



PO Box 1749
Halifax, Nova Scotia
B3H 2Y4

DECLASSIFIED

FOIPOP Review

Oct 21, 2010

Approved to Release



Halifax Regional Council

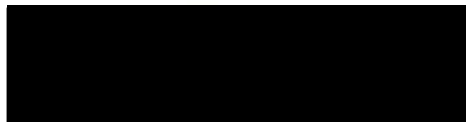
In Camera

October 12, 2004

Date Oct 6 / 2010

TO:

Mayor Kelly and Members of Halifax Regional Council



SUBMITTED BY:

George McLellan, Chief Administrative Officer



Dan English, Deputy Chief Administrative Officer

DATE:

October 7, 2004

SUBJECT:

Harbour Solutions Project - Biosolids Processing Facility

PRIVATE AND CONFIDENTIAL

ORIGIN

June 14, 2004 Private and Confidential Report to Council ("Harbour Solutions Project - Biosolids Facility" - attached).

RECOMMENDATION

WHEREAS beginning in September 1998, HRM undertook a lengthy and detailed RFQ/RFP process for the implementation of the Halifax Harbour Solutions Project (the "Project") and in October 2002 signed agreements with the Halifax Regional Environmental Partnership ("HREP") and others for the implementation of the Project ("HREP Agreements");

AND WHEREAS the conditions precedent to the Effective Date of the HREP Agreements were not met by the deadline date set forth in the HREP Agreements and, as a result, the HREP Agreements are not now in effect;

AND WHEREAS on August 15, 2003, HRM entered into an agreement with Dexter Construction

Company Limited to design, plan, engineer, procure, construct, commission and complete the Sewage Collection Systems, Roads and the Outfalls and Diffusers forming part of the Project and to design and construct the Mengoni Avenue Site Expansion (the "Infrastructure Development Agreement");

AND WHEREAS on June 15, 2004, HRM entered into an agreement with D&D Water Solutions Inc. to design, plan, engineer, procure, construct, commission and complete the Sewage Treatment Plants (the "STP Development Agreement");

AND WHEREAS on March 30, 2004, HRM staff was authorized to negotiate with certain entities who had proposed to provide design and engineering services as subcontractors to HREP related to the Biosolids component of the Project, namely SGE Hatch/N-Viro for the planning, engineering, procurement, construction, commissioning, completion and operation of a Biosolids Processing Facility to be located in the AeroTech Park;

AND WHEREAS HRM staff has reached substantial agreement with SGE Acres Limited on the terms of an agreement related to the planning, design, engineering, equipping, procuring, construction, testing, commissioning, completion and transfer of the Biosolids Processing Facility (the "BPF Development Agreement") and has concurrently reached substantial agreement with N-Viro Systems Canada Inc. ("N-Viro") on the terms of an agreement related to the operation and maintenance of the Biosolids Processing Facility and the marketing and sale of the Biosolids fertilizer/soil amendment product ("Finished Product") to be produced at the Biosolids Processing Facility (the "Operating and Maintenance Agreement");

It is recommended that Halifax Regional Council:

1. enter into the Biosolids Processing Facility Development Agreement with SGE Acres Limited for the planning, design, engineering, equipping, procuring, construction, testing, commissioning, completion and transfer of the Biosolids Processing Facility to be located at the AeroTech Park for a Guaranteed Maximum Price not to exceed Twelve Million Two Hundred and Forty Thousand Dollars (\$12,240,000.00) plus net HST of \$419,685 for a total of \$12,659,685 substantially in the form of the attached draft BPF Development Agreement dated October 3, 2004 with the funding as per the Budget Implications Section of this report;
2. enter into the Operating and Maintenance Agreement with N-Viro for the operation and maintenance of the Biosolids Processing Facility and the marketing and sale of the Finished Product for Unit Prices described in the Discussion Section of this report and substantially in the form of the attached draft Operating and Maintenance Agreement dated October 1, 2004 with the funding as per the Budget Implications Section of this report;
3. enter into any required technology license agreements with N-Viro for the acquisition of all required rights to use N-Viro's intellectual property for a guaranteed maximum price not to exceed Two Hundred and Forty Thousand (\$240,000) plus net HST of \$8,229 for a total of \$248,229 substantially as per the Budget Implications Section of this report; and

4. this report is not be released to the public until the contract has been agreed to by all parties.

BACKGROUND

On March 30, 2004, HRM staff was authorized to negotiate with SGE Hatch/N-Viro for the planning, design, engineering, equipping, procuring, construction, testing, commissioning, operation and maintenance of a Biosolids Processing Facility. On June 14, 2004, staff was authorized to continue negotiations based on certain key terms and conditions. Staff have now concluded this negotiation process.

DISCUSSION

The terms and conditions as outlined in the June 14, 2004 staff Report have been substantially achieved. In order to achieve the best negotiated terms, staff determined that the best arrangement was to negotiate the design/build Development Agreement and the Operating and Maintenance Agreement separately.

While it was initially contemplated that a new, single purpose company jointly owned by Hatch Limited ("Hatch") and N-Viro would be incorporated and that entity would enter into both agreements with HRM to design/build/commission the Biosolids Processing Facility and to operate and maintain it and that Hatch and N-Viro, as parent companies, would jointly and severally guarantee the obligations of the single purpose company under both contracts, the parties have agreed that it is more practical to enter into two separate agreements based on the interests and expertise of Hatch and N-Viro. Accordingly, HRM staff have negotiated two separate agreements - one with SGE Acres/Hatch for the design/build/commissioning phase and one with N-Viro for the operations and maintenance phase. Thus, each agreement has separate security, namely a guarantee, performance bond, labour and materials bond and insurance under the BPF Development Agreement and a performance bond and insurance under the Operating and Maintenance Agreement.

The BPF Development Agreement related to the design/build/commissioning of the Biosolids Processing Facility is in accordance with staff's initial requirements, and meets the \$12.5 million capital allocation.

Following is a summary of the key terms of the BPF Development Agreement:

- a. GMP of \$12,240,000 (not including \$240,000 related to intellectual property licensing to be dealt with separately) with no inflation adjustment;
- b. Construction of the Biosolids Processing Facility is to be completed by May 30, 2006 for initial commissioning;
- c. Initial commissioning is to be completed within six (6) weeks;
- d. Final commissioning is to be completed within six (6) weeks after the wet commissioning of the Halifax STP (anticipated to occur in the period of July and August 2006);
- e. Warranty to correct all defects up to one year from Substantial Completion;
- f. Warranty to replace/repair process-equipment and odour control equipment for an additional 12 months after general warranty (i.e. until the second anniversary from Substantial Completion);
- g. Performance bond of 50% of GMP, stepping down to \$3 million after first anniversary of Date of Substantial Completion;
- h. Guarantee of \$2.5 million until Final Completion then reducing to \$2 million until expiry (i.e. 24 months after Substantial Completion);
- i. Company's liability to pay damages limited to the same amounts noted above;
- j. Damages for default limited to direct damages;
- k. Damages for delay limited to specific items and Company will be required to accept and dispose of Dewatered Biosolids but only if Halifax STP is ready; and
- l. N-Viro a required subcontractor for design and commissioning.

Following is a summary of key items in the Operation and Maintenance agreement:

- a. The agreement is for a term of five years and may be renewed by HRM at its option for another five year term;
- b. The Operator will be required to produce a Finished Product that meets or exceeds the CFIA's requirements for a fertilizer/soil amendment or supplement under the *Fertilizer's Act*, NSDEL's requirement for "Class A" under the Provincial Guidelines, and the requirements to achieve an Exceptional Quality Class A pathogen reduction material designation under US EPA Regulations 40 CFR 503;
- c. The Operator will accept and process all Dewatered Biosolids delivered to the BPF by HRM (through its haulage contractor), and to market and sell the Finished Product to arm's length third parties for beneficial uses for the maximum obtainable value in order to maximize Net Product Revenue;
- d. HRM and the Operator shall share the Net Product Revenue on a 50/50 basis;
- e. If Finished Product does not meet the above-noted product requirements, it will be Unacceptable Finished Product. If the product is unacceptable as a result of the fault of the Operator (and not as a result of the Dewatered Biosolids delivered by HRM) the Operator is responsible for all costs of alternate disposal (in accordance with applicable regulations) if the Unacceptable Finished Product cannot be sold. Further, HRM will be entitled to charge the Operator a 25% penalty (meaning that there will be a 25% reduction in the fees payable by HRM for the related volume of Dewatered Biosolids processed);

- f. Detailed sampling and performance testing protocols, that will confirm requirements to meet all regulatory reporting requirements;
- g. Annual inspections will be performed by the Operator and HRM. If unacceptable conditions are found, HRM will have the right to require the Operator to arrange for and bear the cost of engineering inspection, and to obtain input on the implications/remedies of the unacceptable conditions;
- h. The Agreement includes detailed Capital Maintenance and Operation requirements related to odour control, noise control, maximum metal level in alkaline admixture and storage requirements.
- i. The storage area will accommodate 16,000 tonnes of Finished Product (which equates to approximately six months of storage);
- j. The Operator will be required to maintain a \$1 million performance bond and \$10 million environmental liability insurance during the Operating Period;
- k. HRM will pay the Operator a monthly processing fee (the "OMM Fee") based on the dry tonnes of Dewatered Biosolids delivered to HRM at a unit price per wet tonne. The OMM Fee (in 2004 dollars) is set-out below and will be adjusted prior to the commencement of the Operating Period and annually for inflation in accordance with agreed indices set forth in the agreement:

<i>Annual Tonnage (dry tonnes)</i>	<i>Unit Price per Wet Tonne (For Product meeting or exceeding requirements)</i>	
	<i>≤ 30.0% Solids</i>	<i>> 30.0% Solids</i>
4,000 - 6,000		
6,001 - 8,000		
8,001-10,000		
10,001 -12,000		

HRM anticipates processing dry tonnage of 8,000 - 12,000 tonnes when all three plants are operational (including all existing treatment plants).

BUDGET IMPLICATIONS

The estimated costs for the Biosolids Processing Facility, capital and operating, will be funded through the Environmental Protection Levy. The funding for these costs is within previously approved Environmental Protection Charge increases to the water bill regarding the Harbour Solutions Project.

To date, capital appropriations of \$12.5 million have been approved through the Harbour Solutions capital project CSE00394; future reserve appropriations to fund the OMM operators fee will be required, as per the Harbour Solutions Financing Plan.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES

Negotiate with an alternate supplier. Staff does not recommend this because the proposed N-Viro system meets all HRM's Biosolids management requirements for a competitive price. Staff, through an Expression of Interest, is satisfied that the N-Viro system best meets HRM, federal and provincial requirements. Further, negotiating with an alternate supplier will cause delay in the construction of the Biosolids Processing Facility. Any significant delay in the design/build of the facility will require a contingency plan to deal with the biosolids to be generated during and after the wet commissioning of the Halifax STP. Based on the current political and regulatory environment, it would be extremely difficult for HRM to develop a contingency plan that is economical, practical, and reliable.

ATTACHMENTS

ATTACHMENT – June 14, 2004 Report to Council

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.

Report Prepared by: Ted Tam, P. Eng. Project Manager, 490- 6130

Report Approved by:

Brad Anguish, P. Eng. Director of Environmental Management Services, 490-4825



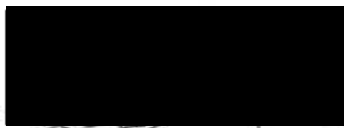
PO Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

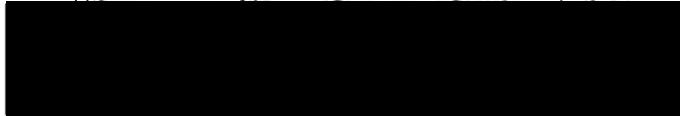
H.

Halifax Regional Council
June 14, 2004
In Camera

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:


George McLellan, Chief Administrative Officer


Dan English, Deputy Chief Administrative Officer

DATE: June 7, 2004

SUBJECT: Harbour Solutions Project - Biosolids Facility

PRIVATE & CONFIDENTIAL REPORT

ORIGIN

This report originates from HRM Council of March 30, 2004

RECOMMENDATION

WHEREAS, beginning in September 1998, HRM undertook a lengthy and detailed RFQ/RFP process for the implementation of the Halifax Harbour Solutions Project ("Project") and, in October 2002, signed agreements ("HREP Agreements") with the Halifax Regional Environmental Partnership ("HREP") and others for the implementation of the Project;

AND WHEREAS the conditions precedent to the effective date of the HREP Agreements were not met by the deadline date and the HREP Agreements are not now in effect;

AND WHEREAS, in August 2003, HRM entered into agreements with Dexter Construction Company Limited to design, plan, engineer, procure, construct and commission the Sewage Collection Systems, Roads and the Outfalls and Diffusers forming part of the Project and to design and construct the Mengoni Avenue Site Expansion;

AND WHEREAS, HRM will enter into agreements with D & D Water Solutions Inc. for the design, construction and commissioning of three new sewage treatment plants (STP);

AND WHEREAS, on March 30, 2004, staff was authorized to negotiate with SGE Hatch/N-Viro for the design, construction, commissioning and operation of Biosolids Processing Facility;

It is recommended that Halifax Regional Council:

1. authorize staff to continue to negotiate with SGE Hatch/N-Viro for the planning, engineering, procurement, construction, commissioning, and operation (design/build/operate) of the bio-solids processing facility to be located at Aerotech Park with a view to finalizing the outstanding business issues substantially within the parameters disclosed to Council (as outlined on the attached Term Sheet) with a view to presenting draft agreements for Council's approval.
2. not release this report to the public until negotiations are concluded and a contract awarded.

BACKGROUND

The Environmental Review of the Harbour Solutions Project under the Canadian Environmental Assessment Act requires the processing of the de-watered biosolids into a product that meets the EPA class A product and also meets the Canadian Fertilizer Act requirements for use as a fertilizer. The Biosolids Processing Facility (BPF) proposed by SGE Hatch/N-Viro meets this requirement and also meets the "Guidelines for Land Applications and Storage of Biosolids in Nova Scotia, May 13, 2004" issued by the NS Department of Environment and Labour. On March 30, 2004 Regional Council authorized staff to negotiate with SGE Hatch/N-Viro for the design, construction, commissioning and operation of Biosolids Processing Facility (BPF). Since then, staff have had several meetings with SGE Hatch/N-Viro.

DISCUSSION

To handle the Biosolids from the three new Harbour plants, the BPF must be capable of processing a minimum of 8,500 dry tonnes per year. There are other Biosolids generated from existing plants and residential on-site septage currently disposed of at the Aerotech Lagoon. The amount is approximately 2,000 dry tonnes per year.

The treatment capacity of the proposed BPF can be increased from 8,500 to 10,500 dry tonnes of Biosolids per year by increasing the hours of operations only and without changes to the processing equipment. However, the size of the storage building must be increased to accommodate the additional product volume during the winter months. The product storage area based on the base bid from SGE Hatch/N-Viro to HREP did not provide for a six months storage capacity for the winter months. The extra cost of providing additional basic storage area is approximately \$250,000 for the three sewage treatment plants. An additional \$150,000 relates to storage for the additional 2,000 dry tonnes per year, for a total of \$400,000 for extra storage area.

The Aerotech Lagoon is scheduled to be decommissioned and replaced with a Central Dewatering Facility that is expected to be tendered for construction in late July 2004. The Lagoon receives anaerobically digested sludges from primarily existing HRM treatment facilities (Mill Cove WPCP and Eastern Passage WPCP) and to a lesser extent, smaller HRM treatment facilities and home septage.

The major benefits related to closing the Aerotech Lagoon and constructing the dewatering facility are as follows:

- a) elimination of greenhouse gases and odours. Because the Lagoon operates as an anaerobic process, large volumes of methane (>10,000,000 cu. ft.) and carbon dioxide are released to atmosphere yearly;
- b) overflow from the Lagoon is treated at the Aerotech Sewage Treatment Plant. This overflow can vary in quality and periodically overloads the STP resulting in operational problems; and,
- c) these dewatered Biosolids will be processed to a fertilizer and the additional volume will lead to lower unit processing costs at the BPF.

Staff has prepared a Term Sheet outlining the key requirements and conditions for development of the BPF contracts. The Term Sheet is based on a processing capacity of 10,500 dry tonnes per year with sufficient storage capacity. The details of the requirements and conditions are as shown on Schedule "A" of this report.

It should be noted that the processing capacity can be further increased to 15,000 dry tonnes per year without major change to the BPF or equipment. Additional storage area would be required. Estimated Biosolid generation will grow to approximately 10,800 dry tonnes per year and 14,600 dry tonnes per year for years 2021 and 2041 respectively. Therefore, other than for an additional increase in the storage area, the proposed BPF is forecasted to handle HRM's growth for the next thirty-seven (37) years without any major upgrade.

Negotiations are still ongoing with SGE Hatch/N-Viro. The Guaranteed Maximum Price is expected to be in the order of \$12.5 million. As owner of the BPF, HRM's requirements are a little different from HREP's and some additional costs are involved, approximately \$0.6 million (e.g. SCADA system, increased basic storage area, back-up generator).

BUDGET IMPLICATIONS

There are no budget implications at this time. The estimated Biosolids management cost is in line with staff's previous estimates with adjustments and within the overall Project budget envelope previously approved by Council. Funding is available from the Environmental Protection Reserve (Q105) and through the Harbour Solutions Financing Plan.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES

Issue Design/Build/Operate Request for Proposals. Staff does not recommend this because the proposed N-Viro system meets all HRM's Biosolid management requirements for a competitive price. Staff, through an Expression of Interest, is satisfied that the N-Viro system best meets HRM, federal and provincial requirements.


ATTACHMENTS

Schedule "A" - Term Sheet

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.

Report Prepared by: Ted Tam, P. Eng., Project Manager 490-6130

Report Approved by:


Brad Anguish, Director of Environmental Management Services 490-4825

Schedule 'A'

Term Sheet

Design/Build/Operate Biosolids Processing Facility (BPF)

Parties

- Halifax Regional Municipality ("HRM")
- Newly-incorporated company owned by Hatch and N-Viro
- Hatch and N-Viro as joint and several guarantors

Site

- Aerotech Drive Extension at Aerotech Business Park; owned by HRM

Description of Facility

- Capable of processing a minimum of 10,500 dry tonnes per year of Dewatered Biosolids
 - 8500 ± from HHSP
 - 2000 ± from existing HRM plants
- Capable of future expansion to process a total of 15,000 dry tonnes per year of Dewatered Biosolids without major changes to the BPF or equipment
 - additional storage (beyond year 2021) would be required; land to be reserved by HRM
- Capable of operating 24 hours per day, 7 days per week, if required
 - normal operations 8-10 hours/day; 6 days/week (when the 3 new sewage treatment plants are operating)
- Compliance with HRM's requirements for:
 - odour control
 - storage
 - noise levels
 - dust control
- Fertilizer Product must meet the "Product Requirements"

Product Requirements

- The Fertilizer Product must meet criteria established by HRM, including the following:
 - Exceptional Quality Class A Pathogen Reduction Material under USEPA Regulations 40CFR 503
 - approved for use as a Fertilizer by the Canadian Food Inspection agency ("AgCan")

- ▶ approved by NSDEL in accordance with its “2004 Guidelines for Land Applications and Storage of Biosolids in Nova Scotia”
- ▶ minimum “Class A; best efforts for exceptional quality”

Construction Schedule

- Initial Commissioning (with biosolids from HRM’s existing plants) to occur at least three months before the commissioning of the Halifax Sewage Treatment Plant
- Final Completion to be coordinated with the completion of the Halifax Sewage Treatment Plant

Guaranteed Maximum Price (“GMP”) for Design/Build/Equip/Commission

- “No adjustment for inflation” (approximately 18 months construction period)
- The Company bears all costs and all risks except those arising from:
 - ▶ Archaeological Finds
 - ▶ Change in Law
 - ▶ Project Risk Events
 - ▶ certain studies required for Canadian Environmental Assessment Act (“CEAA”) Compliance
- Progress payments shall be paid
- Twenty-five percent (25%) of the GMP shall be allocated to commissioning activities

Company to Operate, Manage and Maintain

- 5 year Operating Agreement; HRM to have the option to renew for 5 years on terms set out in the Agreement
- the Company shall accept, treat and dispose of all Dewatered Biosolids delivered to the BPF by HRM
- The BPF must be able to receive Dewatered Biosolids on any day of the year
- The Fertilizer Product must meet or exceed the “Product Requirements”
- The Company must comply with HRM’s requirements for:
 - ▶ odour control
 - ▶ storage
 - ▶ noise levels
 - ▶ dust control
- The Company shall bear all costs and risks of operations and maintenance, except:
 - ▶ Change in Law
 - ▶ Project Risk Events
- Responsibility for trucking the Dewatered Biosolids to the BPF - remains under review

Compensation to the Company for Operations, Management and Maintenance

The Company shall be paid monthly based on unit prices per wet ton, varying with the incoming solids content and annual volumes:

- Penalties for failure to meet Project Requirements
- Unit Prices shall be adjusted annually based on agreed upon indices.

Marketing of Fertilizer Product

- The Company shall be responsible for all marketing activities
- The Company and HRM shall share the revenues of the sale of the Fertilizer Product on a 50:50 basis.

Testing, Reports and Inspections

- Periodic reports to HRM
- Dial-in access to SCADA
- Copies of all reports sent to all federal or provincial authorities
- Annual inspection during operating period
- Regular and ad hoc meetings with HRM
- Report to HRM and immediately investigate all complaints upon receipt and take appropriate action
- Inspection prior to the end of the term
 - ▶ all deficiencies to be rectified at the Company's cost

Plans and Manuals

- Appropriate plans and manuals, including:
 - ▶ Environmental Management Plan and Manual
 - ▶ Health and Safety Plan and Manual
 - ▶ Permitting Plan - Construction and Commissioning QA/QC Plan and Manual
 - ▶ Testing and Commissioning Plan and Procedures
 - ▶ Contingency Plan - (e.g. BPF not completed by Date Certain)
 - ▶ Operating and Maintenance Plan and Manual (including operating procedures, testing and sampling program, staff training plan and plan for equipment replacement)
 - ▶ Marketing Plan
 - ▶ Equipment Replacement Plan
 - ▶ Contingency Plan for Biosolids Disposal
 - not functioning (or not commissioned by Date Certain)
 - Abnormal Dewatered Biosolids

Subcontracting

- Key Subcontractors to be identified for construction activities. HRM must approve any changes.
- No subcontracts shall be permitted for operations.

Access, Inspection, Testing and Audit

- HRM shall have unrestricted rights of access, inspection, testing and audit.

Defaults and Remedies

- HRM shall have the right to cure any default at the Company's expense
- HRM shall have the right to terminate the Agreement on certain events of default, including:
 - failure to operate in accordance with the Project Requirements or the Operating and Maintenance Requirements
 - material departure from any Plan and Manual
 - receivership, bankruptcy
 - abandonment
 - any default that HRM, in its sole discretion, considers may cause irreparable harm to any person or the BPF or HRM
 - breach of Law

Security Package

- Performance bond
- Labour and materials bond (construction period)
- Joint and several guarantees
- Appropriate insurance as determined by HRM in consultation with its insurance advisors