



# Staff Report

## Operations Department

---

**Report To:** Committee of the Whole  
**Meeting Date:** September 16, 2019  
**Report Number:** CSOPS.19.068  
**Subject:** Negotiated Purchase – Odomatic System  
**Prepared by:** Jeffery Fletcher, Manager of Solid Waste and Special Projects

---

### A. Recommendations

---

THAT Council receive Staff Report CSOPS.19.068, entitled “Negotiated Purchase – Odomatic System”;

AND THAT Council endorse proceeding with a sole source procurement of the Odomatic System from Environmental & Power Solutions Inc. for an \$84,000 annual rental fee for a 5 year term;

### B. Overview

---

This report discusses satisfying the objective to eliminate leachate related odours. An opportunity is presented that will reduce current operating costs, improve safety and reduce the impacts of leachate related odours on and off Site.

### C. Background

---

Since the spring of 2018, Landfill Site operations have been pre-processing leachate to eliminate significant odour generating conditions (namely Hydrogen Sulphide, H<sub>2</sub>S). An ad hoc system of mechanical aeration and chemical dosing was developed and implemented by Town Staff.

This pre-processing system has been effective in reducing odours however it is quite operator intensive and has the potential for health and safety risks plus is costly due to equipment rentals and diesel fuel use. Staff have been conducting trials with an alternative technology that has the potential to significantly reduce costs and eliminate environmental and health and safety risks.

#### Hydro Installation

Town Staff are proceeding with the single phase extension in combination with the proposed odour reduction system (Odomatic). Given the status of the leachate management solution investigation, Staff propose to install hydro for pre-treatment system which will be less temporary and reduce operator time and safety conflicts.

## **D. Analysis**

---

### Procurement of Odomatic System

A previous Staff report outlined estimated costs for installation of the Odomatic System. Following cost negotiations with Environmental & Power Solutions Inc. (EPS), the annual rental is lower than current operational cost but the savings are not as significant as previously forecasted. Cost details are included in the Financial Impact section of this report.

Although the savings are not as high as expected, the ease of operation the proposed Odomatic System will provide has other associated benefits. The main benefit being a reduction in staff time and the reliance on overtime, which has been needed to operate the current pre-treatment system.

Also, the current system was implemented with the intention of it being a temporary solution (3 months), it has now been in place for 15 months. Some elements of the current set-up have been identified as having potential safety hazards, which would be avoided with the Odomatic System.

The current system of aeration generates significant on-site odour, which has the high potential to also create off-site impacts. The Odomatic System eliminates odours in the end product and during the treatment process.

Staff recommend proceeding with installation of the Odomatic System under a 5 year rental contract and operating strategy. The contract will include a performance measure of less than 1 (one) ppm of H<sub>2</sub>S. Also, under the rental program, EPS will monitor and maintain the Odomatic unit. If within this 5 year term the leachate forcemain project is built, the intention will be to include this pre-treatment system in the design of the forcemain and continue with the contract in any new infrastructure.

This purchase will be considered a sole source purchase under the Town Purchasing Policy. Under Town policy POL.COR.07.05 section 9, when only one supplier is available Council may approve a negotiated sole source purchase. The Odomatic System is patent pending technology and under the policy, sole sourcing patented technology at this level of purchase is permitted with Council approval.

### Avoiding Safety Hazards

The Town's consultant from the Public Services Health and Safety Association recently visited the Landfill and has expressed concern with the current odour treatment system. The main risks for Staff are the tasks they are required to complete with the current system when working alone and after hours. The main risk with the current system is for Staff working alone and after hours. To avoid this risk with the current system a plan for avoiding lone work would need to be put into place. This would require spending more in staff time for overtime.

The combination of lone work, working from heights and hazardous gas levels creates a high risk situation. On the hierarchy of controls, eliminating the hazard is preferred over implementing administrative controls and PPE to try and protect the worker from the hazards.

Continuing with the current system and trying to addressing the associated safety issues will involve spending more operationally, mostly in the area of additional staff overtime. An estimated \$14,300 would need to be spent. And, if lone work is to be avoided that overtime figure would double to \$28,600. These costs would be in addition to existing costs and the hazards would still be present for the workers. The proposed Odomatic System will eliminate the hazards to the workers and is the recommended approach.

## **E. The Blue Mountains Strategic Plan**

---

Goal #4: Promote a Culture of Organizational & Operational Excellence  
Objective #5 Constantly Identify Opportunities to Improve Efficiencies and Effectiveness

## **F. Environmental Impacts**

---

The installation of hydro will eliminate the burning of an estimated 35,000 litres of diesel fuel per year, which has a direct greenhouse gas reduction of 4 tonnes of carbon dioxide per year. Hydro use has a GhG footprint, however the Ontario grid emission levels are very low due to the mix of nuclear and renewables.

There will be additional benefits to worker environment related to the elimination of engine exhaust, fuel handling and fugitive H<sub>2</sub>S gas.

## **G. Financial Impact**

---

### Improved Odour Management

As outlined below the proposed Odomatic System with the extension of hydro has the potential to reduce the landfill operational budget by \$22,500 annually compared to current operations. Hydro extension would be an additional capital expense estimated at \$50,000, however the payback is financially advantageous.

The table below also outlines the savings in staff time under each option. A significant amount of overtime is required to operate the current system and the proposed Odomatic System will free up staff time to focus on other tasks and avoid the need for coming in after hours to operate diesel powered equipment and start the aeration process. Approximately \$28,600 in staff time could be saved.

If a leachate forcemain or other management solution is put into place hydro extension would be part of that work. A leachate management solution, such as a forcemain, would not be installed and operational until at least 2022. Hydro extension also eliminates the use of diesel and a generator for the pumping of water away from the termination berm. Those associated costs and savings are included in the table below.

Annualize Costs

This chart annualizes cost over a full year period and updates the costs from the previous report (CSPW.19.057) for four comparative scenarios. Of note, equipment rental for the Odomatic system with diesel power has increase from the previous analysis. To operate the Odomatic system with diesel a generator is needed. A generator is also needed to pump water away from the berm. However, these two working areas are at opposite ends of the cell therefore under the option to use diesel power to operate the Odomatic system two generators would be needed, which contributes to the increased cost.

The original Staff estimate (prior to cost negotiations with EPS) for the Odomatic system was \$30,000. The table below identifies the updated and negotiated cost of \$84,000. Although this cost is higher than anticipated it is lower than current operating costs and will better meet the objectives of safety and eliminating odours.

| Expense Type        | Current System   | Odomatic with Diesel Power | Current System with Hydro | Odomatic with Hydro |
|---------------------|------------------|----------------------------|---------------------------|---------------------|
| Equipment Rental    | \$58,800         | \$36,000                   | \$40,800                  | \$-                 |
| Chemicals           | \$22,200         | \$-                        | \$22,200                  | \$-                 |
| Fuel                | \$33,500         | \$33,500                   | \$-                       | \$-                 |
| Odomatic            | \$-              | \$84,000                   | \$-                       | \$84,000            |
| Hydro               | \$-              | \$-                        | \$20,000                  | \$8,000             |
| <b>Total</b>        | <b>\$114,500</b> | <b>\$153,500</b>           | <b>\$83,000</b>           | <b>\$92,000</b>     |
| Overtime Hours (\$) | \$28,600         | \$7,200                    | \$19,000                  | \$0                 |

Overtime hours are based on accumulated overtime to date in 2019. The overtime hours are also doubled in anticipation of needing two staff to avoid lone work risks. With the Odomatic System and Hydro the pre-treatment process can be coordinated within regular work hours and the berm pumping will be automatic, eliminating the need for afterhours work.

The previous quarterly update (Staff Report CSPW.19.057) included a motion approved by Council to extend hydro with the use of Gas Tax funding for a budget of \$50,000 and continue negotiations with Environmental & Power Solutions Inc. for purchase of the Odomatic System for pre-treatment.

EPS developed a rental package plan with associated costs that was higher than current operating costs. Town Staff worked with EPS to find ways to reduce the annual cost of their original proposal. Staff recommend the sole source purchase of the Odomatic System as a monthly rental for a 5 year term at the negotiated cost of \$84,000 per year.

## **H. In Consultation With**

---

Sam Dinsmore, Deputy Treasurer/Manager of Accounting and Budgets  
Serena Wilgress, Manager of Purchasing and Risk Management  
Sarah Traynor, Health & Safety/HR Coordinator

## **I. Public Engagement**

---

The topic of this Staff Report has not been subject to a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required. Comments regarding this report should be submitted to Jeffery Fletcher, [ManagerSolidWaste@thebluemountains.ca](mailto:ManagerSolidWaste@thebluemountains.ca).

## **J. Attached**

---

None

Respectfully submitted,

---

Jeffery Fletcher  
Manager of Solid Waste and Special Projects

For more information, please contact:  
Jeffery Fletcher  
[ManagerSolidWaste@thebluemountains.ca](mailto:ManagerSolidWaste@thebluemountains.ca)  
519-599-3131 extension 238