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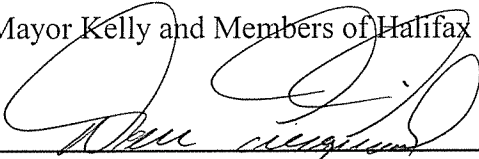


PO Box 1749  
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**Halifax Regional Council**  
**December 14 , 2004**

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:**

  
\_\_\_\_\_  
Dan English, Acting Chief Administrative Officer

**DATE:** December 1, 2004

**SUBJECT:** **Aerotech STP Upgrade/Central Biosolids Dewatering Facility**  
**Tender # 04-282**

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**ORIGIN**

Approved 2002/03, 2003/04 and 2004/05 Capital Budget.

**RECOMMENDATION**

It is recommended that Regional Council approve:

1. An increase to the gross budget for Capital Account No. CSE00700, Aerotech Central Biosolids Dewatering Facility, in the amount of \$3.5million with no change to the net budget to reflect incremental funding from CSIF;
2. An increase to the gross budget for Capital Account No. CSE00700, Aerotech Central Biosolids Dewatering Facility, in the amount of \$374,158, with no change to the net budget to reflect funding from the Wastewater Treatment Plant Infrastructure Reserve, Q122;
3. The award of Tender # 04-282 in the amount of \$5,825,381 to L&R Construction for the construction and commissioning of the Aerotech Sewage Treatment Plant Upgrade/Biosolids Dewatering Facility;

**Recommendations Continued on Page 2.**

4. An allowance for testing of materials and unforeseen work that is likely to arise with a capital project of this size and complexity, in the amount of \$503,875;
5. The appointment of Dillon Consulting/ABL Environment for the amount of \$356,158 for construction inspection, contract administration and commissioning services.

\* Funding for items 3, 4, and 5 is available in Capital Account No. CSE00138, Aerotech Sewage Treatment Plant Upgrade and Capital Account No. CSE00700, Aerotech Central Biosolids Dewatering Facility, as outlined in the budget implications section of this report.

## **BACKGROUND**

Constructed in 1987, the Aerotech Sewage Treatment Plant serves the HRM Aerotech Park and the Halifax International Airport zone. This facility is a 308,000 imperial million gallons per day secondary treatment process which discharges to the Johnson River system and ultimately to Miller Lake and the Shubenacadie River basin.

Historically the Aerotech Sewage Treatment Plant (STP) has been unable to meet Nova Scotia Department of the Environment and Labour effluent compliance. This has been primarily due to the high organic strength of the adjacent Biosolids Lagoon supernatant which the STP receives for treatment and the strength of the wastewater from Aerotech Park and the Halifax International Airport.

In May 2001, HRM Council awarded the Aerotech Park STP Upgrade/Sludge Management Study to Dillon consulting/ABL Environmental. The study reaffirmed the requirement for a plant upgrade from secondary to tertiary treatment in order to meet regulatory compliance for inland receiving waters. The recommended treatment option was converting the plant from a rotating biological contactor (RBC) to a sequencing batch reactor (SBR) process with phosphorus removal, post filtration and ultra violet disinfection.

The Dillon study recommended replacing the existing Aerotech Lagoon due to historical problems related to cleaning, disposal of biosolids and the negative impact on the sewage treatment plant. This approach consisted of constructing a Central Biosolids Dewatering Facility to be adjacent to and integrated with the Aerotech Sewage Treatment Plant in order to receive and dewater biosolids originating from existing HRM wastewater treatment facilities and residential septage. The dewatered biosolids will be transported to the N-Viro facility, also located in Aerotech Park, to be further processed in the (Halifax Harbour Solutions) N-Viro alkaline stabilization/heat treatment process resulting in a Canadian Food Inspection Agency approved fertilizer product and meeting NSDEL Class A Biosolids requirements.

On May 13, 2003, Council approved Dillon Consulting/ABL Environmental to provide design services for the Aerotech Park Sewage Treatment Plant Upgrade and the Central Biosolids Dewatering Facility. The total capital cost for the Sewage Treatment Plant upgrade portion was expected to be \$3.0M. with funding originating from Q122, Wastewater Treatment Reserve. The estimated capital cost required for the Central Biosolids Dewatering Facility phase was expected to cost \$3.5M with the funding source not identified at that time. The total estimated cost of the project was \$6.5M.

### **DISCUSSION**

The initial tender call of September 22, 2004 resulted in only one bid which was submitted by L&R Construction. It was assumed by Procurement and EMS staff that market conditions may have resulted one bid therefore in an effort to realize the submission of a number of competitive bids, the tender date was extended to November 9, 2004.

Six bids (HST included) were received:

L&R Construction:	\$6,477,089.80
Winbridge:	\$7,602,391.90
Black and MacDonald	\$8,634,447.82
Opron	\$8,694,000.00
Santec	\$9,308,469.36
Aecon	Bid rejected

In addition to the Tender costs of \$5,825,381.00 and committed/approved design costs of \$392,943 there will be an estimated allowance of \$503,875.00 for testing and unforeseen work due to the scope and complexity of this capital project, and consultant construction services costs of \$356,158, for a total project cost of \$7,078,357.00.

HRM staff and Dillon Consulting/ABL Environmental are recommending that Council award this project to the lowest bidder, L&R Construction. This firm has specialized in constructing small treatment systems in recent years, i.e., the Eastern Passage WPCP Grit Room Expansion, Pugwash Sewage Treatment Plant, Bridgewater Water Treatment Plant and was recently awarded the Tatamagouche STP project.

The construction of the Aerotech STP Upgrade/Central Biosolids Dewatering Facility has a planned start date of April 2005, and estimated completion date of June 2006.

The total costs related to this project are approximately 8 % higher than the originally projected \$6.54M (exclusive of taxes). This is due to the extreme increases in steel costs during the past two years, the high construction activity in the wastewater treatment sector in Nova Scotia, and inflation.

The Central Biosolids Dewatering Facility phase at \$3.5M is funded from the EPC Reserve which has capacity as a result of funding from the Canadian Strategic Infrastructure Fund (CSIF) and which is designated/approved by the Government of Canada for this purpose.

### **BUDGET IMPLICATIONS**

Based on the price of \$5,632,252 plus net HST for a total of \$5,825,381, plus additional costs of \$503,875 (allowance for testing and unforeseen work) and \$356,158 (consultant construction services), funding is available as follows:

**Budget Summary:      Capital Account CSU00138, Aerotech STP Upgrade**

Cumulative Unspent Budget:	\$1,841,256
Less: Tender 04-282	<u>\$1,841,256</u>
Uncommitted Balance	0

**Capital Account CSE00700, Biosolids Dewatering Facility**

Cumulative Unspent Budget:	\$ 970,000
Plus: CSIF Funding (through Q105)	\$3,500,000
Plus: Transfer from Reserve Q122	\$ 374,158
Less: Tender 04-282	\$3,984,125
Less: Allowance for unforeseen work	\$ 503,875
Less: Contract administration	<u>\$ 356,158</u>
Uncommitted Balance	0

The budget availability has been confirmed by Financial Services.

### **FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating budget, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation. If approved this will increase the 04/05 Capital Budget as well as Reserve withdrawals for 04/.05.

### **ALTERNATIVES**

None recommended

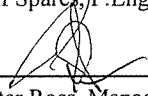
**ATTACHMENTS**

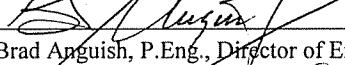
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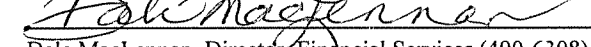
Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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