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DOE STANDARD

TRAINING ACCREDITATION PROGRAM STANDARD: REQUIREMENTS AND GUIDELINES

U.S. Department of Energy
Washington, D.C. 20585

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FOREWORD

The Training Accreditation Program was established by the Department of Energy (DOE) to assist in achieving excellence in the development and implementation of performance-based nuclear facility training programs. This DOE Standard, *Training Accreditation Program Standard: Requirements and Guidelines*, establishes the objectives and criteria against which the training programs for those DOE nuclear facilities listed in Attachment 1 to DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program," are evaluated for accreditation. This Standard also provides Secretarial Offices, Operations/Area Offices, and contractor organizations with information and guidance that can be used to effectively implement DOE Order 5480.18B. This Standard:

a. Describes the accreditation process;
b. Provides functional descriptions for the positions which require accredited training programs;
c. Provides a brief discussion of the systematic approach to training;
d. Contains the objectives and criteria that must be addressed in training programs subject to accreditation;
e. Contains options for core training program accreditation;
f. Provides guidance for Training Program Accreditation Plans and Contractor Self-Evaluation Reports;
g. Describes the process for exemptions and exceptions; and
h. Contains a glossary.

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be of use in improving this document should be addressed to

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by using the U.S. Department of Energy Document Improvement Proposal (DOE F 1300.3) appearing at the end of this document or by letter.

This document replaces DOE-STD-0101T, TAP 1 Training Program Manual, August 1993, and DOE-STD-0103T, TAP 3 Training Program Support Manual, August 1993.

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1. SCOPE

1.1 Scope. The purpose of this Standard is to provide requirements, information, and guidance for the effective implementation of the DOE Training Accreditation Program established by DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program."

1.2 Applicability. This standard is applicable to those facilities listed in Attachment 1 to DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program." It is recognized that training programs will vary according to the complexity and hazard potential of a particular nuclear facility. Additionally, since the potential exists for additional, as yet undetermined, facilities to be added to Attachment 1, some of the criteria from Appendix A to this standard may not be applicable to all the facilities. Hence, a degree of flexibility must be used when applying the criteria. When certain criteria are not applicable they need not be considered.

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2. APPLICABLE DOCUMENTS

2.1 DOE Order 5480.18B, Nuclear Facility Training Accreditation Program, which establishes the DOE Training Accreditation Program, including a description of the duties and responsibilities of selected key personnel and a description of the overall accreditation process.

2.2 DOE Order 5480.20, Personnel Selection, Qualification, Training, and Staffing Requirements at DOE Reactor and Non-Reactor Nuclear Facilities, which establishes the selection, qualification, training, and staffing requirements for personnel involved in the operation, maintenance, and technical support of DOE-owned Category A and B reactors and non-reactor nuclear facilities.

2.3 DOE-STD-1070-94, Guidelines for Evaluation of Nuclear Facility Training Programs, of 6-94, which establishes a single set of objectives and criteria that have been developed to evaluate training to assure compliance with the requirements of DOE Orders 5480.18B and 5480.20, and other Orders and directives that have personnel training and qualification implications.

2.4 DOE-HDBK-1078-94, Training Program Handbook: A Systematic Approach to Training, which describes one approach to developing and implementing a training program using the Systematic Approach to Training model.

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3. DEFINITIONS

Definitions of all key terms used this standard are defined as follows:

3.1 Accreditation is a process to formally recognize reactor and non-reactor nuclear facility training programs as meeting established accreditation objectives and criteria.

3.2 Accrediting Board is an independent group of individuals responsible for making the decision to award or defer accreditation. The Accrediting Board consists of five members with collective expertise in nuclear facility and reactor operations, nuclear and non-nuclear industrial training, instructional processes, and educational accreditation.

3.3 Accreditation Maintenance Report is a report written 2 years after accreditation or renewal of accreditation which describes changes in the accredited training programs since the last accreditation review.

3.4 Accreditation Review Team is a group of professionals representing the Training Accreditation Program with collective expertise in nuclear facility operations, nuclear facility training, instructional processes, and training program evaluation. This team reviews the facility's Contractor Self-Evaluation Report, visits the facility, evaluates training, and documents its findings as individual problem statements and recommendations which are inserted into the Contractor Self-Evaluation Report in the appropriate locations.

3.5 Category A Reactor Facilities means those production, test, and research reactors designated by DOE based on power level (e.g., design thermal power rating of 20 megawatts steady state and higher), potential fission product inventory, and experimental capability.

3.6 Cognizant Secretarial Officer (CSO) is the head of a DOE program which has responsibility for specific facilities. These include: the Assistant Secretaries for Conservation and Renewable Energy; Environmental Restoration and Waste Management;

Defense Programs; Fossil Energy; and Energy Efficiency and Renewable Energy, and the Offices of Nuclear Energy; Energy Research; and Civilian Radioactive Waste Management.

3.7 Contractor Self-Evaluation Report is a formal report prepared by the contractor summarizing the comparison of a training program to each accreditation objective and its supporting criteria.

3.8 Exception is a release from the requirements of DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program" for a training program(s) within an accreditable facility. Exception also refers to the release of an individual from portions of a training program through prior education, experience, and/or testing.

3.9 Exemption is a release from the requirements of this Order for a facility listed in Attachment 1 to DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program."

3.10 Non-Reactor Nuclear Facility means those activities or operations that involve radioactive and/or fissionable materials in such form and quantity that a nuclear hazard potentially exists to the employees or the general public. Included are activities or operations that: (1) Produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium; (2) Conduct separations operations; (3) Conduct irradiated materials inspection, fuel fabrication, decontamination, or recovery operations; (4) Conduct fuel enrichment operations; or (5) Perform environmental remediation or waste management activities involving radioactive materials. Incidental use and generating of radioactive materials in a facility operation (e.g., check and calibration sources, use of radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and X-ray machines) would not ordinarily require the facility to be included in this definition. Accelerators and reactors and their operations are not included.

3.11 Nuclear Facility means reactor and non-reactor nuclear facilities.

3.12 Self-Evaluation is a critical evaluation of a facility training program measured against the accreditation objectives and criteria. This evaluation is conducted by the contractor.

3.13 Shall, Should, and May shall is used to denote a requirement; should is used to denote a recommendation; and may is used to denote permission, neither a requirement nor a recommendation.

3.14 Systematic Approach to Training is an approach to training which is based on tasks and the related knowledge and skills required for competent job performance.

3.15 Training Accreditation Program Staff is an organization contracted by the Office of the Assistant Secretary for Environment, Safety and Health (EH-1), responsible for developing and providing documents, training, and assistance to those who must comply with DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program." This staff also manages the conduct of the team evaluations for accreditation.

3.16 Training Program is a planned, organized sequence of activities designed to prepare individuals to perform their jobs, to meet a specific position or classification need, and to maintain or improve their performance on the job.

3.17 Training Program Accreditation Plan (TPAP) is an action plan developed following a thorough contractor self-evaluation and an identification of training programs requiring accreditation. The Training Program Accreditation Plan identifies scope and resource needs for accomplishing accreditation for all programs at a facility.

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4. INTRODUCTION

In recent years, the Department of Energy (DOE) has given increased attention to all aspects of the operation of DOE facilities. Numerous factors (e.g., Three Mile Island accident, the National Academy of Science training and qualification findings, increased public interest in safety at DOE sites) have contributed to this attention. One of the results of this increased focus on safety has been the emergence of training as a direct link to the safe, reliable, and efficient operation of DOE's facilities. This, in turn, has resulted in initiatives to upgrade the overall quality of the training for the personnel responsible for operating these facilities.

Given the wide variation in mission and individual processes performed at the various DOE sites, and a corresponding broad diversity in training methods across the complex, it is not surprising to find that different training program development methods exist. While some of these programs have proven effective in producing a proficient, knowledgeable workforce, many facilities have experienced difficulties in identifying the most effective training process for the operation concerned. In other cases, the documentation of training does not support the training that has been accomplished. In addition, many facilities have significant percentages of their workforce who are at or near retirement. It is for these reasons that DOE and its operating contractors must adopt a standardized, proactive, training posture to improve the level of expertise of their workforce, and also to ensure uniform standards for safe operation.

DOE goals include the development and implementation of contractor administered training programs that provide consistent, effective, and efficient training for personnel at DOE facilities. The quality and effectiveness of these training programs will be established by the use of a systematic approach to training that is supported by specific training objectives, and training programs that are accredited by an independent accrediting board.

Training programs at DOE facilities should provide well trained, qualified personnel to safely and efficiently operate the facilities in accordance with DOE requirements. Accreditation of training programs at DOE facilities will assure consistent, appropriate, and cost effective training of personnel responsible for the operation, maintenance, and

technical support of these facilities. Training programs that are designed using systematically determined job requirements instead of a subjective estimation of trainee needs yield training activities that are consistent and which develop or improve knowledge and skills that are directly related to the work setting. Because the training is job related, the content of these programs more efficiently and effectively meets the needs of the employee and the employer. A better-trained work force promotes a greater level of operational safety.

The systematic approach to training (SAT) has proven to be a highly effective means of ensuring that operations, maintenance, and technical support personnel are trained to conduct their assignments safely and efficiently. The SAT process has been used for many years and has been given several names, which include: Instructional System Development (ISD), Performance-Based Training (PBT); Criterion Referenced Instruction (CRI); Training System Development (TSD); and Competency-Based Training (CBT). All of these approaches are designed around the same basic premise: to provide training that supplies the information necessary for the job incumbents to perform their assigned duties at a predetermined level of expertise. This predetermined level of expertise is established by an analysis of the job or position in question for which training is to be designed and developed. This analysis replaces the conventional method of subjectively estimating training requirements which, in many instances, results in ineffective training or in overtraining.

Private industry, the military, the commercial nuclear power industry, and others have implemented the SAT model and have experienced significant positive effects on personnel training. The SAT model forms the basis of the DOE Training Accreditation Program (TAP) Objectives and Criteria. The DOE TAP formally endorses the SAT process for DOE contractors.

5. DESCRIPTION OF THE SYSTEMATIC APPROACH TO TRAINING

The systematic approach to training (SAT) is a method that provides a total approach for the establishment of performance-based training programs. SAT consists of five general phases that include analysis, design, development, implementation, and evaluation. The first four phases are normally sequential, with the output of one phase providing the input to the next. Evaluation occurs in each phase and is applied throughout the SAT. The following is a brief description of each of the SAT phases.

5.1 Analysis. Analysis ensures that training programs are oriented specifically to the requirements of the job and its associated tasks. The analysis phase creates the data that serve as the foundation for the systematic development or revision of training programs. Analysis data is obtained from examining job needs, learner needs, and organizational needs. The results establish program goals and define the scope of the training effort.

The primary processes for collecting analysis data include needs analysis, job analysis, and some form of task/content analysis. Each of these processes can be accomplished using a variety of methods depending on the risks and hazards associated with the job. Line and training management should use judgement and discretion when selecting the methods that best meets facility needs.

Following are the three general types of analyses that are associated with the development of training programs using the SAT model. Each of these processes can be accomplished using a variety of methods and effort depending upon:

a. The hazards and risks associated with a job;
b. The availability of existing materials, procedures, and subject matter experts; and
c. The qualifications and experience of the training organization staff.

5.1.1 Needs Analysis. Needs analysis is a systematic search for details about the discrepancies between optimal and actual job performance. Questions addressed by needs analysis include:

a. What are job incumbents expected to do?
b. What problems are they having?
c. Why are they having these problems? and
d. What is the best solution?

Needs analysis can be conducted on either a large or small scale. A large-scale needs analysis evaluates performance problems at a facility or program level. A small-scale needs analysis evaluates problems on a topic or specific incident level. The results of a large-scale analysis are used to determine such things as:

a. Which employees at a facility need training.
b. What are the regulatory requirements for the job. and
c. What training should receive the most attention.

A needs analysis should be performed whenever new requirements are issued, when job performance is below standards, or when requests for changes to current training or for new training are received. An effective needs analysis should involve knowledgeable personnel who know the requirements of the job and the standards of the performance necessary to properly and safely perform it.

5.1.2 Job Analysis. A job analysis is a process of determining specific tasks associated with performing a job. A job analysis can be used as a tool to identify tasks that are critical to the competent performance of a job (i.e., important, difficult, or have a high consequence of error associated with them). The tasks identified in a job analysis are to be used as the basis for the development of training program objectives, curricula, and evaluation instruments.

5.1.3 Task/Content Analysis. Task/Content analysis is used to determine the knowledge and skills associated with a task. Task/Content Analysis can be accomplished using a variety of methods which include, but are not limited to:

a. Verification analysis;
b. Document or procedure analysis;
c. Table-top methods using nominal group techniques and consensus decision-making; and
d. More detailed task analysis methods.

The task/content analysis is usually conducted in conjunction with the design and development phases and results in job knowledge and skill requirements being incorporated directly into terminal and/or enabling objectives.

5.2 Design. During the design process, the overall direction and desired outcomes of the training program are determined. Terminal objectives are developed using the data obtained during the analysis phase. Additionally, training/evaluation standards are developed to provide guidance for on-the-job training. The skills and knowledge identified in the task analysis process are translated into enabling objectives. These are organized into instructional units and sequenced to aid the learning process. The objectives form the "blueprint" which guides the development of all training materials, tests, and delivery strategies. Additional activities during the design process include development of a program description, test items, and examinations.

5.3 Development. All materials produced during the development process are based on the training program's design. The development of lesson plans and guides, training aids, and student materials is also completed during development. Development of additional enabling objectives, test items, rewording of objectives, etc., may also occur during this process. Both technical and instructional reviews of the products of program development are conducted. Recommendations are incorporated as necessary to assure that program content is both technically and educationally sound. All of the materials developed in this process should be reviewed and approved by the appropriate line manager (e.g., Operations Manager for operator programs, Maintenance Manager for maintenance programs).

5.3.1 Lesson Plans/Guides. Instructors use instructional materials that are based on the learning objectives and use appropriate methods of presentation to achieve the objectives. For each training program, lesson plans or guides are developed for use by the instructors. Lesson plans should contain sufficient procedural and content detail so that the information is repeatable from one instructor to another.

5.3.2 Training Aids. Training aids directly support the instructional objectives. Training aids are used to clarify; illustrate; and emphasize points, reinforce concepts, enhance interest, add realism; and provide interactive experiences. Training aids such as video tapes, films, models, slides, flip charts, chalkboards, transparencies, and tape recordings are routinely used to support the lesson.

5.3.3 Student Materials. Student materials include all resources identified by lesson plans for use by the student during a training program (e.g., textbooks, technical publications, self-study guides, design documents, procedures, manuals, or instructor prepared handouts). These materials support the program objectives that are appropriate to the student, and enhance retention.

5.4 Implementation. Implementation consists of activities related to the actual conduct of training, as well as resource allocation, planning, and scheduling. Program implementation includes assigning instructors and support staff and scheduling training, students, and facilities. During implementation, qualified instructors conduct training. Students are evaluated to verify mastery of the objectives.

5.5 Evaluation. Although presented as a separate process, program evaluation is an integral component of all of the SAT processes. Specifically, training programs are evaluated for adequacy of content, testing, presentation, documentation, and after-training job performance. Evaluation provides the critical feedback loop to ensure that the training is up-to-date and reflective of the current job. Feedback obtained from instructors, students, and supervisors is reviewed for its potential effect on future training programs.

The evaluation data generated at the conclusion of the program focuses on the consistency and relevance of the completed program. The feedback received from the evaluation process is used to modify and improve program content and delivery. The program content is monitored and revisions are made as a result of changes in areas such as policies or procedures, system or component design, job requirements, regulatory requirements, and industry guidelines or commitments. Adjustments are also made as a result of analyses of operating experience information such as occurrence reports and other applicable sources.

5.6 Program Documentation. Documentation provides a record of the five phases of the SAT model. These records should be maintained on an ongoing basis and are often referred to as the "audit trail." They document the actions and decisions made during the entire process. It is important that the records contain not only the decisions themselves, but also the rationale that led to making them. The records should be maintained throughout the lifetime of the program to document its development and subsequent modifications.

Master files should be created for each training program to store documentation that require maintenance and control. Administrative controls in the form of procedures, guidelines, or instructions should be used to provide the necessary direction for the maintenance of training program records.

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6. APPLICABLE PROGRAMS FOR ACCREDITATION

Those facilities for which accreditation of their training programs is mandatory are listed in Attachment 1 to DOE 5480.18B, "Nuclear Facility Training Accreditation Program." Accreditation formally recognizes a facility's training programs as meeting the DOE Training Accreditation Program Objectives and Criteria for applicable programs. Accreditation processes are applicable to onsite, offsite, and subcontracted (vendor) training for personnel in positions selected for accreditation.

The specific training programs that require accreditation are those that support personnel in the following functional areas.

a. Shift Supervisor/Shift Manager;
b. Operator/Technician;
c. Radiological Protection Technician;
d. Chemistry Technician;
e. Instrument and Control Technician;
f. Electrical Maintenance Technician; and
g. Mechanical Maintenance Technician.

Personnel performing work in these functional areas include individuals who are in one of the following categories:

a. Part of an operating crew within the facility;
b. Physically located elsewhere but are providing support services to one or more facilities; or
c. Are not employees of the facility operating contractor, but are providing long-term contracted support services for the facility.

Note: Long-term contracted support should be interpreted as a temporary worker being on-site for a continuous 120-day or longer period.

A description of the typical duties performed by personnel working in each of the above functional areas is provided below.

6.1 Shift Supervisor/Shift Manager. These individuals normally do not perform hands-on equipment operation but have the overall responsibility for supervision of the facility operation during a shift. They are responsible for ensuring all work performed in the facility is in accordance with approved procedures, local instructions, technical specifications, and other appropriate documents. In addition to the shift supervisor or shift manager, any operations supervisors between the first-line supervisor and shift supervisor or shift manager should be included in this program.

6.2 Operator/Technician. These individuals are directly involved in and responsible for operation of a facility. Incumbents in this area are typically engaged in one of the following job classifications: reactor operator; experiment loop operator; auxiliary operator; charge/discharge operators; fuel handlers; product enrichment process operator; isotope separation process operator; production, fabrication, assembly, handling, processing, or storing nuclear materials; purification loop operator; power operator; nuclear waste processing operator; and/or other process operations that directly support facility processes.

6.3 Radiological Protection Technician. These individuals monitor radiological conditions and the implementation of radiological safety measures as they apply to facility workers and equipment. They perform tasks such as contamination evaluation, posting of radiological conditions, and calibration or source checks of radiation monitoring instruments. They may also perform radiological monitoring associated with the processing of radioactive waste.

6.4 Chemistry Technician. These individuals perform qualitative and quantitative chemical analyses, prescribe chemical control measures based on such analyses, and operate chemistry related equipment. They provide direct support for facility operations and may perform radioactive and nonradioactive monitoring. They may also support

facility waste-treatment operations by performing chemical analyses in support of the environmental-monitoring program.

6.5 Instrument and Control Technician. These individuals perform installation, preventive and/or corrective maintenance, calibration, and related services on instrumentation and controls that directly affect facility reliability and safety.

6.6 Electrical Maintenance Technician. These individuals perform installation, preventive and/or corrective maintenance, calibration, and related services on electrical components, controls, and power distribution systems that directly affect facility reliability and safety.

6.7 Mechanical Maintenance Technician. These individuals perform installation, preventive and/or corrective maintenance, fabrication, rigging, welding, machining, and related services on valves, piping, pumps, and related systems and equipment that directly affect facility reliability and safety.

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7.0 THE ACCREDITATION PROCESS

An overview of the process to be followed for those training programs requiring accreditation is described below. The reader should refer to the Order DOE 5480.18B, "Nuclear Facility Training Accreditation Program" for a complete description of this process. The process steps are:

a. Identification of applicable programs;
b. Initial self-evaluation conducted by the facility contractor;
c. Documentation of the self-evaluation findings in an Initial Self-Evaluation Report (ISER);
d. Development and approval of a Training Program Accreditation Plan (TPAP);
e. Implementation of the TPAP to achieve accreditation standards for the desired program(s);
f. A second self-evaluation conducted by the facility contractor;
g. Documentation and submittal of the second self-evaluation findings in a Contractor Self-Evaluation Report (CSER);
h. Evaluation of the program(s) by an Accreditation Review Team;
i. Decision by the Accrediting Board;
j. Maintenance of accreditation; and
k. Renewal of accreditation.

A brief description of each process step follows.

7.1 Identification of Programs. Working with the Operations Office, the contractor identifies the positions which require accredited training programs in accordance with the functional descriptions previously described.

7.2 Initial Self-Evaluation. Contractors must conduct a critical initial self-evaluation by comparing the existing training program against the DOE Training Accreditation Program Objectives and Criteria to determine a baseline for how much work is needed to meet the requirements of an accredited training program. This evaluation provides an

opportunity for the facility's respective line organizations and training staff to work together to establish the strengths and weaknesses of the existing program(s). The findings of this self-evaluation are formally documented as a series of strength and weakness statements for each of the objectives and criteria. All other accreditation activities associated with that training program stem from this evaluation, including providing the basis for the document outlining the actions and funding required to bring the program into compliance with the accreditation requirements. Guidelines for the conduct of the initial self-evaluation are found in Section 11 of this Standard.

7.3 Training Program Accreditation Plan. Following the initial self-evaluation, and using the self-evaluation findings as a guide, the contractor prepares and submits a Training Program Accreditation Plan (TPAP). The TPAP documents an implementation schedule which includes the program labor and facility needs required to correct the weaknesses found in the initial self-evaluation. Implementation schedules for training program accreditation are prioritized so that those training programs with the greatest impact on facility safety and operability are accredited first. The TPAP shall be formally approved by the contractor line management, the DOE Operations Office, and the cognizant Secretarial Office. Guidance for the development of this plan is found in Section 12 of this Standard.

The TPAP also includes a justification for program exceptions, as applicable, from accreditation. Section 9 of this Standard provides guidance regarding the preparation and submittal of requests for program exceptions from the requirements of DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program."

7.4 Contractor Self-Evaluation Report. When the improvements identified in the TPAP near completion, a second self-evaluation of the training program against the Training Accreditation Program Objectives and Criteria is performed. A Contractor Self-Evaluation Report (CSER) is prepared on the basis of this evaluation. The CSER documents the findings of the second self-evaluation for use by the Accreditation Review Team (ART) during an on-site, independent evaluation. The CSER is the mechanism which

triggers the formal program review by the ART and is ultimately submitted to the Accrediting Board. The report is finalized, approved by the contractor line management and the DOE Operations Office, and forwarded to the TAP Staff Manager. Guidance on preparing the CSER is found in Section 13 of this Standard.

General guidance about a program's readiness for the second self-evaluation and preparation of its CSER is provided here. The program should be sufficiently implemented to determine the effectiveness of the training and the training feedback system. Specifically:

a. The analysis, design, and development products for the submitted training program(s) must be completed. This includes the development of learning objectives, test items, lesson plans and guides, and supporting documents necessary to effectively deliver the instruction currently required to meet personnel training needs.

b. A program must be sufficiently implemented to provide objective evidence that it is functional and effective in the training of personnel. Further, it must be demonstrated that the various phases of program evaluation can be administered, and that needed adjustments to the program will occur as a consequence of the evaluations.

c. It is recognized that some longer-term line items, such as building a training facility, may not be complete. These items should not deter the facility from submitting a CSER.

Multiple programs may be combined into one CSER, if the noted strengths and weaknesses are clearly distinguishable between programs. Additionally, some facilities may have positions that appear to merge two programs. A Radiation/Chemistry Technician may be defined as one position or a facility may have Electrical/Instrumentation Control Technicians. In such cases, the contractor should submit one CSER for the joint program. However, the contractor must describe the program in sufficient detail such that

the reader can clearly understand the duties and responsibilities for a person in that program.

7.5 Accreditation Review Team Evaluation. Upon receipt of the CSER, the TAP Staff Manager appoints an Accreditation Review Team Manager (TM) to coordinate and conduct an on-site program review. A team for a program review consists of peer evaluators from around the DOE Complex and personnel from the TAP Staff. The team possesses technical expertise in the program(s) being evaluated, as well as expertise in training, instructional processes, and training evaluation. During the review, the team evaluates whether the training program meets the intent of each accreditation objective. Cognizant Secretarial Office (CSO), Operations Office, and Accrediting Board personnel may participate in the evaluation as observers.

The TM develops supplemental sections to the CSER clarifying the ART's findings during and after the on-site visit. These supplemental sections contain problem statements, conclusions, and recommendations for improvement. The TM returns the CSER with the supplemental sections to the contractor. A copy of the report is forwarded to EH-1, the CSO, and the Operations Office. The contractor prepares written responses to the supplemental sections that provide clarification or describe corrective actions taken. The responses are incorporated into the CSER, which is then submitted to the Operations Office for approval. The approved amended CSER is returned to the TAP Staff Manager. The TAP Staff Manager submits the CSER directly to the Accrediting Board when both the TM and the contractor's management agree that the program is ready.

7.6 Accrediting Board Decision. An Accrediting Board consists of five members with combined expertise in nuclear facility and/or reactor operations, non-nuclear industrial training, instructional processes, and educational accreditation. Alternate members are selected to facilitate the scheduling of meetings.

Senior DOE Operations Office and contractor line management representatives and the TM are present at the Board meeting to answer questions and describe the current status of training programs prior to the Board's deliberations. Cognizant Secretarial Office

representatives may also be present at the Board meeting as observers. Following the TM's presentation of the program and the Board's question and answer session with the Operations Office and contractor representatives, the Board retires for private deliberations and to render a decision.

The Board informs the TAP Staff Manager of its decision. The TAP Staff Manager then delivers the decision and basis for the decision to the cognizant Secretarial Officer, the Operations Office manager, and the contractor. When accreditation is awarded, it normally remains in effect for four years. If accreditation is deferred, the cognizant Secretarial Officer and the Operations Office Manager are responsible for ensuring that the training program is upgraded and that the contractor reapplies for accreditation.

7.7 Maintaining Accreditation. Accreditation is maintained during the four-year period by submitting an Accreditation Maintenance Report two years following the award of accreditation. The report contains specific information, with appropriate documentation, regarding actions taken and changes made to the accredited programs during the two-year period since accreditation was granted.

A summary of the Accreditation Maintenance Report is forwarded to the Accrediting Board by the TAP Staff Manager. The Board determines whether to: (1) continue accreditation, (2) continue accreditation in a probationary status for up to 120 calendar days, or (3) withdraw accreditation.

7.8 Renewal of Accreditation. Accreditation renewal occurs no later than four years from the date of initial accreditation and each four years thereafter. Renewal of accreditation is very similar to the initial accreditation process. Essentially, Sections 7.4, 7.5, and 7.6 of this Standard are repeated. However, the contractor has the option of writing one CSER that includes up to a maximum of six of the programs accredited four years earlier. The Board meets to determine whether to renew accreditation, continue accreditation in a probationary status for up to 120 calendar days, or withdraw accreditation.

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8. CORE PROGRAM ACCREDITATION

Training programs that are common to several facilities at a site (e.g., core programs) should be submitted for accreditation as one program for the site versus submitting the same core program separately accredited at each facility. Historically, Operations Offices and facility managers have supported and encouraged the use of core programs to effectively consolidate the training needed by new employees. Workers participate in the core programs to learn the fundamental concepts before being assigned to a given facility. The cost savings generated by the use of core programs can be substantial. Site and facility managers who want to accredit core programs should follow the same Objectives and Criteria as they would for facility-specific programs.

8.1 Accreditation Review Team (ART) Evaluation of Core Programs. The ART evaluates core programs in one of two ways. In Option 1, the core program is evaluated in conjunction with a facility-specific program. In Option 2, the core program is evaluated by itself.

8.1.1 Option 1. When the first facility at a site submits a CSER that includes a core program, the TM schedules time for the review of the facility-specific material and the core program. This option accredits the facility-specific program and the core program.

As other site facilities who share the same core program request ART visits, the ART does not formally review the associated core program again. Instead, the TM directs the evaluators to use the initial ART report that includes the core program to establish an understanding of the core program content and administration. With that background, evaluators determine management and core program content support of the facility-specific program under review. The TM may direct the evaluators to look more closely at the core program if it has been two years or more since the core-program's initial review.

8.1.2 Option 2. The contractor may elect to submit a core program as a separate program. In this instance, the TM schedules time for the review team to evaluate the core program's strengths and weaknesses in supporting all facilities.

Three important questions regarding accrediting core programs individually must be answered. They are:

a. Who is responsible?
b. Does the core program support the facility-specific needs?
c. How have individual facilities provided their input into the core program to ensure that their specific needs will be met?

8.2 Core Program Contractor Self-Evaluation Report Guidelines. Each facility submits a CSER for each program under consideration. The organization providing the core program has the option of submitting a CSER separately, or in conjunction with a facility-specific program. The determination is based on how line management is structured at the site. If one manager is responsible for both the facility-specific and the core program, then the facility would submit only one CSER. However, if the core program is managed in an organization separate from the one in which the facility resides, the core program must have its own CSER.

8.3 DOE Accrediting Board Reviews for Core Programs.

8.3.1 Option 1. The Accrediting Board grants accreditation status to the core program(s) in conjunction with accrediting a facility-specific program at a facility. The core program does not receive accreditation status separately. Instead, the facility-specific and the core programs are viewed as a whole and reviewed together.

8.3.2 Option 2. The core program comes to the Board when it is ready. The core program receives accreditation status separately from the facility-specific program.

9. EXEMPTION AND EXCEPTION FROM ACCREDITATION REQUIREMENTS

Facilities that are listed in Attachment 1 of DOE Order 5480.18B, "Nuclear Facility Training Accreditation Program," should apply the requirements of the accreditation program as they relate to facility risks and hazards. However, DOE Order 5480.18B contains provisions that allow facilities to formally request release from the requirements of the Order at either the facility level (exemption) or the individual program level (exception). Those facilities or programs that management has determined do not require accreditation are expected to formally document the justification for the exemption or exception.

9.1 Exemption from Accreditation. An exemption from DOE Order 5480.18B releases a facility from the requirements of the Order. To request an exemption, facility management prepares a document specifying the basis for the request and the accompanying justification. The exemption request should be a stand-alone document that can be evaluated and understood by someone not having an in-depth knowledge of the facility. The request is submitted to the Operations Office for approval, who then forwards it for approval to the cognizant Secretarial Officer. The explanation of the rationale (justification) for the exemption should be based on the following considerations:

a. The facility will be shut down and placed in a standby status.
b. Continued facility operation will be short-lived.
c. The facility's hazard classification has been downgraded due to a change in mission or status.

9.1.1 Exemption Process. When facility contractors request an exemption to release a facility from the requirements of accreditation, the following process should be used:

a. The contractor requesting an exemption for a facility prepares the document and forwards it to the Operations Office for review and approval.

b. The Operations Office Manager conducts an independent assessment of the exemption request and either approves or disapproves it. If the Operations Office Manager approves the request, a separate memorandum documenting the approval of the request is prepared. The request and the memorandum are forwarded to the cognizant Secretarial Officer.

c. The cognizant Secretarial Officer reviews the submittal and renders a decision to approve or disapprove the exemption.

d. If the cognizant Secretarial Officer agrees with the exemption request, EH-1 concurrence of the action is requested by the cognizant Secretarial Officer. A copy of the proposed approval memorandum to the Operations Office is included in the cognizant Secretarial Officer's request for EH-1 concurrence.

e. The cognizant Secretarial Officer advises the Operations Office of the approval action by memorandum.

f. The Operations Office Manager notifies the contractor of the decision by memorandum.

g. EH-1 maintains documentation of the exemption and revises Attachment 1 to DOE Order 5480.18B at the next opportunity.

9.2 Exceptions from Accreditation. Exceptions release a facility from the requirements of Order 5480.18B on a program-by-program basis. Facility line management may determine that proceeding with accreditation for a program is not necessary. This determination might be based on a variety of factors (e.g., the number of job incumbents in a particular program, the risks and hazards associated with a particular job).

9.2.1 Exception Process. To request an exception, facility management prepares a document that specifically explains the basis for the request and the accompanying justification. The following considerations should be included with the request:

a. Impact on facility or public safety;
b. Degree of facility specific knowledge required;
c. Number of personnel in the position;
d. Existence of well-defined industry or professional programs;
e. Applicability of the position to the facility; and
f. Degree to which the position is supervised.

Requests for exception may be prepared and approved in either of the two ways described below. Regardless of whether the request is included in a TPAP or as a separate document, it must be written such that it can be evaluated and understood by someone not having an in-depth knowledge of the facility.

a. During the process of determination of applicable programs and initial self-evaluation, one or more programs might be deemed not applicable for accreditation by facility line management. In situations such as these, when the TPAP is prepared, formal requests for exception for the program(s) should be included in the TPAP. Approval of the TPAP would constitute approval of the exception(s).

b. Subsequent to the approval of a facility's TPAP, facility line management may determine that one or more of the programs originally identified as being applicable to the Order are no longer applicable. In cases such as these, a formal request for exception should be prepared by the appropriate organization and submitted to the Operations Office for approval, who then forwards the request to the cognizant Secretarial Office for approval. If this option is chosen, the following process is used:

1. The contractor desiring an exception for a program prepares the request document in accordance with the guidance provided in this document and forwards it to the Operations Office for review and approval.

2. The Operations Office Manager conducts an independent assessment of the exception request and either approves or disapproves it. If the Operations Office Manager approves the request, a separate memorandum documenting the approval of the request is prepared. The request and the memorandum are forwarded to the cognizant Secretarial Officer.

3. The cognizant Secretarial Officer reviews the submittal and either approves or disapproves the exception. If the cognizant Secretarial Officer approves the exception request, EH-1 concurrence of the action is requested by the cognizant Secretarial Officer. A copy of the proposed approval memorandum to the Operations Office is included in the cognizant Secretarial Officer's request for EH-1 concurrence.

4. The cognizant Secretarial Officer advises the Operations Office of the approval action by memorandum.

5. The Operations Office Manager notifies the contractor of the decision by memorandum.

10. TRAINING ACCREDITATION PROGRAM OBJECTIVES AND CRITERIA

To ensure that the training programs targeted for accreditation meet consistent levels of quality, a series of training program objectives and associated criteria have been developed. Each objective provides a broad goal to be achieved. The functional areas encompassed by the objectives are:

a. Management and administration of training and qualification programs;
b. Development and qualification of training staff;
c. Trainee entry-level requirements;
d. Determination of training program content;
e. Design and development of training programs;
f. Conduct of training;
g. Trainee examinations and evaluations; and
h. Training program evaluation.

To assist training and line managers (and training program evaluators) determine the extent to which their training programs satisfy a given objective, each objective includes a series of related criteria. The criteria for an objective provide specific elements that management should consider in order to assist them to determine if a training program meets the intent of the objective. It is possible that not all of the criteria identified for a particular objective will be applicable to a particular facility. Line and training managers should use discretion in determining the applicability of the criteria to their respective facilities.

The Training Accreditation Program Objectives and Criteria, included as Appendix A in this Standard, are identical to the objectives and criteria contained in the DOE Standard DOE-STD-1070-94, "Guidelines for Evaluation of Nuclear Facility Training Programs," of 6-94.

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11. CONDUCTING SELF-EVALUATIONS, DOCUMENTING THE RESULTS, AND DEVELOPING REPORTS

A thorough and critical self-evaluation of facility training programs, organizational structure, policies, and procedures is the foundation upon which all other accreditation program activities are based. The following guidelines have been developed to assist contractors with the self-evaluation process, including the documentation of the findings. Proper use of this guidance provides consistency in the application of the self-evaluation process, and ultimately in the preparation, approval, and submittal of TPAPs and CSERs. Variations on the practices discussed in this Section may be required to meet specific facility situations.

11.1 Self-Evaluation Discussion. To ensure optimal results, management convenes a team that has as its charter the evaluation of the facility's training program(s). The self-evaluation team reviews training provided by both the contractor itself and by subcontracted organizations.

Facility management, supervisors, and workers, together with the designated training staff, are active participants in the self-evaluation. The self-evaluation is a team effort that requires planning and preparation by participants who are familiar with the accreditation objectives and criteria and the accreditation process. They are knowledgeable about their duties and responsibilities in the self-evaluation.

Members of the self-evaluation team use an internally approved data collection instrument to record their work. They identify program strengths and weaknesses in a documented set of findings. These findings are used for internal planning purposes. Solutions are developed to correct or resolve deficiencies (i.e., circumstances where the current training program does not comply with the accreditation objectives and criteria). These solutions are then further refined into action plans. Depending on the facility's progress in implementing TAP, the strengths, deficiencies, solutions, and the action plans are documented in either the ISER, the TPAP, or the CSER.

11.2 Self-Evaluation Guidance. The team focuses its attention on training programs from two perspectives as it conducts the initial self-evaluation. One perspective is macroscopic or overall; the other is microscopic, the details. The questions the team considers to acquire the macroscopic perspective include:

a. What is the training program specifically attempting to accomplish? What are the program goals?
b. What knowledge and skills must employees possess and how are they identified?
c. Is the training program effectively designed to enable employees to acquire the knowledge and skills?
d. What are the strengths and successes of the training program?
e. What are the training program's weaknesses, limitations, and inadequacies?

When assessing the relative strengths and inadequacies of existing training, the team's key focus is to determine how well the program meets the needs of the trainees and the job. Are they satisfied with the product? What specific improvements or changes does the program need?

To acquire the detailed perspective, the team must look at the details. To achieve this perspective, team members are assigned responsibility for the investigation of designated program elements. Team members set out to find answers to the question, "Does this training program element meet the corresponding objective or criteria?".

The self-evaluation team makes use of the following resources to conduct its review:

a. The accreditation objectives and criteria, with amplifying explanations;
b. Facility training policies and procedures;
c. Training program descriptions;
d. Cognizant training developers, instructors, supervisors and managers, and line managers, supervisors, and selected trainees;
e. Training materials (lesson plans and guides, student handouts, tests, etc.);
f. Facility procedures (administrative, operating, maintenance, etc.);

g. Training records (attendance sheets, test scores, qualification records, in-process and post training evaluations, etc.).

Team members record their findings using a common set of definitions and a consistent level of detail. Management should ensure that a level detail that is consistent with the risks and hazards associated with the training program being evaluated is assigned to the process. Reviewers may use the Problem, Reason, Example, Proposal (PREP) method as an effective means for recording findings. An evaluator documents a concern with an element of the training program by:

a. Briefly stating the Problem;
b. Explaining the Reason why it is a problem;
c. Give specific Examples of the problem's existence; and
d. Provide a Proposal for resolving the problem.

The PREP method is applied at the TAP criteria level for self-evaluation purposes. Careful analysis of all the PREP sheets submitted assists the self-evaluation team in determining significant problems with the training processes or program content.

The self-evaluation team conducts its activities where the training activities occur (e.g., the facility, the training center, the actual work site). Team members engage in three major activities during the evaluation:

a. Training observations;
b. Personnel interviews; and
c. Document reviews.

Evaluators conducting training observations focus on the people (both instructors and trainees), the instructional environment, and the instructional process. To be effective, observations of training must be inconspicuous and focus on facts. Evaluators performing training observations should focus on the following key aspects to reach their conclusions:

a. They should select the training to be observed, obtain a copy of the lesson plan or guide, and review it prior to the observation;
b. They should explain the purpose of the observation to the instructor and attend training (they should not participate in the discussion and should minimize trainee attention to the observation);
c. They should take detailed notes of occurrences during the observation. Write any occurrences as facts and record the time of the occurrence;
d. They should compare the facts observed with the desired behaviors or conditions in each training setting following the observation; and
e. They should note any strengths and/or weaknesses on the observation form.

Team members use a different set of skills and abilities to acquire information about training when they perform personnel interviews. Successful interviewing depends on communication skills, both speaking and listening, and on good questioning techniques. Key considerations that evaluators should use during the interviewing process include:

a. Planning: Develop a set of questions in advance. Formulate clear, concise questions on important information focused on one issue;

b. Opening: Explain the interview purpose and answer questions;

c. Questioning: Make use of open-ended questions to obtain detailed information (e.g., "What do you think about the way tests are administered in the maintenance training program?");

Use closed questions to obtain short answer conclusions (e.g., "Do you believe the maintenance trainers properly secure tests?");

Clarify understanding by requesting the interviewee to expand on an answer. Confirm understanding by paraphrasing the answer;

d. Closing: Express appreciation for interviewee's time and restate the purpose of the interview and the data; and

e. Follow up: Compare responses to the objectives and criteria. Interviewers may wish to consult with each other before documenting the findings.

Evaluators should also review training records to verify that program materials and individual training activities are being properly documented, processed, and retained as required by policy or procedure. The document reviewers should include the following key considerations when conducting self evaluations of training records:

a. Process steps: Prepare for the review by reading the policy or procedure for training records submission, verification, disposition, and retention. Review records in accordance with the host record center's policy and/or procedure. Check documents for completeness, accuracy, currency, and legibility. Ask questions often and record the responses. Follow up on unresolved questions, verify that a records problem in one program is or is not a problem in the other programs. Report findings using the team data collection forms.

b. Review Strategy: The review cuts a "vertical slice" through the records. At the program level, it includes task lists, lesson plans, instructor qualifications, program evaluations etc. At the trainee level, it includes attendance records, test results, qualification cards, certifications, etc.

c. Philosophy: When inconsistencies exist, "pull the string" to determine the depth and breadth of the problem.

d. Records Status: Assess the system as a whole. Are the records properly validated and entered into the system in a timely manner? Is there an effective document control system? Are all the records in the system and readily retrievable?

Having gathered the data, the self-evaluation team should conduct an analysis of the data to determine how well the training program meets the objectives and criteria. This is achieved to help the team reach a consensus on the solutions needed to resolve deficiencies. Once the solutions are clear, the team specifies a set of action items with scheduled completion dates for implementation. Evaluation teams will find it helpful during this phase of problem identification and resolution to step back and take another look at the big picture to increase their assurance that the decisions made and actions taken will bring the desired outcomes.

12. TRAINING PROGRAM ACCREDITATION PLAN

The TPAP is the contractor's action plan for achieving accreditation. During the self-evaluation, the contractor identified the scope and resource needs for accomplishing accreditation. Using the data from the self-evaluation, the contractor then develops the TPAP as a tool that serves the following two purposes:

A TPAP contains detailed data that should be focused on bringing the training programs into compliance with the requirements of Order 5480.18B, "Nuclear Facility Training Accreditation Program." Included in these data are the fiscal resource requirements needed to implement the corrective actions indicated. In essence, the TPAP becomes a funding and planning document. As such, the contractor must obtain DOE approval for the scope of corrective actions outlined, and for any additional budget dollars with which to accomplish the work.

The TPAP contains detailed schedules for the implementation of the corrective actions necessary for the facility's training program(s) to come into compliance with the requirements of Order 5480.18B. Jointly, the contractor's line and training management allocate resources and set priorities to achieve the training upgrades within the prescribed time and reports progress against the plan.

A TPAP is an important resource to the training organization and the facility seeking accreditation of its training programs. The guidance that follows is intended for persons tasked with writing the TPAP. The primary source of information needed to achieve this work is contained in the self-evaluation data and the recorded conclusions reached and decisions made by facility and training management as a result of the evaluation. The TAP Staff can assist with answers to specific questions related to the TPAP construction.

12.1 TPAP Guidance. The TPAP contains the following headings. To provide the contractor with guidance related to the development of the TPAP, each heading is followed by a brief discussion of the suggested heading's content.

12.1.1 Cover Page. The Cover Page contains the following elements:

a. The document's name;
b. The submitting contractor;
c. The name of the facility; and
d. Spaces for the signatures and dates of the submitting training manager, the approving facility line management, the approving Operations Office manager, and the approving cognizant Secretarial Office.

12.1.2 Table of Contents. The Table of Contents includes sufficient detail to allow the reader to locate specific elements of the document, with notations of related attachments.

12.1.3 Definitions. The Definitions section contains those terms used in the document which are not likely to be familiar to people outside of the facility.

12.1.4 Abstract. The Abstract contains two sections:

a. A brief description of the facility, its hazard classification, its mission (past, present, and future), and purpose; and
b. A brief overview that identifies development efforts necessary to comply with the objectives and criteria for all programs being accredited.

12.1.5 Introduction. The Introduction includes an explanation of the document's intent. It lists all reference materials and outlines any special considerations relative to the programs submitted.

12.1.6 Application. The Application section contains a listing of all the job positions at the facility that are included in each of the seven training programs listed in Section 6 of this Standard. For those positions that the facility management wants to except from the accreditation process, a description of the rationale (justification) is provided. The guidance for excepting positions is found in this Section 6 of this Standard.

12.1.7 Status of Training Administration. The Status of Training Administration section contains an overall assessment of the development and implementation of the facility training policies and procedures that describe the philosophy and the approach to training. The assessment includes an appraisal of how well these management tools support the objectives and criteria. The description includes a summary of the strengths and weaknesses and the projected scope of work required to comply with each objective.

12.1.8 Status of Individual Programs. The Status of Individual Programs section includes a program-by-program comparison with the objectives and criteria. Where commonalities exist from program to program for a given objective and/or its criteria, references to this fact are indicated. The information gathered by the self-evaluation team and the subsequent solutions and actions reached by training and facility management are the basis for this section of the document. The written description for each program includes:

a. Position descriptions, requirements, and responsibilities for each job position;
b. A summary of strengths and weaknesses. This is assessed and written at the accreditation objective level, not at the criterion level;
c. The projected scope of work to address weaknesses and achieve accreditation. This is written at the accreditation objective level, not at the criterion level;
d. Labor projections (including retraining of job incumbents). This is written at the accreditation objective level, not at the criterion level;
e. Training facility upgrades;
f. Equipment and materials projections; and
g. Milestones and the mechanisms used to track the accreditation efforts.

12.1.9 Accreditation Plan Summary. The Summary incorporates all individual program accreditation efforts. It explains how the identified personnel resources, facility, and material needs are to be funded. Combined program milestones that reflect major efforts or phased training program accreditation are included. A Gannt bar chart (or similar type of schedule) is used to reflect these efforts and attached to the TPAP.

12.1.10 Approval. When completed, the TPAP is formally approved by the contractor's line management, the DOE Operations Office, and the cognizant Secretarial Officer. Once approved, the contractor implements the plan outlined in the TPAP. The contractor should regularly review the progress being made against the schedule contained in the TPAP. The contractor should provide frequent updates to the DOE Operations Office on all progress review findings.

13. CONTRACTOR SELF-EVALUATION REPORT GUIDELINES

The contractor performs a followup self-evaluation using the methods outlined in Section 11 to confirm that all the actions specified in the TPAP have been completed. When the followup self-evaluation is completed, the contractor prepares a CSER that documents the findings and includes specific corrective actions that are being implemented to correct any noted deficiencies.

Development of the CSER is not intended to be an exercise in writing; it is an opportunity to document the findings resulting from the followup self-evaluation. It is a record of how the training program stacks up against the accreditation objectives and criteria. The following general guidelines apply to the development, review, approval, and submittal of CSERs:

a. Write the CSER for the intended audience, the Accrediting Board. Assume that the Board members know little about the facility, its processes, or the products produced. Avoid "jargon," acronyms, or other language that requires a working knowledge of the facility.
b. Be concise in all descriptions. Do not fail to include deficiencies or imbed them in voluminous text. If there is a problem, state the problem clearly and concisely. If a resolution to a problem is in progress, state what it is, describe the progress that is being made, and state the anticipated completion date. Likewise, if there are noted strengths, describe them.
c. Allow sufficient time for the CSER to be thoroughly reviewed by training and line management and the appropriate DOE Operations Office oversight personnel. The people who concur and approve the document are those who appear before the Board to explain the program and answer questions. They must have an in-depth knowledge of the document and its findings.
d. Keep the DOE Operations Office counterparts informed of the training program implementation progress. There should be no surprises for the Operations Office oversight and monitoring personnel when they review the CSER.

e. Communicate often with the TAP Staff. They are available to answer questions, provide guidance, and give assistance during this process. Inform the TAP Staff when the CSER has been submitted to the Operations Office.

13.1 Contractor Self-Evaluation Report Format. The following guidance assists CSER preparers assemble the information in a standard format and with consistent topical areas. Compliance with this guidance helps the Board and the TAP staff evaluate the training program. The CSER contains the following headings. To provide the contractor with guidance related to the development of the CSER, each heading is followed by a brief discussion of the suggested heading's content.

13.1.1 Title Page. The title page should contain the following:

a. Header;
   The following header should be used:
   TRAINING ACCREDITATION PROGRAM
   CONTRACTOR SELF-EVALUATION REPORT
b. The name of the facility;
c. The training program's name;
d. The name of the Site or Laboratory;
e. The name of the contractor;
f. The date of submittal;
g. The contractor and DOE Operations Office approval signatures and titles. (Include the contractor and DOE managers that will represent the program before the Accrediting Board.); and
h. The name, address, and phone number of the contractor's CSER point of contact.

13.1.2 Footers. All pages following the Title Page should have a footer containing the date of submittal and the page number. The pages should be numbered sequentially from the beginning to the end of the CSER using the format, Page # of ##.

13.1.3 Table of Contents. A table of contents page follows the title page and contains only enough information to enable the reviewer to find major sections (e.g., where each objective begins) of the CSER.

13.1.4 Facility Description and Mission. This section describes the primary and any secondary facility functions. Additionally, factors that relate to the training program, such as the facility size (number of people, buildings, acreage, etc.) are included, along with a brief overview of the facility's operational record (number of years in operation, any non-classified productivity figures, facility safety records, etc.). This section is limited to one page in length.

13.1.5 Management Organization. Begin with the most senior line manager (e.g., the Facility Manager) and identify those managers in the line organization who have direct involvement and oversight of the training. Also describe the Training organization and outline its reporting relationship to the line organization and the Facility Manager (or equivalent position). Include a brief description of each position responsibility within the training program. Ensure that the descriptions pertain to the training program being submitted.

Include a current organization chart which identifies all individuals who have responsibilities associated with the training program. Names and titles should be used.

13.1.6 Program Description. The following general guidance applies to developing the Program Description:

a. Brief Overview - In one or two paragraphs, describe the overall training program (what the objectives are, how the program is designed, and how it is implemented to meet the objectives), the facility positions that are included, any progression steps, etc. If the program has distinctly different training phases, include this information for each phase.
b. Prerequisites - Describe the typical entry level trainee; outline the training, education, and experience they are required to have prior to entering the program.

Describe any screening methods used and any remediation training that is required for those who fail to meet the entry standards.

c. Historical Data on Program - Describe the normal frequency that the program is offered, the last time it was delivered, the average number of trainees that enter the program, and the attrition rates.

d. Initial Training - List the major training topics, their duration, and the setting for each major topic.

e. Continuing Training - List the major continuing training topics, their duration and settings. Describe how the content for each continuing training cycle is established, how individual trainee needs are addressed, and how the program accommodates changes in facility priorities and training needs.

f. Program Evaluation - Briefly describe how the overall program is evaluated, the program's performance indicators, and any trends that exist.

g. Strengths and Weaknesses - Briefly describe (less than one page) any overall program strengths and weaknesses. These should be global in nature; specific strengths and weaknesses are identified in the objectives and criteria section.

If the training program(s) being submitted in the CSER include training for multiple job positions, a separate program description for each job position would not be required if the training for those job positions is encompassed a single training program. However, if the training for the different job positions entails multiple training programs, a separate program description for each job position must be provided. For example, if the training program is designed to train Technicians at the A level and then at a higher B level as they gain experience and are promoted, only one program description would be necessary. Conversely, even though both Technician A and Technician B fall within the same job category, if the training for Technician A is designed as a separate program from Technician B, a separate program description should be provided for each position.

13.1.7 Objectives and Criteria. This section constitutes the majority of the CSER. Each criterion for each objective is listed with a narrative that describes how that criterion is satisfied. This is where the self-evaluation findings are documented. As such, all comments should accurately describe present conditions.

The following general guidance applies to the contractor responses regarding training program compliance to the objectives and criteria:

a. Format - Begin the descriptions for each objective and its criteria on a new page. Limit individual criterion descriptions to a single page. All continuation pages for the objective are formatted like the first page with the word (continued) following the objective number.
b. Write a response for each criterion. If a criterion does not apply, state that it does not apply and why. Where existing procedures or policy pertain to a criterion, write a brief response that outlines the applicable procedure or policy, describes how it is implemented, and reference the document.

Appendix B to this Standard contains portions of a sample CSER, including example responses to the objectives and criteria. These are provided as a reference only and are not to be interpreted as another requirement. Contact the TAP staff for additional assistance.

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APPENDIX A
DOE TRAINING ACCREDITATION PROGRAM
OBJECTIVES AND CRITERIA

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MANAGEMENT AND ADMINISTRATION OF TRAINING AND QUALIFICATION PROGRAMS

OBJECTIVE 1

The facility is organized, staffed, and managed to facilitate planning, directing, evaluating, and controlling a systematic training process that supports the facility mission(s).

Criteria

1.1 **Facility line management has overall responsibility and authority for the content and effective conduct of the training and qualification program(s).**

Line management ownership, commitment, and accountability are the foundation for the training and qualification programs at the facility. Line management is responsible for ensuring that these programs will produce competent workers and supervisors. The commitment to the training of personnel at the facility includes participation of line management in all phases of the training program. Management ensures that resources are available to support the training effort, mandates attendance at training sessions, and is thoroughly knowledgeable of all aspects of the training and qualification program(s) in which that facility's personnel participate.

Management-approved policies and procedures are implemented that promote a systematic approach to training. They adequately describe the duties, responsibilities, and authorities of line and training management, and detail the interfaces involved in implementing the training and qualification programs for both training staff and facility personnel. They also describe the process for the analysis, design, development, implementation, and evaluation of the training programs.

1.2 An organization/person within line management is responsible for the implementation of the training and qualification program(s).

A training group is established as part of the line organization. If a training group is not separately established, then personnel within the line organization are assigned responsibilities for implementing the training and qualification program(s). At facilities with small staffs and/or training programs, the training group may consist of only one individual, either full- or part-time. However, the job function, responsibilities, authority, and accountability of personnel involved in managing, supervising, and/or implementing training are clearly defined in the incumbent's job description, procedure, or similar document.

1.3 Goals, objectives, and plans are in place to describe the implementation of the training and qualification programs.

Written goals and objectives related to the implementation of the training and qualification processes are in place and stated in documents such as strategic plans, award fee criteria, policies, and mission statements. The goals and objectives adequately address the current issues that are important to both contractor management and DOE. Facility line management and the training organization implement specific plans as appropriate to ensure adequate management of the training program.

1.4 Training records are maintained to support management information needs and to provide required historical data.

Training records are maintained in an auditable manner. Training records support management information needs and provide required data on each individual's training participation, performance, and qualification/certification. Training records are also maintained to support verification of the accuracy of training program content.

1.5 Training developed and/or implemented by personnel or organizations other than the operating contractor's staff is monitored and controlled to ensure that it meets applicable facility requirements.

Training provided by an outside organization (e.g., sub-contractor, vendor, site central training) in support of the qualification or certification of facility personnel meets the same basic requirements for development, implementation, testing, and documentation as training provided by the facility staff.

1.6 Training facilities, equipment, and materials effectively support training activities.

Adequate facilities are available to support safe and consistent training. Sufficient facilities and proper tools, equipment, and materials are available to support applicable training content and performance activities (e.g., hands-on training for maintenance personnel and technicians). Instructional support materials and equipment such as audio-visual equipment, flip charts, and marker boards are adequate to support the training activities. In addition to facilities to support the implementation of training, staff facilities and equipment are available to support analysis, design, development, and evaluation of training. Technical reference materials such as procedures, technical manuals, and drawings are readily available to instructors and trainees on all shifts.

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DEVELOPMENT AND QUALIFICATION OF TRAINING STAFF

OBJECTIVE 2

Training staff (contractor and subcontractor) possess the technical knowledge, experience, and the developmental and instructional skills required to fulfill their assigned duties.

Criteria

2.1 **The training staff have and maintain the education, experience, and technical qualifications for their respective positions.**

Instructors have the technical qualifications, including theory, practical knowledge, and experience for the subject matter that they are assigned to teach. Methods are implemented to ensure that individual instructors meet and maintain instructional and technical position qualification requirements. Developmental and instructional qualifications of instructors include theory, practical knowledge, and work experience in analyzing, designing, developing, conducting, and evaluating training, as appropriate to their job assignments.

2.2 **A training program is implemented to ensure that training staff gain the knowledge and skills required for their position.**

A training program is in place to develop the necessary instructor capabilities to fulfill training program requirements in all applicable training settings. Training staff and instructors who have not met the qualifications required for an assignment are under the supervision and guidance of a qualified individual. Subject matter experts used occasionally as instructors are provided assistance and are periodically monitored. The instructional skills training program is conducted using approved instructional materials that are based on learning objectives derived from job performance requirements and which provide for effective and consistent presentations.

2.3 **A continuing instructional skills training program is implemented to maintain, improve, and update the knowledge and skills of incumbent training staff based, in part, on the results of instructor evaluations.**

Continuing training includes improvements needed in technical and instructional knowledge and skills, the correction of identified instructional deficiencies, and training on new methods and equipment.

TRAINEE ENTRY-LEVEL REQUIREMENTS

OBJECTIVE 3

Trainees meet the minimum requirements for entry into the training program.

Criteria

3.1 Entry-level requirements are established for each position and include as applicable the minimum education, experience, technical, and medical requirements.

Procedures or policies describe the personnel selection and entry-level requirements. Line management, working with Human Resources personnel, identify the entry-level criteria for personnel working in a particular operating organization and/or assigned to specific duties or tasks. Entry-level requirements address the minimum physical attributes a trainee must possess, as well as the minimum educational, technical, and experience requirements necessary for the employee to meet job requirements.

3.2 Personnel selected for and/or assigned to the operating organization meet the prescribed entry-level requirements prior to being assigned to a position.

Line management is responsible for the hiring or transfer of personnel into positions for which entry-level requirements are established. Applicable education, experience, technical, and medical requirements are verified and documented for personnel who are required to meet entry-level requirements.

3.3 Training program entry-level requirements are reviewed and revised as necessary on the basis of evaluation of trainee performance.

Entry-level requirements for a training program are reviewed as part of the overall evaluation process. Entry-level requirements are at the proper level to ensure that personnel can achieve the established learning objectives at the completion of training. Individual training course prerequisites are also established and reviewed periodically.

DETERMINATION OF TRAINING PROGRAM CONTENT

OBJECTIVE 4

Program content for competent job performance is identified, documented, and included in the training programs, as appropriate.

Criteria

4.1 The tasks required for competent job performance are identified and documented through a systematic analysis of job requirements. The training program is based on the results of this analysis.

A systematic analysis of job requirements is conducted to provide reasonable assurance that all tasks that are essential to safe and efficient operation are addressed by the training program. Subject matter experts, line management, and training staff develop and maintain a valid facility-specific task list as the basis for the training program. The facility-specific list of tasks selected for training is reviewed periodically and updated as necessary by changes in procedures, facility systems/equipment, job scope, and advances in technology.

4.2 Current facility safety analysis report, procedures, technical and professional references, DOE Guidelines and Orders, and industry operating experience are referenced as applicable to establish both initial and continuing training.

DOE and other appropriate training guidelines are used as a guide for selecting, sequencing, and verifying training program structure and content. Current facility safety analysis report, operating procedures, technical and professional references, and facility/industry operating experience are used to identify facility specific training content and information for use in developing training materials.

4.3 Training for Technical Staff personnel is based on an assessment of position duties and responsibilities.

A detailed analysis is not necessary to determine training program content for technical staff personnel. Consensus-based content guides (i.e., Guides to Good Practices), broad-based assessments of training needs, and regulatory requirements can be used to assist with the determination of training program content.

This method may also be sufficient to determine training program content for positions at many low-hazard nuclear facilities.

DESIGN AND DEVELOPMENT OF TRAINING PROGRAMS

OBJECTIVE 5

Training program materials identify and support the knowledge and skills needed by trainees to perform tasks associated with the position for which training is being conducted. The content of initial training prepares the trainee to perform the job for which the candidate is being trained. The content of continuing training maintains and improves incumbent job performance.

Criteria

5.1 Learning objectives are derived from tasks selected for training. Learning objectives describe knowledge and skills required for successful job performance and are specified in observable and measurable terms.

Learning objectives are written to reflect task performance and consider the associated knowledge and skills. Training settings are considered when writing learning objectives. Learning objectives include the actions the trainee must demonstrate, conditions under which the action will take place, and standards of performance. The minimum trainee entry-level knowledge, skills, and experience for the position are considered when developing learning objectives. If conditions and standards for knowledge and/or skill objectives are implied, they must be clearly understood.

5.2 Lesson plans and other training materials used in the selected training setting (e.g., classroom, laboratory, simulator, individualized instruction, on-the-job training, etc.) are accurate, support the learning objectives, and promote effective delivery of training.

Lesson plans are developed or modified using learning objectives derived from job performance requirements. The content of lesson plans and other training materials adequately addresses the learning objectives. The lesson plans contain sufficient detail to ensure consistent and repeatable training. Information contained in the lesson plans is sufficient to ensure that personnel are trained to a level required and expected by facility management.

Lesson plans or equivalent training guides are used for laboratory training, on-the-job training, and simulator training and include standards for evaluating trainee performance. Training materials for these non-classroom training settings provide for effective and consistent instruction. The training materials provide sufficient information to guide the trainee and the instructor in the performance of the task.

The training materials used to guide discussions with technical staff trainees normally are not in lesson plan format; rather training materials include key points that support the learning objectives, taking into account the job position and the experience of the designated instructor. This approach may also be sufficient for much of the training that is conducted at low-hazard nuclear facilities.

5.3 Review, approval, and control requirements are established and utilized for all training materials.

Subject matter experts and training management review and concur on training materials. The cognizant line manager approves them prior to use. Training

materials are controlled in a manner that ensures that the latest approved version of the material is used.

5.4 A continuing training program is in place and maintains and improves the knowledge and skills of job incumbents.

Continuing training content includes refresher training on overtrain tasks, facility and industry events, facility and procedure modifications, retraining addressing task performance deficiencies, and training on infrequently performed tasks.

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CONDUCT OF TRAINING

OBJECTIVE 6

Training is conducted in the setting most suitable for the particular training content. Training is consistently and effectively presented using approved lesson plans and other training guides.

Criteria

6.1 Training is conducted using approved and current training materials.

Lesson plans that meet criterion 5.2 are used to deliver training. Training in all settings is sequenced effectively to provide completion of prerequisite knowledge and skills prior to receiving training on more advanced knowledge and skills.

Individualized instruction, when used, provides the trainees with sufficient guidance and supporting materials for achieving the learning objectives.

6.2 Training replicates actual job conditions to the extent practical, and allows for direct participation by the trainees.

Instructors use the references, tools, equipment, and conditions of task performance that reflect actual job conditions to the extent practicable. Trainee demonstration of task performance is evaluated on actual plant equipment whenever feasible.

6.3 On-the-job training is conducted and evaluated by designated personnel who have been instructed in program standards and methods.

Line management implements standards and policies pertaining to the conduct of on-the-job training (OJT). Personnel who are designated by line management and are trained in the instructional techniques peculiar to OJT conduct and evaluate it. OJT is conducted using valid methods, approved materials, and a planned and logical instructional sequence. Part time OJT instructors and/or evaluators are trained in OJT instructional methods.

Completion of OJT and task qualification is by actual task performance whenever possible. When the task cannot be performed, but is simulated or walked-through, the conditions of task performance, references, tools, and equipment reflect actual performance of the task to the extent feasible. Task performance evaluation is conducted using valid methods and consists of evaluating trainee performance using established standards prior to task or job qualification. Structured on-the-job familiarization is normally used in lieu of formal on-the-job training and evaluation for managers, non-certified supervisors, and technical staff. During this phase, the candidate works closely with supervisors and managers in their day-to-day job functions, including decision-making.

6.4 Laboratory training is effectively and consistently presented.

Laboratory training provides hands-on application of principles conveyed during the classroom training and encourages analytical skills development. The training program content is implemented as outlined by approved training materials and is structured to provide practical experience. Laboratory training activities encourage direct trainee participation in the learning process. Conditions of task performance, references, tools, and equipment reflect actual job performance requirements to the extent possible. Evaluation of trainee performance verifies

that the trainee has obtained the essential knowledge and performance skills associated with the job.

6.5 Simulator training is effectively and consistently presented, where appropriate.

Training on a facility control room or process simulator is used to build operating team skills and/or enhance the effectiveness of hands-on skill training. An appropriate simulator is used for hands-on training to demonstrate operational characteristics and for recognition and control of normal, abnormal, and emergency facility/process conditions. Differences between the simulator and the facility/process are accommodated in the training session.

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TRAINEE EXAMINATIONS AND EVALUATIONS

OBJECTIVE 7

Individual trainees are examined and/or evaluated on a consistent and regular basis to ensure that learning is taking place and that trainees are acquiring the knowledge and skills required to work efficiently and safely at their jobs.

Criteria

7.1 Trainees are evaluated regularly using written, oral, and/or performance examinations and quizzes.

Trainees are evaluated on a regular basis. Examinations/evaluations are administered at the conclusion of structured segments of the training program. A sufficient sampling of the knowledge and skill learning objectives is evaluated prior to awarding qualification or certification.

Much of the training for managers, non-certified supervisors, and technical staff personnel occurs in nontraditional settings such as discussions with individual managers. Monitoring and evaluating training in these nontraditional settings are unnecessary. In addition, since many learning objectives for managers, non-certified supervisors, and technical staff personnel do not readily adapt to prescribed standards or quantitative testing, qualitative evaluations are acceptable in many cases. For example, trainees qualification could be assessed from responses during discussions, behavior during role-playing, or material developed during training exercises. Qualitative evaluations may also be used to assess trainee qualification at low-hazard nuclear facilities.

7.2 Examinations (both written and oral) and OJT, laboratory, or simulator performance evaluations are based on learning objectives, administered consistently, controlled, and documented.

Test items are reviewed by subject matter experts for technical content, meaning, and correct answer. The results of the review process are documented. Examination questions are at the proper depth and detail to ensure adequate evaluation of the trainees' knowledge and skills. Examinations and performance evaluations contain a representative cross-section of knowledge, skills, and abilities required for the position. All examination questions relate to one or more learning objectives.

The acceptance criteria used to grade examinations and performance evaluations are defined in advance of the examination or performance evaluation.

7.3 The content of written and oral examinations is changed at intervals sufficient to prevent compromise.

A policy or procedure is implemented to provide direction for how often and how much examinations are changed to prevent compromise. Examination changes may be based on how often the course of instruction is used and whether the test data is controlled or shared with the trainees as a part of the learning process.

7.4 Development, approval, security, administration, and maintenance of written and oral examinations, and performance evaluations are formally controlled.

A procedure or policy is implemented that controls the development, approval, security, administration, and maintenance of all types of examinations. Access to examinations is physically controlled and limited to designated personnel.

7.5 Remedial training and reevaluation are provided when examination or performance standards are not met.

Remedial training programs are provided as necessary to prepare the trainee to meet the identified training program entry-level requirements for areas where he/she may be deficient. In cases where a trainee fails an examination, remedial training is based upon the weaknesses identified in the examination. Remedial training plans are specified in advance, acknowledged by the trainee and approved by supervision. Completion of remedial training is documented.

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TRAINING PROGRAM EVALUATION

OBJECTIVE 8

A systematic evaluation of training effectiveness and its relation to on-the-job performance is used to ensure that the training program conveys all required skills and knowledge.

Criteria

8.1 A comprehensive evaluation of individual training programs is conducted by qualified individuals on a periodic basis to identify program strengths and weaknesses.

A policy or procedure describes the long- and short-term requirements for performing program evaluations and provides guidance relative to who does the evaluation, how often evaluations are conducted, and how evaluations are conducted. The results of training program evaluations, including program strengths and weaknesses, are identified, documented, and used as a basis for training program revision on a periodic basis.

8.2 Instructional skills and technical competencies of instructors are evaluated regularly.

Instructors are evaluated regularly in all settings in which they instruct by training management, line organization supervision, and peers. The instructors are evaluated against an established set of criteria and the results are used to improve performance.

8.3 Feedback from trainee performance during training is used to evaluate and refine the training program. Feedback from former trainees and their supervisors is used to evaluate and refine the training program.

Examination results (written and performance) are analyzed to determine weaknesses in the development or delivery of instruction. Changes to the program content and/or design are made as appropriate. After the trainee has had an opportunity to use the information gained during training, feedback from the trainee and his/her supervisor is used to determine the effectiveness of training. Improvements to the program are based in part on collective trainee/supervisor input as to how well the trainee can perform the tasks for which he/she was trained.

8.4 Change actions (e.g., procedure changes, equipment changes, facility-specific and operating experience) are monitored and evaluated for their applicability to initial and continuing training programs and are incorporated in a timely manner. Changes in job scope are evaluated to determine the need for revision of initial and continuing training programs.

Changes that impact training program accuracy are incorporated into the training program in a timely manner and training is provided as necessary to inform facility personnel of changes that have an impact on facility operation. Clear responsibility is assigned for providing facility modification and procedure change information to the training organization.

8.5 Improvements and changes to initial and continuing training are systematically initiated, evaluated, tracked, and incorporated to correct training deficiencies and performance problems.

A policy or procedure identifies the requirements and provides the guidance for documenting, evaluating, tracking, and incorporating changes to training

programs. Data from criteria 8.1, 8.3, and 8.4 evaluations form the basis for making program improvements and modifications.

8.6 Training materials are maintained current, based upon the results of training program evaluations.

A procedure or policy is developed and implemented that describes the process for revising and documenting training material updates based upon the results of training program evaluation.

8.7 Training facilities are evaluated to determine their effect on the training process.

Training facilities are evaluated to determine if they are conducive to the learning process. Classrooms and training settings are free from excessive disturbances and distractions. Trainees have adequate space to work and learn individually and in groups, as appropriate. Conditions related to comfort (e.g., heat, lighting, noise level, desk space, etc.) meet standards for good learning environments. The training staff's office and working spaces are adequate to support the training being developed and presented.

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APPENDIX B
EXCERPTS FROM A SAMPLE SELF-EVALUATION REPORT

Appendix B is a series of examples of several sections from a fictional CSER. These particular sections were selected because of the number of questions received by the TAP Staff from facilities preparing these same sections in their CSERs. These examples are not all-inclusive, nor are they to be interpreted as the only way to respond. They are provided as a reference only. For further assistance, contact the TAP Staff.

FACILITY XYZ
SELF-EVALUATION REPORT

I. FACILITY DESCRIPTION AND MISSION

The XYZ Facility's primary function for nearly 20 years was the extraction of fissionable isotopes from expended fuel. The facility is currently in the standby mode. Management is preparing a plan for decommissioning. The expectation is that decommissioning will require several years of work. The primary function will transition from one of processing to one of decontamination, waste management and environmental restoration.

The facility began operations in 1943 with one processing line and peaked at three processing lines in 1986. The facility consists of five buildings situated on a 500 acre site. The staff totals 1,500 workers. Thirty-five people are involved in the Chemistry Technician program.

While the facility has completed its primary mission and most of the operational work force has experienced a decrease in activity, the chemistry laboratory is seeing an increase in work load due to the decommissioning activities. Management anticipates hiring an additional 100 Chemistry Technicians within the next two years. These people will be screened from the ranks of the operating groups (I&C Techs and Operators) and will be trained using the Chemistry Technician training program.

IV. PROGRAM DESCRIPTION

A. Brief Overview

The Chemistry Technician Training Program includes training for two positions, Chemistry Technician, and Senior Chemistry Technician. Chemistry Technicians are entry level employees and must complete 26 weeks of Basic (Level I) training, and pass a written and oral exam prior to becoming certified to perform all non-radioactive laboratory analyses independently. They may be task qualified on a few low priority analysis during this period, however. Table 1 outlines Level I and Level II training.

To progress to the Senior Chemistry Technician position, the Chemistry Technician must complete another 15 weeks of training (Level II) and pass another oral and written exam.

Chemistry Technicians may take as little as six months or as long as one year to become certified. A Chemistry Technician may take as little as a year or as much as two years to promote to the Senior Chemistry Technician position. This is based on the length of time it takes them to complete their on-the-job training (OJT).

Evaluations are made throughout the training cycle by the training department. Written tests are administered during each weekly lecture series. Individuals who score less than 80% on any training cycle test must receive remedial training and successfully pass a retest.

B. Prerequisites

Trainees cannot enter the Chemistry Technician Program until they have met all specified prerequisites. Prerequisites include General Employee Training, a screening exam, a physical exam, and required regulatory compliance training. Trainees must successfully complete each phase of training before entering the next phase.

C. Historical Program Data

A table top job analysis was recently conducted to update and reverify the outdated (3 years old) Chemistry Technician task list. Representatives from the field organization and the training department conducted the job analysis. The new validated list of tasks was then compared with existing materials to determine if the materials adequately covered each task. Where a deficiency was noted, an action item was developed and entered into the Action Item Tracking System to ensure materials would be developed or modified to address the tasks appropriately. Modification and new development is nearing completion with an expected end date in early July.

Since the attrition rate for Chemistry Technicians is very low, there have not been any new trainees starting the program recently. Currently however, there are 10 technicians in the Level I training phase. As they progress though this phase, any modified or new training material will be implemented as required. Level II training material modifications will be implemented in the regularly scheduled continuing training.

D. Initial Training

The first phase of the Chemistry Technician initial training program is the Basic Level I training. This phase consists of 5 weeks of facility orientation and general fundamentals followed by 21 weeks of classroom and laboratory training on general chemistry and radiation protection. The second phase of the Chemistry Technician initial training program is the Level II training. This phase consists of approximately 15 weeks of site specific classroom and on-the-job training.

E. Continuing Training

The Chemistry Technician continuing training program is designed to maintain and upgrade the knowledge of both Level I and Level II personnel. All Chemistry Technicians attend 3 weeks of continuing training on the tasks common to both

positions. These three weeks of training satisfy all requirements for Level I personnel including facility/industry operating experience. An additional week of training is provided to Level II personnel.

A weekly quiz is administered during the first two weeks of continuing training. At the end of the third week, all personnel take an annual requalification exam. Level II personnel take an exam at the end of the fourth week that is rolled into the third week exam. Passing score for all quizzes is 70% and passing for the annual exam is 80% Individuals who fail may be removed from duties and undergo remedial training prescribed by a review board, which is composed of senior department management and the training supervisor. The remedial program includes another requalification exam.

The Chemistry Technician monthly required reading book provides review through required reading assignments on selected operating experiences and changes to existing operating procedures or equipment. It also provides a means of disseminating selected new or changing information on a short term basis. Another form of required reading is assigned quarterly reviews of emergency and abnormal operating procedures.

F. Program Evaluation

In this section, describe how the program was evaluated. Include a description of the composition of the evaluation team, what was looked at, interviews conducted, training sessions observed, etc. The reader should be able to obtain an accurate impression of the depth and quality of the evaluation of the program by reading this section.

G. Strengths and Weaknesses

In this section, describe what the team found. On an overall program level, discuss its strengths and weaknesses. These comments should be more global in nature than the individual responses to the Objectives and Criteria. Be direct and avoid "whitewashing" issues. It is better for the facility to openly identify weaknesses than have the Accreditation Review Team find them.

If there are strengths, take credit for them. However, exercise caution that what is identified as a strength really is. Merely meeting a requirement should not be considered a strength.

V. OBJECTIVES AND CRITERIA

The following are a few examples of narrative responses to the objectives and criteria. These examples are not all-inclusive, nor are they to be interpreted as the only way to respond. They are provided as a reference only. For further assistance, contact the TAP Staff.

1.0 MANAGEMENT AND ADMINISTRATION OF TRAINING AND QUALIFICATION PROGRAMS - the facility is organized, staffed, and managed to facilitate planning, directing, evaluating, and controlling a systematic training process that supports facility mission.

1.1 Facility line management has overall responsibility and authority for the content and effective conduct of the training and qualification program(s).

Line management ownership, commitment, and accountability is the foundation for the training and qualification programs at Facility XYZ. The Facility Manager's written policy contained in Administrative Procedure @#$%, "Training and Qualification of Personnel at Facility XYZ," clearly states that line management is responsible for ensuring that their respective training programs will produce competent workers and supervisors. Each line manager's position description contains specific requirements for the oversight and monitoring of his/her organization's training requirements.

The facility's commitment to the training of its personnel includes the participation of line management in all phases of the training program. The Analytical Chemistry Manager reviews and approves all training materials for the Chemistry Technician training program and regularly attends and monitors the Chemistry Technician training being delivered. Facility management ensures that adequate resources are available to support the training effort.

Procedure @#$% also specifies that a systematic approach to training be implemented for the facility. Chemistry Department Procedure CD123.45, "Training and

Qualification of Chemistry Technicians," adequately describes the duties, responsibilities, and authorities of both the line and training managers who are involved in developing, implementing, and approving the Chemistry Department's training and qualification programs. Chemistry Department Procedure CD123.45 references Training Department Procedure TD345.12, "Training Program Design, Development, Implementation, and Evaluation" as the method by which all training will be developed and implemented.

1.5 Training developed and/or implemented by personnel or organizations other than the operating contractor's staff is monitored and controlled to ensure that it meets applicable facility requirements.

Due to security requirements, Facility XYZ does not utilize training provided by outside organizations. Accordingly, this criterion does not apply.

4.0 TRAINEE ENTRY-LEVEL REQUIREMENTS -- Trainees meet the minimum requirements for entry into the training program.

4.1 Entry level requirements are established for each position and include as applicable the minimum education, experience, technical, and medical requirements.

Common entry-level education, technical, and experience requirements have been established by joint agreement among Human Resources, the Chemistry Department, and the Training Department based on analysis of the position tasks. These requirements are documented in Chemistry Department Procedure CD123.45, "Training and Qualification of Chemistry Technicians." The entry-level requirements address a prospective candidate's level of education in mathematical and physical science areas and/or experience in chemistry.

A screening exam developed by Human Resources is administered to determine if each candidate's level of ability in the areas of reading comprehension, numerical applications, and decision making provide a high level of confidence that the applicant can successfully complete the Chemistry Technician training program.

Entry-level requirements also include a medical evaluation to determine if the candidate has the physical capabilities to perform chemistry technician job duties. Medical records are retained by the Medical Department. Following an evaluation by the Medical Department a form listing any medical restrictions is sent to the Chemistry Department. The Chemistry Department Manager then sends a letter verifying that medical requirements have been met to the training department for inclusion in the candidates training file.

TABLE 1

Level I and Level II Training

PROGRAM COMPONENT	SETTING (Duration)	TOPICS
Facility Orientation	Classroom / Facility (1 week)	Systems overview
General Fundamentals	Classroom (4 weeks)	Mathematics, basic physics, radiation theory, biological effects, radiation instruments
General Chemistry	Classroom/ Laboratory (10 weeks)	Chemistry, water treatment, radiochemistry, chemical instrumentation, chemistry controls, post accident sampling, lab safety, quality control
General Radiological Protection	Classroom/ Laboratory (10 weeks)	Radiological applications, air sampling, respiratory protection, internal and external dosimetry, ALARA concepts, radiation work permits, waste shipping, regulations, emergency plan
On-The-Job Training (OJT) Level I	Facility (1 week)	Task Qualification
Oral Board	Facility	Oral evaluation to review qualification
Site-specific Level II	Classroom/ Facility (5 weeks)	Plant systems, administrative procedures, reactor theory; heat transfer, thermodynamics, and fluid flow; chemistry limits, liquid releases, monitors/analyzers, mitigating core damage, radioactive sources, respiratory fit testing, radioactive material shipment, emergency plan, fire brigade, sampling systems
On-The-Job Training (OJT)	Facility (10 weeks)	Task qualification
Oral Board	Facility	Oral evaluation to review qualification

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CONCLUDING MATERIAL

Preparing Activity:
DOE-EH-63

Review Activity:

DOE	Operations Office
DP	SR
EH	
EM	
ER	
FM	
HR	
NE	

Project Number:

6910-0041