

SECTION 232545 - CHEMICAL TREATMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cleaning of piping systems.
- B. Treatment of closed systems.

1.02 SUBMITTALS

- A. Product Data: Provide chemical treatment materials, chemicals, and equipment including connection requirements.
- B. Manufacturer's Installation Instructions: Indicate placement of equipment in systems, piping configuration, and connection requirements.
- C. Manufacturer's Field Reports: Submit under provisions of the contract.
- D. Manufacturer's Field Reports: Indicate start-up of treatment systems when completed and operating properly. Indicate analysis of system water after cleaning and after treatment.

1.03 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of the contract.
- B. Operation and Maintenance Data: Include data on all equipment including procedures, and treatment programs. Include step by step instructions on test procedures including target concentrations.

1.04 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing or producing services and products specified in this Section with minimum ten years documented experience. Company shall have local representatives with water analysis laboratories and full time service personnel.

1.05 REGULATORY REQUIREMENTS

- A. Conform to applicable code for addition of non-potable chemicals to building mechanical systems, and for to public sewage systems.

1.06 WATER TREATMENT SERVICE

- A. Furnish services of a water treatment company for initial boil out and cleaning of new boiler and piping.

- B. Provide initial treatment and one follow-up visit after two months from the date of initial treatment.
- C. Provide the owner a service instruction manual complete with written instructions for chemical feeding, bleed-off, testing procedures and safety and handling procedures, complete with Material Safety Data Sheets on all materials supplied.
- D. Demonstrate to owner's personnel the proper application of written instructions by following the service instruction manual with a minimum of four (4) hours training in the safety handling application and maintenance procedures.
- E. Provide all chemicals, chemical feeding equipment and testing equipment as required.
- F. Provide technical service visits to perform field inspections and make water analysis on site. Detail findings in writing on proper practices, chemical treating requirements, and corrective actions needed. Submit two copies of field service report after each visit.
- G. Provide laboratory and technical assistance services during this maintenance period.
- H. Provide on site inspections of equipment during scheduled shutdown to properly evaluate success of treatment program, and make recommendations in writing based upon these inspections.
- I. Strainers and equipment low points shall be periodically observed to strain out loosened debris.

1.07 MAINTENANCE MATERIALS

- A. Provide maintenance materials under provisions of the contract.
- B. Provide one year supply of chemicals and testing equipment for treatment and testing.

PART 2 PRODUCTS

2.01 MANUFACTURER/SERVICE PROVIDER

- A. Rhomar Water Management Inc.
- B. Substitutions: Under provisions of the contract.

2.02 MATERIALS

- A. System shall have:
  - 1. Chemical Dispensing Pump
  - 2. Boiler Pro 903 chemical treatment
  - 3. Treatment Test Kit
  - 4. Blowdown Tester

PART 3 EXECUTION

3.01 PREPARATION

- A. Systems shall be operational, filled, started, and vented prior to cleaning. Use water meter to record capacity in each system.
- B. Place terminal control valves in open position during cleaning.

3.02 CLEANING SEQUENCE

- A. New boiler shall be boiled out with an alkaline boiling out compound to remove grease, oil and foreign matter, at the rate of 50 pounds per 1000 gallons of water in the boiler or as recommended by the manufacturer. Boil out period shall be a minimum of 48 hours or as recommended by boiler manufacturer.
- B. Circulate for 48 hours then drain quickly as possible. Refill with clean water and circulate for 24 hours then drain. Refill and repeat procedure until system cleaner is removed. Use neutralizing agents as recommended by the supplier. Clean strainers and screens after each cycle.
- C. Isolate boiler and thoroughly clean and flush to remove all mill scale and oil. Verify chemical compatibility with the boiler manufacturer prior to cleaning. Petroleum based cleaners shall not be used.
- D. This work shall be performed by this Contractor under the supervision of a qualified representative of the water treatment contractor.

3.03 SYSTEM TREATMENT

- A. Install isolating and drain valves and necessary piping and connect into existing water systems as per manufacturer's recommendations. Chemicals shall be introduced when need is indicated by sample testing.
- B. Provide initial treatment chemicals and test water for proper concentrations. Submit lab test results to the Engineer.
- C. Service provider shall return after two months of operation to check and adjust treatment chemicals and retest water for proper concentrations. Submit lab test results to the engineer.
- D. Thoroughly train facility representative in methods of testing and adding chemicals. Provide equipment and materials to permit owner to perform future testing and addition of chemicals. Provide product ordering information for replacements.

END OF SECTION