#### **SECTION 01650**

### STARTING OF SYSTEMS

#### PART 1. GENERAL

#### 1.01 SECTION INCLUDES

- A. Starting Systems
- B. Demonstration and Instructions
- C. Testing, Adjusting, and Balancing

# 1.02 RELATED SECTIONS

- A. Section 01400 Quality Control: Manufacturers' Field Reports.
- B. Section 01700 Contract Closeout: System Operation and Maintenance Data and Extra Materials.

# 1.03 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Authority seven (7) days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions which may cause damage.
- D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of responsible Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 01400 that equipment or system has been properly installed and is functioning correctly.

# 1.04 <u>DEMONSTRATION AND INSTRUCTIONS</u>

- A. Demonstrate operation and maintenance of products to Authority's personnel two (2) weeks prior to date of final inspection.
- B. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Authority' 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 each item of equipment at agreed-upon times, at equipment location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

# 1.05 TESTING, ADJUSTING, AND BALANCING

- A. Contractor shall perform testing, adjusting and balancing. Contractor shall pay for services.
- B. Reports will be submitted to the Authority indicating observations and results of tests and indicating compliance or non-compliance with specified requirements and with the requirements of the Contract Documents.

# PART 2. PRODUCTS

Not Used.

### PART 3. EXECUTION

Not Used.