

PART 1 - GENERAL

1.1 TRAINEES

- .1 Trainees: Personnel selected for operating and maintaining this facility, including Facility Manager, building operators, and maintenance staff, as required.
- .2 Trainees will be available for training during later stages of construction for purposes of familiarization with systems.

1.2 INSTRUCTORS

- .1 Departmental Representative will provide:
 - .1 Descriptions of systems.
 - .2 Single line flow diagram overlaid with P&ID.
 - .3 Step-by-step sequences of operation for static and dynamic operation c/w design setpoints and limits for normal, abnormal, and emergency situation.
 - .4 Instruction on design philosophy, design criteria, and design intent.
- .2 Contractor and certified factory-trained manufacturers' personnel: To provide instruction on the following:
 - .1 Control logic specific to static and dynamic operation c/w design setpoints and limits for normal, abnormal, and emergency situation.
 - .2 Start-up, operation, shut-down of equipment, components, and systems.
 - .3 Control features, reasons for, results of, implications on associated systems of, adjustment of setpoints of control and safety devices.
 - .4 Instructions on servicing, maintenance, and adjustment of systems, equipment, and components.
- .3 Contractor and equipment manufacturer to provide instruction on:
 - .1 Start-up, operation, maintenance, and shut-down of equipment they have certified installation, started up, and carried out PV tests.

1.3 TRAINING OBJECTIVES

- .1 Training to be detailed and duration to ensure:
 - .1 Safe and reliable operation of systems in normal and emergency modes under all conditions.
 - .2 Effective on-going inspection and measurements of system performance.
 - .3 Proper preventive maintenance, diagnosis, and troubleshooting.
 - .4 Ability to update documentation.
 - .5 Ability to operate equipment and systems under emergency conditions until appropriate qualified assistance arrives.

1.4 TRAINING MATERIALS

- .1 Instructors to be responsible for content and quality.
- .2 Training materials to include:
 - .1 "As-Built" Contract Documents.
 - .2 Operating and Maintenance Manual.
 - .3 TAB and PV Reports.
- .3 Project Manager, Commissioning Manager, and Facility Manager will review training manuals.

1.5 SCHEDULING

- .1 Include in Commissioning Schedule time for training.
- .2 Deliver training during regular working hours, training sessions to be 3 hours long.
- .3 Training to be completed prior to acceptance of facility.

1.6 RESPONSIBILITIES

- .1 Be responsible for:
 - .1 Implementation of training activities.
 - .2 Coordination among instructors.

- .3 Quality of training, training materials.
- .2 Departmental Representative will evaluate training and materials.
- .3 Upon completion of training, provide written report, signed by Instructors, witnessed by Departmental Representative.

1.7 TRAINING CONTENT

- .1 Training to include demonstrations by Instructors using the installed equipment and systems.
- .2 Content includes:
 - .1 Review of facility and occupancy profile.
 - .2 Functional requirements.
 - .3 System philosophy, limitations of systems, and emergency procedures.
 - .4 Review of system layout, equipment, components, and controls.
 - .5 Equipment and system start-up, operation, monitoring, servicing, maintenance, and shut-down procedures.
 - .6 System operating sequences, including step-by-step directions for start-up, shut-down, operation of valves, dampers, switches, adjustment of control settings, and emergency procedures.
 - .7 Maintenance and servicing.
 - .8 Troubleshooting diagnosis.
 - .9 Inter-action among systems during integrated operation.
 - .10 Review of O&M documentation.
- .3 Provide specialized training as specified in relevant Technical Sections of the construction specifications.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION