Reactor and Replacement Tritium Facility (RTF) facilities at Savannah River, have implemented sound, performance-based training and qualification programs. However, implementation has generally been slow and inconsistently executed within the complex. Strong action is necessary to accelerate the implementation of these orders, expand senior management involvement, and establish implementation milestones and dates.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the responsibility for overall coordination for Task 5. The primary responsibility for implementing these initiatives lies with Cognizant Secretarial Officers and Operations Office managers assisted by the Associate Deputy Secretary for Field Management.

**Commitment 5.1** - Improve the status of contractor implementation and compliance with DOE Order 5480.20 by initiating the following actions:

**Commitment 5.1.1** - Validate the status of development, submittal, approval and implementation of Training Implementation Matrices (TIMs) required by DOE Order 5480.20. Determine the corrective action required and report the results of the analysis to senior management.

Deliverable: Report to senior management

Due Date: December 1993

**Commitment 5.1.2** - Develop a comprehensive schedule for bringing the Department into compliance with DOE Order 5480.20. The schedule will address the development, approval, and implementation of TIMs, with the objective of having all TIMs approved by June 1994.

Deliverable: Schedule for remaining TIMs

Due Date: February 1994

Deliverable: TIMs approved for all defense nuclear facilities

Due Date: June 1994

Target date for achieving compliance with DOE Order 5480.20: Fourth Quarter 1995

**Commitment 5.2** - Validate the status of contractor implementation of the Training Program Accreditation

Plans (TPAPs) required by DOE Order 5480.18A and commence providing quarterly status reports to DOE and contractor senior management.

Deliverable: TPAP status report issued

Due Date: April 1994

**Commitment 5.3** - Revise DOE Order 5480.18A and related guidance documents (Training Accreditation Plan (TAP) manuals) to reflect the changes in facility status and Departmental responsibilities, and to provide clear and concise guidance to M&O contractors regarding the implementation of the Order. Issue interim guidance to field organizations clarifying the applicability of the Order to the various facilities across the complex.

Deliverable: Interim guidance updating the list of applicable facilities required to implement DOE Order 5480.18A

Due Date: February 1994

Deliverable: Approved revisions of DOE Order 5480.18A and TAP Manuals

Due Date: August 1994

**Commitment 5.4** - Review and revise DOE Order 5480.20 to update the responsibilities and authorities sections and incorporate lessons learned since the issuance of the Order. The following items will be addressed in the revision:

- The requirement for performance-based training programs for operators, maintenance personnel, technicians, and selected technical support personnel (as identified by facility management) at high and moderate hazard nuclear facilities
- Guidance for the application of a tailored approach to training at low hazard nuclear facilities.
- Guidance for the application of performance-based training requirements at facilities that assemble and disassemble weapons.
- Emphasis on continual performance improvement in continuing training and requalification programs.

Deliverable: Approved revision of DOE Order 5480.20

Due Date: September 1994

**Commitment 5.5** - Establish a Technical Personnel Coordinating Committee under the sponsorship of the Technical Personnel Program Coordinator to facilitate intrasite and intersite communications, coordinate initiatives, share lessons learned and resources, and facilitate progress. This will include conducting workshops for contractors and cognizant Federal managers on training and qualification issues of interest and sharing the principles and procedures used in the training and qualification programs for facilities such as K-Reactor and RTF at Savannah River and Building 559 at Rocky Flats.

Deliverable: Technical Personnel Coordinating Committee established

Due Date: January 1994

**Commitment 5.6** - Review and strengthen, as necessary, the capabilities of contractor organizations responsible for technical training and qualification by taking the following actions:

**Commitment 5.6.1** - Review and analyze the organizational structure, responsibilities, and position qualification requirements of technical training units at selected facilities across the complex. Develop and issue guidance to the field organizations regarding the recommended organizational infrastructure, responsibilities, and personnel qualification requirements for contractor technical training units.

Deliverable: Guidance developed and issued

Due Date: October 1994

**Commitment 5.6.2** - Verify that contractor training organizational units are functioning in a manner consistent with the guidance issued in 5.6.1.

Deliverable: Organizations functioning appropriately as verified by selected self-assessments and oversight reviews.

Due Date: October 1995

**Commitment 5.7** - Develop and issue guidance for contracting officers to assist them in providing contract direction and contract incentives to M&O contractors to upgrade defense nuclear facility training and qualification program performance. This guidance includes the development and incorporation of innovative techniques, cost effective improvements, utilization of proven techniques, and prudent resource allocation.

Deliverable: Guidance document for contracting officers issued

Due Date: September 1994

**Commitment 5.8** - Expand and enhance the training assistance team concept for technical training and qualification activities. This concept is currently in place for supporting training program accreditation. These teams will provide support to both M&O contractors and DOE staff.

Deliverable: Training assistance teams implemented

Due Date: Initiate by January 1994 and fully operational by June 1994

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## **TASK 6: EXTERNAL ASSESSMENT**

The Department will establish an independent, external assessment capability.

### **Purpose:**

To provide the Department with independent, candid, and timely feedback on its efforts to increase the technical capability of its work force.

### **Discussion:**

The ability to perform meaningful assessments of the technical capability of contractor and Federal work forces will be greatly improved by independent external assessments. Several internal evaluations have been conducted and are under way to assess the current status of DOE programs. However, a powerful tool that should be added to this process is the development of an assessment program conducted by reputable experts outside the Department. These assessments will provide candid and timely feedback on the effectiveness of the initiatives relative to technical personnel development programs. These assessments will be designed to assure that the Department is taking full advantage of flexibilities available within Federal service, of innovative approaches being taken by industry and academia, and of lessons learned from other organizations facing similar issues.

Independent external assessment teams will include respected national experts from organizations such as the National Research Council of the National Academy of Sciences and the National Academy of Public Administration. The comprehensive scope of the assessments will include recruitment and retention, education and career planning, DOE technical employee training and qualification, and contractor training and qualification. Another element of the program will be to review the effectiveness of the DOE internal oversight program in providing a comprehensive review of DOE training and qualification programs.

Internal assessments of these same issues are addressed in Commitment 1.4, and under the individual numbered tasks.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 6.

**Commitment 6.1** - The Department will establish an independent external assessment program for evaluating the effectiveness and progress of DOE technical excellence programs.

Deliverable 1: External Assessment Plan - to include a charter, schedule, a detailed listing of areas for review and external organizations being considered.

Due Date: February 1994

Deliverable 2: Baseline assessment report to DOE

Due Date: June 1994

Deliverable 3: DOE review and develop strategy for adoption and implementation of accepted recommendations from external review panels

Due Date: No later than September 1994

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**TASK 7: REPORTING REQUIREMENTS**

The Department will prepare quarterly reports updating the progress and significant accomplishments made in implementing the 93-3 Implementation Plan initiatives.

**Purpose:**

To keep the appropriate DOE staff and DNFSB aware of progress and activities. The report will also keep the various sites, Operations Offices, departments and other stakeholders apprised on significant developments across the complex. The report will also assist in sharing lessons learned across the complex.

**Discussion:**

The quarterly reports will contain performance indicators (see Commitment 4.3) and progress discussions on the various initiatives. The report will highlight ongoing efforts, review completion dates and upcoming milestones, discuss the upcoming quarter's activities, and note any concerns.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 7 with assistance from Cognizant Secretarial Officers, Operations Office managers and the Associate Deputy Secretary for Field Management.

**Commitment 7.1** - Quarterly progress reports will be issued within 30 days of the end of every calendar quarter. The first quarterly report will be issued by April 1994.

Initially, an interim report will be issued containing an update of all activities occurring between the issuance of the Implementation Plan and the end of the calendar year. The interim report will contain a suggested format and schedule for future reports and will be issued by January 1994.

Deliverable: Interim Report issued to DNFSB

Due Date: January 1994

Deliverable: Quarterly Report issued to DNFSB

Due Date: First report sent by April 1994

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**TASK 8: CHANGE CONTROL**

The 93-3 Implementation Plan is a complex and long range plan. Flexibility is needed to address changes in commitments, actions or completion dates where modifications are necessary due to additional information, project refinements, or changes in DOE's baseline assumptions.

**Purpose:**

To provide a change control process to handle implementation course corrections or process change.

**Discussion:**

The 93-3 Implementation Plan is based on certain assumptions. These assumptions were used to develop commitment dates. If outyear significant funding, FTE levels, or mission changes occur, the original date for commitments may require modification. Any anticipated significant changes in completion dates and department commitments will be promptly brought to the attention of the DNFSB prior to the passing of the completion date, formally discussed in the quarterly progress reports including appropriate corrective actions, and where appropriate submitted to the DNFSB as a revision to the Implementation Plan.

**Responsibility:**

The Assistant Secretary for Human Resources and Administration and the Technical Personnel Program Coordinator have the primary responsibility for Task 8.

**Commitment 8.1** - Substantive changes in a Department commitment or commitment completion date will be formally submitted. The Implementation Plan will be revised and resubmitted as appropriate.

Deliverable: Revised Implementation Plan

Due Date: As required

**Commitment 8.2** - Changes to interim milestones and schedules will be formally addressed and assessed in the quarterly progress reports.

Deliverable: Discussion in quarterly report

Due Date: As required in conjunction with quarterly report schedule

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## ATTACHMENT A

### GLOSSARY

This glossary is intended to provide clarity to the Implementation Plan. It is recognized that some of the terms listed below may be defined in other ways. The definitions provided below reflect the meaning of the term as used in this plan.

**Accreditation:** A process to formally recognize reactor and nonreactor nuclear facility training programs as meeting established objectives and criteria.

**Career Path Planning:** An on-going process that provides periodic opportunities for individuals to plan a direction for advancement and career achievements within the organization and to communicate their desires for future assignments and career aspirations.

**Cognizant Secretarial Officer/Office (CSO):** The Departmental official at the Assistant Secretary level who is responsible for the assignment of work, the institutional overview of a facility, or both.

**Competency:** An essential skill without which an individual is not qualified to perform assigned tasks.

**Cooperative Education:** A formal program where promising, high-quality individuals receive tuition reimbursement for course-work taken in pursuit of a degree in return for part-time work. The program stresses education and work experience with the hope of converting participating individuals to full-time status upon completion of their degree.



<b><u>Cost-Benefit:</u></b>	An analysis of potential actions or paths of action where the relative costs and benefits of each alternative are weighed and prioritization decisions are made based on both areas of consideration.
<b><u>Department of Energy Contractors:</u></b>	Contractors who manage, operate, and/or provide site services to Department research, development, testing, or production facilities that are principally engaged in work for the Department.
<b><u>Department of Energy Facilities:</u></b>	Any of the Department owned research, development, testing, and production facilities.
<b><u>Excepted Service:</u></b>	Those civil service positions that are not in the competitive service or the Senior Executive Service. This allows for exceptions to Federal personnel policy and procedures in areas such as recruitment, retention, or removal of employees.
<b><u>External Oversight:</u></b>	The oversight performed by non-DOE organizations that have the right to enter Department activities/facilities to review the conduct of operations from the standpoint of compliance with applicable laws and/or regulations.
<b><u>Facility Representatives:</u></b>	For each major facility or group of lesser facilities, an individual assigned responsibility by the Head of the Field Element for monitoring the performance of the facility and its operations. This individual is the primary point of contact with the contractor and is responsible to the appropriate DOE program office and field elements.
<b><u>Fellowships:</u></b>	A program whereby selected applicants are provided the opportunity to pursue full time study in an approved program while receiving compensation and reimbursement for tuition and selected expenses from the Department.
<b><u>Hazard:</u></b>	A source of danger with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment.
<b><u>Individual Development Plan (IDP):</u></b>	An individually tailored plan established between supervisor and employee with the assistance of a Training Specialist outlining the employee's short- and long-range career objectives and the means for achieving these objectives within certain timeframes. The purpose of an IDP is to increase the current proficiency, development, and progression of the employee through a systematic training plan.
<b><u>Intern Program (Technical):</u></b>	A formal, structured, continuous program for recruiting, developing, and retaining high-quality, entry-level technical professionals. The program is designed to use a wide range of developmental experiences to accelerate the growth and experience level of the participants.
<b><u>Internal Oversight:</u></b>	That oversight role performed by Department organizations without programmatic or institutional responsibility that review performance of Department operations in order to provide independent advice to the Secretary in areas of environment, safety, health,

and safeguards and security.

**Learning Objective:** A statement that specifies measurable behavior that a trainee should exhibit after instruction, including the conditions and standards of performance.

**Mentoring:** A process through which experienced, high-level professionals provide knowledge and guidance to less experienced employees to assist them in their development, both within their field of expertise and within the organization.

**Performance Appraisal:** The review and evaluation of an employee's accomplishment of assigned work against described performance standards.

**Performance Based Training (PBT):** A systematic approach to training that is based on tasks and the related knowledge and skills required for competent job performance. PBT is also known as Instructional System Design (ISD), Systematic Approach to Training (SAT), Training System Design (TSD), Criterion Referenced Instruction (CRI), or Competency Based Training.

**Performance Indicators:** Operational information that is indicative of the performance or condition of a facility, group of facilities, or site.

**Performance Objectives:** A broadly stated expectation or target of accomplishment, the achievement of which signifies satisfactory performance in the stated areas.

**Risk:** A quantitative or qualitative expression of possible harm that considers both the probability that a hazard will cause harm and the amount of harm.

**Self-Assessment:** An on-going, multifaceted process that is continually conducted at all levels of a line organization including contractors, Operations Offices/Area Offices, and Headquarters. This is an integral component of a quality management program.

**Selection Requirements:** Requisite requirements to enter a position (sometimes referred to as entry level requirements). Selection requirements may be stated in terms of education, experience, special training, professional certifications, or medical requirements.

**Senior Manager:** Deputy Assistant Secretary level (or the equivalent) and above at Headquarters, Assistant Managers and above at the Operations Offices, and equivalent individuals in Management and Operating Contractor organizations.

**Stakeholder:** An individual or organization who is affected by or can affect the future of an organization.

**Succession Planning:** A formal, merit-based process that provides and communicates to aspiring employees clear lines of promotion and performance requirements for selection and advancement to key positions and assures, through active management involvement, the continual creation and refreshment of pools of qualified candidates.

**Tailored Approach:** A process in which the depth of detail required and the magnitude of resources expended for a particular management element is tailored to be commensurate with the element's relative importance to safety, environmental compliance, safeguards and security, programmatic importance, and/or other facility specific requirements.

**Technical Excellence:** A Departmental philosophy intended to assure that the Department's technical staff has the training and education to execute the Department's missions and assure the safe, environmentally sound, and cost-effective execution of its responsibilities with the goal of continual improvement toward excellence.

**Technical Personnel (Position):** All DOE personnel in 800 and 1300 occupational series and others who, according to their duties and responsibilities, provide direction, guidance, oversight, or evaluation of contractor technical activities. The definition is inclusive of positions that require professional judgement in technical matters, thus, it is implied that technical competence is requisite to the job.

**Technical Personnel Program Coordinator:** A newly created and senior position reporting directly to the Assistant Secretary for Human Resources that is responsible for: (a) coordinating Federal technical training and qualification, developmental and educational processes, and organizational career planning and development; (b) overseeing contractor technical training programs; (c) establishing appropriate feedback mechanisms on the quality and consistency of such initiatives; and (d) establishing a departmental perspective on the technical needs and capabilities within the Department in a systematic and cost-effective manner.

**Technical Qualification:** The process that is used to objectively determine that individuals performing activities related to the technical management, oversight, or operation of DOE nuclear facilities possess the necessary knowledge, skills, and abilities, as determined by a functional analysis of position requirements, to effectively perform their specific duties and responsibilities.

**Technical Qualification Standard:** A document that describes the process and requirements to objectively determine that individuals can effectively perform specific activities related to technical management, oversight, or operation of DOE nuclear facilities. The document typically describes the selection criteria, initial training requirements (in terms of knowledge, skills and abilities), continuing training requirements, and performance evaluation criteria.

**Technical Specialty Experts:** A pool of experts in selected technical disciplines, as well as individuals with significant facility management and operating experience, that have been explicitly identified as critical to the Department's performance and mission accomplishments.

**Technical Training:** That training designed to develop understanding, knowledge, and proficiency in technical disciplines and/or the application of those disciplines to technologies and facility operation.

<b><u>Total Quality Management:</u></b>	A strategic, integrated management system for achieving customer satisfaction that involves all managers and employees and uses quantitative assessment methods to continuously improve an organization's results and processes.
<b><u>Training Assistance Teams:</u></b>	A group of knowledgeable and experienced technical training personnel that are available to assist contractor and federal personnel in the implementation of technical training and qualification programs.
<b><u>Training Implementation Matrix (TIM):</u></b>	A matrix prepared by the operating organization which defines and describes the application of the selection, qualification, and training requirements of DOE Order 5480.20. This matrix includes any exceptions taken for requirements which are not implemented.
<b><u>Training Program Accreditation Plan (TPAP):</u></b>	An action plan developed by the contractor following a thorough self-evaluation and identification of training programs requiring accreditation. The TPAP identifies scope and resource needs for accomplishing accreditation.

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## ATTACHMENT B

### LIST OF ACRONYMS AND ABBREVIATIONS

<b>DNFSB</b>	Defense Nuclear Facilities Safety Board
<b>DOE</b>	Department of Energy
<b>FTE</b>	Full Time Equivalent
<b>IDP</b>	Individual Development Plan
<b>M&amp;O</b>	Management and Operating
<b>NPR</b>	National Performance Review
<b>RTF</b>	Replacement Tritium Facility
<b>TAP</b>	Training Accreditation Program
<b>TIM</b>	Training Implementation Matrix
<b>TPAP</b>	Training Program Accreditation Plans
<b>TPPC</b>	Technical Personnel Program Coordinator