The U.S. Department of Energy National Training Center

Training Approval Program (TAP) Guide

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Training Approval Program (TAP) Guide

A. Scope of Training Approval Program (TAP)

The Training Approval Program (TAP) applies to Department of Energy (DOE) contractor and subcontractor organizations that conduct Safeguards and Security (S&S) training. "Conducting training" means developing training or delivering NTC-developed training.

TAP systematically reviews S&S training programs to ensure that sites use systematic approaches to developing training and employ qualified instructors to deliver training. The TAP process validates training programs as reflected in contractor training procedures, through a site visit to review training documents and directly observe training delivery. Although TAP does not review every course, the contractor organization should be able to demonstrate that it adheres to its own procedures throughout its entire training program.

B. Definition of Terms

A complete list of acronyms and a glossary can be found in Appendix D: Acronyms and Appendix E: Glossary. However, before reading the guide, please review the select TAP terms and definitions listed below (Table 1). A clear understanding of their meanings in the TAP context is essential for effective use of the guide.

Table 1: Select TAP Terms and Definitions

Term	Definition
Contractor or "Contractor Organization" or "Site Organization" (abbreviation "Contr.")	is the contractor or subcontractor responsible for the training program for the S&S program elements being reviewed in a TAP submittal.
Corrective Action Plan (CAP)	is the complete list of corrective actions the contractor will perform to bring the training program into compliance.
NTC TAP Manager	is a contract employee within NTC responsible for managing the TAP program.
NTC Director	is the DOE director of the NTC, with ultimate authority and oversight for the TAP program.
Site Federal Oversight Entity (Fed).	Federal entity that has oversight authority for the contractor, e.g., DOE operations office, DOE field office, NNSA site office.
Site Federal TAP POC.	The Federal DOE or NNSA site point of contact (POC) designated to coordinate TAP activities at the site office level.
TAP Self-Evaluation Matrix (TAP SE):	The checklist of objectives and criteria to be met, including suggested validations.

C. DOE Manual Reference

DOE M 470.4-1, Change 1, Part 2, Section J—Safeguards and Security Training Program, Page J-3, Para. 2(f) states: Training Approval Program (TAP)—"A TAP is a process to ensure that established objectives, standards, and criteria are met by validating, through the Office of Security [now Office of Health, Safety and Security (HSS)], security training programs conducted by organizations other than the National Training Center (NTC)." The five sub-paragraphs state the following:

1) *Upon the request of the Departmental element the NTC will certify site implementation of NTC-developed courses.*
2) *Site programs must be examined by representatives of the NTC every 5 years (at least every 60 months) to verify adherence to Departmental training objectives and standards and to provide program approval recommendations to the Director, Office of Security [now Director, Health, Safety and Security (HSS)].*
3) *Initial and recurring reviews for training approval must cover all aspects of local training programs, including program management and structure, course content, training facilities, observation of course presentations for effectiveness, and evaluation of students.*
4) *Training approvals will remain valid for a period of 5 years.*
5) *TAPs must be re-evaluated and resubmitted for approval based upon significant changes in operational missions or conditions.*

D. Identification of Safeguards and Security Programs Requiring Formal TAP Approval

1) Requirement Notification

   a. **Renewals:** NTC notifies the responsible DOE/NNSA site office that a TAP is due. The responsible Federal oversight entity then notifies the local site organizations that a formal TAP approval is required for specific program elements.

   b. **Organizations with significant changes to the organization's mission, structure, or function:** The local DOE/NNSA site office notifies the NTC TAP manager that formal TAP re-approval may be required. These situations will be evaluated on a case-by-case basis. In general, if the existing procedures are adequate to handle the changes, a new TAP will not be required.

   c. **Contractor taking over a contract with an already-approved training program:** The contractor may agree to follow the same TAP-approved procedures, if they still adequately cover the training program under the new contract.

2) Requirement Determination

   If the contractor conducts S&S training in one or more of the S&S program elements listed below, then that organization's training program must have formal TAP approval.

The S&S program elements (as listed in DOE M 470.4-1, Part 2, Section J—Safeguards and Security Training Programs, 2. Requirements: a. Key Program Elements) are as follows:

- Program Planning and Management
- Personnel Security
- Physical Protection
- Protective Force
- Nuclear Material Control and Accountability
- Information Security

3) Exemptions from Formal Approval

a. Any DOE facility or activity regulated by the Nuclear Regulatory Commission (NRC) is exempt from TAP requirements. This exemption exists to preclude duplicative requirements.

b. If a local site uses NTC-developed courses that have been tailored to meet local needs, the local site must maintain a history of site-specific course changes, and must also meet all other applicable TAP requirements. In other words, any site that delivers NTC site-certified courses must complete the TAP Self-Evaluation Matrix for at least Objectives 1–3 and 7–8. The local site is exempt from only one requirement—maintaining documentation of the original development process because that process is documented and maintained at the NTC.

c. TAP requirements do not apply to training conducted by outside vendors who are not subcontractors to DOE.

d. S&S organizations that neither develop nor deliver training are not required to do TAP reports. Again, any site that delivers NTC site-certified courses must follow the TAP process and prepare a TAP submittal.

e. Deviations from the TAP requirements in DOE M 470.4-1, Section J - Safeguards and Security Training should be processed in accordance with DOE M 470.4-1, Section M - Deviations. This section lists the requirements and process for obtaining variances, waivers, and exceptions to DOE program directive requirements.

E. Contractor Self-Evaluation

Self-evaluation is normally performed by the organization that conducts, possesses, or develops the training program. The organization, through its Federal oversight entity, can request NTC assistance with performing or preparing the self-evaluation. Address such requests for assistance to the NTC Director, attention: Training Approval Program (TAP) Manager.

1) **TAP Self-Evaluation (SE) Matrix:** The contractor must use the TAP SE Matrix to assess its required site S&S training programs and activities. TAP self-evaluation

shall be a thorough and critical survey of contractor site training-program requirements, including organizational structure, policies, and procedures, facilities and instructor qualifications, course content, training aids and presentations.

2) **Combining Program Elements into One TAP:** Under the conditions listed below, a site may combine program elements (e.g., MC&A, Information Security, Protective Force, and Physical Protection) into one TAP submittal:

Conditions:

a. The training programs operate under the same standard operating procedures (SOPs).

b. Each program element demonstrates compliance with TAP criteria.

c. The program elements are clearly specified in the introduction, listed on the TAP Submittal cover sheet, and also listed on the TAP SE Matrix pages.

d. The annual training program for each element is supplied.

F. Site (Contractor and Federal Oversight) Tap Points of Contact (POCs)

Federal
The Safeguards and Security Director or equivalent at the Federal oversight entity will designate a Federal TAP point of contact (POC). This person will coordinate the initial TAP conference call between the NTC TAP manager and the site contractor(s) POC(s). The POC will remain involved in the process until the TAP is complete.

Contractor
Each contractor will appoint a TAP point of contact and provide the POC's name, phone number, and e-mail address to the Federal TAP POC and the NTC contractor TAP manager. The contractor TAP POC must have an understanding of the contractor training program and the TAP process and procedures. It is recommended that the TAP POC be well-versed in the elements of both job analysis and a systematic course development process.

The NTC offers two courses to aid both Federal and contractor POCs in acquiring this knowledge:

- MIT-120 Job Analysis
- MIT-210 Curriculum Development Training

All designated TAP POCs will be invited to any TAP-specific workshops or training offered by the NTC. Updates will be posted on the NTC TAP Web page. The contractor may also call the NTC contractor TAP manager for further information (505.845.5170, ext. 219).

G. TAP Approval Process

The Training Approval Program (TAP) is often a 5- to 13-month process that includes an initial conference call to establish responsibilities and timelines, a self-evaluation by the contractor, submittal of the Self-Evaluation, and an evaluation (validation) site visit by the NTC TAP team.

The process may include an NTC assistance visit to the contractor site. It may also include a contractor corrective action plan. The items on the corrective action plan must be completed before the TAP evaluation visit. The process ends with a letter and certificate indicating approval of the contractor's training program.

The basic TAP approval process, responsibilities, and potential timelines are described in Appendix B: TAP Flow Chart and Appendix C: TAP Action Table. These approval process documents will be reviewed and agreed upon during conference calls at the start of the process.

H. Contractor TAP Submittal Report

The TAP Submittal Report is the result of the contractor's TAP self-evaluation. It also serves as a site overview for the NTC TAP evaluation team prior to a site visit. It should include all the items listed below.

Starting with item #3 below, use these items as topic headings within the report and list them in the table of contents. If the information for any topic is already in the Annual Training Plan or any other document being submitted, simply indicate—under the appropriate topic heading—exactly where reviewers can find the information. Duplicating the information is not necessary. The NTC's goal is to minimize significantly the volume of paper that needs to be compiled and submitted by the contractor. The format is as follows:

1) Cover Page:
   Include title [TAP Submittal Report], site name, contractor, program elements covered, and date of report.

2) Table of Contents:
   List all topics below plus all attachments including the TAP Self-Evaluation (SE) Matrix, the training procedures, and the annual training plans for each program element (listed separately).

3) Introduction and Overview:
   Create a one-page summary of the information below, including the program elements and topical elements or sub-elements being reviewed, the date the TAP SE was completed, and the results (e.g., "all criteria are complete").

4) Site Mission and Location(s):
   This should include a site map of all facilities If this information is already included in the annual training plan please indicate where it can be found. (section, page).

5) S&S Training Program Elements and Sub-topical Areas Covered by This Report:
   Describe which programs elements are covered in this TAP submittal.

6) Contractor Line Management Roles/Responsibilities in Support of Training:
   Identify personnel by name and official title according to established site organizational structures. Personnel might include project managers, deputy project managers, and other key managers within the organization. Be sure to include the TAP POC and TAP preparer and their contact information. If this information is already covered in the annual training plan, please indicate where.

7) Organizational Elements Responsible for the Training Programs Covered in this TAP Submittal:
Identify training personnel by name and official title or rank according to established site organizational structures. Examples include site training manager, training coordinators/specialists, instructional designers, trainers, and shift trainers. Identify the applicable roles for each individual. An organizational chart could be an effective way to display this information.

8) Annual Training Plans:
Include the most recently approved annual training plan for each program element covered in this submittal. If the submittal covers more than one element, use a separate tab for each and list each separately in the Table of Contents. (Remember, you may combine program elements into one submittal if all the program elements follow the same set of training procedures.)

9) Other Attachments:
Send one (1) set of documents for one course. The set will include *all of the following*

- A typical analysis document
- Its associated Task-to-Training Matrix or similar document
- The related course lesson plans, workbooks, handouts, and PowerPoint slides. List of other visual aids used.
- Student feedback forms from one iteration

This information can be included electronically or in hard copy. If you include it electronically, please make clear what it is and where it is. The safest is to create a link from the TAP Self-Assessment Matrix to the exact sentence or section in the document. If you include it as hard copy, please tab it and clearly indicate its location in the table of contents.

Important: Do *not* send all the other documents that show you are following the procedures. We will review these other documents at the site.

10) The TAP Self-Evaluation (SE) Matrix:
Completion of this matrix is essential.

a. Adequately identify the supporting documentation for each criterion.

i) **Procedures**. Do *not* send all the procedures for the entire training program. For any criterion that requests procedures, please reference and document *only* the specific procedure or page that clearly meets the criterion. Highlight the section or sentence. If sending hard copy, use tabs to separate sections of the procedures and list the tabs in the table of contents so reviewers can find them easily. If sending an electronic copy with links, then link to the actual *sentence* that validates the criterion.

ii) **Products of Training.** Simply list the type of document you will use, such as lesson plan, job analysis, or task-to-training matrix. Do not send these documents, except the set of four documents listed in Item 9, Other Attachments. The TAP

Evaluation Visit team will review all other documents at the site. These documents are indicated in the validation column of the matrix with the words "At Site" in yellow highlight.

b. For each validation, complete the status column C = "complete" and I = "incomplete." Any items identified as "incomplete" should be completed before the TAP evaluation visit. Use the narrative column to explain special circumstances and to explain any N/A (non-applicable) entries. Note: The validations are suggestions. If the contractor is using a different validation method, indicate "N/A" and explain in the narrative column how the criterion is being validated.]

11) Corrective Action Plan:
If any items on the SE Matrix are marked as "I" Incomplete, it is recommended that the contractor compile a Corrective Action Plan (CAP) of actions that must be taken to achieve compliance in all areas. The CAP does not have to be submitted to the NTC; however, **all corrective actions must be completed and documented on a corrected TAP Self-Evaluation Matrix** sent to the NTC at least a month before the TAP Evaluation visit.

I. TAP Evaluation Team Report and Recommendation

After the site review, the TAP evaluation team prepares a TAP evaluation report that lists or describes the following:

- Contractor(s), training program elements, and activities examined
- TAP criteria validated as complete or incomplete

A verbal summary briefing and explanation of results will be given to the contractor and Federal oversight entity representatives. The TAP review team report will be submitted to the NTC director with a recommendation for approval or an explanation of additional actions required.

J. TAP Decision

Approval—Approval certifies that a training program meets the training requirements of DOE M 470.4-1, Chg. 1.

The NTC director will review the TAP evaluation team report and recommendation. If the training program is approved, the director will send an approval letter and certificate to the Federal oversight entity.

Non-approval—Non-approval of a training program will be based on failure to adhere to TAP criteria before the current TAP expiration date.

If the training program is not approved, the NTC director will inform the site Federal oversight entity of the specific reasons that the approval has been withheld.

The contractor shall bring the program into compliance with TAP objectives and criteria. Both the Federal oversight entity and the affected contractor organization are responsible for ensuring that necessary improvements are made to the training program.

The subsequent request for training program approval shall include both the circumstances necessitating the resubmittal and the corrective actions taken to remedy deficiencies. The

contractor shall include a revised TAP Self-Assessment Report and any other documentation that was deemed necessary to demonstrate compliance. If necessary, the NTC director may direct additional review, information gathering, or coordination to remedy deficiencies.

K. Term Of Approval

1) The duration of approval is five years, starting from the approval date.

2) Each applicable S&S training program shall be subject to the formal approval process every five years.

3) Both the Federal oversight entity and the contractor are responsible for checking the TAP Status Matrix on the NTC TAP Web site at least once a year and being alert to upcoming TAP reapproval dates.

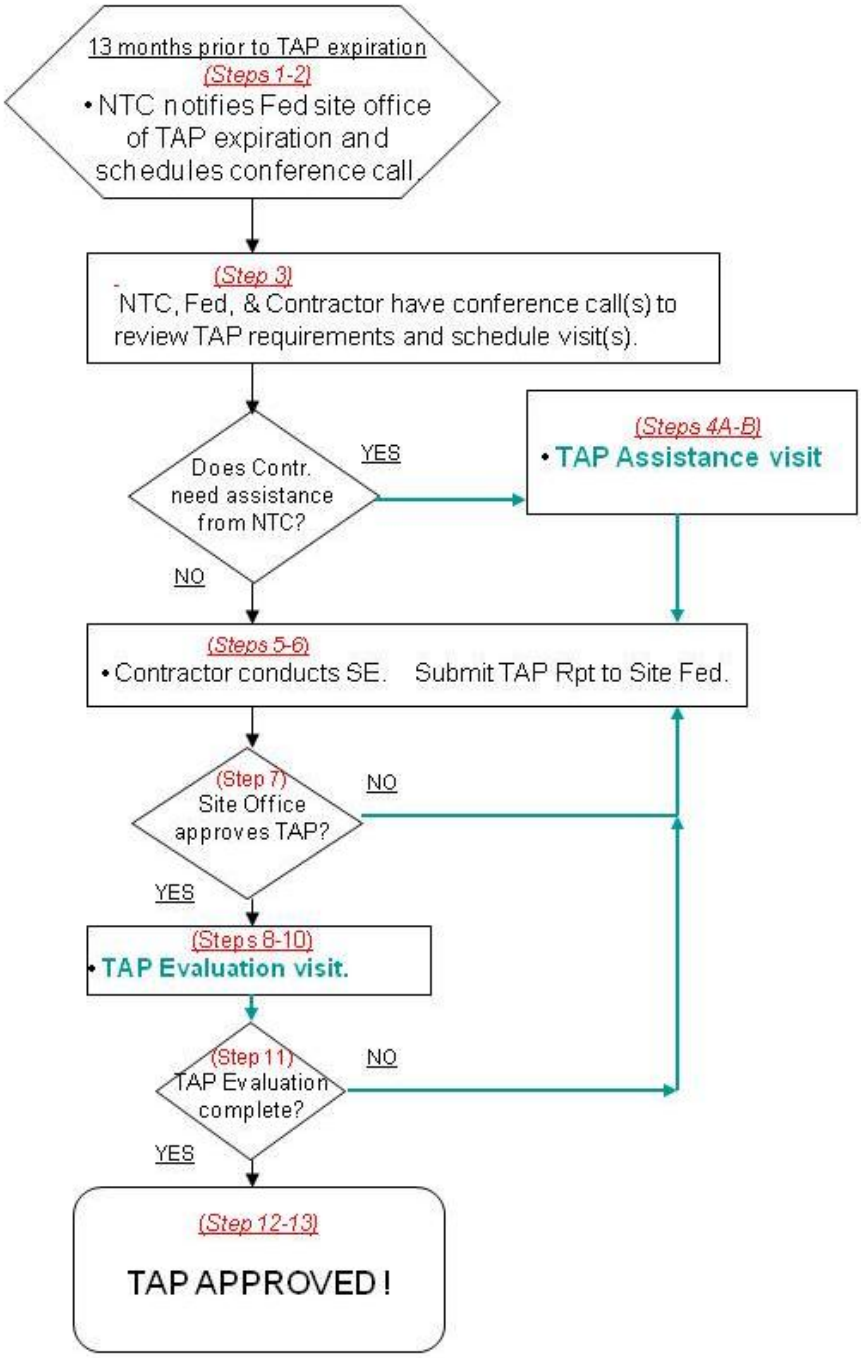
Appendix A: TAP Self-Evaluation (SE) Matrix

This document is found on the NTC Web site under TAP Resource Links, Forms, and Documents. It is provided in MS Word format so that your site may download it and customize it for your site's needs.

Appendix B: TAP Flow Chart

TAP Appendix B: TAP Flow Chart

The timelines on the flow chart are **suggestions only**. Actual timelines will be agreed upon during the initial conference call. The steps are further clarified in ***Appendix C – TAP Approval Process -- Action Table.***



Appendix C: TAP Action Table

The following steps are a guide with suggested timelines for the contractor organization preparing for TAP certification or re-certification. All corrective actions must be completed before approval is given, therefore it is suggested that the contractor begins in time to correct any deficiencies. Bear in mind that the NTC normally requires two months to grant approval after the evaluation visit, assuming all corrective actions have been completed prior to the visit.

Step	Action	Who does it	Suggested timeline
1	▪ Notify Federal oversight entity (Fed) of TAP due dates. ▪ Request list of contractors providing S&S training. ▪ Schedule conference call with NTC, Federal oversight entity and contractor organization.	NTC TAP manager	10-13 months prior to TAP expiration
2	▪ Submit the following to NTC TAP manager: —All site contractors delivering S&S training —Their program elements and sub-topical areas —Their TAP POCs with contact information	Federal oversight entity	
3	Conduct conference call(s) with Federal oversight entity and contractor organization POC to: ▪ Identify Safeguards and Security training programs that require TAP approval ▪ Determine whether a site-assistance visit is necessary ▪ Coordinate TAP milestones & process (visits, submittals, Fed. review schedule) ▪ Assemble TAP Evaluation Team	NTC TAP manager With site Fed And Contractor	9-12 months prior
4A	Contractor Organizations requesting NTC site assistance send the following to the NTC TAP manager: ▪ Annual Training Plan(s) for programs being reviewed ▪ SE Matrix (documented to extent possible) Example: a) identify if criteria & validations are complete or incomplete b) identify the documents to support the validations.	Contractor organization	10-11 months prior
4B	Visit contractor requesting TAP assistance. ▪ Review Self-Evaluation Matrix and related procedures. ▪ Identify relevant documentation. ▪ Spot-check various criteria and suggested validations. ▪ Assist contractor to formulate Corrective Action Plan (CAP) if needed. ▪ Review how to assemble TAP Submittal Report.	NTC TAP manager	9-11 months prior
5	**All Contractors** • Conduct TAP Self-Evaluation ▪ Identify documents to validate criteria on TAP Self-Evaluation (SE) Matrix. ▪ Create Corrective Action Plan (CAP) if needed. ▪ Note: Corrective actions must be completed before contractor training can be approved.	Contractor organization	5-11 months prior
6	▪ Execute CAP (if required). ▪ Revise Self-Evaluation Matrix (if required). ▪ Complete TAP Submittal Report ▪ Send TAP Submittal Report to Fed.	Contractor organization	6-9 months prior
7	▪ Review, approve, or return the TAP SE Matrix.	Federal oversight	5-9 months prior

Step	Action	Who does it	Suggested timeline
	▪ If complete, send contractor's TAP Submittal Report to the NTC TAP manager.	entity	
8	▪ Review contractor's TAP submittal. ▪ Resolve questions, if any, with contractor and Fed.	NTC TAP manager & NTC DOE Federal staff as needed	4-9 months prior
9	When Step 8 is complete ▪ Reconfirm TAP visit date ▪ Reconfirm TAP Evaluation team member ▪ Review the contractor SE, issues, schedule prior to evaluation visit	NTC TAP manager And NTC TAP Evaluation Team	4-9 months prior
10A	▪ Host TAP team evaluation visit	Contractor organization & Fed	4-9 months prior
10B	▪ Conduct Evaluation visit. ▪ Provide out-brief to contractor and Feds. ▪ Report results to NTC director.	NTC TAP team NTC TAP Manager	
Return to step 6	**If all Incompletes are resolved after the visit** ▪ Note: TAP certification will end on the expiration date if not re-approved.	Contractor	1-6 months prior
11	**If complete** ▪ Draft approval certificate and letter	NTC TAP manager	2-8 months prior
12	▪ Send memo and certificate indicating approval to the site Federal oversight entity	NTC director	0-6 month prior
13	▪ Site Fed forwards certificate and memo to contractor	Fed oversight entity	0-6 month prior

Appendix D: Acronyms

The following acronyms and abbreviations are found within the *Training Approval Program (TAP) Guide*

Acronym	
CAP	Corrective Action Plan
DOE	Department of Energy
Fed	Federal oversight entity
MTT	Mobile training team
NTC	National Training Center
OJT	On-the-job training
S&S	Safeguards and Security
SE	Self-Evaluation
TAP	Training Approval Program

Appendix E: Glossary

The following definitions apply to Safeguards and Security.

> **Note from Glossary:** The Safeguards and Security Glossary contains DOE safeguards and security (S&S) program terms and definitions. These terms and their definitions reflect the latest additions and changes to terminology commonly used in S&S programs. Generally used terms defined in most dictionaries have been intentionally omitted from the Glossary.
>
> Although a Manual including the Safeguards and Security Glossary would be considered a requirements document, it is not intended that the definitions imply or be construed as establishing DOE requirements. Therefore, if the definition of a term in the Glossary should differ from an analogous one in a programmatic manual, the definition in the programmatic manual will take precedence.

Certification is the verification that a standard of knowledge or skill level pertaining to a safeguards and security or classification discipline has been demonstrated by an individual through a combination of training, testing, and performance.

Contractor or "Contractor Organization" or "Site Organization" (abbreviation "Contr.") is the contractor or subcontractor responsible for the training program for the S&S program elements being reviewed in a TAP submittal.

Corrective Action is an action the contractor will perform to meet a specific TAP Self-Evaluation (SE) criterion.

Corrective Action Plan (CAP) is the complete list of corrective actions the contractor will perform to bring the training program into compliance.

Criterion Test is a methodology that tests a student against a measurable standard identified as being realistic given the environment of the job.

Decision Trees are tools used to perform statistical analysis to establish training priorities based on task characteristics of difficulty, consequence, and frequency. The trees have predetermined value thresholds for each task characteristic.

Delivery Method refers to the instructional method used for a course, such as classroom instructor-led training (ILT), Web-based eLearning, computer-based training (CBT), and on-the-job training (OJT).

Federal Oversight Entity (abbreviation "Fed") is the federal office, facility, or other federal entity with oversight authority for the contractor. e.g., the DOE operations office, DOE field office, NNSA site office, NNSA service center.

Function Analysis is a systematic method used in obtaining a detailed listing of duties and tasks for a specific job function.

Goal is the endpoint or intent of a body of instruction, e.g., a course or lesson.

Individualized Instruction is instruction in which the pace of training is controlled by the trainee and guided by the programmed materials.

Instructional Objective is a statement that specifies measurable behavior that a trainee should exhibit after instruction, including the conditions and standards for performance.

Instructional System Design is a systematic approach to developing performance-based training. Instructional System Design is synonymous with Systematic Approach to Training, Criterion-Referenced Instruction, and Training System Design, and consists of the following phases:

1. **Analysis** identifies training requirements for a specific job position through the use of various types of analysis such as needs analysis, job/function analysis, and task analysis.

2. **Design** uses information collected during the analysis phase to establish specific learning objectives sequenced into lessons and lesson specifications that guide the future development of all training materials and strategies. The training medium (e.g., instructor-led, video, CBT) is usually determined here, as is the method of testing.

3. **Development** encompasses the selection and development of appropriate instructional methods, course content, equipment, student and instructor training materials, and suitable facilities.

4. **Implementation** consists of activities related to the actual conduct of training, as well as resource allocation, planning, and scheduling.

5. **Evaluation** focuses on the effectiveness of the training in reaching the objectives and suggests revision to materials and techniques to improve that training.

Instructor is any person assigned the task of instruction in a formal training program that has been certified by the NTC director or by the individual responsible for the contractor training program.

Job Analysis[1]. A systematic method used to obtain a detailed listing of the tasks of a specific job.

Job/Task Analysis (JTA)[1]. A process that describes systematically the performance requirements of a job by identifying and defining the valid tasks and the elements needed to satisfactorily perform the analyzed job.

Lesson Plan is an instructor's document that describes learning objectives, lesson content, delivery method, and resources necessary for the conduct of training, and outlines instructor and trainee activities.

[1] Definition is from DOE M 470.4-7, (Manual, 08/26/2005, SP) Safeguards and Security Program References, Section A, Safeguards and Security Glossary

National Training Center (NTC) [1]**.** A DOE organization comprising multiple training academies and programs supporting the development and implementation of centralized, standardized training, curriculum development, and other training-related services. The NTC provides the infrastructure in support of these academies and programs.

NTC TAP Manager is a contract employee within NTC responsible for managing the TAP program.

NTC Director is the DOE director of the NTC, with ultimate authority and oversight for the TAP program.

On-the-Job Training is a systematic method of providing training in the work environment and ensuring that the required job-related knowledge and skills are possessed by employees.

Performance-Based Training is a systematic approach to training based on tasks and related knowledge and skills required for job performance. This term is synonymous with Competency-Based Training.

Qualified indicates the satisfactory completion of a training program that is based on knowledge and skills that were identified by a job/function or task analysis.

Qualification is the verification that a specific standard of knowledge or experience pertaining to a specified job or task has been demonstrated based on specific test requirements.

Safeguards is an integrated system of physical protection, material accounting, and material control measures designed to deter, prevent, detect, and respond to unauthorized possession, use, or sabotage of special nuclear materials.

Security[1] is an integrated system of activities, systems, programs, facilities, and policies for the protection of classified information and/or classified matter, unclassified controlled information, nuclear materials, nuclear weapons, nuclear weapon components, and/or the Department's and its contractors' facilities, property, and equipment.

Self-Evaluation is a critical evaluation of a training program measured against the approval objectives and criteria. This evaluation is conducted by the training organization management and staff.

Subject-Matter Expert is an individual qualified and experienced in performing a particular task. Also may be an individual who, by education, training, and/or experience, is a recognized expert on a particular subject, topic, or system.

Self-Test is a test taken by a student to reinforce what has been learned. Immediate feedback on the results is essential to the success of a self-test.

Site (contractor site, training site) refers to the physical location where the contractor performs work. This is distinct from "site office," which refers to the DOE federal office providing oversight to the contractor.

Site-Certified Course is an NTC-developed course that is being taught at the site by designated site trainers who have NTC Instructor certificates and who have been observed presenting the course in an effective and professional manner following NTC lesson plans. Each course must also be recertified according to the NTC requirements for that course, but at least every 5 years.

Site Office means the DOE Field Office, DOE Operations Office, NNSA Site Office, or DOE Facility Office where DOE oversight of the contractor occurs. It is synonymous with the term "federal oversight entity," which is used in this document to avoid confusion with the site contractor. (See "Site.")

TAP Self-Evaluation (SE) Matrix is a formal checklist of objectives and criteria that the contractor uses to evaluate its training program. There are suggested validations for each criterion to aid the contractor in completing the SE Matrix.

Task is a well-defined unit of work having an identifiable beginning and ending with two or more elements.

Task Analysis is a process used to obtain detailed information about tasks identified in a job analysis. It systematically identifies and defines the specific tasks and the elements needed to satisfactorily perform the task. Task Analysis determines the elements (action, step, or decision) of how a task is performed. It identifies the attributes (knowledge, skills, and abilities) that affect task performance. The decision to expand a job analysis into a job/task analysis is dependent on site needs. (See also "Job Analysis.")

Training is instruction designed to develop or improve job performance of a trainee or worker.

Training Approval Program (TAP)[1]. A DOE program that formally recognizes S&S training programs and courses conducted by an organization other than the National Training Center that have satisfied established objectives, standards, and criteria for a quality S&S training program or course.

Training Approval Program (TAP) Report is a document developed by the contractor following a thorough self-evaluation of training programs requiring approval. The report identifies all criteria as either complete or incomplete. Incomplete criteria require corrective actions. All required corrective actions are compiled into a CAP.

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

Appendix F: DOE References

DOE O 414.1C, Quality Assurance.

DOE O, 470.4, Safeguards and Security Program.

DOE M, 470.4-1, Safeguards and Security Program Planning and Management.

DOE 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities.

DOE-HDBK-1001-96, Guide to Good Practices for Training and Qualification of Instructors (80 pages) PDF (226 KB).

DOE-HDBK-1074-95, Alternative Systematic Approaches to Training (77 pages) HTML | PDF (249 KB) "Reaffirmation Memorandum."

DOE-HDBK-1076-94, Table-Top Job Analysis (237 pages) PDF (1429 KB) "Reaffirmation Memorandum."

DOE-HDBK – 1078-94, Training Program Handbook: A Systematic Approach to Training (216 pages) PDF (886 KB) "Reaffirmation Memorandum."

DOE-HDBK-1086-95, Table-Top Training Program Design (290 pages) PDF (2658 KB) "Reaffirmation Memorandum."

DOE-HDBK-1103-96, Table-Top Needs Analysis (98 pages) PDF (452 KB).

DOE-HDBK-1114-98, Guide to Good Practices for Line and Training Manager Activities (34 pages) PDF (133 KB).

DOE-HDBK-1118-99, Guide to Good Practices for Continuing Training (31 pages) PDF (102 KB).

DOE-STD-1171-2003, Safeguards and Security Functional Area Standard (48 pages) PDF (162 KB).

DOE-HDBK-1201-97, Guide to Good Practices for Developing Learning Objectives (48 pages) PDF (624 KB).

DOE-HDBK-1201-97, Guide to Good Practices: Evaluation Instrument Examples (88 pages) PDF (227 KB).

DOE-HDBK-1204-97, Guide to Good Practices for the Development of Test Items (93 pages) PDF (233 KB).

DOE-HDBK-1205-97, Guide to Good Practices for the Design, Development, and Implementation of Examinations (85 pages) PDF (261 KB).

DOE-HDBK-1206-98, Guide to Good Practices for On-the-Job Training (61 pages) PDF (739 KB).

Engineering Effective Learning Toolkit by Harold D. Stolovitch and Erica J. Keeps, Copyright 2003, John Wiley & Sons, Inc. (ISBN 0-7879-6536-7).

Evaluating Training Programs by Donald Kirkpatrick, Second Edition, Copyright 1998, Berrett Koehler publishers (ISBN 1576750426).

An Introduction to Instructional Systems Design by A.F. O'Neal, Copyright 1988.

ISD From the Ground Up by Chuck Hodell, Copyright 2000, American Society for Training & Development, ASTD Press. (ISBN 1-56286-143-3).

Needs Assessment Basics by Deborah Tobey, Copyright 2005, American Society for Training & Development, ASTD Press. (ISBN 1-56286-387-8).

Training Design Basics by Saul Carliner, Copyright 2003, American Society for Training & Development, ASTD Press. (ISBN 1-56286-348-7).

Appendix G: Training Development Model Job Aid

A. Introduction

This section contains helpful information for developing unique site-specific training or evaluating training offered external to the site. Site training organizations may use any recognized Instructional Systems Design (ISD) development model to achieve the same goals. The program goals of the on-the-job training program are also discussed in this chapter.

B. The Development Model

Effective, performance-based training is derived from any of the following training development systems: Instructional Systems Development/Design, Systematic Approach to Training, Criterion Referenced Instruction, Training System Design, and Competency Based Training.

All of these systems are designed around the same basic premise: to produce training using a systematic process that provides the knowledge and skills necessary for the job incumbent to perform assigned duties at a predetermined level of competence.

A total approach to the development and conduct of training programs that provide performance-based training consists of five phases: Analysis, Design, Development, Implementation, and Evaluation.

These phases are sequential with the output of one phase providing the input to the next phase (Figure 1). The arrows inside the model represent the review of each phase at its completion. They also represent interactive feedback, allowing previous phases to be revisited to revise or improve content validity and accuracy.

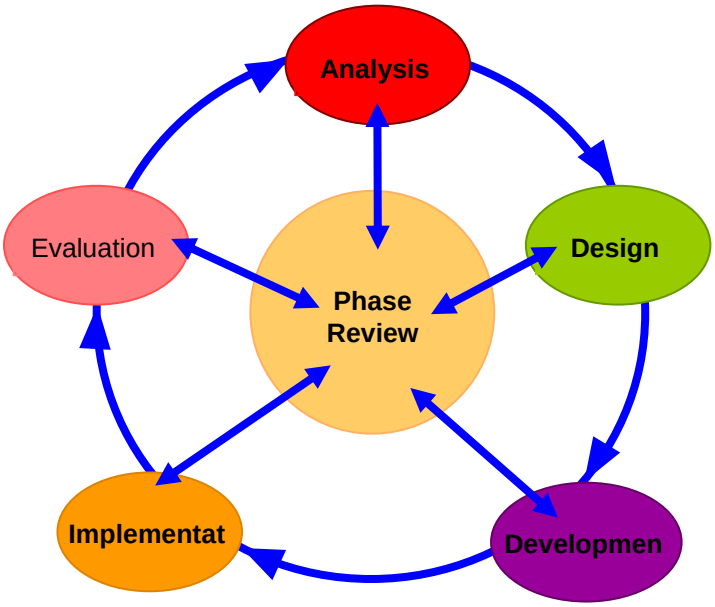


Figure1: Instructional System Design Model

The first three phases, Analysis, Design, and Development, constitute the developmental sequence of the process. Implementation involves conducting the training. Evaluation refers to evaluating the course feedback from instructors, students, and, when possible, from subject-matter experts. The Phase Review looks at the processes performed and the products generated in each phase, all of which need to be reviewed for accuracy and possible improvement at the completion of each phase before moving on to the next phase.

1) Analysis. DOE M 470.4-1, Chg.1, Safeguards and Security Program Planning and Management, Section J - Safeguards and Security Training Program, requires that field elements involved in safeguards and security programs and activities develop job analyses for identified Safeguards and Security Program elements. A job analysis must identify, describe, and document major task and skill requirements.

> **Note:** The Order does not require a complete job analysis for clerks/secretaries or similar positions working in the safeguards and security field. Usually these jobs require only limited technical safeguards and security knowledge and training, such as control or marking of classified matter, and therefore a functional analysis is more cost-effective and appropriate.

The analysis phase ensures that training programs are oriented specifically to the actual tasks performed by a person doing the job. In addition to an initial job analysis, other types of analyses may be performed depending on the situation.

f. Needs Analysis. This type of analysis consists of a systematic study of an identified performance problem or issue. The data is then used to make decisions or suggestions about what type of training, if any, is required by which audience(s), analyzing student test results, and evaluating transfer of training back to the job site.

g. Job Analysis. This type of analysis entails a determination of the specific tasks associated with the performance of a job. The analysis determines tasks that are critical to a job based on difficulty, importance, and frequency of performance. When translated, these items represent the foundation for the development of performance-based training program objectives, curriculum, and evaluation instruments.

h. Task Analysis. Task analysis is the breakdown of an individual task to determine knowledge and skills required to perform the task. Task analysis can be used to verify procedures, to locate problems associated with the performance of a task, or to develop the steps necessary to perform the task.

i. Job/Function Analysis. This type of analysis can be valuable in that it looks at one function performed on a job instead of all the components of a job. It generates the same products as a job analysis. Function analysis is a useful approach for two types of situations. One is when only part of the job is of interest at a given time. In this case, doing a function analysis saves both resources and time. The second type of situation for which a function analysis is appropriate is one involving a function that is performed by many different positions.

The National Training Center (NTC) develops and distributes generic DOE (non-site-specific) job analyses upon request. The goal is to achieve standardization where prudent, and to realize economy of effort through elimination of duplicative efforts. These job

analyses should be used to begin the process of developing site-specific analyses. For information relating to the completed analyses, contact the NTC Curriculum and Professional Development Department at (505) 845-5170, ext. 351.

Although issuance of job/function analysis by the NTC should reduce the need for some data gathering at the field site, analysis must still be tailored to reflect site details. The NTC-generated task inventory contained within the analyses can be extremely useful to the sites as a tool in developing site-specific job analyses. These inventories should be used as preliminary task lists and reviewed by site subject-matter experts and expert performers who can both add tasks performed at that site that are not on the NTC inventory and delete tasks not performed at the site. If possible, generic statements should be changed to better reflect the site condition or situation. Example: If a task statement says "Draw Duty Weapon," change it to state the type of duty weapons currently being used at the site. This might be changed to "Draw weapon (Smith and Wesson 686)."

The following steps describe how a site can use the NTC analysis:

1) Revise the task inventory using site-specific documentation such as standard operating procedures, post orders, job descriptions, and procedural manuals.

2) Have the revised inventory reviewed by subject-matter experts and expert performers to identify tasks not listed or listed but not performed.

3) Make changes to the list based on these comments.

4) Validate the tasks on the revised list by using a focus group comprising subject-matter experts and expert performers.

5) Compile validated list for use in a site-specific survey or table-top analysis.

6) Administer the survey to job performers or run table-top analysis to rate difficulty of task performance, consequences of improper task performance, and frequency of task performance.

7) Put the final data through a DOE-approved decision tree to determine task ratings and training recommendations.

8) Have subject specialists and expert performers validate the final recommendations. Document any changes to the recommendations and state the reasons for the change.

j. Task-To-Training Matrix. A task-to-training matrix is a tool used to ensure that the tasks that were designated for training during the analysis process are being trained. The matrix correlates tasks/training recommendations to course objectives.

    1) If there are gaps in the objectives, e.g., if tasks are listed with “train” or “recurring training” recommendations but there are no objectives to train those tasks, that could indicate the task isn’t being trained.

    2) If there are gaps in the tasks, e.g., if there are objectives but no corresponding tasks with “train” or “recurring” recommendations, then perhaps something is being trained that doesn’t need to be trained.

3) If more than one objective trains the same task, and the recommendation is for "train," then possibly the task is being trained in duplicated places and doesn't need to be.

4) On the other hand, a task with a "recurring" recommendation should correlate with objectives in more than one course.

5) **Design.** During the design phase, the general framework or blueprint of the course is created. The components of the design phase include the following: macro-level content outline, lesson goals, sequenced lesson objectives, lesson outlines (micro level), student testing methods and instruments, safety considerations, methods of delivery, and media selection (in-class, correspondence, CBT, etc.).

6) **Development.** All materials developed during this phase are based on results from the design phase. The development components include completing the following: student tests (based on the objectives), lesson plans, student activities, training aids, job aids, and other student materials. Enabling objectives may be identified, and, in some cases, rewording of objectives may occur. Development, at its best, is a creative, interactive process between the developer, subject-matter expert(s), and instructor as they generate or revise the materials and products mentioned above.

a. **Student tests.** Student tests are designed to specifically test the instructional objectives. Broadly, student tests fall into one of two types: performance-based or cognitive. Performance-based includes tests where the student must physically perform the actions described in the objective, while cognitive tests test the student's intellectual or cognitive understanding of a concept or action.

b. **Lesson Plans**. Lesson plans shall contain sufficient procedural and content detail to enable any subject-matter expert using the lesson plan to teach the class in a manner resulting in students achieving the instructional objectives. Lesson plans are required for all training classes.

c. **Activities**. Activities can be used to reinforce something that has been taught, or to teach the actual concept in a "discovery" method. Accelerated learning theory provides the rationale for the fact that adult learners benefit from a much more activity-based teaching methodology. (See references by Dr. David Meier and Sharon Bowman in Appendix E.)

d. **Training Aids**. Training aids directly support the instructional objectives by enhancing the presentation. Training aids are used to clarify, illustrate, and emphasize points; reinforce concepts; maintain interest; and add realism. Training aids such as videotapes, film, models, slides, flipcharts, white boards, transparencies, and audio tape recordings may be used where appropriate to support the lesson plan.

e. **Job Aids**. Job aids are tools that not only assist the student in achieving the instructional objectives, but also assist in performing on the job. Job aids may take the form of diagrams, measuring devices, tables, checklists, or other assistance in performing assigned tasks.

f. **Student Materials**. Student materials include resources identified by lesson plans and used by students during a training course. They may include textbooks, technical publications, self-study guides, design documents, procedures, manuals, worksheets, and instructor-prepared handouts. These materials reflect course instructional objectives and shall be technically accurate and current.

7) **Implementation**. Implementation consists of all activities related to the actual conduct of training, as well as resource allocation, planning, and scheduling. Course implementation requires assigning instructors and support staff as well as scheduling training and facilities. During implementation, only qualified and properly certified instructors conduct training.

Qualified personnel (who have appropriate experience or have satisfactorily completed training courses comparable in content and performance standards to the required training) may be exempted from portions of training on an individual-case basis through testing or granting of equivalent credit.

Testing shall consist of the same or equivalent examinations based on instructional objectives as stated for the required training course.

Equivalent credit may be granted through the credit-equivalency program outlined on the NTC website and managed by the Professional Development (PDP) Department. See the "Request for Evaluation of Equivalent Credit" process under the PDP program on the NTC website, or call 505-845-5170 ext. 362. Completion of testing for equivalency and equivalency credit approval shall be documented in appropriate training records.

8) **Evaluation**. Evaluation ensures that training is effective, valid, and current. Feedback obtained from instructors and students, as well as student test results, will be reviewed for their potential impact on revisions to course materials. This evaluation is conducted after each course iteration. Feedback from supervisors, when available, will be part of the evaluation phase. Instructors should submit after-action reports for each iteration of a course, and lead instructors should conduct periodic reviews of training to ensure that directive references and technical information are up-to-date. In addition, the job/task/or function analysis and the task-to-training matrix associated with the course should be updated and re-analyzed to maintain course validity.

9) **Training Program Documentation**. Documentation provides a continuous record of the five phases of performance-based training and substantiates the validity of the training program. To facilitate training program development, modification, or revision, significant actions and decisions made during the entire process are documented. Administrative controls in the form of procedures, guidelines, or instructions provide necessary direction for the maintenance of training program documentation records.

A training-course record, maintained on an ongoing basis, provides an audit trail that is usually kept in a course history file. Critical portions of an audit trail include not only the decisions themselves, but also the rationale leading to them. The audit trail is maintained in a course history file throughout the lifetime of a training course to record its development, subsequent modification, and retirement or archiving, thereby validating the training program. Sound judgment must be used to maintain only material and files

necessary to document the history of a course. Courses are archived for the term specified according to the training topic (OSHA, firearms, etc.), DOE order, and the site Standard Operating Procedure.

C. Performance Testing

Performance testing is an integral part of performance-based training and refers to testing both knowledge and skills. Accountability in training is achieved only by accurate testing of students involved in the training.

Because safeguards and security personnel may be faced with potentially serious consequences from their actions, it is imperative that trainers are confident that a trainee's knowledge of duties and skill performance are up to prescribed proficiency standards. Performance testing will accomplish this end.

1) **Performance Testing**. The purpose of performance testing in DOE safeguards and security training is to provide learning reinforcement and training accountability. Testing is performed to accomplish the following:

a. Reinforce learning.

b. Determine when a student has achieved stated instructional objectives.

c. Determine whether the instruction is adequate to enable students to perform as prescribed.

2) **Self-Testing or Quizzes.** Learning reinforcement is accomplished by giving students periodic self-tests or quizzes administered at the end of a period of instruction. Maximum reinforcement occurs when the instructor provides correct responses to students for self-evaluation immediately after the test is completed. A suggested procedure is to administer a self-test after covering two or three instructional objectives, depending upon their complexity, to reinforce achievement of the objectives. Grades are not recorded, and additional help is provided on the spot to students who are unclear about the concepts.

3) **Objectives.** All safeguards and security training is driven by instructional objectives. Each student is tested against these objectives. Test items directly reflect the objectives they test. Objectives are required to be met by each trainee at the prescribed level, and test results are recorded.

4) **Validity.** The validity of training is determined by applying evaluation techniques discussed in the Evaluation section under the discussion of the development model.

5) **Approach to Performance Testing.** In all measures of performance, the emphasis is upon successful achievement of objectives. Negative testing features that attempt to cause students to fail are absent from the menu of test items, whether cognitive or practical.

6) **Techniques.** Testing is accomplished in a manner and environment closest to that in which the operation will be executed on the job. To the extent possible, skill testing is performance-based, i.e., it evaluates the actual performance of the task. Knowledge

testing may include, but is not limited to, constructed responses, i.e., short answer, sentence completion, fill-in blanks, multiple choice, or true/false.

7) **Realism.** Performance testing of skills, or the actual physical performance of a task, is accomplished in a manner and environment closest to that of the actual performance required in the field. Two types of skill performance testing are employed: actual and simulated. Where practical and safe, actual performance is used. Simulation is performed where lack of appropriate facilities and/or the nature of the activity, such as handling nuclear materials, preclude actual performance.

8) **Objectivity.** Performance testing is accomplished objectively. Performance evaluators should use checklists or other objective measurement tools to achieve consistency and fairness for all students.

9) **Standards.** All performance test scores are compared with a defined standard of performance for a given activity. All students are given the opportunity to achieve a perfect score because they are competing against a standard rather than against each other. Courses are designed to provide information and skills necessary to achieve perfection. Individual student application of instructional material will determine final grades.

D. On-The-Job Training (OJT) Program Goals.

1) OJT should emphasize the training of personnel to perform their daily duties and tasks. OJT training may be used to supplement other formal training. This type of training uses current operational procedures to form the basis of the training program. Often, these procedures are used as lesson plans in the instructional process. Student performance is normally evaluated through (1) checklists or performance tests that describe the task, conditions, and standard of task performance; and (2) written exams that ensure the person has obtained the knowledge required. Evaluation measures must be directly tied to the tasks identified in the task inventory, i.e., tasks that have been selected for training as a part of OJT.

2) Because OJT focuses on daily activities and is usually based on operational procedures, these programs can be taught by a broad variety of supervisory or fully qualified personnel. Individuals serving as OJT instructors do require some form of instructor qualification. This may be achieved through a locally developed orientation session or training program.