

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittal requirements for manufacturers' operation and maintenance (O&M) data.
- B. Submittal requirements for O&M data notebooks.

1.02 UNIT PRICES

- A. The value and payment of approved equipment operation and maintenance manuals is incidental to the amount bid for equipment and installation. Project retainage will not be released until O&M manuals have been delivered and accepted by Owner.

1.03 REQUIREMENTS

- A. Furnish manufacturers' operation and maintenance data notebooks for equipment and components as required by the individual technical specifications in accordance with all sections and provisions of these specifications.
- B. Furnish O&M data notebooks in accordance with the requirements of this Section.

1.04 SUBMITTALS

- A. Submit O&M data for manufacturers' equipment and components, as required.
- B. For projects which include multiple facilities, provide separate O&M data submittals noted accordingly.
- C. Manufacturers' O&M data submittals shall have been reviewed and accepted by the Owner's Representative prior to requesting operational testing.
- D. Submit three (3) copies of complete O&M data notebooks and electronic copies on disks meeting the requirements of this Section to the Owner's Representative 14 days prior to the scheduled demonstration testing and facility start-up.
- E. Compile the O&M data notebook of all approved manufacturer O&M data submittals previously reviewed and accepted by the Owner's Representative and organize in accordance with the requirements of this Section.

- F. Incorporate revisions or additional data required for the O&M data notebook, due to system start-up and demonstration testing, and resubmit as a condition of final payment.

#### 1.05 O&M DATA

- A. For each product or system: list names, addresses, e-mail addresses and telephone numbers of suppliers and service representatives, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- D. Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- E. Warranties, Guarantees and Bonds: Bind in a copy of each.

#### 1.06 O&M REQUIREMENTS

- A. For each item of equipment and each system include a description of unit or system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include function, normal operating characteristics, and limiting conditions. Include performance curves where applicable, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- B. Data submitted on equipment shall include complete maintenance instructions (including preventive and corrective maintenance) and parts lists in sufficient detail to facilitate ordering replacements.
- C. Operating Procedures: Include start-up, and normal operating instructions and sequence. Include regulation, control, stopping, shut-down, and emergency instructions.
- D. Provide servicing and lubrication schedule, and list of lubricants required. Cross-reference lubricants to products offered by at least three major lubricant suppliers. Note lubrication points on Drawings.
- E. Include manufacturer's printed operation and maintenance instructions.
- F. Include sequence of operation by controls manufacturer.
- G. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams, and diagrams required for maintenance.

- H. Troubleshooting guides.
- I. Complete spare parts list with predicted life of parts subject to wear, list of spare parts recommended on hand for both initial start-up and for normal operating inventory, and local or nearest source of spare parts availability.

1.07 O&M DATA NOTEBOOKS

- A. The Contractor shall compile O&M data notebooks for each facility consisting of the assembled manufacturer's O&M data submittals which were previously reviewed and accepted by the Owner's Representative. The O&M data notebooks are required before demonstration testing or start-up activities.
- B. Submit O&M data notebooks, bound in 8½ x 11 inch text pages, 3-ring/D binder notebooks with durable plastic covers as well as electronic media containing the O&M manuals in acceptable electronic format.
- C. Provide binder covers and spines with computer printed title "OPERATION AND MAINTENANCE DATA", title of project, facility name and address.
- D. For projects with multiple facilities, provide separate O&M data notebooks specific to each facility.
- E. Provide separate binder notebooks based on category of equipment or components submitted. Note as either "Mechanical", "Electrical", or "Instrumentation" on the cover and spine. DO NOT combine these into one binder.
- F. All binder notebooks shall be provided with labeled, tabbed, dividers logically arranged, and shall include a Table of Contents noting all sections, drawings, diagrams, vendor data, and other documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION