

# The Corporation of the Municipality of Brockton



## By-Law 2020-026

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Being a By-Law to Accept a Tender from Trojan Technologies Group ULC for the Walkerton Pollution Control Plant UV Disinfection System for the Municipality of Brockton.

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**Whereas** the Council for the Corporation of the Municipality of Brockton Council deems it expedient to accept a tender from Trojan Technologies Group ULC for the Walkerton Pollution Control Plant UV Disinfection System for the Municipality of Brockton;

**Now Therefore** the Council of the Corporation of the Municipality of Brockton enacts as follows;

- 1.0 That the Council of the Corporation of the Municipality of Brockton hereby accepts the tender of Trojan Technologies Group ULC in the amount of \$242,858.47 for the Walkerton Pollution Control Plant UV Disinfection System as described in the attached Schedule "A" to this By-Law.
- 2.0 That the Mayor and Clerk are hereby authorized to sign on behalf of the Council for The Corporation of the Municipality of Brockton, any contracts and other documents required to authorize such purchase to proceed, and to affix the corporate seal of the Municipality of Brockton.
- 3.0 This By-Law shall come into full force and effect upon final passage.
- 4.0 This By-Law may be cited as the "Walkerton Pollution Control Plant UV Disinfection System Tender Acceptance By-Law".

**Read, Enacted, Signed and Sealed this 10th day of March, 2020.**

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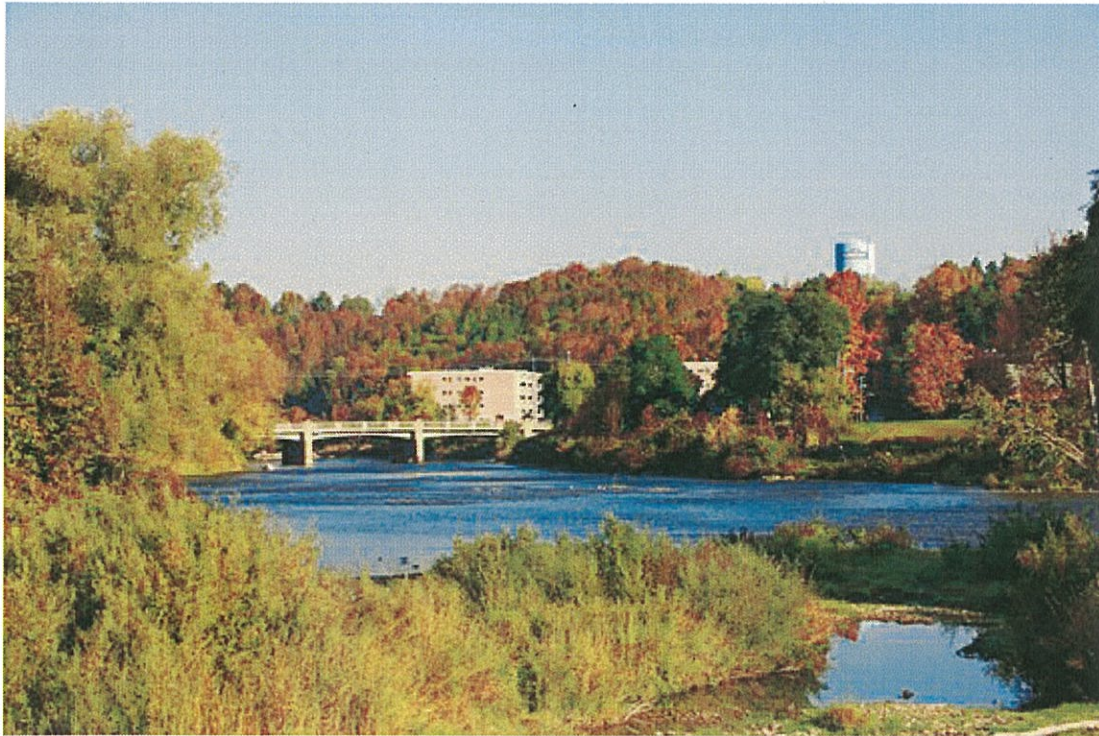
Mayor – Chris Peabody

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Clerk – Fiona Hamilton

UV Disinfection System for:

**MUNICIPALITY OF BROCKTON  
WALKERTON WASTEWATER TREATMENT PLANT  
PRESELECTION OF ULTRAVIOLET (UV) DISINFECTION SYSTEM  
PROJECT NO. 17182**



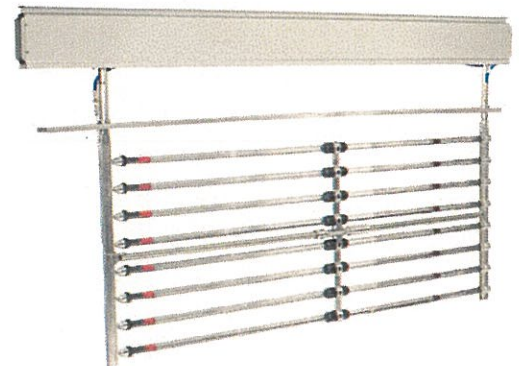
**SUBMITTED BY TROJAN TECHNOLOGIES**

ROB JANSEN [rjansen@trojanuv.com](mailto:rjansen@trojanuv.com) 519-457-3400

**AND OUR LOCAL MANUFACTURER'S REPRESENTATIVE:**

ANDREW PELLEY [andrew@h2flow.com](mailto:andrew@h2flow.com) 905-660-9775

JANUARY 16, 2020



January 16, 2020

Walkerton WTP/ Municipality of Brockton  
c/o B.M. Ross and Associates Limited  
Engineers and Planners  
62 North Street, Goderich, Ontario  
N7A 2T4

Attention: Kimberley Mitchell

**Re: Municipality of Brockton**  
**Quotation- Pre-Selected Ultraviolet Disinfection Equipment for Wastewater Systems;**  
**Walkerton Water Pollution Control Plant**  
**PROJECT NO. 17182**

Dear Ms. Mitchell,

I would like to thank you for the opportunity to provide an information proposal for the Ultraviolet (UV) Disinfection System – Walkerton Water Pollution Control Plant. I trust that you will find the enclosed proposal complete and informative. The enclosed proposal is based on the **TrojanUV3000Plus™** low pressure high intensity horizontal lamp system. Of note: we have provided two options, the requested 2 bank design with minimum 40 MS2 dose request (actual is >44 MS2 dose) and an alternate design with 1 less module per bank that has a 36 MS2 dose. Also, as requested, weirs were provided for level control, but if space is an issue we can offer a weighted gate for level control at the same price.

I would like to take this opportunity to outline the key features that differentiate the proposed Trojan System UV3000Plus™ from all other manufacturers. The Trojan System UV3000Plus™ offers the following advantages over other UV systems:

- Trojan's UV3000Plus™ lamps undergo a special manufacturing process that ensures lamp life longevity. This feature has also been independently validated in accordance with 2003 NWRI protocol to allow the use of a 0.98 lamp aging factor in the overall system sizing. Trojan UV3000Plus™ installation references will verify that disinfection performance continues well past the guaranteed 12,000 hours and often extends beyond 15,000 lamp operating hours.
- A fully automatic chemical/mechanical cleaning system (ActiClean™) is provided for the quartz sleeves. This fully automated sleeve cleaning system optimizes power consumption by eliminating fouling. The plant's O&M expenses are reduced by eliminating operator involvement for system cleaning.
- Trojan's UV3000Plus™ system has been sized according to the bioassay validation requirements and using validated equipment factors for lamp aging and quartz sleeve fouling. In order to guarantee disinfection



performance, it is a requirement that the UV system be sized using bioassay validation – as it demonstrates actual reactor performance.

- The UV3000Plus™ system is uniquely modular. Individual single-leg modules are independent electrical sub-systems, which increase the overall electrical redundancy of the system. This means that when a module is taken out of the channel, a much smaller percentage of the UV system is taken off-line. In addition, each bank of lamps is powered from a separate independent Power Distribution Center (PDC).
- Type 4X stainless steel cabinetry allows for *complete outdoor installation* and exposure to environmental extremes. *HVAC systems and buildings can be completely eliminated* from the design, a direct cost savings. Some UV manufacturers require portions of their system to be installed indoors and/or air-conditioned.
- UV3000Plus™ Modules are rated 6P and are designed to tolerate flood conditions.
- The advanced amalgam lamp technology is available from multiple sources – ensuring long-term availability of lamps. In addition, Trojan offers lamp recycling and the most comprehensive lamp warranty in the industry.

The design and support of the UV3000Plus™ system is provided by Trojan Technologies, a world leader in UV based disinfection technologies. Purchasing a UV system from Trojan Technologies offers the following advantages:

- The largest installed base of municipal systems in the world.
- A simple disinfection performance guarantee, at no extra cost, valid for the life of the System. This is significantly better than the one (1) year performance guarantee offered by some UV manufacturers and is testament to Trojan's experience and confidence in designing and sizing UV Systems.
- Comprehensive after-market service through Trojan and our local certified service Representatives. All replacement parts, emergency and routine service and maintenance can be provided through our local representative, H2Flow Equipment Inc., based in Vaughan, ON.

If you have any questions, please do not hesitate to contact us.

Best regards,

**Trojan Technologies,**



Rob Jansen

Regional Manager



MUNICIPALITY OF BROCKTON  
WALKERTON WASTEWATER TREATMENT PLANT  
EQUIPMENT PRE-SELECTION



FORM OF QUOTATION



**FORM OF QUOTATION**

By an equipment supplier in respect of  
a Quotation for supplying, delivering,  
and checking the installation of equipment.

(Equipment supplier to enter name, address and quotation number below)

Trojan Technologies Group ULC

3020 Gore Road

London, Ontario, Canada, N5V 4T7

Quotation Number: 222930

To - Municipality of Brockton  
c/o B. M. Ross and Associates Limited  
Engineers and Planners  
62 North Street  
Goderich, Ontario  
N7A 2T4

**Project No. 17182**

We, the above named equipment supplier, having carefully examined the quotation documents issued by the Contract Administrator, herewith submit in duplicate and in accordance with the terms and conditions set out in the aforementioned documents our quotation for the equipment listed hereafter.

We agree that, in case of any conflict between any of the terms and conditions set out in the documents which we submit together with this Form of Quotation and the terms and conditions set out in the quotation documents issued by the Contract Administrator, the provisions of the latter documents shall take precedence and shall govern.

We declare that our quotation for the equipment listed below is made without any connection, comparison of figures or arrangements with, or knowledge of, any other corporation, firm or person making a quotation for similar equipment for this project and is in all respects fair and without collusion or fraud.

We undertake to keep our accompanying quotation valid and open to acceptance for a period of three (3) months after the date set for closing of quotations and to accept within the said period an order based upon our accompanying quotation, with such amendments, if any, as may be agreed upon by the Engineer and ourselves, for the supply, delivery, and supervision of installation of the equipment listed in the order, the price of which shall be the sum of the relevant individual item prices as stated in the following table, subject to any adjustment in price as may be made in accordance with the terms of the said order.

We expressly warrant and guarantee to the Municipality of Brockton that in the event of the equipment, or a part thereof, offered by the equipment supplier in this quotation being selected by the Municipality of Brockton, such equipment, or part thereof, when supplied pursuant to a purchase order, will be deemed to have been supplied upon the terms of the quotation documents issued by the Contract Administrator and this quotation, with such amendments, if any, as may be agreed upon in writing by the equipment supplier and the Contract Administrator before the issuance of the said purchase order.

**1. Equipment List (Supplier to Complete)**

Item	Quantity Required	Description	Unit Price \$ Can.	Total Price \$ Can.	Delivery Period (weeks after receipt of purchase order)
1.	(1)	Trojan UV3000Plus System	\$239,829	\$239,829	10 weeks after approved submittals 4-6 weeks for submittals

TOTAL PRICE  
(excluding HST) \$ 239,829

Harmonized Sales Tax \$ 31,177.77

TOTAL PRICE  
(including HST) \$ 271,006.77



## 2. Shop Drawings

Estimated time required for submission of shop drawings after receipt of purchase order  
4 - 6 weeks.

## 3. Countries of Origin and Rates of Exchange

Item No.	Description	Country of Origin	Total Price Can. \$	Rate of Import Duty	Dutiable Value Can. \$	Rate of Exchange
1.	(1) Trojan UV3000 Plus System	Canada	\$239,829	Not Applicable	Not Applicable	Not Applicable

### NOTE:

- (1) "Item No." to be as in preceding Equipment List.
- (2) "Description" to give description of components if applicable.
- (3) "Rate of Import Duty" to be at date of submission of quotation.
- (4) "Rate of Exchange" to be at date of submission of quotation.

## 4. Commissioning Time

No. of man days in total price 3 days commissioning, 1 day training

Extra price per man day for further commissioning \$1,500/day

**5. Alternative Proposal (if any)**

Alternate UV3000Plus Design - 36 MS2 Dose:

(2) bank, (3) 8 lamp modules/bank, 48 lamps total, weir or ALC: \$214,919 (HST extra)

Alternate level control option for either proposal if weir cannot be used:

Automatic Level Controller (ALC) - weighted gate, instead of weir.

No change to pricing provided for Quote 222930.

  
\_\_\_\_\_  
Signature of Authorized Signing Officer

Name: Trevor Noye, VP of Operations

Date: January 16, 2020

MUNICIPALITY OF BROCKTON  
WALKERTON WASTEWATER TREATMENT PLANT  
EQUIPMENT PRE-SELECTION



TABLE 1 DATA FORM





**TABLE 1 DATA FORM**

**for**

**ULTRAVIOLET DISINFECTION SYSTEM**

**for**

Project No. 17182 Contract No. 17182

Location and Job Site: Municipality of Brockton, 300 Durham Street West, Walkerton, ON

**NOTES:**

- a) This table, prepared by the Consulting Engineer, covers the specific requirements of the equipment for the above project.
- b) Quotations must be in accordance with the "Specification for Ultraviolet Disinfection System", dated March 2013 (attached) and as supplemented by this Data Form.
- c) Each quotation must be accompanied by a properly completed Table 2 Data Form.

**D1.1.0 Required Performance**

- .1 Treated effluent discharge limit (at maximum flow): 150/100 ml. based on a 30 day geometric mean.
- .2 Design UV dosage - at 70% lamp output: 40 mw.s/cm<sup>2</sup>

**D1.2.0 Effluent Quality (Prior to Disinfection)**

- .1 Average Flow 7,560 m<sup>3</sup>/day
- .2 Maximum Flow 18,160 m<sup>3</sup>/day
- .3 Suspended Solids 2 mg/l (average) 15 mg/l (effluent objective) 25 mg/l (limit)
- .4 BOD 2 mg/l (average) 15 mg/l (effluent objective) 25 mg/l (limit)
- .5 Design UV transmission 65 %
- .6 Temperature Range 0 °C to 30°C
- .7 Treatment Process: Activated Sludge

**D1.3.0 Electrical**

- .1 Power Supply 600 V 3 ph 60 Hz

D1.4.0 Special Requirements

- .1 Supply transformer as required to operate equipment from available power supply or as noted in D1.3.0.

Issued by B. M. Ross and Associates Limited

Date: December 2019

MUNICIPALITY OF BROCKTON  
WALKERTON WASTEWATER TREATMENT PLANT  
EQUIPMENT PRE-SELECTION



TABLE 2 DATA FORM





**TABLE 2 DATA FORM**

for

**ULTRAVIOLET DISINFECTION SYSTEM**

for

Project No. 17182 Contract No. \_\_\_\_\_

Location and Job Site Municipality of Brockton, 300 Durham Street West, Walkerton, ON

**D2.1.0 Bidder's Reference**

.1 Bidder's Name, Address & Phone No. Trojan Technologies Group ULC  
3020 Gore Road, London, ON N5V 4T7  
519-457-3400

.2 Bidder's Quotation No. & Date 222930 January 16, 2020

**D2.2.0 Disinfection System**

.1 Manufacturer Trojan Technologies Group ULC  
.2 No. of UV banks 2  
.3 No. of module racks/bank 4  
.4 No. of lamps/module rack 8  
.5 Total no. of lamps 64  
.6 Total effective arc length 1.47 m

**D2.3.0 Guaranteed Performance**

.1 Maximum effluent E-coli count (at maximum flow) 150 /100 ml  
Minimum  
.2 ~~Maximum~~ UV dosage at ~~70%~~ lamp output and design UV transmission  
44,000  $\mu\text{W-sec/cm}^2$  (at 3rd party validated 98% EOLL)  
.3 Minimum percent UV transmittance through effluent at UV wavelength of 254 nm  
65 %

.4 Assumed effluent characteristics (prior to disinfection) for above performance guarantees:

- a) Maximum flow 18,160 m<sup>3</sup>/day  
 b) Suspended solids 2 (avg). 15 (objective) mg/l  
 c) UV Transmission 65 %  
 d) Temperature range 0 °C to 30 °C

.5 Total Headloss

- a) Average Flow 7,560 m<sup>3</sup>/day. Headloss 101.6 mm  
 b) Maximum Flow 18,160 m<sup>3</sup>/day. Headloss 163.8 mm

D2.4.0 Lamps

- .1 Manufacturer and Type Heraeus (Low Pressure High Output)  
 .2 Rated Life 12,000 hr.  
 .3 Percent UV output at end of life 98 %  
 .4 Ozone production None  
 .5 Wavelength 254 nm  
 .6 Minimum arc length/lamp 1.47 m

D2.5.0 Electrical

- .1 No. of control panels 1 CPP  
 .2 Power supply CPP: 120 V 1 ph 60 Hz  
 .3 Power required per panel 1.8 kVA W  
 .4 Total power requirement 15.4 kW W  
 .5 Transformer supplied per specification 4.3 b)? Yes ☒ No ☐

D2.6.0 General

- .1 Liquid level regulator type Weir  
 .2 Accessories and spares in accordance with the specifications are supplied.  
 .3 Required channel dimensions:  
 a) No. of channels 1  
 b) Width 0.63 m  
 c) Depth 1.16 m  
 d) Length 3.8 m  
 e) Liquid Depth 0.8 m  
 .4 Drawing of system and channel layout attached? ☒ YES ☐ NO

D2.7.0 Exceptions to Specifications (if none, say "No Deviations")

Please see Scope of Supply

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D2.8.0 Alternatives to Substitutions - List in a separate schedule or covering letter. If none, say "None Proposed".

Alternate UV3000Plus Design - 36 MS2 Dose:

(2) bank, (3) 8 lamp modules/bank, 48 lamps total, weir or ALC: \$214,919 (HST extra)

Alternate level control option for either proposal if weir cannot be used:

Automatic Level Controller (ALC) - weighted gate, instead of weir.

No change to pricing provided for Quote 222930.

Submitted by: 

Rob Jansen Regional Manager

Date: January 16, 2020



MUNICIPALITY OF BROCKTON  
WALKERTON WASTEWATER TREATMENT PLANT  
EQUIPMENT PRE-SELECTION



SCOPE OF SUPPLY



**SCOPE OF SUPPLY FOR WALKERTON WASTEWATER TREATMENT PLANT  
ULTRAVIOLET DISINFECTION EQUIPMENT – TROJAN SYSTEM UV3000Plus™**

**Prepared for:** All bidding General Contractors

**Project Name:** Walkerton, Municipality of Brockton

**Consulting Engineer:** B. M. Ross and Associates Limited

**Specification:** Specification for Ultraviolet Disinfection System

**Submitted by:** Rob Jansen, Regional Manager

**Trojan Quote:** 222930

**Design Criteria:**

Current Peak Design Flow:	18 160 m3/d
UV Transmission:	65 % minimum
Total Suspended Solids:	15 mg/l (30 Day Average, grab sample)
Discharge Limit:	150 E-coli/100ml (30 Day Geometric Mean)

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:**

Andrew Pelley  
H2Flow Equipment Inc.  
Phone: (905) 660-9775

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



Rob Jansen  
Regional Manager  
Trojan Technologies



Unless otherwise indicated in this proposal all conduit, conductors, local disconnects and transformers (if required) are the responsibility of the CONTRACTOR and are not included in this Scope of Supply.

### **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.

<b>Model and Make:</b>	Standard System UV3000Plus™
<b>Quantity:</b>	Eight (8) UV modules will be supplied each containing 8 Lamp - 4.0" (102mm) Spacing
<b>Material of Construction:</b>	316 stainless steel frame
<b>Approximate Weight:</b>	112 lbs / 51 kg per 8 Lamp 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:

<b>Quantity Supplied</b>	One (1) SCC will be supplied
<b>Location:</b>	Wall mounted
<b>Controller Type:</b>	CompactLogix
<b>Operator Interface:</b>	AB Panelview Plus 7 (7") Indoor Rated
<b>Material of Construction:</b>	316 Stainless Steel - Type 4X (IP66)
<b>Enclosure Rating:</b>	Type 4X
<b>Approximate Weight:</b>	200 lbs / 91 kgs

#### ***Installation Contractor's Responsibility:***

The Installation Contractor to be responsible for mounting the SCC as indicated on the drawings. The Installation Contractor to be responsible for the supply, installation and connection of the following at the SCC:

1. One (1) 120V 60Hz 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. Discrete signals from Plant SCADA for remote monitoring (or serial communication link to SCADA – describe protocol, Modbus, Ethernet, DH+ etc.)

### **POWER DISTRIBUTION CENTERS**

#### ***Trojan's Responsibility:***

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

<b>Quantity Supplied:</b>	Two (2) PDC(s) will be supplied
<b>Material of Construction:</b>	316 Stainless Steel - Type 4X (IP66)
<b>Enclosure Rating:</b>	Type 4X
<b>Approximate Weight:</b>	220 lbs / 100 kgs each



***Installation Contractor's Responsibility:***

The Installation Contractor to be responsible for setting in place and bolting the Power Distribution Centers to the top of channel. The Installation Contractor to be responsible for the supply, installation and connection of the following at the Power Distribution Center(s):

1. One (1) 480/277V 60Hz, kVA power feed with local disconnect to each of 2 PDC(s)
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 PDC's.
4. One (1) pair of 12Volt DC, 18 gauge minimum discrete signal to the Water Level Sensor from PDC closest to the sensor.
5. One (1) pair of 24Volt DC, 18 gauge remote I/O to the HSC.
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.

<b>Quantity Supplied:</b>	One (1) HSC will be supplied
<b>Materials of Construction:</b>	316 Stainless Steel - Type 4X (IP66)
<b>Enclosure Rating:</b>	Type 4X
<b>Approximate Weight:</b>	300 lbs / 136 kgs

***Installation Contractor's Responsibility:***

The Installation Contractor to be 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 (15 meters) 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, 5 Amp power feed with local disconnect
2. One (1) ground link of, 14 gauge minimum, TWH stranded from the PDC(s).
3. Connection of the hydraulic hoses from PDC(s). 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 PDC's.
5. One (1) pair, 18 gauge minimum, 24Volt DC remote I/O from the closest PDC.

**SUPPORT RACKS**

***Trojan's Responsibility:***

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

<b>Quantity Supplied:</b>	Two (2) racks will be supplied
<b>Material of Construction:</b>	304 Stainless Steel
<b>Approximate Weight:</b>	< 100 lbs / 45 kgs each

***Installation Contractor's Responsibility:***

The Installation Contractor to be 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**

#### ***Trojan's Responsibility***

A level control device is required per channel to maintain and control the effluent level, regardless of flow rate.

<b>Description:</b>	Weir
<b>Quantity Supplied:</b>	One (1) level controller
<b>Material of Construction:</b>	304 stainless steel
<b>Weir Length Required:</b>	19507 mm

#### ***Installation Contractor's Responsibility:***

The Installation Contractor to be responsible for setting in place, grouting and sealing the level control device.

### **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.

<b>Quantity Supplied:</b>	One (1) low water level sensor to be supplied
<b>Enclosure Rating:</b>	Type 4X
<b>Approximate Weight:</b>	10 lbs / 4.5 kgs (panel)

#### ***Installation Contractor's Responsibility:***

The Installation Contractor to be responsible for setting in place and bolting the water level sensor panel to the effluent channel wall. The Installation Contractor shall also be responsible for the supply of mounting hardware, watertight conduit and supply and connection of one discrete signal (pair of 12V DC, 14 gauge) from the water level sensor probe to each PDC.

### **SPARE PARTS AND SAFETY EQUIPMENT**

#### ***Trojan's Responsibility:***

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

- 8 UV lamps
- 8 Quartz sleeves
- 1 Ballasts
- 8 Lamp holder seals
- 1 Complete UV module
- 1 Operators Kit (including face shield, gloves and cleaning solution)

### **ADDITIONAL EQUIPMENT**

#### **DAVIT CRANE**

#### ***Trojan's Responsibility***

In order to facilitate easy removal of the UV Modules from the Channel lifting devices will be supplied.

<b>Quantity Supplied:</b>	One (1) Davit Crane to be supplied
<b>Description:</b>	Thern Model # 5122M1-S w/ Hand Winch
<b>Material of Construction:</b>	Painted Mild Steel
<b>Approximate Weight:</b>	110 lbs / 50 kgs

#### ***Installation Contractor's Responsibility:***

The Installation Contractor to be responsible for the installation and integrity of the crane base.



### **INDIVIDUAL UV MODULE LIFTING SLING WITH FRAME**

***Trojan's Responsibility:***

In order to remove individual modules, by mechanical means, a 2 rope sling with frame shall be supplied to interface with the existing overhead crane.

<b>Quantity:</b>	One (1) Sling Kit
<b>Materials of Construction:</b>	304 SST
<b>Approximate Weight:</b>	5 lbs/ 2.2 kgs

### **MAINTENANCE RACK**

***Trojan's Responsibility:***

A portable rack, constructed of 304 SST, will be supplied for cleaning / maintenance of UV modules. The Rack shall be constructed to hold 2 UV Modules.

<b>Quantity:</b>	One (1) Maintenance Rack
<b>Materials of Construction:</b>	304 SST
<b>Approximate Weight:</b>	80 lbs / 36 kg

### **STEPDOWN TRANSFORMERS**

***Trojan's Responsibility:***

A standalone isolation transformer, per bank, will be supplied to step down the existing 600 Volt, 3 phase power supply to 480Y/277V 3 phase, 4 wire + ground.

<b>Quantity:</b>	(2) transformers
<b>Rating:</b>	15 kVA, K1
<b>Enclosure Rating:</b>	Nema 3R, Painted Mild Steel
<b>Approximate Weight:</b>	661 lbs / 300 kgs

***Installation Contractor's Responsibility:***

Contractor is responsible for installing and wiring the primary and secondary taps, all conductors, conduit and local disconnects as per local electrical codes.

### **NOTES AND CLARIFICATIONS TO SPECIFICATION**

Section 4.4 a) – Please note that Trojan's ballasts (lamps drivers) will contain PCB.

Section 4.4 b) – Please note that Trojan's ballast (lamp driver) labels will only include the following detailed information: *Part Number, Input voltage, current, frequency, input current and input power consumption and output power.*

Section 4.5 a) - Please note that the Trojan Modules are not supplied with a GFI breaker option. In lieu of this the following features will be supplied:

- Each module is protected by a 15A breaker and relay interlock.
- Ballasts (lamp drivers) have individual fusing for over current protection.
- When disconnecting a module, the high voltage power circuit is broken first due to the FBLM pin of the relay interlock circuit and the high voltage component of the receptacle is eliminated.



## **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 submittal shop drawings 4-6 weeks after receipt of written purchase order. Hard copies available upon request.

Three (3) copies of Trojan Standard O&M manuals at time of equipment delivery.

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

Equipment shipped **10-12** weeks after approval of Shop Drawings.

### ***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.

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](mailto:tac@trojanuv.com)
- Start-up and testing of the installed UV equipment.- **3 days**
  - 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.
- Classroom and/or jobsite training for operations staff – **1 day**
  - If trainees are not available a return visit will be scheduled at the Contractors expense.

## **WARRANTY**

### ***Trojan's Responsibility:***

Trojan Technologies will warrant the equipment and parts for 24 months after start-up or 30 months after shipment, whichever comes first. Refer to attached Terms and Conditions for additional details.

## **PAYMENT TERMS**

10% after approved submittal

80% upon delivery of equipment to site

10% upon equipment acceptance or 60 days after delivery (whichever occurs first)

Net 30 Days

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.

Freight included for all North American projects. Incoterms 2002,

Selling price does not include any applicable duties or taxes.

## **TERMS AND CONDITIONS**

Attached



### Terms and Conditions Covering All Trojan Sales

#### **1. CONSTRUCTION AND LEGAL EFFECT**

The sale by Trojan Technologies ("Trojan") to the purchaser ("Customer") of the goods, products, equipment (individually or collectively the "Equipment") and/or the services (the "Services") listed in any quotation, proposal, bid, scope of supply, and /or similar document, as may be amended by any applicable change agreed by Trojan (individually or collectively the "Quotation") will be solely upon the terms and conditions set out herein. These terms and conditions shall supercede all prior agreements and communications, written or oral, with respect to such sale.

Any purchase order shall not be effective until accepted by Trojan, and any additional or different terms and conditions contained in any purchase order, order acknowledgement or other communication of the Customer, and any waiver or modification of any terms and conditions set out herein, shall be deemed objected to without effect and will not be binding on Trojan unless specifically consented to in writing by an authorized representative of Trojan. A purchase order accepted by Trojan shall constitute an agreement between Trojan and the Customer, the terms and conditions of which are set out herein. The receipt of these terms by a Customer following a purchase order not in response to, or inconsistent with, a Quotation, shall be deemed a notification of objection to all inconsistent terms in that purchase order.

#### **2. EQUIPMENT AND SERVICES SUPPLIED**

Trojan will supply only the specific Equipment and Services specifically listed in the Quotation. Trojan assumes no responsibility to supply other equipment or services.

#### **3. PRICES AND EXPIRATION**

Prices for the Equipment and Services are as specified in the Quotation. If Trojan's delivery of Equipment and/or Services surpasses one (1) year in length, then at least on an annual basis, or if changes to the Equipment or Services are requested or needed, the parties shall conduct good faith discussions regarding changes to the prices for the Equipment and/or Services, to reflect Trojan's increased costs for which Supplier shall be entitled to additional fair and appropriate compensation. Installation, maintenance and any other services which relate to the Equipment are not included unless specifically provided for in the Quotation. The amount of any present or future excise, sales, use, value-added or similar tax, duty or other governmental charge applicable to the production, sale, shipment or use of Equipment or Services will be the responsibility of Customer and will be in addition to the prices set out in the Quotation. Any Quotation is valid for ninety (90) days from issuance, unless specifically consented to in writing by an authorized representative of Trojan.

#### **4. PAYMENT**

4.1 Customer shall pay all invoiced amounts due to Trojan within 30 days from the date of Trojan's invoice. Late payments are subject to subject to a monthly late payment assessment of up to 1.5% of the outstanding balance per month. Notwithstanding the foregoing, if Trojan believes timely payments from Customer will not follow, and/or if the level of costs incurred by Trojan for custom work or pass-through items is high, and/or if lead times are long, as determined by Trojan in its sole discretion, then Trojan may require payment on different terms, including but not limited to prepayment in full. For the avoidance of doubt, the final 5% of the purchase price is due no later than 30 days following the Acceptance Date, regardless of any delays in start-up of the Equipment.

4.2 Where the Customer is responsible for any delay in shipment by Trojan, the date on which the Equipment is ready for shipment by Trojan may be treated by it as the Delivery Date for purposes of determining the time of payment of the purchase price. In such event, the Equipment ready for shipment shall be held at the cost of the Customer and the Customer will be responsible for reasonable storage and insurance expenses with respect to such Equipment.

4.3 Customer and Trojan both recognize that there is a risk of wire fraud when individuals impersonating a business demand immediate payment under new wire transfer instructions. To avoid this risk, Customer must

verbally confirm any new or changed wire transfer instructions by calling Trojan and speaking with Trojan's Credit Manager before transferring any monies using the new wire instructions. Both parties agree that they will not institute wire transfer instruction changes and require immediate payment under the new instructions but will instead provide a ten (10) day grace period to verify any wire transfer instruction changes before any outstanding payments are due using the new instructions.

#### **5. DELIVERY TERMS, PACKAGING, SHIPPING, SITE STORAGE AND HANDLING**

Unless otherwise specified in writing by the Customer and consented to in writing by an authorized representative of Trojan, terms of Equipment delivery shall be "Ex Works" at the point of shipment, and:

- (a) Equipment will be boxed or crated as determined appropriate by Trojan for protection against normal handling and there will be an extra charge to the Customer for additional packaging required by the Customer with respect to waterproofing or other added protection,
- (b) the manner and routing of shipments will be at Trojan's discretion,
- (c) responsibility for payment of shipping costs to the project site will be as specified in the Quotation,
- (d) any insurance to be arranged with respect to shipping of the Equipment will be as specified in the Quotation,
- (e) delivery of Equipment to the initial carrier will constitute delivery and title passing to the Customer and Equipment will be shipped at the Customer's risk; any claim of the Customer for loss or damage in transit must be placed with the carrier and pursued by the Customer, and
- (f) Customer has sole responsibility for off-loading, storage and handling of the Equipment at the site.

#### **6. DELIVERY**

6.1 Trojan's quotation will provide a firm date for delivery of the Equipment (the "Delivery Date") which Trojan will then use to establish the production schedule for the Equipment. The Delivery Date will then be binding on the Customer except for any changes agreed in writing between Trojan and Customer.

#### **7. CANCELLATION AND RETURN OF EQUIPMENT**

The whole or any part of this order for the Equipment may be cancelled only with the prior written consent of Trojan. If Trojan does consent to a cancellation, such consent will be given only upon payment of reasonable cancellation charges in an amount determined by Trojan. In addition, with respect to any Equipment which is returned on a cancellation consented to by Trojan, the Customer will pay Trojan's cost of placing the returned Equipment in a saleable condition, sales expenses incurred by Trojan in connection with such returned Equipment, a reasonable restocking charge and freight costs incurred in connection with the original shipment and in connection with returning such Equipment to Trojan, all in such amounts as are advised to the Customer by Trojan.

#### **8. ACCEPTANCE**

Customer shall have no longer than thirty (30) days following receipt of a shipment of Equipment to inspect the Equipment. Customer may reject Equipment, in whole or in part, where the inspection reveals the Products are damaged, or are materially defective in workmanship or material. If Customer fails to timely reject Equipment or places the Equipment into operational use, the Products shall be deemed accepted.

#### **9. START-UP**

9.1 For Equipment requiring start-up in the quotation, Trojan may request the Customer to provide a firm date for start-up of the Equipment (the "Start-Up Date"). Trojan may then schedule its technician to be on-site for the Start-up Date. The Start-up Date is binding except for any changes made as agreed between Customer and Trojan.

9.2 On the Start-up Date, Customer must have the Equipment and site ready, and must have paid all amounts then due and payable to Trojan.

9.3 Customer is the operator and in full control of its premises, including those areas where Trojan employees or contractors are performing service, repair and maintenance activities. Customer will ensure that all necessary



measures are taken for safety and security of working conditions, sites and installations during the performance of Services. Customer is the generator of any resulting wastes, including without limitation hazardous wastes. Customer is solely responsible to arrange for the disposal of any wastes at its own expense. Customer will, at its own expense, provide Trojan employees and contractors working on Customer's premises with all information and training required under applicable safety compliance regulations and Customer's policies. If Customer requires Trojan employees or contractors to attend safety or compliance training programs provided by Customer, Customer will pay Trojan the standard hourly rate and expense reimbursement for such training attended. The attendance at or completion of such training does not create or expand any warranty or obligation of Trojan and does not serve to alter, amend, limit or supersede any part of this Contract.

#### 10. EXCUSABLE DELAYS

Trojan shall not be liable for any failure to meet the Delivery Date or the Start-up Date and/or meet any other obligations hereunder if such failure is due to reason(s) beyond Trojan's reasonable control including, without limitation, acts or omissions of carriers, labour difficulties, shortages, strikes or work stoppages of any type, fire, accident, explosion, flood, defaults or delays of suppliers, governmental acts or omissions, acts of God, acts of civil or military authorities, incomplete or inaccurate information supplied by Customer or any other cause beyond Trojan's reasonable control. In any such event, the Delivery Date and Start-up Date and/or other obligation due date shall be extended on a day for day basis to the extent of such delay.

#### 11. WARRANTY

11.1 Trojan warrants the Equipment in accordance with its then-current warranty covering the specific Equipment ordered, generally under which Trojan warrants to the Customer that during the period ending 18 months after the Delivery Date or 12 months after the Start-up Date, whichever occurs first, Equipment which is manufactured by Trojan will be free from defects in material and workmanship and will function in accordance with the specifications specified in the Quotation.

11.2 This warranty shall not apply to any failure or defect which results from the Equipment not being operated and maintained in strict accordance with instructions specified in Trojan's Operation and Maintenance manual or which results from mishandling, misuse, neglect, improper storage, improper operation of the Equipment with other equipment furnished by the Customer or by other third parties or from defects in designs or specifications furnished by or on behalf of the Customer by a person other than Trojan. In addition, this warranty shall not apply to Equipment that has been altered or repaired after start-up by any one except:

- (a) authorized representatives of Trojan, or
- (b) Customer acting under specific instructions from Trojan.

All Equipment warranties set forth herein (and any related guarantees, performance bonds, and the like) 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 Trojan recommendations, (c) operating conditions at the Customer site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.

11.3 Customer must notify Trojan in writing within 5 days of the date of any Equipment failure. This notification shall include a description of the problem, a copy of the operator's log, a copy of the Customer's maintenance record and any analytical results detailing the problem. If Customer has not maintained the operator's log and maintenance record in the manner directed in the Operation and Maintenance manual, or does not notify Trojan of the problem as specified above, this warranty may, in Trojan's discretion, be invalid.

11.4 Customer will fully cooperate with Trojan, in the manner requested by Trojan, in attempting to diagnose and resolve the problem by way of telephone support. If the problem can be diagnosed by telephone support

and a replacement part is required, Trojan will either, at Trojan's expense, ship a repaired, reworked or new part to the Customer who will install such part as directed by Trojan or will direct Customer to acquire, at Trojan's expense, such part from a third party and then install such part as directed by Trojan.

11.5 If Trojan determines that the problem cannot be resolved by way of telephone support and/or shipment by Trojan, or acquisition by the Customer, of a replacement part for installation by the Customer, Trojan will send one or more persons to make an on-site inspection of the problem. If an on-site visit is made, Trojan personnel will evaluate the problem and repair or replace any Equipment determined to be in breach of this warranty. If the problem is not attributable to a breach of this warranty, Trojan reserves the right to invoice the Customer for this service.

11.6 Components of the Equipment which are manufactured by a third party but furnished to Customer by Trojan are warranted by the original manufacturer, only to the extent of the original manufacturer's warranty, and are not covered by this warranty.

11.7 This warranty is the exclusive remedy of the Customer for all claims based on a failure of or defect in the Equipment, whether the claim is based on contract (including fundamental breach), tort (including negligence), strict liability or otherwise. This warranty is lieu of all other warranties whether written, oral, implied or statutory. Trojan expressly disclaims any remedies of "cover" and any warranties implied by law, including but not limited to any warranty of merchantability or fitness for a particular purpose.

11.8 Lamp and lamp driver warranties, and obligations of Trojan concerning lamp replacements, are set out in separate lamp and lamp driver warranty documents.

#### 12. LIMITATIONS OF LIABILITY

12.1 Trojan does not assume any liability for monetary damages, personal injury or property damage caused by use or misuse of the Equipment. Trojan has no responsibility for the supervision or actions of Customer's employees or contractors or for non-Trojan 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 Supplier's control. Trojan shall not in any event be liable for liquidated, penalty, special, incidental, indirect or consequential damages including, without limitation, lost profits, lost business opportunities, lost revenue or loss or depreciation of goodwill, even if it has been advised of the possibility thereof. Trojan's liability shall, in all instances, be limited to repair or replacement of Equipment in breach of the above warranty and shall not exceed the cost of such repair or replacement. This liability with respect to repair or replacement will terminate upon the expiration date of the above warranty.

12.2 In addition to the foregoing, in no event shall Trojan's liability exceed that portion of the purchase price actually paid to it.

12.3 This limitation of liability shall survive any termination of any agreement based on its Quotation.

#### 13. COMPLIANCE AND OTHER OBLIGATIONS

Trojan shall not be responsible for verifying that any agreement and/or the supply of Equipment and Services, is in compliance with all applicable laws, ordinances, regulations, codes and orders. If the Customer fails to notify Trojan in writing that the agreement or such supply is not in compliance with any applicable law, ordinance, regulation, code or order, the Customer shall be responsible for and hereby agrees to indemnify Trojan against all claims, demands, losses, liabilities, costs and expenses incurred by it as a result of such non-compliance. Unless otherwise expressly agreed, Customer is responsible for obtaining any required export or import licenses necessary for Equipment delivery. Customer will comply with all laws and regulations applicable to the installation or use of all Equipment, 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 Equipment and technology delivered hereunder. Customer will not sell, transfer, export or re-export any Trojan Equipment 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 Trojan Equipment or technology in any facility which engages in activities relating to such weapons. Customer 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 Customer'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"). Customer 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 Customer or for Trojan, 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 Customer's activities related to this Contract. Trojan asks Customer to "Speak Up!" if aware of any violation of law, regulation or our Standards of Conduct ("SOC") in relation to this Contract. See <http://danaher.com/integrity-and-compliance> and [www.danaherintegrity.com](http://www.danaherintegrity.com) for a copy of the SOC and for access to our Helpline portal. Customer is not an agent or representative of Trojan businesses and will not present itself as such under any circumstance unless and to the extent it has been formally screened by Trojan compliance department and received a separate duly-authorized letter from Trojan Technologies setting forth the scope and limitations of such authorization.

#### 14. INSPECTION

Inspection of Equipment by the Customer or its representative at Trojan's plant may be permitted provided that it is conducted under principles of confidentiality and does not unduly interfere with Trojan's production workflow and that complete details of the desired inspection are provided to Trojan in writing with sufficient advance notice.

#### 15. PATENT INDEMNIFICATION

15.1 Trojan will not be liable with respect to any claim of patent or other intellectual property infringement made regarding any Equipment unless such claim is based on an assertion that Equipment manufactured by Trojan, in the form in which such Equipment is supplied to the Customer, infringes any United States or Canadian patent. Trojan's obligations hereunder shall not apply to Equipment modified, or used in an unauthorized manner, by the Customer or to the extent that infringement arises as a result of combining the Equipment with any other equipment, whether or not supplied by Trojan. Subject to the foregoing, provided that the Customer notifies Trojan promptly in writing of any such claim of infringement and authorizes Trojan to exercise sole control over the defence and/or settlement of any such claim, Trojan will indemnify the Customer against the reasonable expenses of defending such claim as well as any resulting damages finally awarded against Customer or agreed to in any settlement but only up to a maximum amount not exceeding the purchase price actually paid to Trojan for the allegedly infringing Equipment.

15.2 If an injunction is obtained against the further use of allegedly infringing Equipment, Trojan shall, at its option and expense, use its reasonable efforts to:

- (a) procure for the Customer the right to continue using the Equipment,
- (b) modify the Equipment so that it is no longer infringing,
- (c) replace the allegedly infringing Equipment with non-infringing Equipment, or

(d) refund the purchase price paid to Trojan for the Equipment, less reasonable depreciation as determined by Trojan.

15.3 The foregoing provisions constitute Trojan's sole responsibility and liability, and the Customer's sole remedy, with respect to actual or alleged infringement of patents or other intellectual property.

15.4 The Customer hereby agrees to indemnify Trojan against all claims relating to or resulting from any actual or alleged patent infringement by Trojan which arises out of the manufacture and/or supply by Trojan of Equipment manufactured according to a design and/or specifications furnished to Trojan by the Customer or on behalf of the Customer by a person other than Trojan.

#### 16. 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 Equipment will remain the property of Trojan without credit to the Customer. Trojan 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 Customer.

#### 17. INTELLECTUAL PROPERTY & SOFTWARE.

All Trojan contributions to the Equipment and Services, the results of the Services, and any other work Equipment designed or provided by Trojan 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 Trojan; and Customer shall not disclose (except to the extent inherently necessary during any resale of Equipment sold hereunder), disassemble, decompile, or otherwise reverse engineer said contributions, or any results of the Services, or any work Equipment, or otherwise attempt to learn the underlying processes, source code, structure, algorithms, or ideas.

All licenses to Trojan's separately-provided software Equipment may be subject to the separate software license agreement(s) accompanying the software media. In the absence of such terms and for all other software, Trojan grants Customer only a personal, non-exclusive license to access and use the software provided by Trojan with Equipment purchased hereunder solely as necessary for Customer to enjoy the benefit of the Equipment. A portion of the software may contain or consist of open source software, which Customer may use under the terms and conditions of the specific license under which the open source software is distributed. Customer agrees that it will be bound by any and all such license agreements. Title to software remains with the applicable licensor(s).

#### 18. RECORDS & AUDITS

Unless otherwise specifically agreed in writing by an authorized representative of Trojan, neither the Customer nor any representative of the Customer shall have the right to examine or audit any books, records or accounts of Trojan; or be entitled to, or have control over, any engineering or production prints, drawings or technical data which Trojan, in its sole discretion, considers to be of a confidential nature.

#### 19. ASSIGNMENT

All rights and obligations of Trojan and the Customer will enure to the benefit of and be binding upon their respective successors and permitted assigns. The rights and obligations of Customer hereunder shall not be assignable without the prior written consent of Trojan. All rights and obligations of Trojan may be assigned in whole or in part to any Affiliate or to any person acquiring any assets of Trojan outside the ordinary course of business. An "Affiliate" shall mean any entity which controls, is controlled by or is under common control with Trojan, whether directly or indirectly. Any attempted assignment in violation of the provisions of this section shall be void.

#### 20. CONFIDENTIALITY

20.1 All technical information, specifications, drawings, documentation



and knowhow of every kind and description disclosed by Trojan to the Customer and which is identified by Trojan as confidential shall be deemed to constitute "Confidential Information" of Trojan unless such information:

- (a) becomes part of the public domain through no fault of the Customer,
- (b) is disclosed to the Customer by a third party without breach of any obligation or other restriction,
- (c) is known to the Customer at the time of disclosure and has been documented as such, or
- (d) is required to be disclosed by legal, judicial or administrative proceeding.

20.2 All Confidential Information shall be owned by, and remain the exclusive property of, Trojan.

20.3 All Confidential Information shall be held in confidence by the Customer and, if in any form of physical media, returned by the Customer to Trojan upon request. The Customer shall not:

- (a) reproduce the Confidential Information without the written consent of Trojan, or
- (b) use the Confidential Information for any purpose other than in connection with the operation and maintenance of the Equipment.

20.4 The Customer shall be liable for and shall indemnify Trojan against all claims, demands, liabilities, losses, costs and expenses arising from any failure to comply with the terms hereof relating to Confidential Information. The Customer acknowledges that monetary damages may not be adequate in the event of any such failure to comply and that Trojan shall be entitled to injunctive relief in the event of any such non-compliance.

## 21. GOVERNING LAW

All issues relating to the construction, validity, interpretation, enforcement and performance of this agreement and the rights and obligations of Trojan and the Customer 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.

## 22. MODIFICATION/WAIVER

These terms incorporate and/or replace all prior terms whether oral or written, and may not be changed by either party except by a writing signed by both parties. The failure by Trojan to enforce at any time any of the provisions of this contract, or to exercise any election or option provided herein, shall in no way be construed as a waiver of such provision or option, nor in any way affect the validity of this contract (or any part hereof), or the right of Trojan thereafter to enforce each and every such provision. If any provision hereof is held by a court of competent jurisdiction to be unenforceable the remaining terms and provisions shall be unaffected and remain in full force and effect.

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

In addition to all terms and conditions above, the following Sections 104, 106, 108, and 109 apply to Trojan sales of Configured-to-Order Projects, Systems, and the like:

**104. PAYMENT**

Unless otherwise noted in the Quotation, 10% of the purchase price for the Equipment is due 30 days after approval of engineering submittals, 85% of the purchase price is due 30 days after the Delivery Date (as defined below) and 5% of the purchase price is due 30 days after the Acceptance Date (as defined below), provided that if the Start-Up Date is less than 30 days after the Acceptance Date, 90% of the purchase price is due on or before the Start-Up Date.

**106. DELIVERY**

106.1 Trojan will request the Customer to provide a firm date for delivery of the Equipment to the project site (the "Delivery Date") which Trojan will then use to establish the production schedule for the Equipment. The Delivery Date will then be binding on the Customer except for any changes made in accordance with the provisions below.

106.2 The Customer can request a rescheduling of the Delivery Date on one occasion only by notifying Trojan in writing not less than four weeks prior to the scheduled Delivery Date. The Customer 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 Customer may also request that the Delivery Date be extended beyond a six week period but, Trojan may not agree to such extension, beyond the maximum six week extension period.

106.3 Trojan 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.

106.4 Trojan 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 Trojan. Trojan will provide the Customer or its representative with a minimum of 24 hours notice of any such rescheduling.

106.5 Where any change to the Delivery Date is made at Customer's request, for all purposes with respect to the warranty and payment provided by Trojan in connection with the Equipment, the initial Delivery Date will be considered to be the Delivery Date regardless of any change later made to the Delivery Date.

**108. ACCEPTANCE**

108.1 During the period between the Delivery Date and the Start-up Date, the Customer shall prepare the Equipment and the project site for installation and start-up and, unless otherwise agreed in writing by an authorized representative of Trojan, shall complete acceptance testing with respect to the Equipment. The Equipment shall be deemed to be accepted on the earliest to occur of the following dates (the "Acceptance Date"):

(a) that date on which the Equipment 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.

108.2 All amounts which remain owing by the Customer for the Equipment, including any amount which is specified to be payable on the Acceptance Date, will be paid by the Customer to Trojan within 30 days after the Acceptance Date, unless otherwise agreed in writing by an authorized representative of Trojan.

108.3 Written notification must be given by the Customer to Trojan within seven days after the Acceptance Date listing any outstanding deficiencies with respect to the Equipment and Trojan will use all reasonable efforts to correct such deficiencies promptly.

**109. START-UP**

109.1 Trojan will request the Customer to provide 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.

109.2 On the Start-up Date, Customer must have the Equipment and site ready as provided in the Installation Preparation Checklist contained in the Contractor Installation Package sent to Customer, and must have paid all amounts then due and payable to Trojan.

109.3 Customer can request a rescheduling of the Start-up Date by notifying Trojan in writing not less than three weeks prior to the Start-up Date. Customer may request that the Start-up Date be extended, but may not request that the Start-up Date be moved forward. Trojan 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.

109.4 Trojan may, in its sole discretion, agree to reschedule the Start-up Date where a Customer requests less than a two week extension but is under no obligation to do so. In the event that Trojan does agree to less than a two week extension or that Customer requests more than two changes to the Start-up Date, Customer will be charged an administration fee in an amount determined by Trojan.

109.5 Trojan 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 Trojan. Trojan will provide Customer or its representative with a minimum of 72 hours notice of any such change to the Start-up Date.

109.6 In the event that Trojan'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 Trojan remain unpaid, Customer may either:

(a) provided all amounts then due and payable to Trojan have been paid, issue a purchase order for all costs involved in having Trojan correct the deficiencies, or

(b) have Trojan'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 Customer selects this option, the cost of rescheduling will be not less than a minimum amount specified by Trojan, with the final cost being determined by Trojan based on its costs and expenses incurred in connection with the rescheduling.

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