

**FEEDWATER SYSTEM
OJT TRAINING GUIDE (IRI-07-OJTG)
IRI POWER PLANT**

(Date)

1.0 Introduction

This OJT Training Guide is designed to assist you in coordinating the Training for Module IRI-07 of the IRI Power Plant Training Program. It contains information about conducting training for the IRI Power Plant Systems.

Each Trainee is required to successfully complete all four (4) elements of the module to be certified on the Training Progress Monitoring Card (TPMC) as completed. Each of the following four (4) elements are included in each system training module to ensure the trainee has knowledge of each system and can perform the required tasks.

Formal System Training provides the trainee with a structured training session that teaches and tests the knowledge required to understand the operation of the system and related equipment. The instructional method can be Facilitator Led Classroom, Video Program, Computer Based Training, Self-Study, or any combination of acceptable methods that provides quality instruction that meets the lesson objectives.

System Operating Procedure Formal Training provides a formal process for instructing the trainee on the understanding and proper execution of all System Operating Procedures.

On-The-Job Training will be designed to include 1) system and equipment startup 2) system normal operations and 3) system shutdown. OJT Training Checklist will also include how to properly perform all equipment checks, the frequency of each check, and any system adjustments that are made to bring the checked parameter within operational limits.

System Checkout involves formal instruction on how to properly perform all system operations and checks. This includes 1) how to start up the system equipment 2) routine system adjustments 3) process operating limits 4) proper use of checklists while performing routine system inspections and equipment checks.

Both knowledge tests and OJT Training Checklists will be used to test trainees on both knowledge and performance to measure competency.

This training program may utilize the self-study method of training. Training materials and assistance will be provided to the trainee as needed to complete the module. However, trainee progress will depend on their willingness to gain the required knowledge and skills.

As the trainees gain the knowledge and skills listed for each module they will be required to demonstrate actual work proficiency before they can be signed off on that module.

Preparing to complete each module will require preparatory work, such as reading, studying, observation, or practical experience. The trainee should ask questions if they are unsure about any items. It is the trainee's responsibility to take the initiative to request training or help in learning a knowledge or skill.

The training requirements for each module are listed in the module outline. They have been designed to include the knowledge and skills needed to satisfactorily perform the job. The Facilitator is responsible for observing the trainee's safety habits, work procedures, and completion time. As the trainee demonstrates skills, the Facilitator will initial and date the space next to the knowledge or skill demonstrated on the TPMC.

The module requirements as listed in the TPMC do not have to be completed in their order of appearance except that one (1) level must be completed before the next can be started. The order in which the trainee performs the demonstration of these skills depends on their experience and preparation. It also depends on their current work schedule.

The Facilitator will consider safety habits when judging whether or not to approve a skills demonstration. An unsafe act may invalidate an otherwise approved performance.

Remember that safety is a crucial part of any Plant Operator's work and of every task performed.

Your Facilitator, or someone designated by the Facilitator, must approve skill demonstrations. The company-approved safety procedures will be used to determine the quality of a demonstration. In some cases, the Facilitator may use a team to approve a demonstration. The Facilitator will date and initial or sign all approvals on the TPMC.

2.0 Training System Module Facilitator's Guide

The Training System Module is designed as part of the IRI Power Plant Training Program. This module is designed to aid operators in upgrading their knowledge and understanding of the system.

Reference Materials: IRI Power Plant System P&I Drawings, Logic Drawings and Equipment Technical Manuals.

2.1 Formal Training

The format of the Module IRI-07 formal training materials (System Description Document) is suited for either formal classroom instruction, self-study or for refresher training.

Unless a waiver is granted, the trainee must have completed the prerequisite basic knowledge modules (IRI Web Based Training, Videos or CD Rom Programs) and safety modules before starting training on the next module. If the training is presented as classroom instruction the following applies.

2.2 System Description - Facilitated Training

The following guide is used to formally instruct the trainee in a structured training environment. If the training is presented as classroom instruction, the following applies:

2.2.1 Suggested training aids and materials:

- Overhead Projector
- Chalkboard/Whiteboard
- Flipchart
- PC and Monitor
- Pencils
- Notebook paper
- Hi-liters

2.2.2 Facilitator Preparations

- Review System Description (IRI-07-SD) text.
- Prepare copies of System Description (IRI-07-SD) for trainee handouts.
- Print SD drawings as overhead slides.
- Review the OJT Training Checklist (IRI-07-OJTC).
- Prepare copies of IRI-07-OJTC.
- Display or Review Reference Materials: IRI Power Plant System P&I Drawings, Logic Drawings and Equipment Technical Manuals.

2.2.3 Classroom Presentation

- Describe the module and how the material is to be presented.
- Hand out copies of student text.
- Present each chapter objective.
- Review the contents of each chapter with the students using student text and drawings.

- Allow for discussion at the end of each chapter. Encourage the students draw on their past experiences with regard to the lesson.
- Summarize each chapter.
- Walk down the system with the trainee and instruct them to describe the flow path, identify the system components and describe the purpose of each component.
- At completion of lecture and discussion, administer the written test.

2.2.4 Module IRI-07 System Description Overall Training Objectives

The objective of this lesson is to present the material relating to the system.

Upon completion of the training the Plant Operator should be able to:

- Describe the purpose of the system.
- List the components that make up the system.
- Describe the flow path through the system.
- Describe the purpose of each component in the system.
- Identify system equipment under the operational jurisdiction of the IRI Power Plant Control Room.

2.2.5 Module IRI-07 System Description Chapter 1.0 - Training Objectives:

This section describes the purpose of the system. It provides a simplified description of the system; introducing the system components, flow path, and system configuration. Components are described as they apply to IRI Plant Operators.

Upon completion of this chapter, each student should be able to:

- State from memory the purpose of the system.
- State from memory the names of each system component.
- Draw a System Block Diagram.

2.2.6 Module IRI-07 System Description Chapter 2.0 - Training Objectives:

This segment addresses each system component. The components are described as to their purpose, type and inputs. Upon completion of the chapter, each student should be able to:

- Draw from memory a diagram of the system.
- State from memory the names and purposes of each component within the system.
- Describe each system component's location.
- List each system component's normal operating parameters.

2.2.7 Module IRI-07 System Description Chapter 3.0 - Training Objectives

This section describes the System Operation as it applies to IRI Plant Operators. Upon completion of this section, each student should be able to describe the system operation during Startup, Normal, and Shutdown operations.

At the end of the training session a written test will be administered. A score of 75 percent must be obtained to satisfactorily complete this part of the training.

2.3 System Description - Self-Directed Learning

The following guide is used to provide direction to the trainee to self-study the module training materials. If a self-directed approach is used then the following applies:

2.3.1 Trainee Preparation for Self-Study

Provide the trainee with the following tools and training materials:

- Pencil
- Notebook

- Hi-liter
- System Description
- Plant reference materials such as: P&I Drawings, Logic Drawings and Equipment Technical Manuals.

Discuss the self-directed learning strategy with the trainee:

- Read each chapter of the System Description and be able to complete each of the chapter objectives.
- Review the Plant P&I Drawings, Logic Drawings and Equipment Technical Manuals
- Walk down the system and refer to the training materials to help you understand the purpose of each component, the location of each component, the system flow path and equipment operating parameters.
- Interact with more experienced Plant Operators and your assigned Facilitator. They are responsible for answering questions, providing you with On-The-Job Training and conducting oral quizzes to determine your progress and competency level.

2.4 IRI-07 System Operating Procedure - Facilitated Training

The following guide is used to formally instruct the trainee to understand and perform all operations described in the System Operating Procedure.

2.4.1 Suggested Training Aids

- Overhead Projector
- Chalkboard/Whiteboard
- Flipchart
- PC and Monitor

2.4.2 Suggested Student Materials

- Pencils
- Notebook paper
- Hi-liters

2.4.3 Classroom Preparation

- Review System Operating Procedure (IRI-07-SOP) Text.
- Prepare copies of System Operating Procedure (IRI-07-SOP) Text for student handouts.
- Prepare copies of the system written test.
- Prepare the IRI-07-SOP Valve Checklist as overhead slides.
- Display Reference Materials: IRI Power Plant System P&I Drawings, Logic Drawings and Equipment Technical Manuals.

2.4.4 Classroom Presentation

- Describe the IRI-07-SOP and discuss how the material is to be presented.
- Hand out copies of the IRI-07-SOP.
- Present each section objective.
- Review the contents of each section of the IRI-07-SOP with the students using drawings to illustrate locations of components and equipment.
- Allow for discussion at the end of each section. Encourage the students to draw on their past experiences with regard to the lesson.
- Summarize each section.
- When complete with the classroom instruction, walk down the system with the trainee and discuss/demonstrate how to perform all steps of the operating procedure.
- When the facilitator agrees you are ready then you will be given the written test. A mastery level of 75 percent is required to demonstrate knowledge.

2.4.5 Module IRI-07 System Operating Procedures Objectives

This section describes the operation of the system. Upon completion of this training the trainee should be able to:

- List the safety requirements associated with the system.
- Describe any environmental impacts or concerns involved with the system operation.
- Discuss training and responsibilities required for operation of the system.
- List the Precautions, Limitations and Setpoints relating to operation of the system.
- Perform the Pre-Operational checks needed when operating the system.
- Operate the system under normal conditions.
- Shutdown the system.
- Use the IRI-07-SOP Valve Checklist to line up the system.

2.5 IRI-07 System Operating Procedure – Self-Directed Learning

To ensure the trainee fully understands all aspects of the Operating Procedure, it is required that he/she is provided with facilitated instruction. However, to minimize Facilitator time, the trainee can do the following self-study so he/she is better prepared prior to the formal training session:

2.5.1 Provide the trainee with the following tools and training materials:

- Pencil
- Notebook
- The System Operating Procedure
- Plant System Piping and Instrument Diagrams and Legend.
- Provide a handout of the Procedure Objectives listed in section 2.4.5

2.5.2 Instruct the trainee to do the following self-study:

- Discuss the Procedure Objectives with the trainee and instruct him/her to use the objectives to direct the outcome of the self-study session.
- Read the System Operating Procedure
- Walk down the system, following each step of the operating procedure, and mentally simulate how to perform the required actions.
- Make note of any questions that you may have concerning the procedure so they can be discussed with your facilitator.

2.5.3 Once the trainee has completed the self-study, the facilitator will conduct a facilitated training session that includes the following:

- Conduct an oral review to assess the trainee's understanding and answer the questions that were noted during the self-study.
- Walk down the system with the trainee and have them discuss or demonstrate how to perform each step of the procedure.
- Explain and demonstrate any aspects of the procedure that the trainee doesn't fully understand.

At the end of the training session administer the System Questions. A score of 75 percent must be obtained to satisfactorily complete this part of the training.

3.0 On-The-Job (OJT) Training

The purpose of On-The-Job Training is to demonstrate to the trainee how to perform the various operations associated with the systems. Trainees are to be given copies of the OJT Training Checklist. The OJT Training Process is performed as follows:

Step 1 The Facilitator discusses the performance of the OJTC

- Facilitator gives an overview of the procedure or process that is to be performed.
- Shows location of system components, valves and controls.
- Describes the preparations needed for operation of the system.

Step 2 Facilitator describes or performs the OJTC

- Facilitator describes or performs each step that is needed to start up the system.
- Facilitator describes or performs each step that is needed during normal operation of the system.
- Facilitator describes or performs each step that is needed to shut down the system.
- Facilitator describes or performs system inspection and equipment checks. This includes how to properly perform the checks, the frequency of each check, any routine system adjustments that may be required, and how to properly use and record information on the operator rounds/checklist.

4.0 System Checkout

System Checkout involves having the trainee properly perform all system operations and equipment checks. The trainee will use the OJTC, the System Operating Procedure, and the Operator Rounds/Checklist to perform the System Checkout using the following process:

Step 1 Trainee discusses the System Checkout with the Facilitator

- Trainee gives an overview of the procedure or process that is to be performed.
- Trainee will show location of System Components, Valves and Controls.

Step 2 Trainee performs the System Checkout and is evaluated by the Facilitator

- Trainee describes or performs the preparations needed for Operation of the system using the System Operating Procedure and associated Checklist as needed.
- Trainee describes or performs each step that is needed to start up the system.

- Trainee describes or performs each step that is needed during normal operation of the system.
- Trainee describes or performs each step that is needed to shut down the system.
- Trainee performs complete system inspection and equipment checks using the applicable rounds/checklists.

5.0 Module Requirements Sign Off

When all the elements of the System Training Module have been completed, the Supervisor or designated Subject Matter Expert will sign off the associated documents in the trainee's TPMC.