

# SCOPE OF SUPPLY FOR KEY WEST (REPLACEMENT) WASTEWATER TREATMENT PLANT ULTRAVIOLET DISINFECTION EQUIPMENT – TROJAN SYSTEM UV3000Plus™

Prepared for: All bidding General Contractors

**Project Name:** Key West (Replacement)

**Trojan Quote:** 238645 (February 6, 2023)

Design Criteria: Current Peak Design Flow: 20 MGD

Average Flow: 4 MGD

UV Transmission: 65%, minimum

Total Suspended Solids: 10 mg/L (Maximum, grab sample)

Minimum UV Dose: 30 mJ/cm<sup>2</sup>, MS2 RED

Discharge Limit: 200 Fecal Coliform/100 mL (30 Day Geometric Mean)

800 Fecal Coliform/100 mL (Maximum)

We are pleased to submit the following scope of equipment based on the above criteria.

The purchaser is responsible for reading all information contained in this Supply Contract. Trojan will not be held accountable for the supply of equipment not specifically detailed in this document. Supplemental Terms and Conditions are attached to this document. Detailed installation instructions are provided with the shop drawings and are available earlier upon request. Changes to this Scope of Supply that affect selling price will be handled through a change order.

## Please refer all inquiries to Trojan Manufacturer's Representative:

Austin Moore

TSC-Jacobs

Phone: 813-888-5556 Fax: 813-854-2183

This proposal has been respectfully submitted by, **Trojan Technologies** 

Mike Shortt Regional Manager Trojan Technologies **UV Disinfection System Scope of Supply** 

Unless otherwise indicated in this proposal all anchor bolts, conduit, conductors, local disconnects and transformers are the responsibility of the Installation Contractor and are not included in Trojan's Scope of Supply. Specific cable types listed below are for reference only. Selecting cables that are appropriate for the installation environmental conditions and in compliance with local code is the responsibility of the Installation Contractor.

# **ULTRAVIOLET MODULES**

## Trojan's Responsibility:

Each module supplied shall be completely assembled containing lamps, quartz sleeves and be electrically wired to each electronic ballast. Modules are shipped in a support rack and crated.

Model and Make: Standard System UV3000Plus™

Quantity: Twenty (20) UV modules each containing eight (8) UV Lamps

Material of Construction: 316 stainless steel frame Approximate Weight: 112 lbs per UV module

# **SYSTEM CONTROL CENTER**

## Trojan's Responsibility:

One (1) System Control Center (SCC) shall be supplied to monitor and control the UV System. Trojan will provide a PLC I/O and soft address map to aid the Contractor with integration of the UV PLC and WWTP SCADA system. The UV SCC shall consist of the following:

Quantity Supplied One (1) SCC

**Location:** Wall mounted (by Installation Contractor)

Material of Construction:316 Stainless SteelEnclosure Rating:Type 4X (IP66)Controller Type:AB CompactLogix

**Operator Interface:** 12" Beijer HMI (Type 4X - Outdoor Rated)

Panel UPS: 20 Min on 24VDC

Approximate Weight: 200 lbs

SCADA Protocol: Modbus Ethernet

# Installation Contractor's Responsibility:

The Installation Contractor is responsible for mounting the SCC as indicated on the drawings. The Installation Contractor is responsible for the supply, installation and connection of the following <u>at the SCC:</u>

- 1. One (1) 120V, 60 Hz, 1 phase, 2 wire + GNG, 1.8 kVA (minimum) power supply
- 2. One (1) 4 20 mA DC analog signal from plant flow meter
- 3. One (1) Ground Link, 14 gauge minimum type TWH stranded, daisy chained to the HSC and PDCs.
- **4.** One (1) serial communication link consisting of one (1) shielded twisted pair, 18 gauge maximum from the HSC and other PDCs (daisy chained).
- 5. Serial communication link to SCADA via Modbus Ethernet protocol
- 6. One (1) 4-20 mA analog shielded twisted pair from online UV Transmittance monitor
- 7. Control signal conductors (as required by actuator) for control of slide gates (provided by Others)
- 8. One (1) discrete, 2 conductors, 20 gauge minimum, open command to the motorized weir gate
- 9. One (1) discrete, 2 conductors, 20 gauge minimum, close command to the motorized weir gate
- **10.** One (1) discrete, 2 conductors, 20 gauge minimum, remote mode indication from the motorized weir gate
- **11.** One (1) 4-20 mA analog shielded twisted pair, 20 gauge minimum, gate position indication from the motorized weir gate
- 12. One (1) 4-20 mA analog shielded twisted pair from the Level Sensor Monitor

## POWER DISTRIBUTION CENTERS

## Trojan's Responsibility:

The Power Distribution Center (PDC) distributes power to the UV Modules and shall consist of the following:

Quantity Supplied:Four (4) PDCsMaterial of Construction:316 Stainless SteelEnclosure Rating:Type 4X (IP66)Approximate Weight:220 lbs per PDC

# Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place and bolting the Power Distribution Centers to the top of channel. The Installation Contractor is also responsible for the supply, installation and connection of the following at each Power Distribution Centers:

- 1. One (1) 480/277V, 60Hz, 3 phase, 4 wire + GND, 10.30 kVA power feed with local disconnect
- 2. One (1) Ground Link,14 gauge minimum, TWH stranded single wire from the HSC.
- 3. One (1) communication link consisting of one (1) shielded twisted pair from the SCC and daisy chained to other PDCs.
- **4.** One (1) pair of 24Volt DC, 18 guage minimum power feed to the Level Control Panel from PDCs.
- One (1) pair of 24Volt DC, 18 gauge minimum discrete signal from the Level Control Panel to each PDC.
- 6. Connection of communication, power cables and hydraulic lines from the UV Modules

## **HYDRAULIC SYSTEM CENTER**

# Trojan's Responsibility:

The Hydraulic System Center (HSC) houses the ancillary equipment required to operate the quartz sleeve cleaning system.

Quantity Supplied:One (1) HSCMaterials of Construction:316 Stainless SteelEnclosure Rating:Type 4X (IP66)Approximate Weight:300 lbs

## Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place and bolting the HSC and manifold as shown on the contract drawings. The HSC should be located within 50 feet from the farthest PDC. The Installation Contractor shall be responsible for the supply, connection and installation of the following at the HSC:

- 1. One (1) 480V, 60Hz, 3 phase, 3 wire + GND, 5 Amp power feed with local disconnect
- 2. One (1) ground link of,14 gauge minimum, TWH stranded from the PDCs
- **3.** Connection of the hydraulic hoses from PDCs. Hoses and connections will be supplied by Trojan.
- **4.** One (1) serial communication link of one (1) twisted, shielded pairs, 18 gauge maximum cable from the SCC and daisy chained to the PDCs.

## SUPPORT RACKS

## Trojan's Responsibility:

Support racks are provided to support UV modules in the effluent channel.

**Quantity Supplied:** Four (4) Module Support Racks

Material of Construction: 316 Stainless Steel Approximate Weight: < 100 lbs each

## Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place and bolting the support racks to the channel walls. The Contractor will be required to supply eight (8) 1/2" Diameter x 5 1/2" Long expansion anchor bolts per rack.

Install approved (engineered) anchor points for personnel to use as part of their fall restraint system around the open channels. The anchor points must be positioned so that the preferred retractable lifeline of 8 feet is of sufficient length to access the work at the channel. Refer to local safety regulation.

# **LEVEL CONTROLLER**

Modulating Weir Gates (MWGs) shall be self-contained and shall be designed and manufactured by an experienced and reputable manufacturer, based on the AWWA C561 Standard for Fabricated Stainless Steel Slide Gates and AWWA C542 Standard for Electric Motor Actuators for Valves and Slide Gates in effect as of the date of this specification.

MWGs shall be designed for the following performance criteria:

- MWG actuation speeds shall be between 10" (255 mm) and 14" (356 mm) per minute
- MWG maximum design rate of change of flow shall be limited to 25% of the Peak Design Flow/Channel
  per minute, or alternatively, flow shall be ramped up (zero to peak) or down (peak to zero) in no less than
  4 minutes
- MWG actuators shall employ AWWA compliant, S4-50% duty class motors with a rated minimum 900 starts per hour capability
- MWG actuators shall employ AWWA compliant, Class B, solid-state Thyristor based switchgear capable
  of at least 5,000,000 modulating steps before overhaul; electromechanical type actuators and controls are
  not permitted

It is the responsibility of the Plant designers to ensure the stated performance criteria are acceptable for the plant process or to modify the design accordingly.

## Trojan's Responsibility

Level control devices are required to maintain and control the effluent level in the channel, regardless of flow rate.

**Quantity Supplied:** One (1) – to be located in the common effluent channel

Description: Motorized Weir Gate (MWG)
Supplier: RW Gate with Rotork Actuator
Material of Construction: 316 Stainless Steel frame and yoke

Total Effective Weir Length: 72 inches

# Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place, grouting and sealing the level control weir gate and the installation of the following connections:

- 1. One (1) 480 Volt, 3 phase, 3 wire + GND, 5 AMP feed to the MWG.
- 2. Open command discrete output, two (2) conductors, 20 gauge minimum, from SCC to the MWG.
- 3. Close command discrete output, two (2) conductors, 20 gauge minimum, from SCC to the MWG.
- 4. Remote mode discrete input, two (2) conductors, 20 gauge minimum, to SCC from the MWG.
- 5. Gate position analog input, one (1) twisted shielded pair, 24 gauge minimum, to SCC from MWG.

## **ULTRASONIC WATER LEVEL SENSOR**

# Trojan's Responsibility:

Ultrasonic level sensor and monitor panel will be supplied to monitor common effluent channel water levels, for weir gate control. The transducer will be supplied with a sufficient length of cable to distribute to the monitor panel.

Quantity Supplied: One (1) ultrasonic sensor and one (1) monitor panel

## Installation Contractor's Responsibility:

The Installation Contractor shall be responsible for mounting the bracket and transducer in the UV channel and for mounting the monitor panel adjacent to the channel. Installation Contractor shall distribute the following cable/wiring between these two components and the SCC in appropriate conduit <u>at the sensor</u>:

- 1. One (1) 120 Volt, 1 phase, 2 wire + GND from a Distribution Panel to the Level Sensor Monitor.
- 2. One (1) 4-20 mA analog shielded twisted pair from the Level Sensor Monitor to the SCC
- 3. One (1) communication link using 33 ft of cable (supplied by Trojan) from the Level Sensing Transducer to the Level Sensor Monitor

## WATER LEVEL SENSOR KIT

## Trojan's Responsibility:

The water level sensor is located downstream of the UV System and provides a digital signal to shut down & protect the UV System if the water level is too low.

**Quantity Supplied:** One (1) Water Level Sensor Kit per UV channel;

• each Kit includes an electrode type water level sensor and a

Level Cotrol Panel (LCP)

**Enclosure Rating:** Type 4X **Approximate LCP Weight:** 25 lbs **Approximate Probe Weight:** 10 lbs

# Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place and bolting the water level probes assembly to the effluent channel wall and mounting the Level Control Panel as indicated on the drawings.

The Installation Contractor shall also be responsible for the supply of mounting hardware, watertight conduit and supply and connection of the following at each LCP for each UV channel:

- 1. One (1) pair of 24Volt DC, 18 guage minimum power feed to the Level Control Panel from the two (2) PDCs.
- 2. One (1) pair of 24Volt DC, 18 gauge minimum discrete signal from the water Level Control Panel to each PDC.
- 3. One (1) pair of 12Volt DC, 14 gauge minimum discrete signal to the low water level probe from the Level Control Panel.

## ON-LINE UV TRANSMISSION MONITOR

## Trojan's Responsibility:

An on-line UV Transmission Monitor will be supplied to provide a UVT measurement of the source water.

**Description:** One (1) Hach UVASsc UVT monitor including:

• One (1) submersible probe with mounting kit

• One (1) sc4500 Controller

• 25 ft cable between the probe and the controller

**Enclosure Rating:** Type 4X **Controller Dimensions:** 12 x 12 x 4 in

**Approximate Weight:** 30 lbs (includes probe and Controller)

**Probe Immersion Depth:** up to 6 ft

# Installation Contractor's Responsibility:

The Installation Contractor is responsible for setting in place and bolting the controller panel and the probe. The Installation Contractor shall also be responsible for the supply, installation and connection of the following:

- 1. One (1) 120 Volt, 1 phase, 2 wire + GND, 0.2 kVA power supply
- 2. One (1) 4-20mA Analog communications link between the Controller and the SCC
- 3. Installation of sensor communication cable between Probe and Controller (Cable supplied by Trojan)
- 4. Supply of the required bolts for mounting Controller and Probe to the channel edge

# **SPARE PARTS AND SAFETY EQUIPMENT**

# Trojan's Responsibility:

The following spare parts and safety equipment will be supplied with the UV system:

Sixteen (16) UV lamps/Sleeve assembly

Four (4) Ballasts

Thirty-Two (32) Wiper Seal Kit

One (1) Operators Kit (including face shield, gloves and cleaning solution)

## **DOCUMENTATION (SHOP DRAWINGS AND O & M MANUALS)**

# Trojan's Responsibility:

The following documentation will be supplied to the contractor by Trojan per the following schedule:

- One (1) electronic copy of Trojan Shop Drawing 5 6 weeks after acceptance of written purchase order
- One (1) electronic copy of Trojan Standard O&M manuals at time of equipment delivery

## **DELIVERY, START-UP AND TRAINING**

- UV Equipment and RW Gate will be shipped within 26 28 weeks after approval of Shop Drawings.
- Rotork actuator will be shipped within 40 42 weeks after approval of Shop Drawings

## Trojan's Responsibility:

The following start-up services will be provided by Trojan-certified technicians:

- Installation assistance as required by phone or fax. Technical Assistance Center 1-866-388-0488 or tac@trojanuv.com
- Start-up and testing of the installed UV equipment, including classroom and/or jobsite training for operations staff

- If the Trojan's Certified Service Technician determines the Contractor work is not complete and the start-up cannot be completed in the allotted time a return visit will be scheduled at the Contractors expense.
- o If trainees are not available a return visit will be scheduled at the Contractors expense.

## Installation Contractor's Responsibility:

The Contractor is responsible for:

- Un-loading of the components supplied by Trojan, storage of all components, if required in a clean dry environment
- Installing the equipment outlined in the scope of Supply in accordance with contract drawings, Trojan's shop drawings, instructions and installation checklist.
- Supplying all conduits and conductors and components per the sites state regulations and components indicated as supplied by others,
- Completing the Checklist and returned at least two (2) weeks prior to date requested for commissioning.

## WARRANTY

Trojan will warrant the equipment and parts for 12 months after start-up or 18 months after shipment, whichever comes first. Warranty does not cover labor or consumables. Refer to attached Terms and Conditions for additional details.

- UV lamps shall be warranted for 12,000 hours, prorated after 9,000 hours.
- Ballasts shall be warranted for 5 years, prorated after 1 year.

## **SELLING PRICE**

## \$555,300.00 USD

- Freight included if destination is within North America.
- Incoterms 2002: Ex Works (EXW) or Cost, Insurance and Freight (CIF) to destination or port will apply for all other destinations.

# **PAYMENT TERMS & INVOICING MILESTONES**

Net 30 Days

- 30% upon Submittal Approval
- 60% upon Equipment Delivery to job site
- 5% upon Equipment Installation or 90 days after Delivery (whichever occurs first)
- 5% upon Equipment Acceptance

If UV System Start-up is required within 30 days of shipment, Trojan requires 95% payment unless agreed upon in writing before authorizing system Start-up.

## **TERMS & CONDITIONS**

Trojan appreciates the opportunity to submit this proposal. Our proposal is submitted subject to and based on our standard terms and conditions, which we have attached as part of our proposal. We respectfully reserve the opportunity to negotiate, fair and reasonable contract terms acceptable to both parties, if we are selected for this project.



## **Terms and Conditions of Sale**

This document sets forth the Terms & Conditions of Sale for goods manufactured and/or supplied, and services provided, by the seller entity identified on the purchase order ("SELLER") and sold to the original purchaser thereof ("BUYER"). The term "SELLER" includes only SELLER, and none of its affiliates. Unless otherwise specifically stated in a previously-executed written purchase agreement signed by authorized representatives of SELLER and BUYER, these Terms & Conditions of Sale establish the rights, obligations and remedies of SELLER and BUYER which apply to this offer and any resulting order or contract for the sale of SELLER's goods and/or services ("Products").

- 1. APPLICABLE TERMS & CONDITIONS: These Terms & Conditions of Sale are contained directly and/or by reference in SELLER's proposal, offer, order acknowledgment, packing slip, and/or invoice documents. The first of the following acts constitutes an acceptance of SELLER's offer and not a counteroffer and creates a contract of sale ("Contract") in accordance with these Terms & Conditions of Sale: (i) BUYER's issuance of a purchase order document against SELLER's offer; (ii) acknowledgement of BUYER's order by SELLER; or (iii) commencement of any performance by SELLER pursuant to BUYER's order. Provisions contained in BUYER's purchase documents (including electronic commerce interfaces) that materially alter, add to, or subtract from the provisions of these Terms & Conditions of Sale are not a part of the Contract.
- 2. CANCELLATION AND RETURN: The whole or any part of this order may be cancelled only with the prior written consent of SELLER. If SELLER does consent to a cancellation, such consent will be given only upon payment of reasonable cancellation charges in an amount determined by SELLER. In addition, with respect to any Products returned on cancellation, BUYER will pay SELLER's cost of placing the returned Products in a saleable condition, sales expenses incurred by SELLER in connection with such returned Products, a reasonable restocking charge and freight costs incurred in connection with the original shipment and in connection with returning such Products to SELLER, all in such amounts as are advised to the BUYER by SELLER.
- **3. DELIVERY:** Delivery will be accomplished EXW or CIP at the point of shipment (Incoterms 2020), unless otherwise expressly agreed between the parties. Legal title and risk of loss or damage pass to BUYER upon transfer to the first carrier, regardless of final destination and mode of transit. SELLER will use commercially reasonable efforts to deliver the Products ordered herein within SELLER's normal lead-time necessary for SELLER to deliver the Products sold hereunder. Products will be boxed or crated as determined appropriate by SELLER for protection against normal handling and there will be an extra charge to the BUYER for additional packaging required by the BUYER with respect to waterproofing or other added protection. BUYER has sole responsibility for off-loading, storage and handling of the Products at the site. Where Buyer is responsible for any delay in the delivery date or installation date, the earlier of the date of delivery or the date on which the Products are ready for shipment by SELLER may be treated as the delivery date for purposes of determining the time of payment of the purchase price. Moreover, BUYER will be responsible for reasonable storage and insurance expenses with respect to such Products. Should BUYER fail to effect pick-up of Product as previously agreed in a timely manner, SELLER may, at its discretion, assess reasonable storage charges to the account of BUYER.

- **4. INSPECTION:** BUYER will promptly inspect and accept any Products delivered pursuant to this Contract after receipt of such Products. In the event the Products do not conform to any applicable specifications, BUYER will promptly notify SELLER of such nonconformance in writing. SELLER will have a reasonable opportunity to repair or replace the nonconforming Product at its option. BUYER will be deemed to have accepted any Products delivered hereunder and to have waived any such nonconformance for such Products unless a written notification pursuant to this paragraph is received by SELLER within thirty (30) days of delivery to BUYER destination on order.
- **5. PRICES & ORDER SIZES:** Prices do not include any charges for services such as insurance; brokerage fees; sales, use, inventory, or excise taxes; import or export duties; special financing fees; value added tax, income, or royalty taxes imposed outside the U.S. or Canada; consular fees; special permits or licenses; or other charges imposed upon the production, sale, distribution, or delivery of Products. BUYER will either pay any and all such charges or provide SELLER with acceptable exemption certificates, which obligation survives performance under this Contract. Installation, maintenance and any other services which relate to the Products are not included unless specifically set forth in the quotation. SELLER reserves the right to establish minimum order sizes and will advise BUYER accordingly. Any orders below the minimum order size are subject to a fee as set out by SELLER. If SELLER's delivery of Products surpasses one (1) year in length, then at least on an annual basis, or if changes to the Products are requested or needed, the parties shall conduct good faith discussions regarding changes to the prices for the Products, to reflect SELLER's increased costs for which SELLER shall be entitled to additional fair and appropriate compensation.
- 6. PAYMENTS: All payments must be made in agreed-to currency, normally Canadian or U.S. Dollars. Unless other payment terms are expressly set forth in the purchase order or otherwise required by the Seller, invoices are due and payable NET 30 DAYS from date of the invoice, without regard to delays for inspection or transportation, with payments to be made by check to SELLER at the address listed in the purchase order or by bank transfer to the account obtainable from SELLER's Accounts Receivable Manager. In the event payments are not made or not made in a timely manner, SELLER may, in addition to all other remedies provided at law, either: (a) declare BUYER's performance in breach and terminate this Contract for default; (b) withhold future shipments until delinguent payments are made; (c) deliver future shipments on a cash-with-order or cash-in-advance basis even after the delinquency is cured; (d) charge interest on the outstanding balance at a rate of 1.5% per month or the maximum rate permitted by law, if lower, for each month or part thereof that there is an outstanding balance plus applicable storage charges and/or inventory carrying charges; (e) repossess the Products for which payment has not been made; (f) pursue other collection efforts and recover all associated costs including reasonable attorney's fees; or (g) combine any of the above rights and remedies as is practicable and permitted by law. BUYER is prohibited from setting off any and all monies owed under this Contract from any other sums, whether liquidated or not, that are or may be due to the BUYER, which arise out of a different transaction with SELLER or any of its affiliates. Should BUYER's financial condition become unsatisfactory to SELLER in its discretion, SELLER may require payment in advance or other security. If BUYER fails to meet these requirements, SELLER may treat such failure as reasonable grounds for repudiation of this Contract, in which case reasonable cancellation charges shall be due to SELLER. BUYER hereby grants SELLER a security interest in the Products, wherever located, and whether now existing or hereafter arising or acquired from time to time, and in all accessions thereto and replacements or modifications thereof, as well as all proceeds of the foregoing, to secure payment in full of all amounts to Seller, which payment releases the security interest but only if such payment could not be considered an avoidable transfer under applicable laws. The security interest granted hereby constitutes a purchase money security interest under the applicable Uniform Commercial Code or Personal Property Security Act or other applicable law, and SELLER is authorized to make whatever registration or notification or take such other action as SELLER deems necessary or desirable to perfect such security interest. BUYER's insolvency, bankruptcy, assignment for the benefit of creditors, or dissolution or termination of the existence of BUYER, constitutes a default under this Contract and affords SELLER all of the remedies of a secured creditor under applicable law, as well as the remedies stated above for late payment or non-payment.

- 7. LIMITED WARRANTY: Unless specifically provided otherwise in SELLER's quotation, SELLER provides the following Limited Warranty. SELLER warrants that Products sold hereunder will be free from defects in material and workmanship and will, when used in accordance with the manufacturer's operating and maintenance instructions, conform to any express written warranty pertaining to the specific goods purchased, which for Products is for a period of twelve (12) months from delivery. SELLER warrants that services furnished hereunder will be free from defects in workmanship for a period of ninety (90) days from the completion of the services. Products repaired or replaced are not covered by any warranty except to the extent repaired or replaced by SELLER, an authorized representative of SELLER, or under specific instructions by SELLER, in which cases, the Products will be covered under warranty up to the end of the warranty period applicable to the original Products. The above warranties do not include the cost of shipping and handling of returned items. Parts provided by SELLER in the performance of services may be new or refurbished parts functioning equivalent to new parts. Any nonfunctioning parts that are repaired by SELLER shall become the property of SELLER. No warranties are extended to consumable items such as, without limitation, light bulbs, and for normal wear and tear. All other guarantees, warranties, conditions and representations, either express or implied, whether arising under any statute, law, commercial usage or otherwise, including implied warranties of merchantability and fitness for a particular purpose, are hereby excluded. The sole remedy for Products not meeting this Limited Warranty is replacement, credit or refund of the purchase price, as determined by SELLER in its sole discretion. This remedy will not be deemed to have failed of its essential purpose so long as SELLER is willing to provide such replacement, credit or refund. To make a warranty claim, BUYER must notify SELLER in writing within 5 days of discovery of the defect in question. This notification must include a description of the problem, a copy of the applicable operator's log, a copy of BUYER's maintenance record and any analytical results detailing the problem. Any warranty hereunder or performance guarantees shall only be enforceable if (a) all equipment is properly installed, inspected regularly, and is in good working order, (b) all operations are consistent with SELLER recommendations, (c) operating conditions at the installation site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.
- **8. INDEMNIFICATION:** Indemnification applies to a party and to such party's successors-in-interest, assignees, affiliates, directors, officers, and employees ("Indemnified Parties"). SELLER is responsible for and will defend, indemnify and hold harmless the BUYER Indemnified Parties against all losses, claims, expenses or damages which may result from accident, injury, damage, or death due to SELLER's breach of the Limited Warranty. BUYER is responsible for and will defend, indemnify and hold harmless SELLER Indemnified Parties against all losses, claims, expenses, or damages which may result from accident, injury, damage, or death due to the negligence or misuse or misapplication of any Products or the breach of any provision of this Contract by the BUYER or any third party affiliated or in privity with BUYER.
- 9. PATENT PROTECTION: Subject to all limitations of liability provided herein, SELLER will, with respect to any Products of SELLER's design or manufacture, indemnify BUYER from any and all damages and costs as finally determined by a court of competent jurisdiction in any suit for infringement of any U.S. or Canadian patent (or European patent for Products that SELLER sells to BUYER for end use in a member state of the E.U. or the U.K.) that has issuedas of the delivery date, solely by reason of the sale or normal use of any Products sold to BUYER hereunder and from reasonable expenses incurred by BUYER in defense of such suit if SELLER does not undertake the defense thereof, provided that BUYER promptly notifies SELLER of such suit and offers SELLER either (i) full and exclusive control of the defense of such suit when Products of SELLER only are involved, or (ii) the right to participate in the defense of such suit when products other than those of SELLER are also involved. SELLER's warranty as to use patents only applies to infringement arising solely out of the inherent operation of the Products according to their applications as envisioned by SELLER's specifications. In case the Products are in such suit held to constitute infringement and the use of the Products is enjoined, SELLER will, at its own expense and at its option, either procure for BUYER the right to continue using such Products or replace them with non-infringing products, or modify them so they become non-infringing, or remove the Products and refund the purchase price (prorated for depreciation) and the transportation costs thereof. The foregoing states the entire liability of SELLER for patent

infringement by the Products. Further, to the same extent as set forth in SELLER's above obligation to BUYER, BUYER agrees to defend, indemnify and hold harmless SELLER for patent infringement related to (x) any goods manufactured to the BUYER's design, (y) services provided in accordance with the BUYER's instructions, or (z) SELLER's Products when used in combination with any other devices, parts or software not provided by SELLER hereunder.

- **10. TRADEMARKS AND OTHER LABELS:** BUYER agrees not to remove or alter any indicia of manufacturing origin or patent numbers contained on or within the Products, including without limitation the serial numbers or trademarks on nameplates or cast, molded or machined components.
- 11. SOFTWARE AND INTELLECTUAL PROPERTY: All licenses to SELLER's separately provided software products are subject to the separate software license agreement(s) accompanying the software media. In the absence of such express licenses and for all other software, SELLER grants BUYER only a personal, non-exclusive license to access and use the software provided by SELLER with Products purchased hereunder solely as necessary for BUYER to enjoy the benefit of the Products. A portion of the software may contain or consist of open source software, which BUYER may use under the terms and conditions of the specific license under which the open source software is distributed. BUYER agrees that it will be bound by all such license agreements. Title to software remains with the applicable licensor(s). All SELLER contributions to the Products, the results of the services, and any other work designed or provided by SELLER hereunder may contain or result in statutory and non-statutory Intellectual Property, including but not limited to patentable subject matter or trade secrets; and all such Intellectual Property remains the sole property of SELLER; and BUYER shall not disclose (except to the extent inherently necessary during any resale of Product sold hereunder), disassemble, decompile, or any results of the Services, or any Products, or otherwise attempt to learn the underlying processes, source code, structure, algorithms, or ideas.
- 12. PROPRIETARY INFORMATION AND PRIVACY: "Proprietary Information" means any information, technical data, or know-how in whatever form, whether documented, contained in machine readable or physical components, mask works or artwork, or otherwise, which SELLER considers proprietary, including but not limited to service and maintenance manuals. BUYER and its customers, employees, and agents will keep confidential all such Proprietary Information obtained directly or indirectly from SELLER and will not transfer or disclose it without SELLER's prior written consent, or use it for the manufacture, procurement, servicing, or calibration of Products or any similar products, or cause such products to be manufactured, serviced, or calibrated by or procured from any other source, or reproduce or otherwise appropriate it. All such Proprietary Information remains SELLER's property. No right or license is granted to BUYER or its customers, employees or agents, expressly or by implication, with respect to the Proprietary Information or any patent right or other proprietary right of SELLER, except for the limited use licenses implied by law. In respect of personal data supplied by BUYER to SELLER, BUYER warrants that is duly authorized to submit and disclose these data, including but not limited to obtaining data subjects' informed consent. SELLER will manage BUYER's information and personal data in accordance with its Privacy Policy, a copy of which is available to Buyer upon request. In respect of other data and information that SELLER may receive in connection with BUYER's use of the Products including without limitation data that are captured by the Products and transmitted to SELLER, BUYER hereby grants SELLER a non-exclusive, worldwide, royalty-free, perpetual, non-revocable license to use, compile, distribute, display, store, process, reproduce, or create derivative works of such data as needed for Product operation and maintenance, and to aggregate such data for use in an anonymous manner, solely to facilitate marketing, sales and R&D activities of SELLER and its affiliates.
- **13. SPECIAL TOOLS, DIES, JIGS, FIXTURES AND PATTERNS:** Any tools, dies, jigs, fixtures, patterns and similar items which are included or required in connection with the manufacture and/or supply of the Products will remain the property of SELLER without credit to the BUYER. SELLER assumes the cost for maintenance and replacement of such items and shall have the right to discard and scrap any such item after it has been inactive for a minimum of one year, without credit to the BUYER.

- **14. CHANGES AND ADDITIONAL CHARGES:** SELLER reserves the right to make design changes or improvements to any products of the same general class as Products being delivered hereunder without liability or obligation to incorporate such changes or improvements to Products ordered by BUYER unless agreed upon in writing before the Products' delivery date.
- 15. SITE ACCESS / PREPARATION / WORKER SAFETY / ENVIRONMENTAL COMPLIANCE: In connection with services provided by SELLER, BUYER agrees to permit prompt access to equipment. BUYER assumes full responsibility to back-up or otherwise protect its data against loss, damage or destruction before services are performed. BUYER is the operator and in full control of its premises, including those areas where SELLER employees or contractors are performing service, repair, and maintenance activities. BUYER will ensure that all necessary measures are taken for safety and security of working conditions, sites, and installations during the performance of any services. BUYER is the generator of any resulting wastes, including without limitation hazardous wastes. BUYER is solely responsible to arrange for the disposal of any wastes at its own expense. BUYER will, at its own expense, provide SELLER employees and contractors working on BUYER's premises with all information and training required under applicable safety compliance regulations and BUYER's policies. SELLER has no responsibility for the supervision or actions of BUYER's employees or contractors or for non-SELLER items (e.g., chemicals, equipment) and disclaims all liability and responsibility for any loss or damage that may be suffered as a result of such actions or items, or any other actions or items not under SELLER's control.
- 16. LIMITATIONS ON USE: BUYER will not use any Products for any purpose other than those identified in SELLER's catalogs and literature as intended uses. Unless SELLER has advised the BUYER in writing, in no event will BUYER use any Products in drugs, food additives, food, or cosmetics, or medical applications for humans or animals. In no event will BUYER use in any application any Product that requires FDA 510(k) clearance unless and only to the extent the Product has such clearance. BUYER will not sell, transfer, export, or re-export any SELLER Products or technology for use in activities which involve the design, development, production, use, or stockpiling of nuclear, chemical, or biological weapons or missiles, nor use SELLER Products or technology in any facility which engages in activities relating to such weapons. Unless the "ship-to" address is in California, U.S.A., the Products are not intended for sale in California and may lack markings required by California Proposition 65; accordingly, unless BUYER has ordered Products specifying a California ship-to address, BUYER will not sell or deliver any SELLER Products for use in California. Any warranty granted by SELLER is void if any goods covered by such warranty are used for any purpose not permitted hereunder.
- 17. EXPORT AND IMPORT LICENSES AND COMPLIANCE WITH LAWS: Unless otherwise expressly agreed, BUYER is responsible for obtaining any required export or import licenses necessary for Product delivery. BUYER will comply with all laws and regulations applicable to the installation or use of all Product, including applicable import and export control laws and regulations of the U.S., E.U., and any other country having proper jurisdiction, and will obtain all necessary export or import licenses in connection with any subsequent export, re-export, transfer, and use of all Product and technology delivered hereunder. BUYER will not sell, transfer, export, or re-export any SELLER Product or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical, or biological weapons or missiles, nor use SELLER Product or technology in any facility which engages in activities relating to such weapons. BUYER will comply with all local, national, and other laws of all jurisdictions globally relating to anti-corruption, bribery, extortion, kickbacks, or similar matters which are applicable to BUYER's business activities in connection with this Contract, including but not limited to the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"). BUYER agrees that no payment of money or provision of anything of value will be offered, promised, paid, or transferred, directly or indirectly, by any person or entity, to any government official, government employee, or employee of any company owned in part by a government, political party, political party official, or candidate for any government office or political party office to induce such organizations or persons to use their authority or influence to obtain or retain an improper business advantage for BUYER or for SELLER, or which otherwise constitute or have the purpose or effect of public or commercial bribery, acceptance of or acquiescence in extortion, kickbacks, or other unlawful or improper means of

obtaining business or any improper advantage, with respect to any of BUYER's activities related to this Contract. SELLER asks BUYER to "Speak Up!" if aware of any violation of law, regulation, or our Code of Conduct ("CoC") in relation to this Contract. See www.danaherintegrity.com and www.danaher.com/how-we-work/integrity-and-compliance for a copy of the CoC and for access to our Helpline portal.

- **18. RELATIONSHIP OF PARTIES:** BUYER is not an agent or representative of SELLER and will not present itself as such under any circumstances, unless and to the extent it has been formally screened by SELLER's compliance department and received a separate duly-authorized letter from SELLER setting forth the scope and limitations of such authorization.
- 19. FORCE MAJEURE: SELLER is excused from performance of its obligations under this Contract to the extent caused by acts or omissions that are beyond its control, including but not limited to Government embargoes, blockages, seizures or freezing of assets, delays, or refusals to grant an export or import license, or the suspension or revocation thereof, or any other acts of any Government; fires, floods, severe weather conditions, or any other acts of God; quarantines; epidemics and pandemics; labor strikes or lockouts; riots; strife; insurrections; civil disobedience or acts of criminalsor terrorists; war; material shortages or delays in deliveries to SELLER by third parties. In the event of the existenceof any force majeure circumstances, the period of time for delivery, payment terms, and payments under any letters of credit will be extended for a period of time equal to the period of delay. If the force majeure circumstances extend for six months, SELLER may, at its option, terminate this Contract without penalty and without being deemed in default or in breach thereof.
- **20. NON-ASSIGNMENT AND WAIVER:** BUYER will not transfer or assign this Contract or any rights or interests hereunder without SELLER's prior written consent. Failure of either party to insist upon strict performance of any provision of this Contract, or to exercise any right or privilege contained herein, or the waiver of any breach of the terms or conditions of this Contract, will not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same will continue and remain in force and effect as if no waiver had occurred.
- 21. FUNDS TRANSFERS: BUYER and SELLER both recognize that there is a risk of banking fraud when individuals impersonating a business demand payment under new mailing or banking transfer instructions. To avoid this risk, BUYER must verbally confirm any new or changed mailing or banking transfer instructions by calling SELLER and speaking with SELLER's Accounts Receivable Manager before transferring any monies using the new instructions. Both parties agree that they will not institute mailing or banking transfer instruction changes and require immediate payment under the new instructions, but will instead provide a ten (10) day grace period to verify any mailing or banking transfer instruction changes before any new or outstanding payments are due using the new instructions.
- 22. LIMITATION OF LIABILITY: None of SELLER, its successors-in-interest, assignees, affiliates, directors, officers, and employees will be liable to any BUYER Indemnified Parties under any circumstances for any special, treble, incidental, or consequentialdamages, including without limitation, damage to or loss of property other than for the Products purchased hereunder; damages incurred in installation, repair, or replacement; lost profits, revenue, or opportunity; loss of use; losses resulting from or related to downtime of the Products or inaccurate measurements or reporting; the cost of substitute products; or claims of any BUYER's Indemnified Parties' customers for such damages, howsoever caused, and whether based on warranty, contract, and/or tort (including negligence, strict liability or otherwise). The total liability of SELLER, its successors-in-interest, assignees, affiliates, directors, officers, and employees arising out of the performance or nonperformance hereunder, or SELLER's obligations in connection with the design, manufacture, sale, delivery, and/or use of Products, will in no circumstance exceed the amount actually paid to SELLER for Products delivered hereunder.

- 23. APPLICABLE LAW AND DISPUTE RESOLUTION: All issues relating to the construction, validity, interpretation, enforcement, and performance of this agreement and the rights and obligations of SELLER and the BUYER hereunder shall be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein. Any provisions of the International Sale of Goods Act or any convention on contracts for the international sale of goods shall not be applicable to this agreement. The parties submit to and consent to the non-exclusive jurisdiction of courts located in the Province of Ontario.
- **24. ENTIRE AGREEMENT, TERM & MODIFICATION:** These Terms & Conditions of Sale constitute the entire agreement between the parties and supersede any prior agreements or representations, whether oral or written. Upon thirty (30) days prior written notice, SELLER may, in its sole discretion, elect to terminate any order for the sale of Products and provide a pro-rated refund for any pre-payment of undelivered Products. No changeto or modification of these Terms & Conditions shall be binding upon SELLER unless in a written instrument specifically referencing that it is amending these Terms & Conditions of Sale and signed by an authorized representative of SELLER. SELLER rejects any additional or inconsistent Terms & Conditions of Sale offered by BUYER at any time, whether or not such terms or conditions materially alter the Terms & Conditions herein and irrespective of SELLER's acceptance of BUYER's order for the described goods and services.

Terms and Conditions Covering Sales of Configured-to-Order Projects and Systems

In addition to all terms and conditions above, the following sections apply to sales of Configured-to-Order Projects, Systems, and the like:

## 101. PAYMENT.

- **101.1** Payments will be made per the schedule of payment events set forth in Seller's Quotation; provided that if the Start-Up Date (as defined below) is less than 30 days after the Acceptance Date, 90% of the purchase price is due on or before the Start-Up Date.
- **101.2.** In the event that achievement of a scheduled payment event is delayed or suspended due to the Buyer's convenience or other reasons for which the Buyer or its representatives is responsible, such payment event will be deemed to have occurred and Seller shall be entitled to invoice Buyer as if achievement of such payment event had been achieved. In such circumstances, Buyer must notify Seller in writing of the reasons for the delay and anticipated duration of the delay. Seller will mark the Products (or parts thereof) as the Buyer's property and shall store the Products (or parts thereof) in a segregated area until actual delivery.

## **102. DELIVERY**

- **102.1** SELLER will request the BUYER to provide a firm date for delivery of the Products to the project site (the "Delivery Date") which SELLER will then use to establish the production schedule for the Products. The Delivery Date will then be binding on the BUYER except for any changes made in accordance with the provisions below.
- **102.2** The BUYER can request a rescheduling of the Delivery Date on one occasion only by notifying SELLER in writing not less than four weeks prior to the scheduled Delivery Date. The BUYER may request that the Delivery Date be extended by a period up to six weeks, without penalty, but may not request that the Delivery Date be moved forward. The BUYER may also request that the Delivery Date be extended beyond a six-week period but, SELLER may not agree to such extension, beyond the maximum six-week extension period
- **102.3** SELLER may, in its sole discretion, agree to change the Delivery Date on more than one occasion or if less than four weeks' prior notice is provided of a requested change, but is under no obligation to do so.

- **102.4** SELLER reserves the right to reschedule the Delivery Date to a date prior to or subsequent to the scheduled Delivery Date in order to accommodate its shipping, production or other requirements. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of SELLER. SELLER will provide the BUYER or its representative with a minimum of 24 hours' notice of any such rescheduling.
- **102.5** Where any change to the Delivery Date is made at BUYER's request, for all purposes with respect to the warranty and payment provided by SELLER in connection with the Products, the initial Delivery Date will be considered to be the Delivery Date regardless of any change later made to the Delivery Date.

## **103. ACCEPTANCE**

- **103.1** During the period between the Delivery Date and the Start-up Date, the BUYER shall prepare the Products and the project site for installation and start-up and, unless otherwise agreed in writing by an authorized representative of SELLER, shall complete acceptance testing with respect to the Products. The Products shall be deemed to be accepted on the earliest to occur of the following dates (the "Acceptance Date"): (a) that date on which the Products can function in either manual or automatic operation and provide disinfection in accordance with criteria specified in the Quotation, or (b) 60 days after the Delivery Date.
- **103.2** All amounts which remain owing by the BUYER for the Products, including any amount which is specified to be payable on the Acceptance Date, will be paid by the BUYER to SELLER within 30 days after the Acceptance Date, unless otherwise agreed in writing by an authorized representative of SELLER.
- **103.3** Written notification must be given by the BUYER to SELLER within seven days after the Acceptance Date listing any outstanding deficiencies with respect to the Products and SELLER will use all reasonable efforts to correct such deficiencies promptly.

## 104. START-UP

- **104.1** SELLER will request a firm date for start-up of the Equipment (the "Start-Up Date"). Trojan will then schedule its technician to be on-site for the Start-up Date. The Start-up Date is binding except for any changes made in accordance with the provisions below.
- **104.2** On the Start-up Date, BUYER must have the Equipment and site ready as provided in the Installation Preparation Checklist contained in the Contractor Installation Package sent to BUYER and must have paid all amounts then due and payable to SELLER.
- **104.3** BUYER can request a rescheduling of the Start-up Date by notifying SELLER in writing not less than three weeks prior to the Start-up Date. BUYER may request that the Start-up Date be extended but may not request that the Start-up Date be moved forward. SELLER requires a minimum extension period of two weeks between the existing Start-up Date and the requested new Start-up Date in order to reschedule its technician.
- **104.4** SELLER may, in its sole discretion, agree to reschedule the Start-up Date where a BUYER requests less than a two-week extension but is under no obligation to do so. In the event that SELLER does agree to less than a two-week extension or that BUYER requests more than two changes to the Start-up Date, BUYER will be charged an administration fee in an amount determined by SELLER.
- **104.5** SELLER reserves the right to reschedule the Start-up Date to a date which is prior to or subsequent to the scheduled Start-up Date in order to accommodate its resource availability. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of SELLER. SELLER will provide BUYER or its representative with a minimum of 72 hours' notice of any such change to the Start-up Date.

- **104.6** In the event that SELLER'S technician arrives at the project site and finds that the Equipment or the project site is not ready for start-up as defined in the Contractor Installation Package, or any amounts then due and payable to SELLER remain unpaid, BUYER may either:
- (a) provided all amounts then due and payable to SELLER have been paid, issue a purchase order for all costs involved in having SELLER correct the deficiencies, or
- (b) have SELLER'S technician leave the site and then reschedule the Start-up Date to a date when all deficiencies will be corrected, and the Equipment will be ready for start-up as defined in the Contractor Installation Package. If BUYER selects this option, the cost of rescheduling will be not less than a minimum amount specified by SELLER, with the final cost being determined by SELLER based on its costs and expenses incurred in connection with the rescheduling.