

**INDEX TO**  
**SECTION 23 45 00 – AUTOMATIC SAMPLING EQUIPMENT**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.01	Related Work	23 45 00-1
1.02	Scope	23 45 00-1
1.03	Tools and Test Equipment	23 45 00-1
1.04	Spare Parts	23 45 00-1
1.05	Equipment Manufacturer	23 45 00-1
<b>PART 2 – PRODUCTS</b>		<b>23 45 00-2</b>
<b>PART 3 – EXECUTION</b>		
3.01	General	23 45 00-8
3.02	Preparation	23 45 00-8
3.03	Warranty	23 45 00-8

**SECTION 23 45 00****AUTOMATIC SAMPLING EQUIPMENT****PART 1 – GENERAL****1.01 RELATED WORK**

- A. Division 22 – Mechanical
- B. Division 25 – SCADA
- C. Division 26 – Electrical

**1.02 SCOPE**

- A. Furnish and install two (2) automatic liquid samplers; one (1) for the plant influent and one (1) for the plant effluent as shown on the Drawings and described in the Specifications.

**1.03 TOOLS AND TEST EQUIPMENT**

- A. Six (6) complete sets of Operation and Maintenance Manuals shall be provided.

**1.04 SPARE PARTS**

- A. Miscellaneous Spare Parts
  - 1. One (1) year supply of the manufacturer's recommended spare parts for the equipment furnished.
  - 2. The spares listed above shall be packed in a manner suitable for long-term storage and shall be adequately protected against corrosion, humidity and temperature.

**1.05 EQUIPMENT MANUFACTURER**

- A. Manufacturer for flow metering equipment are as follows:
  - 1. The sampler shall be **N-CON Model Sentinel M96** Automatic Liquid sample.

**PART 2 – PRODUCTS**

- 2.01 The sampler shall be the flow through dipper type. The sampler shall be capable of representatively collecting and preserving by refrigeration liquid samples.
- 2.02 The refrigerated sampler cabinet shall be constructed of corrosion resistant, resin transfer molded fiberglass. The sample compartment door shall have a compressible gasket seal and positive mechanical latch.
- 2.03 The sampler shall be capable of receiving a 5-50 gpm flow. The sample chamber shall have a 2-inch Schedule 80-PVC inlet and 3-inch Schedule-80 PVC outlet. The sampler shall be equipped with an adjustable weir plate to provide a constant liquid level within the chamber. The sample chamber shall have a lift-off clear cover. The sample compartment shall be lockable.
- 2.04 The sample chamber tub shall be a single molded piece without wall and floor seams.
- 2.05 Refrigeration temperature shall be maintained at 39 degrees F (4 degrees C) in 120 degrees F (49 degrees C) ambient conditions and controlled by a hermetically sealed air sensing thermostat. The refrigerator shall be equipped with a 1/6 hp compressor, fan cooled condenser, front ventilation, and silver brazed connections. All refrigeration components and copper plumbing shall be protected with a phenolic resin coating.
- 2.06 A cam operated dipper assembly with a 25-mL sample volume shall rotate through a 90-degree cycle with every initiation from the sampler's timer/controller or an external flow meter signal. The sample shall be delivered through a sealed 1-5/8-inch diameter transfer tube to the sample container located within the refrigerated sample compartment.
- 2.07 The sample volume shall be 25-mL per cycle and may be multiplied each interval from 1 to 99. It shall be possible to preset the number of samples from 24 to 288 to be taken in composite mode. Sampler operation shall terminate automatically with a completed sample program and shall be accomplished electronically with no switch or sensor coming in contact with the liquid. A front panel light shall indicate the completed program condition.
- 2.08 It shall be possible to manually initial a sample cycle without interrupting the program. There shall also be provision to delay the sampling program 1 to 9999 minutes.
- 2.09 The samples shall have the built-in and switch selectable capability for both timed cycle and flow proportional sampling. The interval shall be adjustable from 1 to 9999 minutes in one-minute increments. In the flow proportional mode, the sample shall have both the capability to accumulate 1 to 9999 contact closures or receive a 4-20 mA signal.
- 2.10 The sampler shall operate as a composite unit.
- 2.11 The sampler shall be provided with one (1) 3-gallon polyethylene composite container.
- 2.12 The sampler shall operate from 115 Vac, 60 Hz power.
- 2.13 Exterior dimension of the sampler shall not exceed 52.25" x 19" x 20.5".
- 2.14 The sampler shall be supplied with flanged fittings for the 2-inch inlet and the 3-inch outlet connections.

- 2.15 The sampler shall be supplied with a 4–20 mA input capability for flow paces sampling from an external flow meter.
- 2.16 All parts and components of the sampler shall be suitable for exterior installation in a corrosive environment.
- 2.17 All necessary SCAD contacts required by Division 25 shall be included with the samplers.

### **PART 3 – EXECUTION**

#### **3.01 GENERAL**

- A. All components shall be installed and tested in accordance with the manufacturer's written instructions.

#### **3.02 INSTALLATION**

- A. The Contractor is responsible for the complete furnishing and installation of both the influent and effluent samplers. The Contractor is responsible for supplying the required inlet and outlet piping for withdrawal and disposal of the sample. The Contract is responsible for all electrical and instrumentation connections.

#### **3.03 WARRANTY**

- A. All components shall be warranted one year from the final acceptance of the system.

END OF SECTION