



## STAFF REPORT ACTION REQUIRED

### **Contract Award - Contract 08FS-60WS, Tender Call 158-2008 and Purchase Order Amendments for R.L. Clark Water Treatment Plant, Rehabilitation and Upgrades of Electrical Systems and HVAC**

<b>Date:</b>	October 23, 2008
<b>To:</b>	Public Works & Infrastructure Committee
<b>From:</b>	Executive Director, Technical Services Acting Director, Purchasing and Materials Management Division
<b>Wards:</b>	Ward 6 – Etobicoke-Lakeshore
<b>Reference Number:</b>	P:/2008/Internal Services/pmmd/pw08020pmmd (AFS 4986)

#### **SUMMARY**

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The purpose of this report is to advise on the results of the Tender Call 158-2008 issued for the Rehabilitation and Upgrades of Electrical Systems and HVAC at the R.L. Clark Water Treatment Plant, in accordance with specifications as required by Technical Services, and to request authority to award a contract to the recommended bidder; amend the purchase order for professional services with Genivar Ontario Inc. (formerly known as MacViro Consultants), amend the purchase order for professional services with Earth Tech Canada Inc., and amend the purchase order for professional services for Clean Water Engineering Company Limited.

#### **RECOMMENDATIONS**

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**The Executive Director of Technical Services and the Acting Director of Purchasing and Materials Management Division recommend that Public Works & Infrastructure Committee grant authority to:**

1. Award Contract 08FS-60WS, Tender Call 158-2008, for the Rehabilitation and Upgrades of Electrical Systems and HVAC at the R. L. Clark Water Treatment Plant to Sutherland-Schultz Inc., in the amount of \$23,761,338.10, net of GST, having submitted the lowest bid meeting specifications in conformance with the Tender requirements.

2. Amend Purchase Order No. 6019010 for professional services with Genivar Ontario Inc. (formerly known as MacViro Consultants) for provision of general office administration and site supervision services during construction by an additional amount of \$598,874.22 net of GST, for a revised total of \$1,908,542.22 net of GST, and extend the purchase order expiry date to December 31, 2013.
3. Amend Purchase Order No. 6024382 for professional services with Earth Tech Canada Inc. for provision of general office administration and site supervision services during construction by an additional amount of \$597,126.25 net of GST, for a revised total of \$2,017,508.49 net of GST, and extend the purchase order expiry date to December 31, 2013.
4. Amend Purchase Order No. 6017749 for professional services with Clean Water Engineering Company Limited for provision of general office administration and site supervision services during construction by an additional amount of \$153,807.81 net of GST, for a revised total of \$373,162.95 net of GST, and extend the purchase order expiry date to December 31, 2013.

The total value of the contract award and combined purchase order amendments identified in this report is \$25,111,146.38 net of GST.

## **Financial Impact**

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The total construction contract award identified in this report is \$24,949,405.00 including all applicable taxes, charges and contingency allowances. The cost to the City, net of GST is \$23,761,338.10. The total purchase order amendments identified in this report is \$1,349,813.38, net of GST.

The total value of the contract award and combined purchase order amendments identified in this report is \$26,366,708.94, including all applicable taxes and charges. The total cost to the City net of GST is \$25,111,146.38.

The funding for the contract award is included in the approved 2009 Toronto Water Capital Budget and 2010-2013 Capital Plan in WBS Element CPW063-11 Electrical and HVAC Upgrades Construction.

The funding for the purchase order amendments identified in this report is included in the approved 2009 Toronto Water Capital Budget and 2010-2013 Capital Plan, WBS Elements CPW058-2, Design of Transformers and Switchgears; CPW067-1, Switchgears, Phase 2 Design and Contract Administration and CPW042-03, HVAC Rehab Engineering.

The following Table summarizes the cash flow requirements, for the contract award and combined purchase order amendments identified in this report, by year for each WBS Element:

<b>WBS Element</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
CPW063-11	\$2,500,000.00	\$7,000,000.00	\$8,000,000.00	\$5,000,000.00	\$1,261,338.10	\$23,761,338.10
CPW058-2			\$ 300,000.00	\$ 298,874.22		\$ 598,874.22
CPW067-1			\$ 200,000.00	\$ 397,126.25		\$ 597,126.25
CPW042-03	\$ 30,000.00	\$ 60,007.81	\$ 63,800.00			\$ 153,807.81
<b>Total</b>	<b>\$2,530,000.00</b>	<b>\$7,060,007.81</b>	<b>\$8,563,800.00</b>	<b>\$5,696,000.47</b>	<b>\$1,261,338.10</b>	<b>\$25,111,146.38</b>

The engineering estimate for this contract is \$31,650,000.00 net of GST.

The Acting Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **BACKGROUND**

Tender Call 200-2008 was issued by Purchasing and Materials Management Division and was advertised in the Daily Commercial News on July 16, 2008 and on the City's Internet Website.

The Purchasing and Materials Management Division at its Public Opening held on September 22, 2008, opened the following bids for Contract 08FS-60WS, Tender Call 158-2008, for the Rehabilitation and Upgrades of Electrical Systems and HVAC at the R.L. Clark Water Treatment Plant.

### Tenderer

### Price Complete Including All Charges, net of GST

Sutherland-Schultz Inc.	\$23,761,338.10
Comstock Canada Inc.	\$24,494,538.10*
Black & MacDonald Limited	\$27,056,293.33**
Alberci Constructors Limited	\$34,761,903.81**

\* Comstock Canada Inc. was declared informal by the Purchasing and Materials Management Division a result of the bid response being submitted in pencil and not in non-erasable ink.

\*\*Tender Price corrected for mathematical error. The Purchasing and Materials Management Division has verified that the mathematical errors were corrected.

## **COMMENTS**

The Tender documentation submitted by the recommended bidder has been reviewed by the Executive Director of Technical Services and was found to be in conformance with

the Tender requirements.

Technical Services staff have compared the bid to the estimated cost and found the price of the recommended bidder to be reasonable given the tender prices of all bidders.

The Fair Wage Office has reported that the recommended firm has indicated that it reviewed and understands the Fair Wage Policy and Labour Trades requirements and has agreed to comply fully.

Requirements for Additional Professional Services for Clean Water Engineering Company Limited, Genivar Ontario Inc. and Earth Tech Canada Inc.

### Background

The City of Toronto water treatment and supply system has numerous water treatment plants and pumping stations which supply and distribute water to all City of Toronto users. In some of these facilities the existing electrical systems and heating, ventilation and air conditioning (HVAC) systems equipment is aged and has reached its normal life expectancy and is beyond the state of economical repair.

The electrical systems in these facilities include switchgears, transformers and Motor Control Centres that distribute high and low voltage power to equipment within a facility. The HVAC systems in these facilities include air handling units, heaters, fans, air conditioning and dehumidification equipment and associated building HVAC controls that maintain indoor air quality at a facility.

Three (3) Requests for Proposals (RFP's) were issued for rehabilitation and upgrade of existing electrical systems and HVAC systems at the City's water treatment plants and pumping stations as follows:

In 2004, RFP 9117-04-7357 was awarded to Clean Water Engineering Company Limited (Clean Water) for the pre-design, detailed design and general office administration and site supervision services during construction for the replacement and upgrade of the existing HVAC systems at the R.L. Clark Water Treatment Plant (Clark) and at the F.J. Horgan Water Treatment Plant (Horgan).

In 2005, RFP 9117-05-7125 was awarded to Genivar Ontario Inc. (Genivar) for the predesign, detailed design and general office administration and site supervision services during construction for the replacement of the high voltage (27.6 kV) and medium voltage (4.16 kV) electrical equipment at the Clark as well as replacement of indoor and outdoor switchgears and transformers at seven pumping stations (West Toronto, Amour Heights, Kennedy, Lawrence, W H Johnson, Rosehill and St. Albans Pumping Stations).

In 2006, RFP 9117-06-7084 was awarded to Earth Tech Canada Inc. (Earth Tech) for the pre-design, detailed design and general office administration and site

supervision services during construction for the replacement of the existing low voltage (600 V) electrical equipment at the Clark, for replacement of medium and low voltage equipment at the Island Water Treatment Plant (Island) and R. C. Harris Water Treatment Plant (Harris) and for the replacement of outdoor switchgears and transformers at four pumping stations (Keele, Ellesmere, Kennedy and Richview Pumping Stations).

The work under the above three RFP's will result in a total of nine construction contracts for work at four water treatment plant sites and at twelve pumping station sites as follows:

- Currently six contracts have been awarded and are under construction at 11 sites. One Contract has been issued under Clean Water's assignment related to Horgan HVAC Rehab (07FS-41WS). Three contracts have been issued under Genivar's assignment related to Armour Heights and West Toronto Pumping Station Switchgear (06FS-59WS); St. Albans, West Toronto and Rosehill Pumping Station Outdoor Switchgears (07FS-50WS) and W H Johnson, Kennedy and Lawrence Pumping Stations Indoor Switchgears (08FS-54WS). Two contracts have been issued under Earth Tech's assignment related Kennedy Pumping Station Outdoor Switchgear and Transformers (07FS-66WS) and Island Switchgear and Transformer ( 08FS-52WS).
- Contract 08FS-60WS for the Rehabilitation and Upgrades of Electrical and HVAC systems at the R. L. Clark Water Treatment Plant is the seventh construction contract to be issued with all three engineering firms of Clean Water, Genivar and Earth Tech providing contract administration services for their component of work under the one construction contract.
- The remaining two construction contracts are anticipated to be tendered this year under Earth Tech's assignment.

During the design phase of the above assignments, it was determined that the electrical and HVAC work at the Clark should be completed as one construction contract as there is an overlap in work scope. More specifically, electrical changes required for the HVAC project provided by Clean Water, overlapped and conflicted with the replacement of the low and high voltage electrical equipment under the electrical systems upgrade projects provided by Genivar and Earth Tech. Integrating the electrical and HVAC assignments, such that the construction work was tendered together, would eliminate duplication of work, mitigate operational impact to the plant with respect to shutdowns required for construction, enable standardization of equipment, and from a City's liability perspective would mitigate Constructor issues, pertaining to the City, associated with multiple contractors overlapping in time and construction within the same construction site. Therefore, the design of Contract 08FS-60WS for the Rehabilitation and Upgrades of Electrical Systems and HVAC at the Clark was completed by integrating the work of the three engineering firms: Clean Water for the HVAC Upgrades at the Clark, Genivar for the high voltage electrical equipment at the Clark, and Earth Tech for the low voltage

equipment at the Clark. Accordingly, Clean Water, Genivar and Earth Tech are now required to provide the site inspection services during construction for Contract 08FS-60WS.

Contract administration services for construction of the six contracts (Contract Nos. 06FS-59FS, 07FS-41WS, 07FS-50WS, 07FS-66FS, 08FS-52WS and 08FS-54WS) provided by Clean Water, Genivar and Earth Tech are progressing well and the contracts are on average 60% complete. With respect to the contracts indicated above that are currently under construction, additional timelines for construction beyond those originally anticipated in the City's RFP have been required largely due to increased industry demands for the supply of electrical switchgear equipment. Over the last two years, delivery timelines have more than doubled. Delivery for electrical switchgear equipment is now 52 weeks, where previously, this equipment could be delivered within 26 weeks. This increase, coupled with operational constraints which includes a requirement to complete the work within low water demand periods as to not negatively impact the supply and security of the City's water supply has resulted in longer timelines for construction. As a result additional services are required from Clean Water, Genivar and Earth Tech to meet the extended tendered timelines for construction of the contracts under their respective assignments including the extended tendered construction timelines for Contract 08FS-60WS.

#### Additional Requirements for Clean Water under RFP 9117-04-7357

RFP 9117-04-7357 was awarded for general office administration and site supervision services during construction for the replacement and upgrade of the existing HVAC systems at the Clark and at the Horgan to Clean Water based on a 52 week construction duration for the Horgan component of the work, and 52 weeks for the Clark component of the work.

As derived from all the tendered contracts to be administered by Clean Water, the tendered timeline for construction is a total of 175 weeks. As such, an additional 123 week (175-52 weeks) construction period is required compared to the 52 week construction schedule as identified by Clean Water in their proposal. Clean Water's proposal had identified an amount of \$1,250.47 per week inclusive of disbursements and exclusive of GST, for any additional general office administration and site inspection services during construction. Based on this weekly rate, the additional 123 weeks of construction results in an additional amount of \$153,807.81 thus revising the engineering services during construction cost from \$219,355.14 to \$373,162.95.

Based on the above additional time required, it is requested that Purchase Order No. 6017749 for professional services with Clean Water be amended for an additional amount of \$153,807.81 net of GST (\$161,498.20 inclusive of GST).

### Additional Requirements for Genivar under RFP 9117-05-7125

RFP 9117-05-7125 was awarded for general office administration and site supervision services during construction for the replacement of electrical switchgears and transformers at various pumping stations and water treatment plants to Genivar based on a total of 249 weeks construction duration.

To date, three construction contracts have been awarded and construction for the rehabilitation of switchgears is currently ongoing at seven pumping station sites (Armour Heights, West Toronto, St. Albans, Rosehill, W H Johnson, Kennedy and Lawrence Pumping Stations). Contract 08FS-60WS, which is being recommended for award, includes the replacement of the high voltage and medium electrical equipment at the Clark is the last of the construction contracts to be awarded under Genivar's assignment.

The contract timelines for construction for the above four contracts is 606 weeks. This timeline also includes long delivery schedule for the electrical equipment. City staff, however, is managing the construction supervision costs by verifying that Genivar site services are required only during the active on-site construction. The active on-site construction requiring full time site inspection services by Genivar is currently estimated to be 427 weeks.

As mentioned previously, the additional timeline for construction of electrical contracts is largely attributed to recent increased industry demands worldwide over the last two years for the supply of switchgear equipment for which delivery timeline have more than doubled. The increased timelines coupled with operational constraints to work within low water demand periods (October 1<sup>st</sup> to April 30<sup>th</sup>) in any given year (minimal impact to the supply and security of the City's water supply to the public) has resulted in longer timelines for construction.

Based on 427 weeks of site inspection, an additional 178 week (427-249 weeks) construction period is required as compared to the 249 week construction schedule as identified by Genivar in their proposal. Genivar's proposal had identified an amount of \$3,364.49 per week inclusive of disbursements and exclusive of GST, for any additional general office administration and site inspection services during construction. Based on this weekly rate, the additional 178 weeks of construction results in an additional amount of \$598,874.22 thus revising the engineering services during construction cost from \$1,309,668.00 to \$1,908,547.22.

Based on the above additional time required, it is requested that Purchase Order No. 6019010 for professional services with Genivar be amended for an additional amount of \$598,874.22 net of GST (\$628,817.93 inclusive of GST).

### Additional Requirements for Earth Tech under RFP 9117-06-7084

RFP 9117-06-7084 was awarded for general office administration and site supervision

services during construction for the replacement of electrical switchgears and transformers at various pumping stations and water treatment plants to Earth Tech based on a total of 262 weeks construction duration.

To date, two construction contracts have been awarded and construction for the rehabilitation of electrical equipment is currently ongoing at two sites (Island Water Treatment Plant and Kennedy Pumping Station). Contract 08FS-60WS which includes for the replacement of the low voltage electrical equipment at the Clark is the third construction contract to be issued as part of this assignment. The last two construction contracts are scheduled to be tendered in November/December 2008.

The contract timelines for construction for the above five contracts is estimated to be 623 weeks. However, active on-site construction requiring full time site inspection services by Earth Tech is currently estimated to be 437 weeks. The additional timelines for construction of the electrical contracts are due to longer delivery timelines for switchgear and seasonal operational constraints during construction as indicated above.

Based on 437 weeks of site inspection, an additional 175 week (437-262 weeks) construction period is required compared to the 262 construction schedule identified by Earth Tech in their proposal. Earth Tech's proposal had identified an amount of \$3,412.15 per week inclusive of disbursements and exclusive of GST, for any additional general office administration and site inspection services during construction. Based on this weekly rate, the additional 175 weeks of construction results in an additional amount of \$597,126.25 thereby revising the engineering services during construction cost from \$1,420,382.24 to \$2,017,508.49

Based on the above additional time required, it is requested that Purchase Order No. 6024382 for professional services with Earth Tech be amended for an additional amount of \$597,126.25 net of GST (\$626,982.56 inclusive of GST).

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## SIGNATURE

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