

Date October 13, 1999
Job Title Farmer's Korner Water System
Subject Addendum No. 1

I. Overview

Addendum No. 1 addresses revisions to specification sections:

- Section 11240 – Chlorination Equipment
- Section 15100 – Piping and Valves

Section 11240 is attached with Addendum No. 1 revisions highlighted.

Section 15100: Replace paragraph 2.1 A 2. with the following:

2. Aerator Effluent Piping: Provide pipe that conforms to AWWA C900. Provide fittings as shown on the drawings. All piping and fittings shall be rated for a pressure of 150 psi at 75° F.

3 = REVISIONS FOR
ADDENDUM #1 10/13/77

SECTION 11240

CHLORINATION EQUIPMENT

PART 1 GENERAL

1.1 DESCRIPTIONS

- A. Work Included: Furnish and install all materials, equipment and labor required to install and test the chlorination system complete with, chemical metering pump, agitator, 50 gal chlorine solution tank, piping, valves, corporation stop, controls, general electrical equipment, and all other appurtenances required to render a complete and functional chlorination system.
- B. Related Work
 - 1. Section 15010 - Basic Mechanical Requirements.
 - 2. Section 16050 - Electrical Basic Materials and Methods.

1.2 REFERENCE STANDARDS

The work in this section is subject to the requirements of applicable portions of the following standards:

- 1. NEMA Standards
- 2. OSHA Rules and Regulations
- 3. Chlorine Institute

1.3 SUBMITTALS

Complete list of equipment proposed to be installed with manufacturer's information, diagrams, characteristic curves, shop drawings, operation and maintenance instructions, including but not limited to the following shall be submitted:

- 1. Metering pump
- 2. Valves, corporation stop
- 3. Agitator
- 4. Chlorine solution tank
- 5. Pump suction tube shield

PART 2 EQUIPMENT

2.1 CHLORINE FEED EQUIPMENT

- A. Metering Pump: Metering pump shall be capable of metering 6 gallons per hour of chlorine solution into a maximum backpressure of 20 psig. The liquid end shall be Plexiglass (Acrylic) with built-in coarse valve and needle valve for air bleed, manually adjusted for continuous degassing of process fluid and self-priming against pressure. The suction and discharge valves shall be PVC, with double ball check design.

Accessories shall include per each pump required: One (1) foot valve and strainer, one (1) injection check valve, twenty-five (25) feet of tubing compatible with the fluid pumped, one (1) two-stage

float switch provided for monitoring tank level, and one (1) pump-mounted multi-function, fixed-spring pressure diaphragm-type valve for backpressure/antisiphon protection, pressure relief, priming and discharge line drain.

Metering pump shall be Model G/4b 0223 NP1 as manufactured by ProMinent Fluid Controls (PFC), or approved equal.

- B. Agitator: Contractor shall provide a Chlorine-Solution Tank-Agitator for the mixing of the chlorine solution. Provide a Suction Tube shield with the mixer to protect the suction tubing of the metering pump. The Agitator shall be Model 7818589.9 as manufactured by Prominent Fluid Controls or approved equal.
- C. Solution Tank: Contractor shall provide a 50 gallon Polyethylene Chlorine Solution Tank with graduated markings on side of tank. The cover shall include mounting spot for the metering pump with holes for chemical addition, mixer mounting, and tube shield. Cover shall be reinforced with stainless rods. Chlorine Solution Tank Cover shall be Model CPS-50 as distributed by Chem Pump Sales, Inc. or approved equal.
- D. Corporation Stop and Nozzle Assembly: Contractor shall provide equipment to insure proper chemical dispersion into 6" DI pipe. Wetted material shall be PVC - size 1" NPT. Corporation stop and nozzle assembly shall be model CS-100-PVC as manufactured by Neptune Metering Pump Company or approved equal.
- E. Spare Parts Kit: Contractor shall provide a spare parts kit for each metering pump required. The kit shall include one (1) diaphragm, one (1) suction valve, one (1) discharge valve, two (2) connector sets, two (2) valve balls, one (1) set of seals. The spare parts kit shall be Model 912696.2 as manufactured by Prominent Fluid Controls or approved equal.
- F. Test Kit: Provide a chlorine test kit for testing free and total chlorine. Test kit shall be Hach Model No. CN-70 as distribed by Chem Pump Sales, Inc. or approved equal.

PART 3 EXECUTION

3.1 QUALITY ASSURANCE

Provide chlorination equipment from a manufacturer who has been manufacturing the specified equipment for similar use for a minimum of 5-years. Provide components and accessories coordinated and supplied by a single manufacturer.

3.2 EQUIPMENT INSTALLATION

Installation shall result in a complete and properly operating pumping system. Proper adjustment of all devices shall be made. Install equipment with suitable access clearance for maintenance or removal of replaceable parts and components, and with necessary couplings or flanges to perform maintenance and removal without removing connecting appurtenances.

3.3 INSPECTION, SUPERVISION, START-UP AND OPERATION AND MAINTENANCE TRAINING

The Contractor shall arrange for the services of a qualified representative be furnished to supervise and inspect the installation; to instruct, supervise, and assist in the adjustment of the equipment; to provide start-up services, and to provide operation and maintenance training after installation of the equipment.

The manufacturer's representative shall revisit the job site as often as necessary until all malfunctions are corrected and the equipment installation and operation are satisfactory to the Engineer.

The Contractor shall notify the Owner and the Engineer 48 hours prior to equipment start-up procedures.

The manufacturer's representative shall furnish to the Engineer and Owner a written report certifying the equipment: (1) has been properly installed, (2) is in accurate alignment, (3) is free from any undue stress, and (4) has been operated and tested satisfactorily.

The representative shall provide one day of instruction for maintenance personnel in the operation and maintenance of the equipment. The cost of the required services of the representative shall be included in the bid price for furnishing the equipment.

3.4 OPERATION AND MAINTENANCE MANUALS

Furnish three (3) sets of operation and maintenance instructions for each individual component provided with the pump installation. Manuals shall cover operating, maintenance and servicing procedures.

END OF SECTION