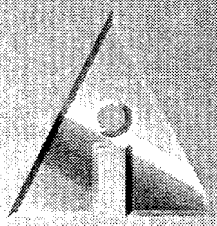

Key Principles of Accreditation

1. Accreditation of training programs includes the following three key elements:

   - self-assessment by the utility
   - on-site visit by an INPO accreditation team
   - review and decision by the National Nuclear Accrediting Board

2. Accreditation teams are accountable solely to INPO management for the performance of their activities.

3. The Accrediting Board is independent in its decision-making authority. The Accrediting Board may make a decision to award or defer initial accreditation and to renew, place on probation, or withdraw accreditation for accredited training programs.

4. The Accrediting Board decision to grant initial accreditation or accreditation renewal is based on a utility's training programs meeting the accreditation objectives. The Accrediting Board grants or renews accreditation for a prescribed interval.

5. INPO members are expected to achieve and maintain accreditation of their training programs for personnel who operate, maintain, and support their nuclear plants.

6. The accreditation process is independent of but recognized by the NRC as a means for satisfying regulatory training requirements.

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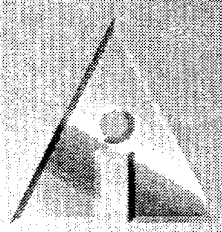

Regulatory Basis for Accreditation

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Regulatory Basis for Accreditation Timeline

10/1979 INPO is incorporated. Training and education are identified as one of the four cornerstones.

Kemeny Commission Report on the Three Mile Island Accident issues a recommendation to establish accredited training institutions for operators and supervisors of operators.

NRC issues NUREG 0585, "TMI Lessons Learned Task Force – Final Report," stating, "We have been told that INPO will: Accredit training programs and certify instructors." (Note: INPO does not certify individual instructors, but does oversee the instructor qualification process through accreditation objectives.)

12/1981 DOE reports to Congress that INPO's overall, industrywide program could adequately train personnel to perform operator and supervisory functions.

1/1983 Nuclear Waste Policy Act is enacted. Section 306 directs the NRC to "promulgate regulations or regulatory guidance for the training and qualification of nuclear plant personnel."

8/1983 The first formal meeting of the National Nuclear Accrediting Board is held at INPO. Five training programs at Duke Power's Oconee Nuclear Station are accredited.

12/1984 In response to Section 306 of the Nuclear Waste Policy Act, the industry commits to the NRC that all nuclear power plants fueled before 1985 will have 10 key training programs ready for accreditation by the end of 1986.

1/1985 Senator Moynihan of New York introduces Senate Bill 16, "The National Nuclear Power Plant Nuclear Training Act of 1985." The bill proposes the establishment of a National Academy for Nuclear Safety to provide training to civilian nuclear power plant personnel.

3/1985 The NRC publishes a Policy Statement on Training and Qualification of Nuclear Plant Personnel endorsing an accreditation program managed by INPO in that it encompassed the elements of effective performance-based training.

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5/1985 Pennsylvania Power & Light's Susquehanna Steam Electric Station has 10 training programs accredited.

9/1985 INPO's Board of Directors formally establishes the National Academy for Nuclear Training.

4/1990 U.S. Court of Appeals for the District of Columbia Circuit concludes that the NRC's Policy Statement does not meet the intent of the Congressional directive to create mandatory requirements for training programs at civilian nuclear power plants. The Court remands the issue back to the NRC for action consistent with the Court's findings.

10/1991 The NRC directs the staff to develop a "proposed rule that is performance-based in focus, that does not exceed the scope of the existing accreditation process. This rule should specifically require that training programs be developed using a systematic approach to training (SAT), with a definition of SAT consistent with that contained in 10 CFR Part 55 included in the rule. The positions to be covered by the rule should be consistent with the scope of the industry's accreditation program."

The National Academy for Nuclear Training issues a single document containing the objectives and criteria for accreditation and accreditation renewal. INPO submits the document for discussion with the NRC, and it is made available in the NRC Public Document Room.

1/1992 NRC proposes an amendment to 10 CFR Part 50 to require training programs to be derived from a systematic analysis of job performance requirements (SAT). The rule would provide for the training and qualification of nuclear power plant personnel in maintenance, chemistry, radiological protection, shift supervisory, and technical staff and manager positions. Licensed operator training is described in 10 CFR 55.31(a)(4) and 55.59(c). Licensed operators would not be covered by the rule, but would continue to be covered by 10 CFR Part 55. (Note: "Technical Staff and Managers" was changed to "Engineering Support Personnel" in response to comment on the proposed rule.)

5/1993 The Final Rule is issued by the NRC, establishing accreditation as a means for compliance with federal regulations. A Memorandum of Agreement between the NRC and INPO is written, describing the overall coordination of training-related activities and the role each organization will assume.

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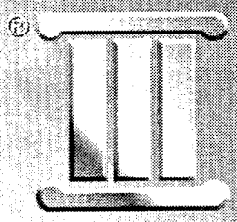

NATIONAL ACADEMY FOR NUCLEAR TRAINING

The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry

(Preliminary)

General Distribution

March 2002
Academy Document
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The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry

NATIONAL ACADEMY FOR NUCLEAR TRAINING

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(Preliminary)

Plant Area: Training

Key Words: Objectives and Criteria,
Accreditation

The National Academy for Nuclear Training operates under the auspices of the Institute of Nuclear Power Operations (INPO). The Academy provides a framework for a unified, coordinated industry approach to achieving and maintaining effective training and qualification. It also promotes pride and professionalism of nuclear plant personnel. The Academy integrates the training efforts of all U.S. nuclear utilities, the activities of the National Nuclear Accrediting Board, and the training-related activities of INPO.

Foreword

The National Academy for Nuclear Training, formed in 1985, focuses on and unifies industry efforts to improve training and promote professionalism among nuclear plant personnel. The Academy integrates the training-related activities of all nuclear operating companies, the Institute of Nuclear Power Operations (INPO), and the independent National Nuclear Accrediting Board. Each INPO member company that operates a nuclear-powered electric generating plant has made a commitment to achieve and maintain accreditation of its training programs.

With the support of its members, INPO develops the accreditation objectives and criteria; develops supporting guidance; assists members in developing, implementing, and maintaining job performance-based training programs; and evaluates the quality and effectiveness of industry training programs.

This document, ACAD 02-001, provides the objectives and criteria for achieving and maintaining accreditation of key training programs in the nuclear power industry. This edition supersedes the December 1991 *Objectives and Criteria for Accreditation in the Nuclear Power Industry* (ACAD 91-015). Because of the scope and number of changes to the December 1991 edition, changes are not marked. The following summarizes substantive changes:

- The objectives provide more balance between training processes and training results.
- A graded approach to the application of the systematic approach to training is expected for the development of training.
- Continuing training is separated from initial training to recognize the differences in training selection and purpose.
- Training delivery is captured in one objective that recognizes training in a variety of venues, including laboratories, simulators, interactive computer training, classroom, and in-plant training.
- Self-assessments and corrective actions are identified as essential aspects of managing accrediting training programs.
- The objectives have been revised to reduce redundancies and overlap.

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Overview

The purpose of training in the nuclear power industry is to provide competent personnel who can safely operate, maintain, and improve performance of the plant. To achieve this purpose, the nuclear power industry uses a systematic approach, based on job performance requirements, to guide the training and evaluate the competency of nuclear plant personnel. This approach provides personnel with the necessary knowledge and skills prior to job performance, including the ability to perform technical tasks, meet expectations for high levels of human performance, and make effective decisions that take into consideration nuclear plant safety. *The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry* provides the framework for a systematic approach to training and is the industry standard used for achieving and maintaining training program accreditation.

The accreditation objectives and criteria apply to training processes and training results. Training that meets the accreditation objectives has the following attributes:

- It is based on specific learning objectives that relate to job performance requirements and that trainees are responsible for achieving.
- The training content is technically accurate and presented in an instructionally effective manner.
- Trainees are evaluated to verify that the learning objectives have been achieved.

Fundamental to the accreditation program is the use of a systematic approach to training. The essential elements of the systematic approach to training, as applied to the nuclear power industry, are described in Appendix A.

The National Academy for Nuclear Training conducts team visits to ascertain that plant training and personnel qualification programs effectively implement the systematic approach to training and meet the accreditation objectives. The teams conduct an independent review of training programs and corroborate the information in the station accreditation self-evaluation report. Information gathered during team visits and from the station accreditation self-evaluation report form the bases for decisions by the National Nuclear Accrediting Board on initial accreditation and periodic renewal. The process for receiving initial accreditation and renewing accreditation of training programs is described in a separate document, ACAD 02-002, *The Process for Accreditation of Training in the Nuclear Power Industry.*

Overview

Essential to job performance-based training are the knowledge and skills transferred from qualified, high performing personnel to new, inexperienced personnel. Training programs must provide opportunities for this knowledge and skill transfer to occur, recognizing that some of this information transfer is through less formal and undocumented methods, such as mentoring, observations, shop and staff meetings, and prejob briefings. Other learning occurs during professional development seminars that broaden worker and supervisor perspectives but may not relate to specific learning objectives needed for job performance. The accreditation objectives and criteria are not intended to apply to the less formal methods and professional development seminars; these learning venues should supplement, not replace, formal training programs.

Accreditation Objectives and Criteria

The accreditation objectives and criteria provide the basis for self-evaluation and accreditation team review. The objectives and criteria describe the expected results of an effective, well-managed training program. The objectives generally address broad functional areas; it is intended that accredited training programs will meet the objectives. The criteria are principles or methods that support the objectives and are applied with professional judgment. If an objective is fully met, it is not necessary that all supporting criteria be met.

Objective 1: Training for Performance Improvement

Training is used as a strategic tool to provide highly skilled and knowledgeable personnel for safe, reliable operations and to support performance improvement.

Criteria

1.1 Corporate and plant goals address the training and resources needed to support performance and workforce projections. These goals are integrated through strategic plans and training schedules.

1.2 Clear standards for personnel performance are used in the development of training programs.

1.3 Training needs are anticipated, and training materials are developed and delivered in time to support plant activities.

1.4 Personnel and plant performance are monitored to ensure that training contributes to safe and reliable plant operation and to identify training opportunities and solutions that will help achieve expected performance improvements.

1.5 The self-assessment and corrective action processes are used to identify training improvements that can enhance safe and reliable plant operations.

1.6 Training expertise is used during analysis of the contributing causes of personnel performance problems to help identify and differentiate between training and nontraining solutions.

Objective 2: Management of Training Processes and Resources

Management is committed to and accountable for developing and sustaining training programs that meet station needs. Resources and an infrastructure of training processes are applied consistent with these needs to support training program sustainability.

Criteria

2.1 A systematic approach to training is defined by implementing policies and procedures that provide the flexibility necessary to apply training methods commensurate with the importance of the job to nuclear safety, reliability, and the complexity of the job performance requirements.

2.2 Resources (staff, facilities, equipment, materials) effectively support training activities and provide a professional learning environment.

2.3 Instructors and evaluators, including personnel performing on-the-job training and task performance evaluations, possess the knowledge and skills to fulfill their assigned duties.

2.4 Management and job incumbents participate in curriculum development and training program effectiveness reviews to verify training achieves expected results.

2.5 Changes that affect training and qualification, such as job scope, plant design and equipment, procedure, and regulatory requirements, are evaluated and incorporated into the training program.

2.6 A method is used to verify that job performance requirements and associated learning objectives are included in training materials prior to use.

2.7 A configuration control process for simulator hardware and software results in the simulator representing the operating characteristics of plant components and systems.

2.8 Management establishes and reinforces expectations for trainees regarding attendance, performance, remediation, and timely makeup.

2.9 Training schedules are established that support plant needs and effective use of resources.

2.10 Examinations are controlled and administered to maintain evaluation integrity and prevent compromise.

2.11 Records are maintained to document personnel qualifications for job assignments. Training program documentation supports management information needs.

Objective 3: Initial Training and Qualification

The initial training program uses a systematic approach to training to provide personnel with the necessary knowledge and skills to independently perform their job assignments.

Criteria

3.1 Initial training program content is based on an analysis of job performance requirements as well as on entry-level requirements, industry guidance, and regulatory requirements.

3.2 Job performance requirements and the requisite knowledge and skills are identified and form the bases for learning objectives. Higher cognitive job requirements, such as analytical and diagnostic activities, are included, when appropriate. Learning objectives are developed for human performance improvement techniques and other management expectations that are included in the job performance requirements.

3.3 Job performance requirements and associated learning objectives are maintained current, and new or modified performance requirements are analyzed to identify knowledge and skills to be added to the training program.

3.4 Instructional strategies and training materials are developed to support training delivery. Training materials are verified current before use.

3.5 Lessons learned from operating experience are evaluated, and selected information is included in training materials.

3.6 Personnel entering an initial training program satisfy entry-level requirements. The training needed to qualify for their job assignments is determined.

3.7 Personnel qualified in an accredited training program at another nuclear plant are considered for qualification based on an assessment of similarities in job performance requirements.

3.8 Personnel, including contracted and nonplant personnel, satisfy established training and qualification requirements prior to being assigned to work independently.

Objective 4: Continuing Training

Continuing training uses a systematic approach to training to refresh and improve the application of knowledge and job-related skills and to meet management expectations for personnel and plant performance.

Criteria

4.1 The continuing training program is based on an analysis of training needs for refreshing knowledge and job-related skills, personnel performance improvements, new or modified performance requirements, and regulatory requirements.

4.2 Lessons learned from operating experience are included in continuing training to increase depth of understanding and application of knowledge and skills to job performance.

4.3 Continuing training uses learning objectives that provide relevant information to support job performance and higher cognitive learning objectives to refresh or improve analytical and diagnostic skills.

4.4 Continuing training content is evaluated for inclusion in initial training programs.

4.5 Timely application of continuing training, such as just-in-time training, to provide or refresh knowledge and skills on selected jobs is used to optimize personnel performance and resource allocation.

Objective 5: Conduct of Training and Trainee Evaluation

Training is conducted using methods and settings that support trainee attainment of job-related knowledge and skills. Achievement of learning is confirmed with reliable and valid evaluation methods.

Criteria

5.1 Training is presented in a sequence and in settings that facilitate learning and trainee achievement of learning objectives.

5.2 Training activities provide opportunities for hands-on application of knowledge and skills in a learning environment.

5.3 The control room simulator is used to train and evaluate individual licensed operator and control room crew performance.

5.4 Training is conducted using approved learning objectives that are based on the knowledge and skills needed for job performance.

5.5 Training and evaluation reinforces the application of fundamental knowledge, human performance improvement techniques, and management expectations in learning settings.

5.6 When subject-matter experts are used to provide instruction, qualified training personnel provide assistance to ensure training effectiveness.

5.7 Training and evaluation use plant procedures, references, tools, equipment, and conditions of task performance that reflect actual job conditions to the extent practicable.

5.8 Achievement of learning objectives is evaluated using reliable and valid test methods.

5.9 Evaluation methods identify personnel who are prepared to perform independently at the levels expected by the line organization.

Objective 6: Training Effectiveness Evaluation

Evaluation methods are used systematically to assess training effectiveness and modify training to improve personnel and plant performance.

Criteria

6.1 Ongoing and periodic self-assessments of training programs are conducted to identify strengths and weaknesses.

6.2 Management monitors and evaluates training processes and training delivery to identify training program strengths and areas needing improvements.

6.3 Personnel performance and feedback during training are used to evaluate and modify training programs.

6.4 Post-training assessments are used to gauge training program effectiveness. Training effectiveness measures, such as job performance, management observations, and feedback from supervisors, the trained personnel, and job incumbent peers, are used to support these assessments.

6.5 Improvements and changes to initial and continuing training are systematically identified, tracked, and incorporated.

APPENDIX A

SYSTEMATIC APPROACH TO TRAINING—ESSENTIAL ELEMENTS

The systematic approach to training is a proven, structured method for efficiently producing job performance-based training that addresses personnel and organizational needs and performance deficiencies. The training outcomes contribute to improved job performance and professional development.

An essential aspect of improving plant and personnel performance is a thorough performance analysis of shortfalls and adverse trends. Performance analysis is designed to help users select appropriate solutions. It is imperative that performance improvement solutions be thoroughly considered whenever a gap in personnel or organizational performance is addressed. The systematic approach to training begins after performance analysis has identified that training is at least part of the solution to a plant or personnel performance shortfall or need. If performance analysis verifies that training is a correct response, the systematic approach to training focuses on training analysis, design, development, implementation, and evaluation.

While the systematic approach to training methods always apply to accredited training, a graded approach to the administration and documentation is expected. The extent of application is based on the importance of the job to nuclear safety, reliability, and the complexity of the job performance requirements. Existing training materials may be used as a starting point to efficiently develop new materials.

Analysis

Once a valid training need has been identified, the analysis phase defines the skills and knowledge that trainees require. The following key steps apply:

- Perform a job analysis by reviewing existing station or industry job data, tabletop analyses, interviews, and job survey questionnaires to select job tasks for which training is required. The job analysis should use existing job data and incumbent employees to identify and rate job tasks. Task difficulty, importance, and frequency are considered to determine the initial and continuing training program content.

- Conduct task analyses to determine methods of task performance and associated knowledge and skills, using a tabletop approach, questionnaires, or interviews. Formal, detailed task analyses should be used only when alternative methods will not produce satisfactory results. In some applications, it may be desirable to combine task analysis with the development of learning objectives. The knowledge and skills identified provide a task-specific reference for both new and existing programs.

- For new tasks, use technical documentation, subject-matter experts (SMEs) and line management to define proper task performance and the underlying knowledge and skills required.

- For modified tasks, use SMEs and existing station or industry training program products to identify which portions of the tasks have changed. This process includes gathering relevant existing training materials and task information, comparing materials to facility-specific needs, and identifying the training program content modifications necessary to support the changes in the tasks.

Design

Design uses the task information collected during the analysis phase to specify, in measurable terms, the knowledge and skills that training will develop in the trainee. The following key steps apply:

- Describe learning objectives. These written objectives define exactly when, what, and how well the trainee must perform during training. They address the desired knowledge and skills identified during analysis to determine what is to be learned in terms of measurable trainee performance. Complex subjects have an underlying structure that can simplify learning. This structure needs to be determined, analyzed, and organized to enhance learning efficiency. Organizing learning objectives to take advantage of the logical relationships within the subject reduces the time needed to achieve the learning objectives and is a source of design efficiencies.

- Prepare performance tests. These are prepared at the task level to measure the adequacy of the trainee's task performance. They define the cue that initiates task performance, identify the task performance conditions, and establish standards of successful task performance. In many instances, approved, well-written procedures contain much of this information, the use of which minimizes the effort required to develop job performance measures (JPMs).

- Develop methods to observe and measure trainee performance as a part of design. Some typical evaluation methods are written test questions, oral examinations, laboratory evaluations, JPMs, task performance evaluations, on-the-job evaluations, and simulator evaluations. Test items and, as appropriate, examination banks are developed to objectively measure how well trainees achieve the learning objectives. The examination bank is used to generate tests for use during training. Existing test items are revised to meet changes in learning objectives or to address information obtained from various feedback sources.

- Determine the setting in which training will be conducted. The training environment is determined based on the knowledge and skill requirements.

Development

The development phase creates and organizes the instructional resources that trainees and instructors will need to achieve the learning objectives. Emphasis is on maximizing the use of existing materials and resources. The following key steps apply:

- Identify learning activities for each learning objective. This can be accomplished by classifying the learning objective as knowledge- or skill-related and then developing or adapting existing learning activities to support the objective.

- Select training methods. Training methods are techniques employed to enhance the learning process. They include lecture, walk-through, demonstration/practice, discussion, role-playing, case study, and other similar techniques.

- Based on the method of instruction, develop, modify or obtain training materials such as written texts, computer software, equipment, audiovisual materials, models, simulation devices, examinations, and performance tests. Then, specify the means of using the material. Review and modify existing training materials, as needed. Station-specific information should be considered for integration into any material originating from outside sources.

Implementation

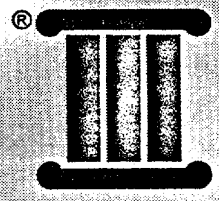
Implementation puts training programs into operation. Training is delivered as planned, and trainee and instructor performance is evaluated. The following key steps apply:

- Select and train instructors and subject-matter experts, and confirm the availability of trainees and facilities. Provide sufficient time for instructor preparation to help ensure general adherence to the lesson plan.
- Consider exempting trainees if they exhibit achievement of learning objectives prior to training. A pretest may be administered to identify if trainees have previously achieved the learning objectives.
- Collect feedback on training content and delivery. This information may include the effects of training on personnel and plant performance, reinforcement of management expectations, trainee test and evaluation performance, and instructor, trainee, and management critiques of training.
- Maintain records of training attendance, content, results, and feedback to support management information needs and to document trainee and instructor performance.

Evaluation

Evaluation ensures training continues to produce qualified employees who perform at acceptable standards and contribute to the organization's core business objectives. Evaluation is a dynamic process of assessing performance, identifying concerns, and initiating corrective actions. By monitoring employee job performance, plant and procedure changes, and operating experience, evaluation helps maintain and improve the initial and continuing training programs. The following key steps apply:

- Analyze and trend feedback collected during training, such as trainee evaluation results, instructor observations, management observations, and student feedback.
- Analyze job performance feedback and other information collected to determine training effectiveness to identify training program changes.
- Perform periodic training self-assessments.
- When evaluation results confirm training program weaknesses, initiate corrective actions and track them to completion.
- Periodically review corrective actions for effectiveness.



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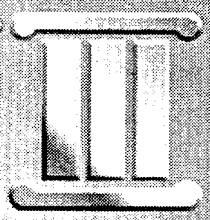

NATIONAL ACADEMY FOR NUCLEAR TRAINING

The Process for Accreditation of Training in the Nuclear Power Industry

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NATIONAL ACADEMY FOR NUCLEAR TRAINING

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Plant Area: Training

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The Process for Accreditation of Training

This document, ACAD 02-002, supersedes ACAD 00-001 and addresses the initial accreditation and accreditation renewal processes. ACAD 02-001, *The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry*, complements this document.

Changes described herein are intended to standardize the accreditation self-evaluation report format. The following summarizes substantive changes:

- The accreditation self-evaluation report will be written to address the revised accreditation objectives provided in ACAD 02-001.
- The report content is focused on how plants meet the objectives. For accreditation renewal, general descriptions of each training program are no longer included in the report.
- The report will typically be 30-40 pages in length; pictures, colored charts, and foldouts will not be accepted.
- The accreditation self-evaluation report and the team report that are sent to the Accrediting Board will not include strengths. However, the accreditation teams will continue to identify strengths and share them with the industry. Positive aspects of training that help sustain achievement of accreditation objectives will be included in the team report.
- Areas for Improvement will be called Findings.

- The information requested for the attachments to the report has been revised, with greater emphasis on self-assessment results and the bases for continuing training content, rather than on the number of training hours.

The National Academy for Nuclear Training welcomes suggestions to improve the accreditation process, objectives, and criteria. Provide suggestions to the executive director, National Academy for Nuclear Training. National Academy members are encouraged to use this and other National Academy for Nuclear Training documents to guide day-to-day decisions concerning accredited training programs.

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Accreditation Process

General

This document describes the process for achieving and maintaining accreditation of training programs. The accreditation process assists National Academy for Nuclear Training members in establishing and maintaining training programs that produce competent nuclear professionals who can safely operate, maintain, and improve performance of nuclear power plants.

The National Academy for Nuclear Training establishes accreditation standards and assists members in achieving and maintaining objectives and criteria. The independent National Nuclear Accrediting Board makes the final determination regarding whether the objectives are met by awarding, renewing, or withdrawing accreditation.

Training programs are accredited prior to initial fuel load or within the time frame established by INPO and the operating company senior management for new members. After initial accreditation, training programs are reviewed for accreditation renewal approximately every four years.

Nuclear power plants are awarded accreditation for training and qualification of personnel responsible for operating and maintaining equipment important to safe and reliable nuclear power plant operation. Personnel who perform these duties participate in appropriate portions of the 12 accredited training programs listed below. Accreditation is awarded at each nuclear plant location by training program. When differences exist among units at plant locations, such as significant differences in equipment or power generation technology, then training programs must meet the needs of each unit for accreditation to be awarded. When several plant locations share common training processes, efficiencies may be gained by coordinating the accreditation team visits and the National Nuclear Accrediting Board review. However, accreditation will be awarded separately for each location by training program.

The accreditation process formally recognizes when the following nuclear plant training programs meet the accreditation objectives of ACAD 02-001, *The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry*.

<u>Operations Area</u>

1. nonlicensed operator
2. reactor operator
3. senior reactor operator
4. shift manager

5. continuing training for licensed personnel
6. shift technical advisor

Technical Areas

7. instrument and control technician and supervisor
8. electrical maintenance personnel and supervisor
9. mechanical maintenance personnel and supervisor
10. chemistry technician
11. radiological protection technician
12. engineering personnel

Accreditation Process Elements
The accreditation process consists of the following elements:

- implementation of the systematic approach to training
- preparation of an accreditation self-evaluation report
- on-site visit by the accreditation team
- decision by the independent National Nuclear Accrediting Board
- maintenance of accredited training programs

These elements are described in detail in the following paragraphs.

Implementation of the Systematic Approach to Training
Accredited training programs are developed and implemented using the systematic approach to training. ACAD 02-001, *The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry*, provides the objectives that accredited training programs are expected to meet and a framework with which to evaluate the implementation of training.

Self-Assessments and Accreditation Self-Evaluation Reports
In preparation for initial accreditation or accreditation renewal, plants prepare an accreditation self-evaluation report for accreditation team and Accrediting Board review. The report is a candid, stand-alone document that succinctly describes how training programs meet the accreditation objectives and that reflects the results of ongoing and periodic self-assessments for the programs under review. Appendix A provides the template for the report format and content.

Accreditation self-evaluation reports are based on meeting the objectives in ACAD 02-001, *The Objectives and Criteria for Accreditation of Training in the Nuclear Power Industry.* The report includes objective-level findings from self-assessments, important program changes since the last accreditation renewal,

and brief descriptions of how each accreditation objective is met. A finding is a condition that contributes to an accreditation objective not being fully met.

The accreditation self-evaluation report is submitted to the executive director of the National Academy for Nuclear Training one month prior to the INPO accreditation team visit. The company officer responsible for the site (usually the site vice president or equivalent) approves the final report. A single accreditation self-evaluation report is prepared for all training programs submitted for initial accreditation or accreditation renewal. Typically, six programs are submitted at a time, representing either the operator or technical training programs.

Accreditation Team Visit

The National Academy for Nuclear Training conducts team visits to ascertain that plant training and personnel qualification programs implement a systematic approach to training effectively and meet the accreditation objectives. The teams conduct an independent review of training programs and corroborate the information in the station accreditation self-evaluation report. Information gathered during team visits and from the self-evaluation report form the bases for decisions by the National Nuclear Accrediting Board on initial accreditation and periodic renewal. The accreditation team consists of INPO and nuclear industry personnel with collective expertise in nuclear power plant operations, nuclear plant training, instructional processes, and training evaluation in the positions corresponding to the training programs being reviewed.

For initial accreditation, an accreditation team visit will be scheduled when the operating company submits an accreditation self-evaluation report. For accreditation renewal, visits typically are scheduled about three months before the National Nuclear Accrediting Board review date. The accreditation team visit normally will be coupled with an INPO plant evaluation but will not be conducted during the same two-week period. A one-week accreditation team visit will follow the plant evaluation by four to six weeks, to maintain a tie between training and performance. As part of the coupled visit, training programs reviewed for accreditation renewal alternate with each plant evaluation such that each accredited program is considered for renewal every four years. A separate, one-week accreditation team visit will be conducted if the four-year accreditation renewal cycle does not match the plant evaluation frequency.

The accreditation team manager normally visits the site one to two months before each accreditation team visit. The previsit begins the review process and allows the accreditation team manager to meet with line and training managers to discuss the

purpose and scope of the team visit. During the previsit, materials for team preparation, the accreditation self-evaluation report, and station-identified findings are discussed. Also, observations of training settings such as task performance evaluation may be conducted.

Team members prepare for the on-site accreditation team visit by reviewing the self-evaluation report, various training documents and materials provided by the plant staff, plant operating experience data, and previous accreditation, plant, and corporate evaluation reports. The team periodically meets to discuss the materials, review training schedules, and identify areas for additional review.

During the visit, team members observe training activities; interview line and training personnel; examine facilities, equipment, and training materials; review training procedures; and examine training program content and the self-assessment and corrective action processes and results. Results are discussed with line and training managers and their staffs.

Following the on-site visit, the accreditation team prepares an accreditation team report to describe the results of the visit. The team report includes team-identified findings, the status of corrective actions for station-identified findings, and a performance summary for each objective. The objective performance summary includes information to aid the Accrediting Board review, such as team activities to evaluate the objective, performance shortfalls that might challenge achievement of the objective, positive aspects of training that help sustain achievement of the objective, and information to clarify or supplement the accreditation self-evaluation report. In addition, strengths identified by the team will be summarized separate from the accreditation team report. The accreditation team report and the team-identified strengths are reviewed with station management at the exit meeting.

Following the exit meeting, the operating company submits a written response describing the causes and corrective actions for team-identified findings and updates the status of unresolved station-identified findings. This report and a copy of the accreditation self-evaluation report are submitted to the National Nuclear Accrediting Board for review and deliberation. The Accrediting Board is also provided with a copy of the previous accreditation report for the programs under review.

National Nuclear Accrediting Board Decision

Members of the National Nuclear Accrediting Board meet as a voting board to consider the training programs for initial accreditation or accreditation renewal. The board meets approximately three months following the accreditation team evaluation. The composition of the

voting board includes at least one individual from an INPO member company (although generally two companies are represented), one person from a nonnuclear industrial training organization, one from the postsecondary education community, and one nominated by the Nuclear Regulatory Commission but who is not employed by the Commission. Therefore, a majority of each voting board is always from outside the nuclear power industry.

At the Accrediting Board meeting, board members review the training programs and interact with station managers. The Accrediting Board decision is based on a comparison of the training programs to the accreditation objectives, the status of corrective actions for any identified problems, and interactions with station managers during the meeting. For each training program, the Accrediting Board will make one of the following decisions:

- award initial accreditation
- defer initial accreditation pending station corrective actions and additional Accrediting Board review
- renew accreditation
- place accredited training programs on probation—A training program placed on probation retains accredited status.
- withdraw accreditation

The operating company CEO will be notified of the Accrediting Board decision by telephone and by a written summary of the basis for the decision. If any or all of the training programs are placed on probation, INPO will assist the station in correcting the weaknesses noted by the board and will submit a revised team report to the Accrediting Board at the end of the probation period. The board will review the report and meet with station management. Approximately nine months after a plant's training programs have been removed from probation, an INPO review team will perform a follow-up visit to verify the continued effectiveness of corrective actions. Plants are encouraged to notify the Nuclear Regulatory Commission if their training programs are placed on probation or accreditation is withdrawn.

Maintenance of Accreditation

Nuclear plants maintain training program accreditation using the systematic approach to training, which includes ongoing and periodic self-assessments of individual training programs based on the accreditation objectives. Training effectiveness feedback and other

self-assessment results are used to identify and correct problems promptly.

An accreditation review visit is conducted after initial power operations or within a short time frame following initial accreditation. This visit is to verify that the accredited training programs are being revised based on plant operating experience.

If INPO determines that one or more accreditation objectives are not being met for an accredited training program prior to review for renewal, the executive director of the National Academy for Nuclear Training may initiate a review commensurate with the apparent magnitude of the problem. If appropriate, station managers will be asked to demonstrate to the National Nuclear Accrediting Board that accreditation of the affected training program should be continued. The executive director selects early review of training programs by the National Nuclear Accrediting Board when the member is not identifying and correcting significant weaknesses that affect one or more accreditation objectives.

Accredited training programs are maintained during plant shutdown and decommissioning until accreditation is administratively changed or withdrawn. Training programs will need to be adjusted to support job needs during the shutdown, defueling, and decommissioning period. Training is emphasized for jobs most related to nuclear safety.

Administrative Withdrawal of Accreditation

Accreditation of training programs will be administratively withdrawn if the operating company's membership in INPO is withdrawn. If the station operating license is transferred, membership will be transferred to the new operating company. A plant loses its status as a branch of the National Academy for Nuclear Training if accreditation is administratively withdrawn from all accredited training programs at the plant. Similarly, operating company membership in the National Academy is withdrawn if accreditation is administratively withdrawn from all accredited training programs at all of its plants.

Accreditation of a plant's training programs will be administratively changed to include only the remaining operating units if a unit of a multiple-unit plant is permanently shut down and defueled and the operating company does not intend to operate the defueled unit in the future. Likewise, accreditation is administratively withdrawn if all units at a plant are permanently shut down and defueled and the operating company does not intend to operate the units in the future.

APPENDIX A

ACCREDITATION SELF-EVALUATION REPORT TEMPLATE

ACCREDITATION
SELF-EVALUATION REPORT

Operating Company Name

Plant Name

List the applicable programs

Date Submitted

{Plant Name]
ACCREDITATION
SELF-EVALUATION REPORT

Reviewed and Approved by:

_____/_____
Training Manager/Date

_____/_____
Line Manager (Program Owner)/Date

_____/_____
Plant Manager/Date

_____/_____
Site Vice President/Date

TABLE OF CONTENTS

INTRODUCTION

This section is used to share management's perspective on training with the accreditation team and the Accrediting Board. It is expected that each station will include specific information that best conveys the context of training. Limit this section to two pages.

In this section, include information such as the following:

- significant plant performance issues, regulatory interactions, or changes in business climate that affect the organizational culture
- strategic plans or events that have affected or are likely to affect site training, such as changes in staffing, loss of experienced personnel, or past accreditation probation
- other significant changes that affect training

FINDINGS SUMMARY

{Include all objective-level findings identified over the accreditation cycle.}

Objective	Month/Year Discovered	Finding (one sentence stating the condition)	ASER Page	Status (open/closed)

OBJECTIVE #

{Title}

{Objective}

I. SELF-ASSESSMENT RESULTS

{Describe station-identified findings for this objective. For accreditation renewal, this includes findings that were identified during the renewal cycle. If no findings were identified for the objective, then use the following statement: **"No findings were identified."**}

{Finding will use the following format:}

Station-Identified **Finding** (ACC.#-1)

{State, in one or two sentences, the condition, including the scope, significance, and consequences.}

Discovery Date:

Training Programs Affected: {List applicable training programs.}

Examples/Supporting Details:

1. ....

Causes/Contributors:

Status: {Describe planned or completed corrective actions for the finding and the expected or actual completion date.}

II. CHANGES SINCE ACCREDITATION OR ACCREDITATION RENEWAL

{Describe training program changes relating to this objective that affect the training and qualification of station personnel.}

III. DISCUSSION OF OBJECTIVE # {Limit this section to three pages.}

{Summarize the methods used to monitor training activities and confirm that the objective is satisfied. Self-assessment results that demonstrate achievement of the objective and comments about specific criteria can be included but are not required. This section also includes information on performance trends.}

Attachment 1

Station Summary

OPERATING COMPANY: {Operating Company Name}

PLANT: {Plant Name}

PROGRAMS:

Nonlicensed Operator
Reactor Operator
Senior Reactor Operator
Shift Manager
Shift Technical Advisor
Continuing Training for Licensed Operators

PERSONNEL STATISTICS:

Workforce on site that supports nuclear operations (including long-term contractors): {for example, 900 total}

Site training staff: {number of full-time, long-term contracted, and loaned}

Site training staff supporting programs **presented:** {number}

Off-site training staff or corporate support **for programs presented:** {number, or none}

{Fill in the table as appropriate.}

Program*	Qualified Incumbents**	Contracted Workers**	Trainees in Initial Training**	Number of Graduates Since Renewal of Accreditation
Nonlicensed Operator	17	0	5	16
Reactor Operator	12	0	8	5
Senior Reactor Operator	15	0	2	4
Shift Manager	10	0	0	4
Continuing Training for Licensed Operators	30	0	NA	NA
Shift Technical Advisor	8	0	0	3

* Include maintenance supervisor data on a separate row.
** Report number current at the time of writing the ASER.

Attachment 2

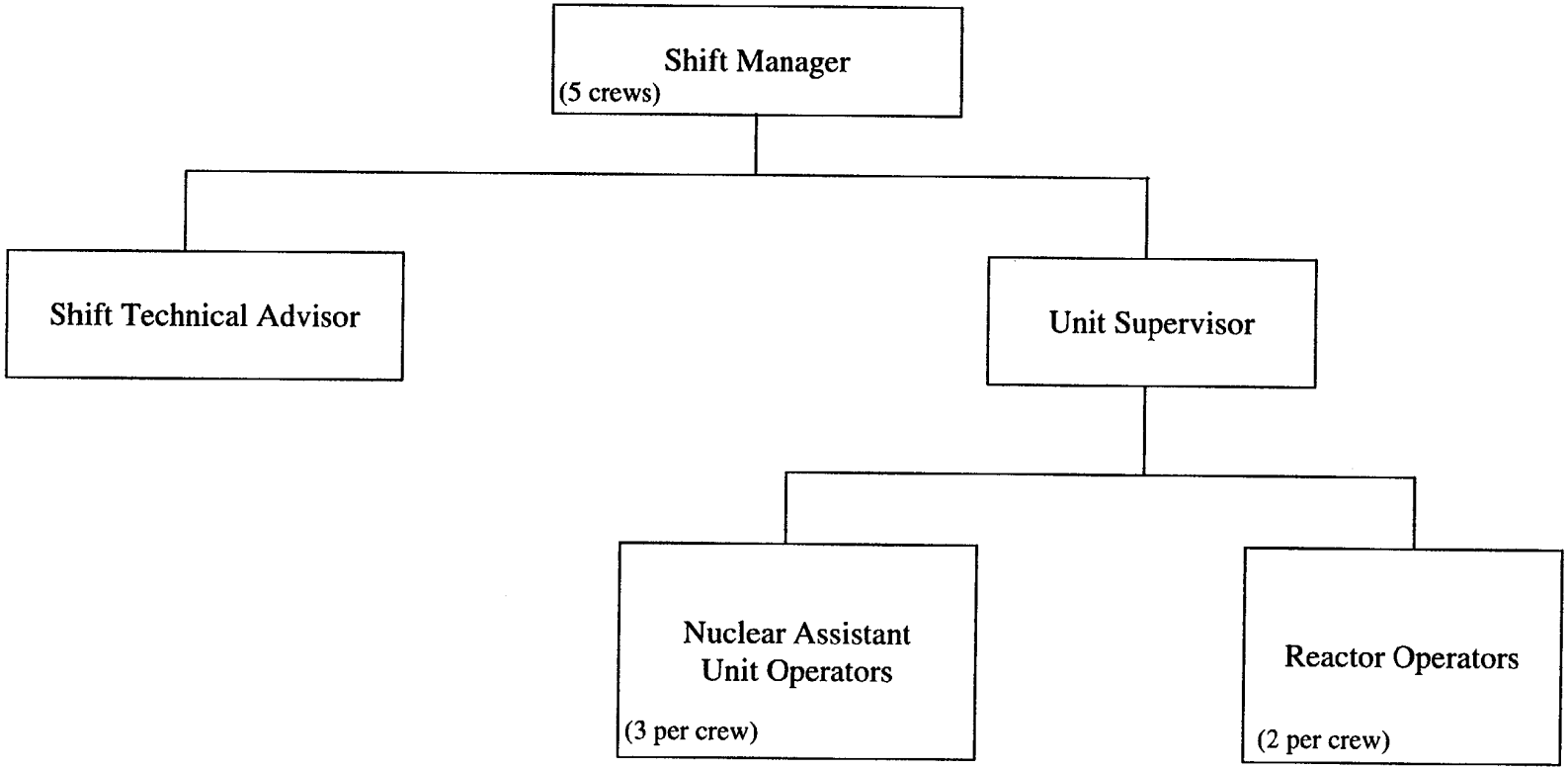
Station Organizational Charts

Organizational charts display the management and functional area structure for the plant. Limit the station organizational chart to one page. Include the following organizational charts:

- plant organization with functional area reporting relationships
- training department organization
- control room organization (hierarchy) — Provide this chart only for self-evaluation reports that address operations training programs. An example control room organizational chart is provided on the next page.
- regional and corporate training organizational relationships
- training oversight committee organizational relationships, if used (Descriptions of their purpose, meeting frequency, required or typical attendees, and responsibilities can be included in a separate table or the objective discussion.)

Control Room Organization
(Required for Operations Program Evaluation Only)

(Plant Name) Control Room
Sample Organizational Chart



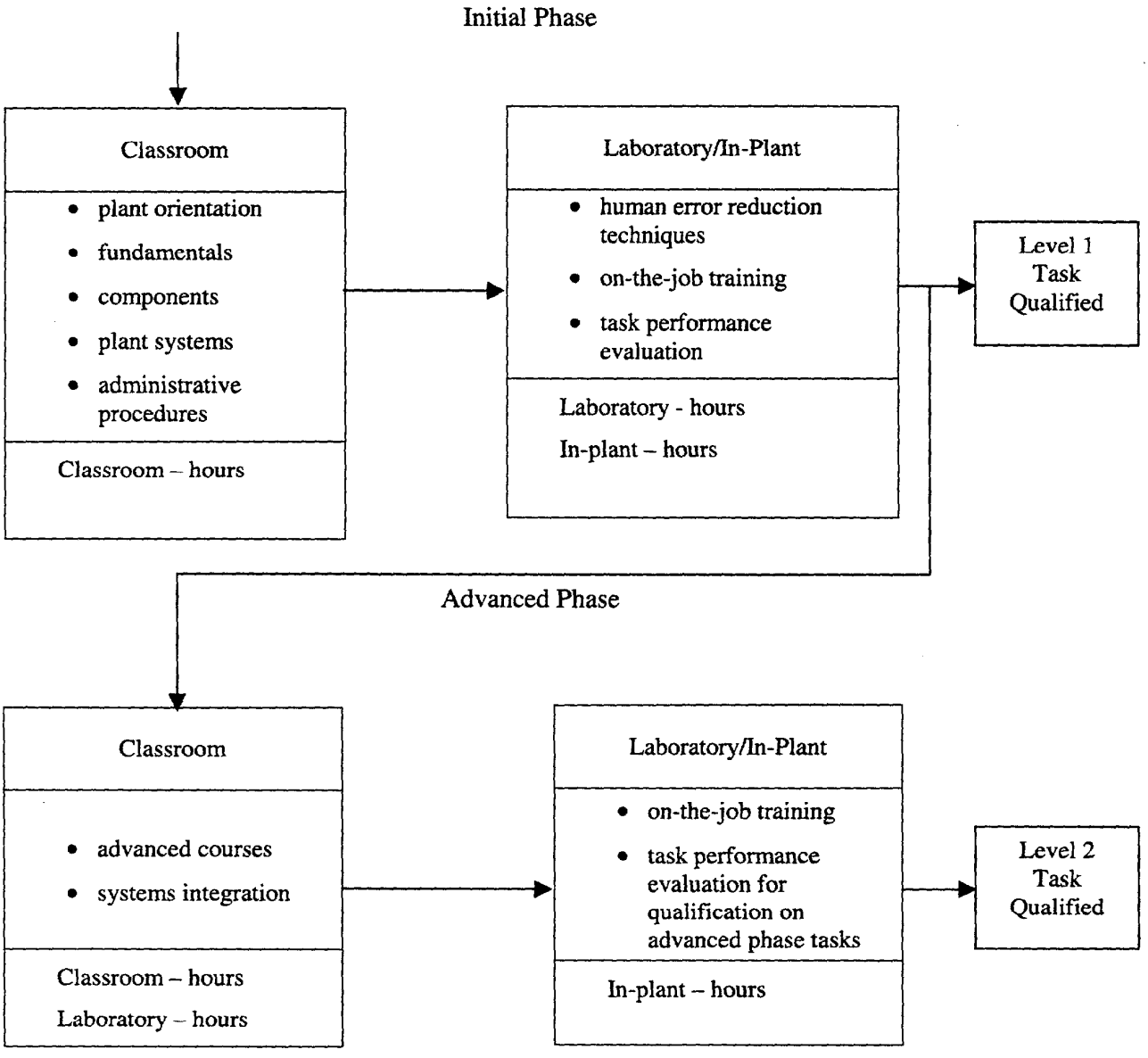
Attachment 3

Training-Related Self-Assessments Table

{SAMPLE}

Program	Date Mo/Yr	Focus Area(s)	Method	Team Lead
All	Apr-1997	Self-Assessment/Corrective Action	Industry-Supplemented Team	Maintenance Manager
Chemistry	Jul-1997	Use of Operating Experience in Continuing Training	In-House Team	Operating Experience Coordinator
Mechanical Maintenance	Jul-1997	Worker Qualifications	Quality Assurance Audit	QA Auditor
All	Jan-1998	Instructor Performance	Management Assessments/Student Feedback	Operations Training Supervisor
ESP	Mar-1998	Program Population and Training Completion Timeliness	Industry-Supplemented Team	Technical Training Supervisor
Radiation Protection	Jun-1998	Contractor Training and Qualification	Management Review	RP Manager
All	Jan-1999	Student Behaviors in Training Settings	Management Observations	Training Coordinator
Instrument & Controls	Feb-1999	Training Needs Analysis and Content Alignment/Adequacy	Industry-Supplemented Team	I&C Supervisor
Electrical Maintenance	Nov-1999	Line Management Involvement	In-House Team	Assessments Supervisor
All	Feb-2000	Initial Program Training Materials Adequacy	In-House Team	Assistant Plant Manager—Support
All Technical	Aug-2000	Comprehensive Review Prior to ASER Development for Technical Training	Industry-Supplemented Team	Engineering Manager

Attachment 4
Example Flowchart
Initial Training and Qualification Sequence



Attachment 5

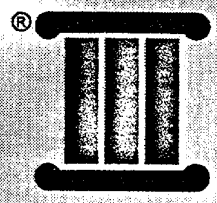
Continuing Training Topics Tables

{Include a table of continuing training topics for each training program. Include the following information in the tables.}

Program	Year	Topic	Population*	Basis for Topic Selection**
Nonlicensed Operators	1999	Control Room HVAC	All	A

* Indicate if the training was for ALL incumbents, a subgroup, or an individual.
** Indicate the basis for topic selection using the following guide (more than one code may apply):

A Fundamentals refresher (for example, topics selected by difficulty, importance, frequency analysis)
B Performance improvement
C Operating experience
D Changes in job performance requirements (for example, plant or procedures changes)
E Other



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