

Request for Decision

Sudbury Wastewater Treatment Plant Headhouse Upgrades - Odour Control System

Presented To: Operations Committee

Presented: Monday, Jan 20, 2014

Report Date: Monday, Jan 13, 2014

Type: Routine Management Reports

Recommendation

THAT the City of Greater Sudbury authorize staff to sole source the purchase of photo-ionization odour control technology with AMBIO Biofiltration Ltd. for the Sudbury Wastewater Treatment Plant Head House Facility and Raw Sewage Lift Station; all in accordance with the report dated January 13, 2014 from the General Manager of Infrastructure Services.

Finance Implications

Funds for the purchase of odour control equipment have been included in existing Wastewater capital budgets.

Background

One of the major drivers of the City's Biosolids Management Project was the history of odour problems (Copper Cliff and Lively odour events in 2005 and 2007) resulting from the current sludge disposal method. Therefore, it was of utmost importance that the new Biosolids Project at the Sudbury Wastewater Treatment Plant (SWWTP) include odour control technology to reduce odours in and near the Kelly Lake Road site. The Biosolids Facility constructor is responsible for including odour control in the Biosolids Facility and the Sludge Receiving and Sludge Dewatering Facilities, of which the latter two are to be turned over to the City for operation upon completion of the project. Odour generation from the Headhouse Facility and the Raw Sewage Pump Station also needed to be addressed and incorporated into the SWWTP Head House Upgrades Project.

As part of the Biosolids Project, air dispersion modeling to determine the required odour removal levels for the plant's various processes was first completed. As a result, the Biosolids constructor chose Photoionisation technology for odour control in the three facilities. To determine if this technology was the most suitable for the Headhouse Facility and the Raw Sewage Pump Station, the City's consultant, RV Anderson, then completed a technology review to determine what potential technologies might be the most suitable. This resulted in a comprehensive technical memorandum report that evaluated the following three alternatives for a single odour control system for both the Headhouse Facility and the Raw Sewage Pumping Station:

Signed By

Report Prepared By

Brad Johns
Facilities Engineer
Digitally Signed Jan 13, 14

Division Review

Nick Benkovich
Director of Water/Wastewater Services
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Recommended by the Department

Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Jan 14, 14

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
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- Alternative A Carbon Filter Absorption
- Alternative B Biofiltration
- Alternative C Photoionisation

RV Anderson's report reviewed, amongst other things: capital cost, operating and maintenance (O&M) costs, O&M cost scope, life cycle cost (NPW), advantages, disadvantages, potential suppliers, and concluded that the photoionisation technology would be the best fit for the Headhouse Facility and the Raw Sewage Pumping Station. References were consulted to understand and confirm the benefits of the technology, including the operability and dependability of the equipment. Since plant staff will be operating and maintaining the odour control systems in the Sludge Receiving and Sludge Dewatering Facilities, there are also operational, maintenance and routine odour sampling synergies created by using the same technology throughout the Plant's facilities.

Currently, there is only one North American vendor for Photoionisation Technology. Therefore, staff is seeking Council's approval to single source the odour control equipment for the Headhouse Facility and Raw Sewage Pump Station from AMBIO Biofiltration Ltd. of Rockland, Ontario. The purchase of the equipment is estimated to cost, in Canadian dollars, approximately \$800,000 (subject to the variability of the international currency rates at the time of purchase) and an annual operating cost of approximately \$110,000. The existing capital works budget includes the funds for the purchase of odour control equipment. Staff is seeking Council's approval to complete the negotiations and purchase of the required equipment as soon as possible. The delivery time for this equipment ranges from twelve to sixteen weeks. The annual operating costs will need to be incorporated into future annual Operating budgets, beginning in 2015.