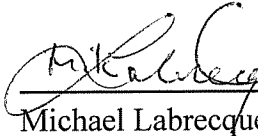


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Halifax Regional Council  
May 28, 2002

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

**SUBMITTED BY:**   
Michael Labrecque, Project Director, Harbour Solutions Project

**DATE:** May 20, 2002

**SUBJECT:** Use of Sewage Sludge

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## INFORMATION REPORT

### ORIGIN

At the Council meeting of May 14, 2002, the following request was made:

Item 8.2: *Councillor Sloane stated she would like further information to be provided to Council regarding where and how the sludge will be used.*

### BACKGROUND

As per the terms of the Harbour Solutions Request for Proposals, the proponent (HREP) is responsible to use the sludge for a beneficial purpose. HREP has provided a sludge management solution involving onsite dewatering at the STPs, transport to a central offsite location via enclosed trucks, and conversion of raw sludge via lime stabilization and high temperature processing to produce a Class A fertilizer/soil conditioner product.

## DISCUSSION

At the offsite location, the sludge process would take place within a completely enclosed building with odour control. Any site runoff would be directed to the adjacent sewage treatment plant; however, the process is expected to be a net consumer of water. The existing HRM sludge lagoon facility will continue to operate, but may be reduced over time if an arrangement is made with HREP to process sludge from existing sources.

The product resulting from this facility must meet all applicable regulatory requirements. The product will qualify as Class A under USEPA Regulation 40 CFR Part 503, indicating essentially no detectable population of pathogenic organisms in the final product. For use as a soil amendment in any agricultural application, the finished product must meet the requirements of Agriculture and Agri-Food Canada under the *Fertilizers Act* and Regulations. The facility will also have to meet all applicable NSDEL requirements, as will any application of the final product for any purpose in Nova Scotia.

The final product of the process is a biologically stable, low-odour, safe, soil-like material that will have a solids content of approximately 60-65%. The product is low in odour. The heavy metals present in the sludge are converted to insoluble forms so the use of the product does not create any adverse conditions associated with metals leaching. No hazardous compounds are produced during the process. The product will have a broad range of possible applications including use as a liming agent and soil conditioner in agriculture, silviculture, landscaping, land restoration, as landfill cover, and as fill material.

The environmental spread of biological materials such as antibiotics (which tend to promote development of resistant bacterial strains) through the use of processed sewage sludge, does not appear to have a credible scientific basis. Spread of infectious disease agents has been known to occur through use of untreated or poorly-treated sewage sludge. However, the referenced EPA regulation applied in Nova Scotia is specifically designed to eliminate this possibility. The spread of Bovine Spongiform Encephalitis (BSE, mad-cow disease) has never been attributed to an environmental source such as sewage sludge. Caused by a particular form of protein substance (prions), this and related disease (scrapie in sheep and Creutzfeldt-Jacob Disease in humans) is thought to result from direct ingestion or transfer (possibly through blood or blood products in the case of humans) of prions from one individual to another. The mad cow disease currently of concern in the UK and some places in Europe stemmed from the accidental use of dead carcasses of infected animals as animal feeds. There does not appear to be any evidence of prion contamination via biosolids (sewage sludge).

Staff has contacted Dr. Spencer Lee, Professor of Microbiology and Immunology, Dalhousie University Medical School and Director, Virology/Immunology, Division of Microbiology, QEII Health Sciences Centre. An expert in the field of medical virology, Dr. Lee is able to confirm that food history such as the consumption of contaminated meat or meat products, history of exposure to blood or blood products, previous surgery, or history of exposure to products made from animal brain in countries with BSE, remain the present working hypothesis of transmission, and not environmental sources.

### **BUDGET IMPLICATIONS**

N/A

### **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**

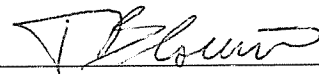
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### **ATTACHMENTS**

N/A

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:



Tony Blouin, Manager of Environmental Policy (490-4610)