

<b>UF/NRE</b> <b>UFTR</b>	<b>QUALITY ASSURANCE DOCUMENT</b>	<b>Project ID: QA-1</b>	
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**Project Title: UFTR DIGITAL CONTROL SYSTEM UPGRADE**

**UFTR-QA1-10, Software Training Plan**

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### **1. Purpose**

The purpose of this training program is to improve technical and human performance through initial training, continuing training, and qualification of personnel working on tasks related to the UFTR Digital Control System Upgrade Project.

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## 2. Definitions and Acronyms

### 2.1 Definitions

*ACAD*: Training guidance documents issued by the National Academy of Nuclear Training

*Cognizant Control*: Having direct oversight of an activity or task. The person in cognizant control of the activity is required to maintain the level of control necessary to ensure the safe, correct completion of that activity.

*NANT*: National Academy for Nuclear Training. The branch within INPO that oversees training.

*SME*: Subject Matter Expert. A person who is recognized as having a high degree of knowledge on a particular topic.

### 2.2 Acronyms

CBT	Computer Based Training
I&C	Instrumentation & Control
MOT	Management Observation of Training
SME	Subject Matter Expert

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### 3. Methodology

This program implements a training process that is modular in nature and supports delivery of specific training for the needs of the various groups within the UFTR. Changes can be made to curricula, and new curricula added, without affecting the structure of the training process.

There are two major sections contained in the training process. These are the implementing of this procedure (a) and training curricula (b).

- a) This document specifies the process required for implementing training in the Project, including topics such as the method for developing evaluations and required records.
- b) Curricula specify items such as job performance requirements, tasks, training topics, and qualifications for a group of individuals performing similar functions.
  1. Curricula are specified and approved by the Project Manager.
  2. Curricula are distinguished by the positions they support.
  3. Curricula may be defined by a curriculum description document.

The training program is assessed on a periodic basis by the Project Manager using feedback and input from trainees, Groups Leads, and the Project Coordinator.

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#### 4. Organization

The Project Coordinator works with the Project Manager and the Group Leads and leads for the implementation of the program.

The Project Manager ensures the training program is appropriately implemented.

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## 5. Responsibilities

### 5.1 Project Manager

- a) The Project Manager has the overall ownership of training within the Project.
- b) Project Manager is responsible for identifying project-specific training needs, coordinating with the Project Coordinator and providing the necessary funding to ensure timely delivery of project-specific training.
- c) Project-specific training and qualifications may be tracked per this procedure.
- d) Periodically review curriculum.
- e) Review training schedules for appropriateness and implementation specifics.
- f) Specify continuing training content.

### 5.2 Project Coordinator

- a) The Project Coordinator is responsible for oversight and implementation of the Project training program.
- b) The Project Coordinator is responsible for ensuring that training materials are instructionally and technically sound.
- c) The Project Coordinator communicates with the Project Manager and the Groups Leads to implement the Project training program.
- d) The Project Coordinator is responsible for assessment of the training effectiveness and periodic reporting of the results to the Project Manager.

### 5.3 Groups Leads

- a) The Group Leads assign tasks to qualified personnel.
- b) The Group Leads are responsible for assessing the training needs of their staff and for submitting recommendations to the Project Manager for review and approval.
- c) The Group Leads are responsible for identifying training needs (Attachment 3 for the Training Request form)

### 5.4 Project Personnel

- a) Department personnel are responsible for the successful completion of training required for their positions.
- b) Department personnel are responsible for providing feedback on the effectiveness of their training.

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### 5.5 Subject Matter Experts (SMEs)

- a) SMEs provide technical input for their area of expertise.
- b) SMEs provide guidance and evaluation for on-the-job learning.
- c) SMEs deliver training under the guidance of the Project Coordinator.

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## 6. Instructions

### 6.1 Curricula

- a) Specific Curriculum Descriptions include:
  1. Curriculum Description
    - i. The Curriculum Description defines items such as the target audience or any progression structure.
  2. Content
    - i. The method used for analysis or content definition.
    - ii. Training materials
- b) Curricula are approved by the Project Manager.
- c) Each curriculum addresses the need for initial and continuing training.
- d) Project training curricula implement a graded approach to training.
- e) Curriculum content is based on an assessment of needs.
- f) A curriculum may have a set of entry level requirements for its associated positions.

### 6.2 Training

Training is normally implemented using one or more of the following forms of delivery:

- a) *Instructor led* - Instructors are either formally trained in instructional techniques, or SMEs under the guidance of the Project Coordinator. Instructor led training is presented in a classroom format using slides, overheads, or other media along with a student handout.
- b) *Hands on* - Hands on training is provided using hardware, software, and tools/equipment similar to those used on the job.
- c) *Self-study* - Self study is performed by the trainees, using formal materials or company/project documents as a guide.
- d) *On-the-Job* - On-the-Job training (also called mentoring) is performed under the cognizance of a qualified person. The qualified person maintains adequate oversight of the trainee to ensure the correct performance of the task.
- e) *CBT* – Computer-based training is performed under controlled conditions, and generally includes an on-line evaluation to show mastery of the subject matter.

### 6.3 Continuing Training

- a) Continuing training content is specified by the Project Manager.
- b) Continuing training topics will generally pertain to the following subject areas:

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1. Procedure updates
  2. Condition reports/lessons learned
  3. Human performance tools
  4. Codes and standards reviews
  5. Technical topics appropriate for the Project personnel
- c) Continuing training is normally provided on a quarterly basis.

#### 6.4 Evaluations

- a) Personnel mastery of the course materials is evaluated as required.
1. If required by the curriculum, students are evaluated to determine mastery of the topics.
  2. Successful completion of hands-on tasks may be used to demonstrate mastery.
  3. Oral questioning techniques may be used to demonstrate mastery.
- b) The method of evaluation is selected according to the following criteria:
1. The difficulty of the task/job requirement
  2. The frequency of the task/job requirement
  3. The criticality of the task to nuclear safety

#### 6.5 Training Waivers

- a) Training waivers may be applied to the requirements of this procedure.
- b) Training requirements may be waived where previous knowledge of the subject matter can be shown.
1. Training waivers are initiated by the individual's group lead (Attachment 2).
  2. The request must include the training to be waived, any associated qualifications affected, and the justification, including any proof of past experience/training/education.
  3. Training waivers must receive the concurrence of the Project Coordinator and be approved by the Project Manager for implementation.

#### 6.6 Disqualifications

- a) Personnel who do not satisfactorily complete required continuing training for qualification are removed from the Project. The Project Coordinator is responsible for notifying the affected personnel and their supervisors when they are removed from the Project

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- b) Personnel who do not perform to an acceptable level may be disqualified from a particular task or area. Disqualification for this reason is determined by the Project Manager.

**6.7 Remediation**

- a) An individual who does not successfully complete the program requirements must have a remediation letter generated stating the conditions under which the disqualification/non-completion of training requirements occurred, and the remediation requirements to be completed to ensure successful mastery.
- b) The individual must review and complete the requirements in the remediation letter to continue in the program.
- c) Repeated failure to complete the requirements is referred to the Project Manager for action.

**6.8 Schedule**

- a) The Project Coordinator works with the Project Manager and the Group Leads to develop and maintain a training schedule.
- b) The training schedule is approved by the Project Manager.

**6.9 Contract and Short-term Employees**

- a) Contract and short-term employees are those employees generally hired for periods of six months or less to perform specific tasks.
- b) Specific qualifications for contract and short-term employees may be generated using the Short-term Qualification Form (Attachment 1).
  - 1. The Short-term Qualification Form must contain enough information for the approver to have assurance of the individual's ability to safely and correctly perform the task
  - 2. Proof of capabilities must be provided. These may include transcripts, resumes, or other means of showing the capabilities of the individual in question.
- c) Short term qualifications must receive the concurrence of the Project Coordinator and the approval of the Project Manager for implementation.
- d) Group leads must ensure that employees qualified under this section are assigned only tasks allowed per their Short-term Qualification Form.
- e) Employees qualified per this section are not required to attend continuing training unless it is related to their scope of work as determined by the individual's supervisor.

**6.10 Records**

Training related records are submitted to the Project Coordinator.

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### 6.11 Management Observation of Training (MOT)

- a) The intent of training observations is to improve the quality of training.
- b) Management personnel are expected to observe training and provide feedback using the MOT form (See Attachment 4)
- c) The periodicity of observations is determined by the Project Manager.
- d) Observations are to start at a time that does not impact the quality of training, such as at the start of the day or at a break time.
- e) The observer should perform the observation in a manner that does not detract from the quality of the presentation.
- f) At an appropriate time, the observer is to discuss their comments with the instructor.
- g) All completed MOT forms are provided to the Project Coordinator for review. The Project Coordinator responds as required and reports the results to the Project Manager.

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## 7. Resources

### 7.1 Staffing

Training staff are supplemented by SMEs.

- a) SMEs are personnel who have a high level of expertise in their area and have been designated by the Project management to support training and development of the personnel in their areas of expertise.
- b) SMEs without instructional backgrounds may provide training; however SME-led training is monitored by the Project Coordinator for quality.

### 7.2 Facilities

Classroom and laboratory facilities are maintained as necessary for effective learning.

### 7.3 Equipment

Training hardware and software are kept up-to-date, with the versions used for hands-on being similar to the versions used in the design process.

### 7.4 Materials

Student materials are reviewed for:

- a) Completeness and accuracy
- b) Clear and concise descriptions with appropriate graphics
- c) References to source documents.

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**Attachment 1: Short-term Qualification Form**

<b>Short-term Qualification Form</b>	
Name:	_____
Group:	_____
Lead:	_____
Date:	_____
<b>Tasks to be Performed</b>	
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>	
<b>Basis for Qualification (attach documentation)</b>	
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>	
<b>Training Required</b>	
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>	
Concurrence:	_____ (Project Coordinator) Date: _____
Approved:	_____ (Project Manager) Date: _____
Implemented (trng complete):	_____ Date: _____

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**Attachment 2: Training Waiver Request**

<b>Training Waiver Request</b>	
Requested By: _____	
Individual to Waive: _____	
Date: _____	
<b>Training to be Waived / Quals Affected</b>	
<b>Justification for Waiver (attach documentation)</b>	
Concurrence: _____	(Project Coordinator)      Date: _____
Approved: _____	(Project Manager)      Date: _____

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**Attachment 3: Training Request**

<b>Training Request</b>	
Requested By: _____	
Date: _____	
Training Topic: _____	
<b>Training Requested</b>	
<b>Project Manager Review/Actions</b>	
Requester Notified: _____ Date: _____	

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**Attachment 4: Management Observation of Training Form**

<b>Management Observation of Training</b>									
1 = Unsatisfactory    3 = Meets Expectations    5 = High Level of Excellence									
Course Quality					1	2	3	4	5
1	Training materials, handouts and lab exercises are technically accurate				<input type="checkbox"/>				
2	Training is based on knowledge and skills needed for job performance				<input type="checkbox"/>				
3	Training incorporates and emphasizes human performance improvement techniques				<input type="checkbox"/>				
4	Training reinforced good human performance techniques				<input type="checkbox"/>				
5	Students are engaged in the training, asking questions and providing comments				<input type="checkbox"/>				
Instructor Feedback					1	2	3	4	5
6	The instructor is well prepared and organized				<input type="checkbox"/>				
7	The instructor is professional and friendly				<input type="checkbox"/>				
8	The instructor uses effective presentation methods/skills				<input type="checkbox"/>				
9	Instructor creates an atmosphere that encourages student participation				<input type="checkbox"/>				
10	Instructor is effective in making the topics understandable				<input type="checkbox"/>				
Management Expectations					1	2	3	4	5
11	Training meets the needs for which it was given				<input type="checkbox"/>				
12	The training should improve personnel/organization performance				<input type="checkbox"/>				
13	Overall, the training meets the standards and expectations of management				<input type="checkbox"/>				
Specific Observations _____									
_____									
_____									
_____									
_____									
Reviewer: _____					Date: _____				
Course: _____									