



STAFF REPORT ACTION REQUIRED

Contract No. 07FS - 46WP, Tender Call 305-2007 Humber Wastewater Treatment Plant Upgrade of the South Primary Tanks

Date:	April 21, 2008
To:	Public Works & Infrastructure Committee
From:	Executive Director, Technical Services Director, Purchasing and Materials Management Division
Wards:	Ward 5 – (Etobicoke Lakeshore)
Reference Number:	Tender Call No. 305-2007 P:\2008\Cluster B\PW---- (AFS#5655)

SUMMARY

The purpose of this report is to: (a) advise on the results of the Tender Call 305-2007 issued for the Humber Wastewater Treatment Plant – Upgrade of the South Primary Tanks, in accordance with specifications as required by Technical Services, (b) request authority to award a contract to the recommended bidder, and (c) amend the purchase order for professional services with Genivar Ontario Inc (formerly known as MacViro Consultants).

RECOMMENDATIONS

The Executive Director of Technical Services and the Director of Purchasing and Materials Managements recommend that:

1. Funds in the amount of \$12,796,548.74 net of GST be reallocated to CWW005-23 Rehab of South Primary Clarifiers from CWW033-02 Enhanced Digestion Pilot Study, CWW049-02 Humber TP Process Equipment Upgrades, and CWW036-03 Highland Creek TP Biosolids Treatment Upgrades. Funding is included in the approved 2008 Toronto Water Capital Budget and 2009-2012 Capital Plan. The additional cash flow and project cost is to be reallocated (net of GST) as follows: \$2,950,000.00 in 2009 (\$950,000.00 from CWW033-02, \$2,000,000.00 from CWW049-02), \$3,750,000.00 in 2010 from CWW033-02, \$4,000,000.00 in 2011 from CWW033-02, and \$2,096,548.74 in 2012 (\$900,000.00 from CWW033-02, \$1,196,548.74 from CWW036-03).

2. authority be granted to award Contract 07FS-46WP, Tender Call 305-2007, for the Humber Wastewater Treatment Plant – Upgrade of the South Primary Tanks to New Resource General Contracting Inc, in the total amount of \$22,457,142.86, net of GST, being the lowest compliant bid received.
3. authority be granted to amend the purchase order for professional services with Genivar Ontario Inc. (formerly known as MacViro Consultants) for the provision of general office administration and site supervision services during construction by an additional amount of \$1,164,197.60 net of GST, for a revised total of \$1,780,125.30 net of GST; and
4. authority be granted to amend the purchase order for professional services with Genivar Ontario Inc. (formerly known as MacViro Consultants) for the provision of post construction services by an additional amount of \$5,208.28 net of GST, for a revised total of \$35,870.73 net of GST

FINANCIAL IMPACT

The total contract award identified in this report is \$23,580,000.00, including all applicable taxes and charges. The cost to the City net of GST is \$22,457,142.86. The total of contract amendments identified in this report is \$1,169,405.88, net of GST (\$1,227,876.17 including all taxes and charges).

The total value of the contract award and contract amendments combined identified in this report is \$24,807,876.17, including all applicable taxes and charges. The total cost to the City net of GST is \$23,626,548.74.

This project is included in the approved 2008 Toronto Water Capital Budget and 2009-2012 Capital Plan in WBS Element CWW005-23 Rehab of South Primary Clarifiers. However, at this time, the uncommitted cash flow is insufficient and additional cash flow authority is required to meet these commitments. An additional \$12,796,548.74 is required in order to complete the construction and engineering services, net of GST.

The cash flow requirements for this project are \$1,300,000.00 in 2008, \$5,650,000.00 in 2009, \$6,450,000.00 in 2010, \$6,700,000.00 in 2011 and \$3,526,548.74 in 2012 net of GST.

The pre-tender engineering estimate for the construction project was \$18,000,000.00 net of GST. This estimate was finalized after the 2008 budget cycle was initiated, and was therefore not reflected in the approved 2008 Toronto Water Capital Budget. The tender price is approximately \$4.5 million higher than the pre-tender estimate due to the following:

- pre-tender estimate did not include approximately \$1.3 million for aluminum tank covers and miscellaneous metals fabrication to accommodate odour capture and

- conveyance, and ventilation and associated upgrades to accommodate recent stricter interpretations of fire protection regulations under the National Fire Protection Act;
- tender price includes approximately \$1 million for a confined space access premium related to recent changes to the Occupational Health & Safety Act for confined space work, the need to undertake work in tanks adjacent to fully operational facilities in accordance with corporate health & safety policies, and for associated contractor overhead costs due to a prolonged construction duration;
 - approximately \$1 million for process mechanical equipment associated with increased cost for steel and additional process control equipment;
 - the pre-tender estimate did not account for pending expiry of union labour industry contract agreements. The project duration is estimated at 4.5 years however union contract agreements will expire in 2 years and will be renewed at higher rates; and
 - market conditions and activities are such that currently all major water and wastewater contractors are busy with other construction projects throughout the Greater Toronto Area (GTA). Municipalities in the GTA (including the City of Toronto) have in place significant capital investment programs designed to meet growth demands, repair older infrastructure and enhance existing treatment systems. Consequently, prices for construction projects are continuously increasing. Furthermore, the international market demand is driving up the prices for raw materials and consumables for the construction industry.

The additional cash flow and project cost (all net of GST) is to be reallocated from approved 2008 capital projects (with net impact of \$0) as follows:

Account	2008	2009	2010	2011	2012	Total
CWW005-23 Rehab of South Primary Clarifiers (Current Funds)	\$1,300,000.00	\$2,700,000.00	\$2,700,000.00	\$2,700,000.00	\$1,430,000.00	\$10,830,000.00
CWW033-02 Enhanced Digestion Pilot Study	\$0	\$950,000.00	\$3,750,000.00	\$4,000,000.00	\$900,000.00	\$9,600,000.00
CWW049-02 Humber TP Process Equipment Upgrades	\$0	\$2,000,000.00	\$0	\$0	\$0	\$2,000,000.00
CWW036-03 Highland Creek TP Biosolids Treatment Upgrades	\$0	\$0	\$0	\$0	\$1,196,548.74	\$1,196,548.74
TOTAL CWW005-23 (including reallocation)	\$1,300,000.00	\$5,650,000.00	\$6,450,000.00	\$6,700,000.00	\$3,526,548.74	\$23,626,548.74

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

BACKGROUND

The Purchasing and Material Management Division, at its Public Opening held on March 14, 2008, opened the following bids for Contract 07FS-46WP, Tender Call 305-2007, for the Humber Wastewater Treatment Plant – Upgrade of the South Primary Tanks.

Tenderer	Price Complete Including <u>All Charges, net of GST</u>
New Resource General Contracting Inc.	\$22,457,142.86
A Plus General Contractors Corp.	\$23,220,180.95
King City Group Ltd.	\$25,284,988.57*
Kenaidan Contracting Ltd.	\$25,359,047.62

* Bid received from King City Group Ltd. has been declared informal due to insufficient Bonding requirements.

COMMENTS

The Humber Treatment Plant (HTP) is the City's second largest wastewater treatment plant in the City of Toronto, located on the west side of the Humber River. The Humber Treatment Plant has a design capacity of 473,000 cubic metres per day.

Currently, the plant has two primary clarifier facilities; the North Primary Clarifiers, and the South Primary Clarifiers. The purpose of this process is to settle out large settleable solids, to reduce the organic and solids loading to the secondary treatment process. The existing South Primary Clarifier facility is old and the equipment and structures are deteriorating. The facility was constructed in the 1960's, and is in need of extensive maintenance and repairs. Existing equipment, and some structural components, are deemed to have reached the end of their useful service life and are in need of major refurbishment.

The design project was initiated in 2004 and subsequently amended in 2006 to reflect changes as a result of the recommendations of the ongoing Odour Control Study (being performed by Zorix) to address neighbourhood and regulatory compliance concerns regarding odours. The changes to the design were needed to address the immediate and future implementation of recommendations of the odour study, as well as the associated impacts of the Electrical Safety Authority's adoption of National Fire Protection Association 820 as a regulatory standard, and changes to the building code for structural design requirements. This not only impacted the selection of the appropriate process equipment, but increased the extent of structural upgrades required. The modifications to the design extended the project completion by approximately 30 months. The detailed design of the proposed upgrades work was completed in mid-2007. The contract was tendered in late December 2007 after receipt of all regulatory approvals.

It is imperative to proceed with the refurbishment of the ageing infrastructure as the south primary tanks are constantly out of service and require frequent repairs. The unreliability of the tank operations places the Plant in jeopardy of contravening its effluent criteria requirements under its Certificate of Approval as mandated by the Ministry of Environment. Further, there is an urgent need to move forward with the implementation of the odour control program which is dependent on the south primary tank upgrades being performed prior to the implementation of odour control measures such as covers over the tanks.

Requirement for Additional Professional Services from MacViro:

Request for Proposal No. 9117-03-7237 was awarded for the pre-design, detailed design, general office administration and site supervision services during construction, and post-construction services for Upgrades to the South Primary Tanks at the Humber Treatment Plant to MacViro Consultants Inc. (Report No. 6 of the Works Committee, as adopted by the Council of the City of Toronto at its meeting held on July 22, 23, and 24, 2003). MacViro was selected at a cost of \$1,026,061.40 net of GST, for work to be carried out in three phases consisting of detailed design, site services during construction, and post-construction services. Additional engineering fees for services during construction are recommended to address i) the increased construction period over that provided for in MacViro's original fee proposal; ii) the escalation in engineering fees due to extended project duration; and iii) increases in scope for general office administration as a result of design changes requested by the City to accommodate both immediate and future implementation needs for the odour control program at the treatment plant.

The tender submitted by New Resource General Contracting Inc. identifies a construction period of 240 weeks, which is similar to other bidders. This is an increase of 132 weeks to the construction period from the 108 weeks originally identified by MacViro in their proposal. A contingency amount of 20 weeks should also be added to the construction duration for unanticipated site conditions, which results in a total of 152 additional weeks for general office administration and site supervision services.

MacViro's cost of services submission was time-based to upset limits based upon estimated effort and hourly rates, that were a blend of 2003 – 2006 rates, as no allowance for inflation was included in MacViro's proposal. The fees for the base scope of work for general office administration and site inspection were \$615,927.70 net GST, with a weekly rate of \$5,677.57 net GST for any additional general office administration and site supervision services during construction, if the time period identified by the contractor is greater than the 108 weeks included by MacViro in their proposal.

Staff rates have increased according to market conditions since that time and are no longer applicable. Consequently, MacViro has requested a one-time staff rate increase of 4% per annum compounded over four years. Technical Services reviewed MacViro's proposed schedule of fees for 2008-2012 in conjunction with the rates originally submitted for this project and found the rates to be acceptable, based upon the facts that: i) the rates appear reasonable when compared to other wastewater treatment plant

consulting assignments; and ii) the rate increases appear consistent with market conditions observed over the past several years at 4% per annum for a total of four years; iii) the rate increases have only been requested beginning mid-2008, approximately eighteen (18) months after the originally-proposed completion date; and iv) the new increased rates will be held constant by MacViro over the 2008-2012 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 scope cost of services fees be increased from \$615,927.70 to \$720,548.29, and the weekly rate of \$5,677.57 be increased to \$6,641.95, net of GST. Accordingly, the post-construction services fees should be increased from \$30,662.45 net GST to \$35,870.73.

Changes in the base scope of work for detailed design were requested to accommodate the implementation of the odour control program at the treatment plant. These changes included the provision of odour containment for the inlet channel and effluent weirs, and conveyance piping to a future biofilter. The head office contract administration fees for these changes are \$50,000.00 excluding GST.

Based on the weekly rate of \$6,641.95, the additional 152 weeks of construction (132 weeks for construction plus 20 weeks for contingency) results in an additional \$1,009,577.00 to accommodate MacViro's additional time for engineering site services. Along with the recommended fees increase of \$104,620.59 in the base scope associated with the 4% annual escalation over 4 years, and the scope changes to accommodate odour containment in the construction phase, this increases the overall funding requirements for the general office administration and site supervision services during construction from \$615,927.70, to \$1,780,125.30, net of GST.

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.

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