

**Contract Award - Contract 09FS – 52WP  
Tender Call 219-2009 and Purchase Order Amendment  
Ashbridges Bay Treatment Plant  
Biosolids And Centrate Conveyance Remedial Upgrades**

<b>Date:</b>	February 4, 2010
<b>To:</b>	Public Works & Infrastructure Committee
<b>From:</b>	Executive Director, Technical Services Director, Purchasing and Materials Management Division
<b>Wards:</b>	Ward 32 – Beaches – East York
<b>Reference Number:</b>	P:/2010/Internal Services/pmmd/PW10012pmmd (AFS #9031)

**SUMMARY**

---

The purpose of this report is to advise on the results of the Tender Call 219-2009 issued for the Ashbridges Bay Treatment Plant - Biosolids and Centrate Conveyance Remedial Upgrades in accordance with specifications and drawings as required by Technical Services; to request authority to award a contract to the recommended bidder; and to amend the purchase order for professional engineering services with AECOM Canada Ltd.

**RECOMMENDATIONS**

---

**The Executive Director of Technical Services and the Director of Purchasing and Materials Management Division recommend that City Council grant authority to:**

1. Reallocate funds in the amount of \$4,987,654.63 net of GST to CWW035-08 from CWW019-03 – Standby Power Generation and CWW019-16 – Refurbish Polymer Storage as indicated in the table contained in the Financial Impact section of this report.
2. Subject to the approval of Recommendation No. 1, award Contract 09FS-52WP, Tender Call 219-2009, for the Biosolids and Centrate Conveyance Remedial Upgrades to Bennett Contracting Millgrove Ltd., in the amount of \$32,769,500.00

net of GST and HST Recoveries (\$32,225,000 net of GST) having submitted the lowest bid meeting specifications in conformance with the Tender requirements.

3. Subject to the approval of Recommendation No. 1, amend Purchase Order 6023148 with AECOM Canada Ltd. for provision of general office administration and site supervision services during construction from \$605,210.00 net of GST and HST Recoveries by an additional amount of \$1,523,717.79 net of GST and HST Recoveries (\$1,499,958.45 net of GST), for a revised total of \$2,105,168.45 net of GST and HST Recoveries, and extend the purchase order expiry date to December 31, 2014.

## Financial Impact

---

The total construction contract award identified in this report is \$32,769,500.00 net of GST and HST Recoveries. The total purchase order amendments identified in this report is \$1,523,717.79 net of GST and HST Recoveries.

The total value of the contract award and purchase order amendments identified in this report is \$33,724,958.45 net of all taxes. The cost to the City is \$34,293,217.79 net of GST and HST Recoveries.

There is insufficient funding currently available in WBS Element CPW035-08 – Dewatering Equipment Upgrades for the contract award of \$32,769,500.00, the purchase order amendment of \$1,523,717.79. As a result, the additional cash flow and project cost is to be reallocated from the 2010 Toronto Water Capital Budget and 2011-2019 Capital Plan.

The following Table summarizes the cash flow requirements by year for the contract award and purchase order amendments identified in this report, all net of GST and HST recoveries:

Account	2010 Cash Flow	2011 Cash Flow	2012 Cash Flow	2013 Cash Flow	2014 Cash Flow	Total
CWW 035-08	2,900,291.62	4,700,000.00	5,500,000.00	8,200,000.00	8,005,271.54	29,305,563.16
CWW 019-03		1,710,871.54				1,710,871.54
CWW 019-16			1,114,391.54	2,026,871.54	135,520.00	3,276,783.09
Total	2,900,291.62	6,410,871.54	6,614,391.54	10,226,871.54	8,140,791.54	34,293,217.79

The engineering estimate for the Biosolids and Centrate Conveyance Remedial Upgrades is \$30,000.00 net of all taxes.

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

## TENDER BACKGROUND

Tender Call 219-2009 was issued by Purchasing and Materials Management Division and was advertised in the Daily Commercial News on November 28, 2009 and on the City's Internet Website.

The Purchasing and Materials Management Division at its Public Opening held on January 19, 2010, opened the following bids for Contract 09FS-52WP, Tender Call 219-2009, for the Biosolids and Centrate Conveyance Remedial Upgrades:

<u>Tenderer</u>	<u>Price Complete Including All Charges, net of GST</u>
1. Bennett Contracting Millgrove Ltd.	\$32,225,000.00*
2. Kenaidan Contracting Ltd.	\$35,590,476.00

\*For Bennett Contracting Millgrove Ltd., the amount net of GST and HST Recoveries is \$32,769,500.00.

## 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.

### Project Background

The Ashbridges Bay Treatment Plant (ABTP) is Canada's largest wastewater treatment plant. Located on 40.5 hectares of land in Toronto's east end - Beaches Area - it has a design capacity of 818,000 cubic metres for wastewater per day. It is also one of Canada's oldest treatment plants, with the original plant being built in 1910 and it has continued to grow since. The plant has twelve (12) primary and four (4) secondary digesters to digest raw and waste activated sludge. Biosolids are dewatered, pumped, recycled and turned into pellets to be used as a fertilizer and soil conditioner.

The Biosolids and Centrate Conveyance Remedial Upgrades is required to upgrade certain aging sludge cake pumps and associated equipment which is more than fifteen years old and provide additional cooling to twelve (12) existing centrifuge motors to eliminate overheating. In consideration of equipment age and motor overheating issues, the City needs to address these deficiencies. Remedial upgrades are required to: reduce

the dewatering system downtime due to unanticipated, unscheduled maintenance needs; simplify system operations and control parameters; and increase system reliability

**Requirements for Additional Contracted Professional Services for AECOM Canada Ltd.**

Request for Proposal 9117-06-7396 was awarded for the pre-design, detailed design, contract administration and site supervision services during construction, and post-construction services for the Ashbridges Bay Treatment Plant (ABTP) Biosolids and Centrate Conveyance Remedial Upgrades to AECOM (Meeting No. 14, Report No. 3 of Bid Committee meeting held on April 18, 2007). AECOM was selected at a cost of \$1,259,560.00 net of GST, for work to be carried out in three phases consisting of design services, contract administration and site supervision services during construction, and post-construction services. Additional engineering fees for services during construction are recommended to address: i) the increased construction duration over that provided for in AECOM's original fee proposal; ii) the escalation in engineering fees due to extended project duration; and iii) increases in scope for contract administration and site supervision services during construction as a result of design changes requested by the City to accommodate both immediate and future implementation needs for the Biosolids and Centrate Remedial Upgrades at the ABTP.

The bid submitted by Bennett Contracting Millgrove Ltd. on Tender 219-2009 identifies a construction duration of 200 weeks. This is 126 weeks over the construction period of 74 weeks originally identified by the City in the Request for Proposal (RFP). A contingency amount of 26 weeks is requested to be added to the construction duration for unanticipated site conditions, which in total would result in 152 additional weeks for contract administration and site supervision services during construction on Purchase Order 6023148 to AECOM.

AECOM's cost of contract administration and site supervision services during construction submission was time-based to upset limits based upon estimated effort and hourly rates, that were a blend of 2007 rates, as no allowance for inflation was included in AECOM's proposal. The fees for the base scope of work for contract administration, site inspection services and contingency allowance were \$547,710.00 and \$57,500.00 all net of GST respectively with a weekly rate of \$5,750.00 net of GST for any additional contract administration and site supervision services during construction.

Staff rates have increased according to market conditions since that time and are no longer applicable. Consequently, AECOM has requested a one-time staff rate increase of approximately 3% per annum compounded over three years to 9.5%. Technical Services reviewed AECOM's proposed schedule of fees for 2010-2014 in conjunction with the rates originally submitted for this project and found the new rates to be acceptable, based upon the facts that: i) the rates are reasonable when compared to other current wastewater treatment plant consulting assignments; ii) the rate increases are consistent with market conditions observed over the past several years at approximately 3% per annum for a total of three years; iii) the rate increases have only been requested beginning the second quarter of 2010, approximately six (6) months after the originally-proposed completion date stated in the request for proposal by the City; and iv) the new increased rates will be

held constant by AECOM over the 2010-2014 period. Given the delays that have been imposed on this project, the need to maintain continuity and the interest of fairness, the City recommends that the base cost of services fees (contract administration and site inspection services) be increased for inflation by an amount of \$52,032.45 from \$547,710.00 to \$599,742.45, and the weekly rate of \$5,750.00 be increased to \$6,296.25, net of GST.

Based on the weekly rate of \$6,296.25, the additional 126 weeks of construction timeline and the 26 weeks for contingency plus escalation due to inflation will result in additional engineering fees of \$957,030.00 to accommodate AECOM's additional effort for contract administration and site supervision services.

The detailed design was extended, as requested by the City, to accommodate the implementation of the conveyance of dewatered solids from an additional four (4) existing centrifuges supplementing the work being performed for the initial eight (8) centrifuges under the base scope, resulting in work modifications associated with all twelve (12) centrifuges. Included with the remedial work of the conveyance system is the following: emergency power for the conveying system, lighting system study and upgrades, exhaust fans replacement, old centrate tank repairs and pump control upgrades, and various piping and plant services systems upgrades. Additional general office contract administration fees associated with these changes (shop drawings review, responses to Contractor's Requests for Information, coordination, etc.) are in the amount of \$121,296.00 net of GST.

The Biosolids and Centrate Conveyance Remedial Upgrades project is very complex in nature, and involves selective demolition/removals and replacement of process equipment and systems, with associated power feeds, instrumentation and controls (I&C), and extensive SCADA upgrades, all performed in a carefully phased construction sequence. In order to maintain the operation of the Biosolids sludge processing facility throughout the staged construction, considerable coordination is required with the plant staff, PCS group, General Contractor and its I&C sub-contractor, and SCADA integrator. A part-time electrical, I&C and SCADA inspector from the City's engineering consultant, AECOM, is therefore essential to coordinate all electrical, I&C and SCADA aspects of this project in order to minimize the impact of construction on plant operations and processes. The coordination time is estimated at approximately 40% of the contract duration. The proposed budget for this additional field inspector is \$369,600.00, net of GST.

Based on the above additional construction time line and associated contract administration effort, it is requested that Purchase Order 6023148 for contracted professional services with AECOM Canada Ltd. for the provision of general office administration and site supervision services during construction, be amended from

\$605,210.00 by an additional amount of \$1,499,958.45, for a revised total of \$2,105,168.45 all net of all taxes (1,523,717.79 net of GST and HST Recoveries), and extend the purchase order expiry date to December 31, 2014.

## CONTACT

Paul Arsanious, P. Eng.  
Senior Engineer  
Technical Services  
Telephone: (416) 392-3296  
e-mail: [parsani@toronto.ca](mailto:parsani@toronto.ca)

Victor Tryl, P. Eng.  
Manager, Professional Services  
Purchasing and Materials Management  
Telephone: (416) 397-4801  
e-mail: [vtryl@toronto.ca](mailto:vtryl@toronto.ca)

## SIGNATURE

---

William G. Crowther, P. Eng.  
Executive Director  
Technical Services

---

Lou Pagano, P. Eng.  
Director  
Purchasing and Materials Management