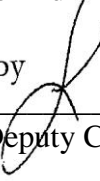


Item No. 11.1.2
Halifax Regional Council
September 11, 2012

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: Original signed by 
Richard Butts, Chief Administrative Officer

Original Signed by 
Mike Labrecque, Deputy Chief Administrative Officer

DATE: August 28, 2012

SUBJECT: Cell 5 Closure – Landfill Gas System and Permanent Cap Installation

ORIGIN

- March 2006 Regional Council Approval of Partial Interim Closure Methodology for Landfill Cells;
- MIRROR NS, operator of the HRM Otter Lake mixed waste processing and disposal facility;
- HRM Approved Capital Project Budgets; and
- Completion of Final Closure of Cell 5 in Fiscal 2012/13.

RECOMMENDATION

It is recommended that Halifax Regional Council:

- 1) Approve a budget increase to Capital Account CWU01361 Half Closure of Cell 5 in the amount of \$3,226,467;
- 2) Approve a withdrawal of \$3,226,467 from the Otter Lake Landfill Closure Reserve Q120 to fund Capital Account CWU01361 Half Closure of Cell 5 as outlined in the Budget Implications Section of this Report.

BACKGROUND

In the Approved 2011/12 Capital Project Budget, Council approved funding of \$739,000 for Project No. CWU01361 Partial Closure of Cell 5 and in the Approved 2012/13 Capital Project Budget, Council approved Project No. CWU01361 Half Closure of Cell 5 – Otter Lake, in the amount of \$3,155,000 to be expended in the 2012/13 fiscal year.

Also in the Approved 2012/13 Capital Project Budget, Council approved in principle Capital Project No. CWU01361 Half Closure of Cell 5 in the amount of \$3,960,000 for planned expenditure in the 2013/14 fiscal year.

As part of the gas and odour control system for the Otter Lake landfill cells, the first phase of closure work in each cell consists of installation of gas collection wells in approximately half the landfill cell (with temporary collection and flaring of the gas while part of the cell remains open) and placement of a clay soil layer on the top of the landfill cell as it reaches design height. Initial gas well installation and placement of clay soil layer occurred in a portion of Cell 5 in 2011.

This methodology of half closure of each cell, lower half and upper half, which was approved by Regional Council commencing with closure of Cell 3A in March 2006, has helped yield the intended and desired result, reducing odour occurrences from the Otter Lake facility. Prior to this cell phased closure methodology, reports of odours received from the communities adjacent to the Otter Lake facility were more numerous. The completion of each cell closure in phases, with gas control and initial clay soil layer in place in one half of the cell (Cell 5A) followed by the other half the following year (Cell 5B), has proven to be more effective in reducing odours from the site while a portion of the cell remains open and prior to final closure of each cell.

DISCUSSION

Closure work for the Cell 5A portion planned in Fiscal 12/13 consists of installation of the final capping geomembrane, permanent gas system, vegetative soil layer and hydroseed on top. It had been anticipated that for the Cell 5B portion, the Fiscal 12/13 work would only consist of the installation of gas collection wells and placement of the initial clay soil layer on top of the Cell 5B portion as it reached design height. However, after staff review of the time lines with MIRROR NS, the final closure work in Cell 5B can be completed this construction season (by December, 2012) to help ensure maximum gas control and odour protection earlier than had been anticipated. The final section of the Cell 5B portion will reach design height in September, allowing sufficient time for completion of the final capping geomembrane, permanent gas system, vegetative soil layer and hydroseed on top in all of Cell 5B this year. MIRROR NS has advised that to ensure prevention of potential odour issues through the winter, to maximize the collection of landfill gas and for efficiency of construction, it is advisable to finish the final closure of Cell 5B this construction season (although it was originally projected to be constructed beginning in spring of 2013).

Section 15 of the 1997 contract agreement with MIRROR NS provides for the construction and

closure of each landfill cell. MIRROR NS (with their design engineers, Dillon), submits a design and construction cost proposal related to cell closure for review. A cost substantiation review of the design and construction costs for Cell 5 Closure was completed by CBCL Ltd., HRM's independent consultant engineers, and HRM Solid Waste Resources staff. Following CBCL's quantity and unit cost review and negotiations with Dillon, HRM and MIRROR NS resolved outstanding issues related to design, quantities, unit costs and completed negotiations for the total project cost of Cell 5 closure. The cost for Cell 5 Closure is \$6,817,326.26 plus net HST. The cost of quantity and unit cost review for this project is \$10,500 plus net HST.

NS Environment issued a construction approval for Cell 5 Closure on June 29, 2012.

The elements of the project agreement for this work (Supplementary Agreement No. 15) between HRM and MIRROR NS for the Closure of Cell 5 are the agreed design specifications and drawings, the agreed project cost schedule and the progress payment procedures.

BUDGET IMPLICATIONS

The cost for the Cell 5 Closure including engineering review is \$6,827,826.26, plus net HST of \$292,640.63, for a net total of \$7,120,466.89. The budget availability has been confirmed by Finance.

Budget Summary:	<u>Project Account No. CWU01361 Closure of Cell 5</u>	
	Cumulative Unspent Budget	\$3,894,000
	Add: Budget Increase	<u>\$3,226,467</u>
	Balance	\$7,120,467
	<u>Reserve Account No. Q120 – Otter Lake Landfill Close</u>	
	Projected March 31/13 balance as of July 31, 2012	\$8,720,979
	Less: Reserve Withdrawal	<u>\$3,226,467</u>
	New Projected balance for March 31/13	\$5,494,512

As noted, the total estimated project cost (Fiscal Years 2011/12, 2012/13 and 2013/14) for this work was \$7,854,000. Through the quantity and unit cost review and negotiations with MIRROR NS, Solid Waste staff have secured a price of \$7,120,467 resulting in an overall planned budget savings of \$733,533.

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Project budget, policies and procedures regarding withdrawals from the utilization of Capital and Operating Reserves, as well as any relevant legislation. Approval of the above recommendations will result in an increase to the gross 2012/13 Project budget and will increase Reserve withdrawals.

COMMUNITY ENGAGEMENT

MIRROR NS in conjunction with HRM staff has an issue response protocol in place to deal with issues that may arise as a result of operations at the landfill. This process remains in place and provides immediate and direct response to community and resident concerns.

ENVIRONMENTAL IMPLICATIONS

The advancement of approved funding to support completion of the Landfill Gas System and Permanent Cap Installation for Final Closure of Cell 5 in Fiscal 2012/13 will enhance gas and odour control at this site beginning in late fall, 2012 rather than waiting until spring, 2013 to complete the work.

ALTERNATIVES

One alternative, not recommended, is not to release the \$3,226,467 from the Q120 Reserve and leave as part of the project for anticipated budget in 2013/14.

The completion of the Landfill Gas System and Permanent Cap Installation for Cell 5 this construction season will ensure a continuation of enhanced gas collection and odour control at the Otter Lake facility.

ATTACHMENTS

N/A

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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