# SECTION 01750 - STARTING AND ADJUSTING

## PART 1 – GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section includes, but is not limited to, the following:

1) Starting systems.

2) Demonstration and instructions.

3) Testing, adjusting, and balancing.

B. Related Sections:

1) Section 01450 – Quality Control: Mechanical and electrical testing.

2) Section 01770 – Closeout Procedures: System operation and maintenance data.

3) Division 15 and 16 Sections: Instructions for starting and adjusting specific equipment and systems.

## PART 2 – PRODUCTS

Not Used

## PART 3 – EXECUTION

### 3.1 STARTING SYSTEMS

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Coordinate schedule for start-up of various equipment and systems.

C. Notify Construction Manager, Architect/Engineer and Owner seven (7) days prior to start-up of each item.

D. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions that may cause damage.

E. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

F. Verify wiring and support components for equipment are complete and tested.

G. Execute start-up under supervision of responsible manufacturer's representative and Contractor's personnel in accordance with manufacturer's instructions.

H. 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.

I. Submit a written report in accordance with Section 01450 that equipment or system has been properly installed and is functioning correctly.

## 3.2 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two (2) weeks prior to date of Substantial Completion.

B. Demonstrate project equipment instructed by a qualified representative who is knowledgeable about the project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed upon times, at equipment location.

F. Prepare and insert additional data in operation and maintenance manuals when need for additional data becomes apparent during instruction.

## 3.3 TESTING, ADJUSTING AND BALANCING

A. Owner will appoint, employ, and pay for services of an independent firm to perform testing, adjusting and balancing.

B. The independent firm will perform services specified in Division 15 and 16 sections.

C. Independent firm will submit reports to the Architect/Engineer, Owner and Contractor indicating observations and results of tests and indicate compliance or non-compliance with specified requirements and with the requirements of the Contract Documents.

D. Adjust operation components for proper operation without binding. Adjust equipment for proper operation.

E. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

F. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Section 01450.

END OF SECTION