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January 6, 2021

Rob Hillis, Engineering Supervisor
City of West Kelowna
204-879 Anders Road
West Kelowna, BC
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**Dear Mr. Hillis**

**Project No: 60557308**

**Regarding: RFP 2020-04-P210 Evaluation Results and Recommendation**

# 1. Background

On May 26, 2020 the submission period closed for *RFP 2020-04-P210 Request for Proposals for Rose Valley WTP – UV Equipment Supply*. Responses and total capital cost were received from the following vendors:

- Atlantium Technologies Ltd. $ 622,020.00
- Calgon Carbon UV Technologies Ltd. $ 393,300.00
- Trojan Technologies Ltd. $ 479,400.00
- Xylem Canada Company $ 289,999.80 (adjusted by a $ 30,000 credit for the transition flanges)

The responses were received, reviewed and evaluated in accordance with the evaluation criteria.

# 2. Evaluation Results

## 2.1 General Contractors

The City received four (4) responses from UV equipment vendors. This letter provides a high-level summary of each response and a recommendation for award of the UV equipment. Attached to this letter is a detailed evaluation of the submissions from Calgon Carbon UV Technologies Ltd. and Xylem Canada Company.

### 2.1.1 Atlantium Technologies Ltd.

Atlantium Technologies Ltd. offered medium pressure UV reactors that met all the requirements of the request for the proposal. A couple significant challenges with the submission from Atlantium Technologies Ltd. are:

- They have no other installed equipment within Western Canada. The closest other installation is Montana in the United States. It was stated in the proposal that technical support would be readily available, but given the lack of other equipment in the area being able to cost effectively maintain timely, local technical support for the entire life of the equipment is expected to be a challenge. The limited previously installed equipment in North America results in low points for the Operational evaluation category.
- The capital cost of the equipment is more than double the low equipment price.

- The annual operating cost was reviewed and was confirmed to be high based on the higher power consumption, shorter lamp life and higher replacement parts typically associated with medium pressure UV disinfection systems.

The Atlantium Technologies Ltd. proposal was reviewed, but not documented in the summary sheets attached to this letter since their submission was the highest cost with no non-cost benefits compared to the other submissions.

### 2.1.2 Calgon Carbon UV Technologies Ltd.

Calgon Carbon UV Technologies Ltd. offered the lowest capital cost of the medium pressure UV reactors submitted to the City. Calgon Carbon UV Technologies Ltd have functioning comparable equipment with the City of Kelowna and the Glenmore Ellison Improvement District in the Okanagan. Additionally, Calgon Carbon UV Technologies Ltd. has numerous installations within Western Canada with a proven track record of acceptable technical support.

A detailed evaluation of the submission from Calgon Carbon UV Technologies Ltd. was completed. The results are attached to this letter.

### 2.1.3 Trojan Technologies Ltd.

Trojan Technologies Ltd. offered both low pressure and medium pressure UV reactors that met all the requirements of the request for proposal.

Trojan Technologies Ltd. is the manufacturer of the UV equipment being used at the Powers Creek WTP. This equipment has been in service for the past roughly 10-years and has worked well for the City. The challenge with the Trojan Technologies Ltd. proposal is the equipment being offered for the Rose Valley WTP is not directly comparable to the existing equipment at the Powers Creek WTP. This means spare parts could not be shared between the 2 sites. Other than the administrative ease of working with 1 vendor there is no other benefit associated with having Trojan Technologies Ltd. equipment at both sites.

The other challenge with the Trojan Technologies Ltd. submission is the cost. The medium pressure reactors capital cost is $ 479,400.00, which is almost $ 200 k higher than the Xylem Canada Company capital cost. The operating cost of the medium pressure Trojan Technologies Ltd. equipment will be higher than the Xylem Canada Company low pressure UV disinfection system. Trojan Technologies Ltd. also offered a low-pressure UV disinfection system, but at a higher capital cost. A high-level review of the costs indicates that the life cycle cost of the offerings from Trojan Technologies Ltd. are comparable.

The Trojan Technologies Ltd. proposals were reviewed, but not documented in the summary sheets attached to this letter since their submission cost was higher with no non-cost benefits compared to the other submissions from Calgon and Xylem.

### 2.1.4 Xylem Canada Company

Xylem Canada Company offered the lowest capital cost of the low pressure UV reactors submitted to the City. Xylem Canada Company have functioning equipment with the Black Mountain Irrigation District and the Regional District of Okanagan-Similkameen (RDOS) in the Okanagan. Xylem Canada Company have other installations within Western Canada and the largest single installation with Metro Vancouver at the Seymour-Capilano Filtration Plant. Xylem is an experienced credible vendor in the Western Canada drinking water treatment market.

Subsequent to receiving the original proposals items were clarified within the Xylem Canada Company submission. The clarification items are:

- The Xylem reactor is provided with 700 mm diameter flanges. This is not a standard size in Canada, so a $30,000 CAN credit was offered from Xylem Canada Company to cover the cost of fabricating the transition spools. Written confirmation of the credit was provided on September 21, 2020 by Xylem Canada Company.

- There were several commercial exceptions within the original Xylem Canada Company proposal. During subsequent discussion the commercial exceptions were all dropped. Agreement that Xylem Canada Company agreed with all the commercial terms was provide in writing on July 1, 2020.

A detailed evaluation of the submission from Xylem Canada Company was completed with the results attached to this letter.

## 3. Conclusion and Recommendations

The following conclusions and recommendations are:

- Xylem Canada Company is a credible UV disinfection vendor with technical support and successful references in Western Canada.
- The Xylem Canada Company offers the City the lowest capital cost by $ 103,300.20. Additionally, given the Xylem equipment uses low pressure UV technology, this proposal also offers the lowest annual operating cost.
- The lowest life cycle cost UV disinfection equipment option and the equipment that offers the highest benefit to cost score is the Spektron 4000e reactor from Xylem Canada Company.
- The City should accept the credit in the amount of $ 30,000 CAN to fabricate the 700 x 750 mm diameter reducers. This is required to connect the 700 mm diameter reactor to the standard 750 mm diameter process piping.
- Xylem Canada Company can meet the requirements of the project schedule.
- The City notifies Xylem Canada Company immediately they were the highest ranked proponent.

We trust the information above is adequate for the City to award the UV Equipment Supply Contract to Xylem Canada Company in the amount of $ 289,999.80. Please contact the undersigned with any questions, otherwise we assume the notice of award will be issued as soon as possible.

Yours sincerely,

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*Encl.*

# Rose Valley Water Treatment Plant
# UV Equipment Pre-selection Proposal Review

AECOM

Date: December 17, 2020
Project No.: 60557308
Rev. 1

**Table 1. Proposal Summary**

| | | Xylem Canada | | Calgon Carbon | |
|---|---|---|---|---|---|
| Category A - Power Consumption | | | | | |
| A.1 | Power consumption at 40 ML/day | 10.01KW | $7,015.01 | 9.7 KW | $6,797.76 |
| A.2 | Power consumption at 70 ML/day | 12.14KW | $8,507.71 | 15.5 KW | $10,862.40 |
| Category B - Supply Costs | | | | | |
| B.1 | Equipment Supply (incl all submittals, manuals, etc) | $274,809.00 | | $302,200.00 | |
| B.2 | Total Freight/Shipping Costs to Site (CIF to West Kelowna, BC) | $24,780.00 | | $28,100.00 | |
| B.3 | Field Services & Performance Testing (Section 01650 – Forms 100,101,102, 103) | $15,209.00 | | $35,300.00 | |
| B.4 | Spare Parts for One Year (Table 1-Schedule F) | $33.80 | | $9,200.00 | |
| B.5 | Training (Section 01650 – Form T1, T2) | $5,168.00 | | $18,500.00 | |
| | Cost adjustment for the specialized 700 x 750 mm diameter flanges | -$30,000.00 | | $0.00 | |
| Category C - Replacement costs | | **each** | **calculated** | **each** | **calculated** |
| C.1 | Lamp replacement | $468.00 | $7,031.23 | $2,703.00 | $14,206.97 |
| C.2 | Wiper Assembly | $45.40 | $726.40 | $502.00 | $2,510.00 |
| C.3 | Quartz sleeve | $637.00 | $63.70 | $684.00 | $342.00 |
| C.4 | Ballast replacement | $1,007.50 | $201.50 | $6,052.00 | $3,026.00 |
| C.5 | UV Sensor | $923.00 | $184.60 | $1,705.00 | $1,461 |
| | Consumable Spares: | **each** | **adjusted*** | | |
| | Fan Filters | $16.90 | $33.80 | | |
| | Wiper Seal | | | | |
| | Acticlean | | | | |
| Category D - Services | | | | | |
| D.1 | Lamp disposal fee | $0.00 | | $50.00 | |
| | Will the vendor provide lamp disposal services (Yes/No) | Yes | | No | |
| Subtotal (A.2, C.1-C.4 (adjusted),D.1) at 40 ML/day | | $15,256.24 | | $28,394.16 | |
| PST | | $1,067.94 | | $1,987.59 | |
| Annual Service Price | | **$16,324.18** | | **$30,381.75** | |
| PROPOSAL PRICE (excluding GST) | | **$289,999.80** | | **$393,300.00** | |
| | **Net Present Cost** | **$524,212.47** | | **$742,988.73** | |
| **Section 00200 - Schedule 3** | | | | | |
| Additional Field Services | | | | | |
| O.1 | Transportation Cost Per Trip | $1,005.00 | | $197.50/hr | |
| O.2 | Per Diem Cost for Field Technician's Expenses | $335.00 | | included | |
| O.3 | Per Diem Cost for Field Technician's Time | $728.10 | | $1,580.00 | |

**Table 1. Proposal Summary (Continued)**

| Section 002000 - Additional Equipment Information | Xylem Bid | Calgon Carbon Bid |
|---|---|---|
| References Provided: | | |
| a) General Experience | Yes | Yes |
| b) Specific Experience | Yes | Yes |
| c) Operating data to support performance claims | Yes | Yes |
| Proponent's Experience Provided | Yes | Yes |
| a) Identify manufacturer/primary supplier of Goods | Yes | Yes |
| b) Show that manufacturer is regularly engage in design and manufacture of Goods | Yes | Yes |
| c) State how long manufacturer has continuously manufactured similar goods | Yes | Yes |
| d) Show that proposed Goods are based on presently existing standard equipment | Yes | Yes |
| Quality Assurance and Product Durability | | |
| Manufacturer's Facilities Info Provided: | | |
| a) List location of manufacturing facilities | Yes | Yes |
| b) Provide list of possible subcontractors | Yes | No |
| c) Provide brief info describing engineering, technical support, and manufacturing staff | Yes | Yes |
| Service Support and Maintenance Availability Provided | Yes | Yes |
| Closest Service Person | | |
| Testing Equipment Provided | Yes | Yes |
| Spare Parts Provided: | | |
| a) Indicate location of facilities of spares and which spares are only available from propone | Yes | Yes |
| b) Describe the availability of spare parts | Yes | Yes |
| c) List recommended stock of spares | Yes | Yes |