



**SAWS East Houston St. Pump Station Disinfection System Upgrades
Solicitation No. CO-00546**

Job No.: 21-6002

ADDENDUM 3
8/29/22

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

1. **Question: What is SAWS estimate of the amount of Sodium Hypochlorite required for the 30 day operational period?**

Response: The Contractor shall supply sodium hypochlorite to fill both 1,550 gallon bulk tanks for the 30-day operational period.

2. **Question: Who is SAWS approved Sodium Hypochlorite supplier?**

Response: SAWS has a contract with the sodium hypochlorite supplier shown below. The Contractor is not required to use this supplier. The Contractor will not be able to use the SAWS contract but is welcome to use the supplier.

Brenntag Southwest, Inc.
704 E. Wintergreen Rd.
Lancaster, TX 75123
Phone: (972) 218-3500
POC: Dakota Doyle, Sales Manager

3. **Question: At Completion of the 30-day operational test, will the Contractor be required to top off/refill the Bulk Storage Tank?**

Response: After completion of a successful 30-day operation test, SAWS will refill the bulk storage tanks for ongoing operations. If the 30-day operation test is not successful, the Contractor shall refill the bulk storage tanks as needed until a successful 30-day operation test is obtained.

4. **Question: Is this water quality analyzer tap existing or must the Contractor install?**

Response: The Contractor shall install this tap as part of the project.

5. Question: If new tap, who drains the existing GST for access?

Response: SAWS will drain the existing GST for access. Contractor shall coordinate with SAWS on the scheduling of the installation of the tap.

6. Question: How long can this system be down?

Response: The maximum shutdown time of the tank is 72 hours.

7. Question: After draining, will the inside of the tank (floor) need to be cleaned?

Response: There is no need to remove sediment, the tap can be installed and the tank returned to service.

8. Question: After tap installation, sand-blasting, and protective coating will the tank need to be cleaned and disinfected?

Response: The tank will not need to be cleaned and disinfected after the tap is installed.

9. Question: Will any water quality testing be required before the GST is released for service?

Response: No testing is required before the GST is returned into service.

10. Question: In specification section #40 70 05 You call out for an Electronic Gauge Pressure Transmitter part number #3051. Drawing #I-5 calls out for Radar Level Transmitter. What is your intent?

Response: The intent is to provide a radar level transmitter. Electronic Gauge Pressure Transmitter section in Specification 40 70 05 will be deleted. The radar level transmitter will be specified in specification section 43 41 43 Polyethylene Tanks by replacing 2.01.D.3 Ultrasonic Level Indicator/ Transmitter with the following, "Radar Level Transmitter - Manufacturer shall furnish and install radar level indicator/ transmitter shown on design drawings and as specified below.

- A. Subject to compliance with the Contract Documents, the following Manufacturers are acceptable:
 - 1. Siemens LR-250
 - 2. Approved equal
- B. The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features, and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety.
- C. General
 - 1. Principle: To pulse K Band signals form the transducer toward the liquid and receive the echo measuring the time between sending and receiving the pulse signal and proportioning that to the measured liquid depth.
- D. Type:
 - 1. Polypropylene lens Antenna sensor
 - 2. With 3 inch (80 mm) polypropylene flanged
 - 3. Polyester powder coated exterior
- E. Function Performance
 - 1. Function: To sense variable liquid level.
 - 2. Input Power: From transmitter signal wire 4 – 20 mA 24 VDC.
 - 3. Range Capability: 1 feet to 65 feet

4. Beam Angle: 10 degrees
 5. Shall have integral temperature compensation unit.
 6. Accuracy. Current output 1 percent of selected full-scale range.
 7. Repeatability. 0.25 percent full scale.
- F. Physical
1. Mounting: flange mounted. Flange shall be as shown on plans", 150 lb. RF. All flanges for chemical tanks shall be coated to match the antennae and flange coatings.
 2. Antenna shall be shaped to optimize reading accuracy and desired location.
- G. Options/Accessories
1. Provide stainless steel hardware
 2. Provide sunshield for the instrument"

11. Question: In specification section #40 70 05 you show a Magnetic Flow Meter section. Is there a Magnetic Flow Meter on this project?

Response: There is no magnetic flow meter on this project. The section of the specification will be deleted.

12. Question: On drawing I-6 you show (1) AIT/AE-210 Analyzer. I don't see a specification on it. Please provide specs.

Response: The following text on specification section 46 33 00 – Liquid Chemical Feed Equipment has been added, " 2.01.B.1.d. Chlorine Analyzer (i) Provide free chlorine analyzer per the drawings. On sheet MD-1 Detail B the following note has been added, "Instrument shall be DEPOLOX 400 M or approved equal."

13. Question: In spec section #40 61 21.3.06.B.1. You call out Manufacturers Standard Training. Can you please tell me what designed standard training courses are required from the Manufacturer?

Response: Under Specification 40 61 21, paragraph 3.06.B, Delete subsection 1 – Manufacturer's Training in its entirety and replace with the following:

1. PLC Software and Hardware Training:
 - a. The PCSI shall provide training which shall last no less than 8 hours for PLC software and hardware training.
 - b. The training shall be for ten Owner's personnel on a day coordinated with the Owner's schedule prior to the 30 Day SAT.
 - c. The training shall include PLC uploading, downloading, navigating, PLC Hardware fundamentals with troubleshooting for instrumentation I/O.
 - d. No top end or HMI training is required.

14. In spec section #40 67 17 you say the SCADA/PLC Panel shall be NEMA 3R. On drawing ID-1 you say the PLC panel needs to be NEMA 4X SS. What is your intent?

Response: Panel shall be provided as NEMA 4X, 316 SS. The specification will be updated to reflect the change.

15. Will the tank be drained to allow for analyzer tap and coating repair?

Response: SAWS will drain the existing GST for access. Contractor shall coordinate with SAWS on the scheduling of the installation of the tap.

16. Is there any further design or detail work needed by SAWS or Engineer on the equipment canopy? If so will further design work require a Texas PE stamp?

Response: The canopy is designed in the contract drawings. Contractor shall submit shop drawings of the canopy for review in accordance with the specifications. Shop drawings do not need to be sealed by a Texas PE.

17. Are there specific areas SAWS will require hydro excavation opposed to conventional excavation method?

Response: Refer to Specification 01 15 00 Item 7- Subsurface Utility Investigation. Contractor shall hydro vacuum foundations, underground utility improvements, and underground electrical duct banks to identify all existing underground tie-in locations and utility conflicts of all existing utilities shown and not shown on the plans prior to excavation for proposed improvements. Conventional excavation methods are allowed for installation of improvements.

18. Is there a designated source for temporary power?

Response: The temporary power source will be a contractor provided diesel generator sized, provided, and fueled by the contractor during the construction of the new system.

19. How long will SAWS want to have the new equipment ran on temporary power before it can be switched over to permanent power?

Response: The intent is to keep and maintain the temporary system during startup and testing. The temporary system is actually for the existing chemical feed facility and not for the new facility. After the 30-day site testing of the new facility on permanent power, the temporary system can be removed, and the existing chemical facility will be demolished at that time.

20. In the Invitation to bidders and in the summary of work spec 01 10 00 it states that the Canopy to be provided to be Stainless Steel, however on page S-7 note 4, it states for all structural members to be Galvanized. Could you confirm whether the canopy needs to be Stainless Steel or Galvanized?

Response: Structural members for the canopy shall be galvanized.

CHANGES TO THE SPECIFICATIONS

1. Specification 40 61 21 Process Instrumentation and Control System Testing,
 - a. Paragraph 3.06.B.1: Delete subsection 1. Manufacturer's Training in its entirety and replace with new subsection 1:
 1. PLC Software and Hardware Training:
 - a. The PCSI shall provide training which shall last no less than 8 hours for PLC software and hardware training.
 - b. The training shall be for ten Owner's personnel on a day coordinated with the Owner's schedule prior to the 30 Day SAT.
 - c. The training shall include PLC uploading, downloading, navigating, PLC Hardware fundamentals with troubleshooting for instrumentation I/O.
 - d. No top end or HMI training is required.

2. Specification Section 40 67 17 – Process Control Panels and Enclosures
 - a. Paragraph 1.01.A: Replace Paragraph 1.01.A in its entirety with the following:
 - A. Furnish new East Houston Chemical Building PLC panel to monitor and control the new equipment associated with the Bulk Hypochlorite Facility and equipment as specified in the detailed requirements of this Section, and logic and schematics as shown on the Electrical and Instrumentation Drawings.
 - b. Paragraph 2.02.A.1: Replace Paragraph 1 in its entirety with the following:
 1. All panels shall be NEMA 4X, 316 stainless steel unless otherwise specified or shown on the drawings.

3. Specification Section 40 70 05 – Field Instruments
 - a. Paragraph 2.02: Delete 2.02 Pressure Transmitter (Tank Level) in its entirety.
 - b. Paragraph 2.03: Delete 2.03 Flow Meter and Transmitter in its entirety.
 - c. Renumber subsequent paragraphs.

4. Specification Section 43 31 43 – Polyethylene Tanks

Replace 2.01D.3 Ultrasonic Indicator/ Transmitter with the following,

“Radar Level Transmitter - Manufacturer shall furnish and install radar level indicator/ transmitter shown on design drawings and as specified below.

 - A. Subject to compliance with the Contract Documents, the following Manufacturers are acceptable:
 1. Siemens LR-250
 2. Approved equal
 - B. The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features, and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety.
 - C. General
 1. Principle: To pulse K Band signals form the transducer toward the liquid and receive the echo measuring the time between sending and receiving the pulse signal and proportioning that to the measured liquid depth.
 - D. Type:
 1. Polypropylene lens Antenna sensor
 2. With 3 inch (80 mm) polypropylene flanged
 3. Polyester powder coated exterior
 - E. Function Performance
 1. Function: To sense variable liquid level.
 2. Input Power: From transmitter signal wire 4 – 20 mA 24 VDC.
 3. Range Capability: 1 feet to 65 feet
 4. Beam Angle: 10 degrees
 5. Shall have integral temperature compensation unit.
 6. Accuracy. Current output 1 percent of selected full-scale range.
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- F. Physical
 - 1. Mounting: flange mounted. Flange shall be as shown on plans", 150 lb. RF. All flanges for chemical tanks shall be coated to match the antennae and flange coatings.
 - 2. Antenna shall be shaped to optimize reading accuracy and desired location.
 - G. Options/Accessories
 - 1. Provide stainless steel hardware
 - 2. Provide sunshield for the instrument"
5. Specification Section 46 33 00 – Liquid Chemical Feed Equipment
Include 2.01.B.1.d Chlorine Analyzer (i) Provide free chlorine analyzer per drawings.
6. Specification Section 01 10 00 – Summary of Work
Section 1.11.A.a.: remove text "stainless-steel canopy" and replace with "galvanized steel canopy".

CHANGES TO THE PLANS

- 1. Drawing MD-1
On Detail B add note 2, "Instrument shall be DEPOLOX 400 M or approved equal.

END OF ADDENDUM

This Addendum is 6 pages in its entirety.

Tadeusz J Stawasz
CP&Y

