

## TRAINING AND QUALIFICATION PROGRAM

### 1.0 Objective

The objective of this performance assessment is to evaluate the effectiveness of the laboratory's training program as implemented at the facility. The Facility Representative or Environmental, Safety, and Health Support Specialist should complete this assessment by conducting a "vertical slice" evaluation of training in a specific functional area such as facility or process operations, maintenance, radiological controls, etc. The Facility Representative or Environmental, Safety, and Health Support Specialist evaluates implementation of site-wide policies, procedures, and programs with particular emphasis on how these site-wide efforts are applied at the facility. In conducting this assessment, the Facility Representative or Environmental, Safety, and Health Support Specialist observes training, interviews personnel, and reviews various documents and records.

### 2.0 Definitions

Concern - A determination of a programmatic breakdown or widespread problem supported by one or more findings or observations.

Finding - An individual item which does not meet requirements.

Functional Area - A discrete group of related safety and support programs.

Lines of Inquiry - Questions that guide the assessor in planning and conducting the performance assessment.

Observation - A condition or practice that does not provide or promote effective protection of the health and safety of the public or DOE's workers or the environment.

Performance Assessment - An evaluation of a program or functional area to verify laboratory line management effectiveness in ensuring the health and safety of the public and of DOE's workers and in ensuring protection of the environment.

Performance Attributes - Key elements, functions, or activities to be assessed in a particular functional area.

### **3.0 References**

- 3.1 DOE 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*
- 3.2 10 CFR 835, Subpart J, *Radiation Safety Training*
- 3.3 DOE-STD-1070-94, June 1994, *Guidelines for Evaluation of Nuclear Facility Training Programs*
- 3.4 DOE-NE-STD-1001-91, November 1991, *Guide to Good Practices for Training and Qualification of Instructors*
- 3.5 DOE-STD-1005-92, July 1991, *Guide to Good Practices for Developing Learning Objectives*
- 3.6 DOE-STD-1011-92, July 1991, *Guide to Good Practices for the Design, Development, and Implementation of Examinations*
- 3.7 DOE-STD-1012-92, July 1991, *Guide to Good Practices for On-The-Job Training*
- 3.8 DOE-STD-1060-93, February 1993, *Guide to Good Practices for Continuing Training*

### **4.0 Performance Assessment Activities**

Before beginning this assessment, the assessor reviews pertinent program documentation including policies, procedures, program plans, and sample training materials. Appendix A provides a suggested list of documents that the assessor may review during preparation for the assessment.

During the assessment, the assessor evaluates selected performance attributes by developing and using lines of inquiry for each performance attribute. Appendix B provides a listing of suggested performance attributes and lines of inquiry. In applying each line of inquiry, the assessor may complete diverse activities such as reviewing training materials or records; interviewing facility and support staff personnel including instructors, trainees, and supervisors; observing training; and performing walkdowns.

The assessor may choose to use existing surveillance guides in completing specific portions of the assessment. Surveillance Guides for the training and qualification functional area include:

TQS 4.1	Classroom Training
TQS 4.2	On-The-Job Training
TQS 4.3	Training Program Content

It is not feasible during this assessment to evaluate implementation of every training program that supports operations of a given facility. Rather, the assessor selects one or more training programs to examine in-depth. In performing this assessment, the assessor must balance review of site-wide programs, facility-specific policies and procedures, and implementation. The following questions provide the general framework that should be used in planning, conducting and documenting the assessment:

- Has the site implemented a systematic approach to training that involves analysis of training needs; development of appropriate materials; effective instruction and periodic reviews of program effectiveness?
- Are facility personnel receiving the training that they need to perform their duties and responsibilities safely and effectively?
- Is the training effective in improving performance and safety?
- Are training and qualification activities receiving management support?

**APPENDIX A**  
**POSSIBLE DOCUMENTS TO BE REVIEWED**

Training and Qualification Policy Statement  
Facility Training Implementation Matrix  
Training program manual  
Job task analyses  
Lesson plans  
Instructor guides  
Student handout materials  
Examination Banks  
Training self-assessment reports

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** I. Management commitment to training and qualification to ensure that workers can safely and efficiently perform their tasks is evident.

**LINES OF INQUIRY:**

1. Has management issued a policy statement for the site or the facility affirming the importance of staff training and qualification activities?
2. Have formal procedures been established and implemented governing the training and qualification program?
3. Have plans been established for personnel training and periodic re-training?
4. Does management ensure that workers participate in scheduled training?
5. Has management committed sufficient staff resources to implement the training and qualification program?
6. Are responsibilities, authority, and accountability clearly defined for designing, developing, and evaluating the training and qualification program?
7. Are adequate facilities committed to training including classroom, "hands-on" simulations, and supporting equipment such as projectors, televisions, etc.?
8. Are goals, objectives, and plans for training and qualification clearly defined and communicated to the workers?
9. Is management's commitment to training and qualification activities evident based on periodic program reviews, observations, and participation by management?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** II. The staff responsible for developing and implementing the training program and instructing facility personnel has the requisite knowledge, experience, and skills.

#### **LINES OF INQUIRY:**

1. Do instructors have appropriate training on instructional techniques, student performance evaluation, and theory, practical knowledge and experience for the subject matter they are assigned to teach?
2. When subject matter experts are used as occasional instructors, are they provided with appropriate assistance and is their performance monitored?
3. Are personnel who conduct on-the-job training trained in the appropriate instructional and evaluation techniques?
4. Are personnel who are responsible for analyzing job performance to identify training needs, developing new training materials, or revising existing training materials trained in the systematic approach to training?
5. Do instructors participate in a continuing instructional skill training program to maintain, improve, and update knowledge and skills?
6. Does the ongoing instructional skills training program use instructor evaluations by trainees as an input?
7. Do instructors maintain their subject matter expertise through additional training on new processes, equipment, methods, or techniques?
8. Is the performance of each training staff member periodically evaluated and are results from evaluations used as input for planning future training and qualification activities?

## **APPENDIX B PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** III. Appropriate entry requirements have been established for each training program and management ensures that employees meet these requirements before entry into the training program.

### **LINES OF INQUIRY:**

1. Have appropriate entry level requirements including education, experience, technical and medical requirements been established for each position?
2. Is a system implemented to verify that employees meet established entry requirements before they are assigned to the training program?
3. Are waivers of entry requirements or exemptions controlled in accordance with an established administrative process or procedure?
4. Are entry level requirements periodically reviewed as part of the overall training program evaluation process?
5. Are prerequisites established for individual training courses?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** IV. The content of training programs is established to ensure that job incumbents can satisfactorily and safely perform their duties and responsibilities.

#### **LINES OF INQUIRY:**

1. Has a systematic analysis of job requirements been performed to identify all tasks that are essential to safe and efficient operation?
2. Have appropriate tasks been selected for training based on frequency, hazards, complexity, or other applicable factors?
3. Is the task list created from the systematic analysis reviewed periodically and updated in response to changes in procedures, equipment, mission or organizational responsibilities?
4. Has the appropriate training setting been specified for each task selected for training?
5. Is the overall training sequenced correctly so that each training activity builds upon and reinforces previous training activities?
6. Do training programs incorporate requirements from applicable standards such as DOE Orders, technical standards, or other DOE documents?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** V. The content of training and continuing training prepares job incumbents to safely and efficiently perform their duties and responsibilities and maintains or improves performance.

#### **LINES OF INQUIRY:**

1. Is each training activity based on defined learning objectives?
2. Are learning objectives derived from tasks selected for training?
3. Do learning objectives identify the actions the trainee must demonstrate, conditions under which the action will take place, and standards of performance?
4. Are lesson plans developed for each training activity based on the identified learning objectives?
5. Do lesson plans specify standards for evaluating trainee performance?
6. Are lesson plans sufficiently detailed to ensure effective and consistent instructions?
7. Are student handout materials understandable and usable?
8. Are training materials including lesson plans and student handout materials consistent with current facility design, operating practices, and administrative procedures?
9. Have training materials been reviewed and approved by subject matter experts and/or line management?
10. Are training materials controlled to ensure they are periodically updated and that only the most current versions of materials are used?
11. Is a continuing training program in place that provides refresher training, information on recent facility or industry events, information on facility changes, lessons learned, and training on infrequently performed tasks?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** VI. Training is consistently and effectively presented in the appropriate setting using only approved training materials.

**LINES OF INQUIRY:**

1. Is each training activity performed using the most current approved lesson plans and training materials?
2. Does on-the-job training replicate actual job conditions to the maximum extent practical?
3. Do instructors use references, tools, equipment, and conditions for task performance that reflect actual job conditions to the extent practicable?
4. Do instructors and trainees follow safe work practices during all training exercises, including simulations?
5. Where laboratory training is conducted, does the training provide hands-on application of principles conveyed during classroom training?
6. Do students and instructors observe safe work practices in the laboratory during training?
7. Are instructors who conduct the training qualified in accordance with facility/site instructor qualification standards?
8. Do trainees complete evaluations of each training activity addressing training content, instructor performance, and effectiveness?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** VII. Individual trainees are examined or evaluated to ensure that learning is taking place and that trainees are acquiring the required knowledge, skills, and abilities to safely and efficiently perform their duties and responsibilities.

#### **LINES OF INQUIRY:**

1. Are trainees evaluated regularly using written, oral, and/or performance examinations?
2. For on-the-job training, is trainee performance evaluated on actual plant equipment or systems whenever feasible?
3. Are examination questions, or on-the-job training performance evaluations tied to learning objectives?
4. Have test items been reviewed by subject matter experts?
5. Do examinations and performance evaluations address a representative cross-section of knowledge skills and abilities for each position?
6. Are acceptable criteria for grading examinations or completing performance evaluations established before the testing?
7. Are examination materials and performance evaluations periodically reviewed to ensure their continuing validity?
8. Are examinations, quizzes and performance evaluations periodically changed to prevent compromise?
9. Is access to examination questions physically controlled and limited to designated personnel?
10. Are examinations effectively proctored to ensure that the integrity of the examination is maintained?
11. Is remedial training and re-evaluation provided when examination or performance standards are not met?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE:** VIII. The effectiveness of the training program is periodically evaluated to promote continuous improvement.

**LINES OF INQUIRY:**

1. Has facility or site management established a policy and required implementing procedures to ensure that training programs are periodically evaluated to identify strengths and weaknesses?
2. Have weaknesses identified in the most recent program evaluation been corrected or have corrective actions been planned and scheduled?
3. Does the evaluation process include solicitation of input from line management on the effectiveness of employee training?
4. Does the evaluation process include reviews of course evaluations prepared by trainees?
5. Does the evaluation process include reviews of results from examinations to identify possible weaknesses in presentation of materials?
6. Are employee inputs solicited on possible improvements to training after the employee has completed training and returned to the work place?
7. Does the evaluation process include examination of training program effectiveness based on recent operational events and lessons learned?
8. Are training facilities periodically evaluated to determine if they provide sufficient support for the training program?

## **APPENDIX B**

### **PERFORMANCE ATTRIBUTES AND LINES OF INQUIRY**

**PERFORMANCE ATTRIBUTE: IX.** Records are maintained to support the training program and an information management system is in place to support ongoing training and qualification.

#### **LINES OF INQUIRY:**

1. Are attendance records maintained showing which students attended classes or completed on-the-job training?
2. Are student examinations maintained on file?
3. Are student course and instructor critiques available?
4. Can the training information system identify when periodic training on various subjects expires for students?
5. Do training records substantiate that employees meet the required entry qualifications?
6. Do training records support verification of the accuracy of the training materials?
7. Are instructors who conduct the training qualified in accordance with facility/site instructor qualification standards?
8. Do trainees complete evaluations of each training activity addressing training content, instruction performance, and effectiveness?