

## PART 1 - GENERAL

## 1.01 SECTION INCLUDES

- A. Work of this Section includes the requirements for demonstrating and training of installed systems, equipment, and products.
- B. Manufacturer field services and the credit for unused service time is also included herein.

## 1.02 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections require field services to be provided, said services shall be provided by qualified, authorized and factory trained representative(s) of the manufacturer (supplier).
- B. Field services shall generally consist of:
  - 1. installation supervision,
  - 2. verify terms of the manufacturer's warranty,
  - 3. equipment and system calibration,
  - 4. startup supervision,
  - 5. and operation and maintenance instructions to the Owner's employees.
- C. Such services do not include service time to correct a factory fault, correct problems resulting from a factory wiring or control logic error, or errors caused by poor or improper installation by the Contractor.
- D. Sale representatives are not acceptable.
- E. The time specified to be provided under the specification sections shall be exclusive of travel time to and from the facility or site. For the purposes of this Contract, one (1) day shall be defined as eight (8) hours exclusive of breaks or mealtime.
- F. The times specified to be provided by the manufacturer does not relieve the manufacturer from providing sufficient service time to place the equipment or systems into satisfactory operation and to obtain the specified performance. The manufacturer shall provide, as a minimum, the times specified in the Specification Sections.
- G. Submit manufacturers' startup reports (MSR's) in accordance with the requirements contained in Section 013300 - Submittals.

## 1.03 SUBMITTALS

- A. The Contractor shall prepare a list of all manufacturer specified field time required by the technical specifications. Compile this summary listing and submit it to the Engineer for review in accordance with the requirements contained in Section 013300.
- B. Manufacturer's Startup Reports

## 1.04 QUALITY CONTROL

- A. The Contractor shall adhere to all instructions provided by the manufacturer's authorized representative.
- B. All verbal instructions necessary to satisfy performance of the equipment or the system shall be immediately provided by the Contractor. The manufacturer shall document all verbal orders in writing at a time suitable to the Contractor.

- C. All written instructions provided in operation, maintenance, and installation guides and manuals, provided by the manufacturer of such equipment and or system, shall be complied with by the Contractor.
- D. The Contractor shall comply with all manufacturer requirements such that written or implied warranties remain in full force during the time period so specified elsewhere in the technical specifications.
- E. Should manufacturer's instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- F. Actions and/or non performance by the Contractor that may void manufacturer warranties shall not constitute a release of the specified warranty, and all warranty claims made by the Owner shall be paid for by the Contractor as if the manufacturer's warranty was still in effect.

#### 1.05 SCHEDULING - FIELD SERVICES

- A. The Contractor shall arrange field service on dates acceptable to the Owner and Architect.
- B. The service visits shall be scheduled at least 2 weeks in advance so that the Owner and Architect can adequately staff the date.
- C. Operator training will not be allowed until such time as the Manufacturer's Operation and Maintenance Manuals have been supplied and approved by the Architect.
  - 1. The field service technician shall review the contents of the manual with designated employees of the Owner.
  - 2. Field services will not be deemed provided until the MSR is provided.

#### 1.06 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel prior to date of Substantial Completion.
- B. Utilize manufacturer's and vendor's Operation and Maintenance Manuals as basis for instruction. Review contents of the manual with the Owner's personnel in detail to explain all aspects of operation and maintenance.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of the equipment or of the system.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- E. The Contractor shall arrange to have the manufacturer's Operation and Maintenance Manuals updated with information that has been added during start-up activities.
- F. The final manual shall contain the most recent information and reflect all operational and maintenance aspects of the final installed and functioning system or equipment component of the system.
- G. Any changes to control panel wiring diagrams or interconnection wiring schematics shall be made and new prints provided as an update to previously approved manuals.
- H. Manufacturer field time shall be as specified in individual Sections of the Technical Specifications.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**