



**ADDENDUM NO. 2**

**TO**

**CITY OF TORRINGTON  
CONNECTICUT**

**BIDDING AND CONTRACT REQUIREMENTS  
AND SPECIFICATIONS**

**FOR**

**WATER POLLUTION CONTROL FACILITY  
ULTRAVIOLET DISINFECTION SYSTEM  
PRESELECTION BID NO. UVS-033-092216**

**September 16, 2016**



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## ADDENDUM NO. 2

### CITY OF TORRINGTON, CONNECTICUT

#### WATER POLLUTION CONTROL FACILITY ULTRAVIOLET DISINFECTION SYSTEM PRESELECTION BID NO. UVS-033-092216

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Informal discussions held via email or over the telephone are informational only. All official changes to the Contract Documents are made only by addenda. The following changes are hereby made a part of the Contract Documents.

#### GENERAL

Not Used

#### DRAWINGS

Not used.

#### SPECIFICATIONS

1. On Bid form listed in 00310 - 8. A.5, “\_\_\_\_\_ Fixed pricing for Maintenance Service Agreement completed in its entirety”, **INSERT**“NA” for this item for submission of final bid.
2. In Specification Section 11234 - 2.2.A.9, **DELETE** text “One UV intensity analyzer” and **REPLACE** with “NA”.
3. In Specification Section 11234 - 1.2.K., **DELETE** text “The UV System shall consist of two (2) independent units / control panels integrated into the plant Instrumentation and Controls system via Ethernet TCP/ICP data communication. Each unit/control panel shall accommodate a 6” by 6” space designated for the installation of a communication protocol converter furnished by the Division 13 System Integrator to be installed, powered, and configured by the UV System Manufacturer. The Division 13 System Integrator and the UV System Manufacturer shall coordinate in the configuration requirements and settings for the protocol converter, network addressing, and transmission of signals as specified herein.” in its entirety and **REPLACE** with “The UV System shall consist of one (1) independent units / control panel integrated into the plant Instrumentation and Controls system via Ethernet TCP/ICP data communication. The control panel shall accommodate a 6” by 6” space designated for the installation of a communication protocol converter furnished by the Division 13 System Integrator to be installed, powered, and configured by the UV System Manufacturer. The Division 13 System Integrator and the UV System Manufacturer shall coordinate in the configuration requirements and settings for the protocol converter, network addressing, and transmission of signals as specified herein.”

4. In Specification Section 11234 - 2.1.K.3, **DELETE** text “The two, (2) System Control Centers (SCC) shall be provided to monitor and control the UV Disinfection System, one (1) per UV System Train. The SCC shall be a separate enclosures to house the system programmable logic controller (PLC), operator interface terminal (OIT), control and instrumentation equipment, power supplies, protocol converters, surge suppression, relays, and termination points.” in its entirety and **REPLACE** with “One, (1) System Control Centers (SCC) shall be provided to monitor and control the UV Disinfection System. The SCC shall be a separate enclosure to house the system programmable logic controller (PLC), operator interface terminal (OIT), control and instrumentation equipment, power supplies, protocol converters, surge suppression, relays, and termination points.”

## **QUESTIONS AND ANSWERS**

### ***Questions from Trojan Technologies***

Q1: Bid Form 00310 8. A. 5 - “Fixed pricing for Maintenance Service Agreement completed in its entirety” Can you please advise the details/terms of the maintenance service agreement they would like us to provide pricing for.

A1: All Bidders, please insert “NA” and initial under item 8. a.5.

Q2: We see that only Ozonia and TROJAN were named with “approved equal” listed, has any other manufacturers been approved as equals? if you are going to approve additional manufacturers will you be officially adding any of them as approved equal by addendum so those who put all the work up front know what we are going to be up against? Again, until now and since the spec came out its been our understanding that only us and Suez were listed as approved and it is imperative that we know if the playing field has changed.

A2: The bid is open to any manufacturer that can meet the specifications. A comprehensive weighted evaluation of all submittals will be conducted for all aspects of the equipment including capital and O&M costs and be presented to the CT DEEP for approval and pre-selection.

### ***Questions from Calgon Carbon UV Technologies***

Q3: Section 00310 6.a - The proposed system’s validation report is confidential and will be submitted following the signing of a non-disclosure agreement (NDA) by the reviewing engineer. Is it possible to get a non-disclosure agreement prior to the bid? If not can the submittal of the validation report, be following the award of contract and signing of an NDA?

A3: . An NDA will not be executed prior to the bid. If the bidder chooses not to do so, please note it in the exceptions with justification and it will be taken into consideration during the weighted evaluation.

Q4: Section 11234 1.2.J & 2.1.K.3 This section states UV system shall consist of two (2) independent unit's/control panels. One (1) System Control Center (SCC) or control panel is typically supplied for the entire UV system that will integrate with the plant SCADA via Ethernet. Each bank of lamp is provided with a dedicated Power Distribution Center (PDC). The PLC in the SCC will communicate with the control card in each of the PDC. Please confirm the requirement for a second control panel.

A4: One SCC is required.

Q5: 2.1.D.3 & .5 Our electronic ballasts are housed in the PDC and not in the UV module enclosure.

A5: Please list as an exception with explanation.

Q6: 2.1.H.5 The proposed mechanical automatic wiping system is powered by the PDC therefore a separate HSC is not required. Please add HSC, if required.

A6: Please list as an exception with explanation.

Q7: 2.1.H.7 The proposed mechanical wiping system utilizes stainless steel wipers which are capable of effectively removing quartz sleeve fouling without chemicals. Out of channel cleaning tanks are for hard water where other parts (frames, etc.) get deposits and need cleaning. Some systems that have in place chemical cleaning have screw drives that are submerged and therefore subject to deposits/fouling. For these reasons if a separate cleaning tank is required we recommend requiring it for all manufacturers regardless of their online cleaning system.

A7: The requirements of the specifications stand as written with respect to the need to provide or not provide a separate cleaning tank.

Q8: 2.1.I.1 We are investigating a tubular fixed weir system for the level controller. Please confirm if this is acceptable in lieu of the finger weir.

A8: We do not plan to evaluate a tubular fixed weir system at this stage. Each manufacturer shall provide what is required to meet the specifications and design intent.

Q9: 2.1.J.1.d The SCC or control panel can be located up to 500 feet from the UV channel in the plant's control room. It is fabricated of Type 304 SS and complies with NEMA 4X (IP65). Does it still need to be rated for outdoor installation?

A9: Yes. The panels shall be rated NEMA 4X and shall include a drip shield. A window kit shall be provided to view the OIT screen without the need to open the panel door. If the panel is UL

Listed and labeled and rated as NEMA 4X, then it is suitable for both indoor and outdoor installation.

Q10: 2.1.J.2 Please confirm if the incoming power supplied to the PDC includes a neutral (480/277V, 4 Wire + GND)?

A10: Yes, this will be in the power supply provided by the equipment.

Q11: 2.1.J.2.b Please confirm if your definition of a control panel is referring to the PDC or the SCC? We consider the SCC as the control panel. Is the specified transformer required if our equipment is supplied with the specified input power?

A11: The SCC is the PLC based control panel and there is only one. The PDC is the Power Distribution Panel and each train/channel shall have the required number of PDC's as per the manufacturer to provide treatment and the specified redundancy. A transformer will be required if the equipment's power requirement is different from the specified input power. This may vary by manufacturer but the minimum requirement for redundancy shall be withheld.

Q12: 2.1.j.2.6 The proposed UV system will have 2 channels. Each channel will have 2 duty banks of lamps plus 1 redundant bank of lamp, for a total of 3 banks of lamps per channel. A dedicated PDC is provided for each bank of lamps. Is UV System Train synonymous to UV System Channel? If one PDC is only supplied per channel, does that mean a redundant bank is not provided here?

A12: UV System Train and UV System Channel are one in the same. Each train/channel shall provide the required number of banks and level of treatment plus include a redundant bank. Each train/channel shall have the required number of PDCs as per the manufacturer to provide treatment and the specified redundancy.

Q13: 2.1.J.17 The PDC uses fan & filter ventilation, while maintaining Nema 4X, therefore not completely sealed from the environment. Is that acceptable?

A13: No it is not acceptable. Provide a UL listed NEMA 4X fan filter kit as they are commercially available for a complete NEMA 4X rates assembly.

Q14: 2.1.K.3 Please confirm communication link between the plant SCADA and the SCC/control panel. Is it an Allen Bradley Ethernet IP? If so, no protocol converter is needed, adjust with if required, otherwise please state the required protocol converter.

A14: If protocol convertor is needed, it will be furnished and installed by the Division 13 I&C integrator. Provide coordination with the I&C integrator during construction.

Q15: 2.1.N.1 One (1) online UV transmittance analyzer will be provided for the entire UV system. One (1) UV intensity sensor will be provided for each bank of lamps. Please confirm if the sensor referenced in the second sentence is for the UV intensity sensor.

A15: Correct, one UV sensor shall be provided for each bank and one on-line UVT analyzer is required for the entire system.

Q16: 2.2.A.9 Please define what is meant by a UV intensity analyzer?

A16: Please delete 2.2.A.9 in its entirety and insert the words "NA"

### ***Questions from Glasco Ultraviolet***

Q17: The PLC 2.1 K. Specification indicates 2 complete standalone PLC centers. I wanted to confirm that each channel is to have its own separate PLC center as outlined with all the ancillary devices (UPS, Ethernet).

A17: The manufacturer shall provide only one PLC center for both channels.

Q18: In Spare Parts and Special Tools, it indicates 2.2 10. One (1) UV Transmittance analyzer and accessories. Is this for the main system or is this a 100% redundant spare unit?

A18: A 100% redundant spare is required.

Q19: In Section 1.8 Warranty Performance Bond. We understand that the winner will have to provide a performance bond. Are you looking for a statement from the bonding company that we have the ability to provide the performance bond? I want to clarify that only a Bid Bond is required for this phase of the submission project. Normally, a Performance Bond is obtained after a purchase order.

A19: Warranty Performance Bond will be required during the construction phase of the project.

### **ATTACHMENTS**

Not Used

*This Addendum consists of 7 pages, 7 pages in this document and 0 pages of attachments.*

**END OF ADDENDUM No.2**