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**REPORT TITLE:      Increase to Contract 2017-395N for Biofilter Media Replacement at the Peel Integrated Waste Management Facility**

**FROM:                      Kealy Dedman, Commissioner of Public Works**

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## **RECOMMENDATION**

**That Contract 2017-395N (Supply of Preventative Maintenance and As Required Repairs and Parts for Waste Management Biofilters) awarded to Biorem Technologies Inc. in 2017 in the amount of \$184,108, be increased by \$618,670 for cost of the media replacement of the biofilters at the Peel Integrated Waste Management Facility, for a new total amount of \$802,778 (excluding applicable taxes), in accordance with the Procurement By-law 30-2018, as amended;**

**And further, that the Commissioner of Public Works be authorized to sign or enter into any ancillary documents that may be required for the media replacement of the biofilters at the Peel Integrated Waste Management Facility by Biorem Technologies Inc., all on business terms satisfactory to the Commissioner of Public Works and on legal terms satisfactory to the Regional Solicitor.**

## **REPORT HIGHLIGHTS**

- The biofilter is an essential component of the composting system at the Peel Integrated Waste Management Facility. The biofilter removes odours from the composting system's process air before it is released into the atmosphere. Operation of the biofilter is a requirement of the provincial environmental permit for the composting process.
  - The biofilter contains porous inorganic media through which the composting process air must pass to be treated. The media traps odorous compounds which are then converted by microbes into non-odorous compounds such as carbon dioxide and water.
  - The existing media has been in service since 2006. Over time the media deteriorates and becomes less porous which restricts the flow of process air, causing poor performance of the composting system. Media within the biofilter has exceeded its expected service life and is significantly deteriorated and must be replaced.
  - The biofilter at the Peel Integrated Waste Management Facility is a proprietary technology of Biorem Technologies Inc.
  - Contract 2017-395N (Supply of Preventative Maintenance and As Required Repairs and Parts for Waste Management Biofilters) awarded to Biorem Technologies Inc. in 2017 includes provisions for the replacement of the biofilter media by the vendor, at the request of the Region and with the Region's prior approval of the cost.
  - The cost to replace the biofilter media is \$618,670. Funds are available in Capital Project 20-6396.
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## **Increase to Contract 2017-395N for Biofilter Media Replacement at the Peel Integrated Waste Management Facility**

### **DISCUSSION**

#### **1. Background**

Organic material collected through Peel's green bin and leaf and yard waste programs is processed at Peel's composting facility located at the Peel Integrated Waste Management Facility on Torbram Road in Brampton. The biofilter, a necessary component of an aerobic composting system, removes odours from the composting system's process air. It is filled with porous inorganic media through which the composting system's process air must pass to be treated before it is released into the atmosphere. Media within the biofilter, which uses microbes to convert odorous compounds into non-odorous compounds such as carbon dioxide and water, has exceeded its expected service life, significantly deteriorated, and must be replaced.

The biofilter system is a regulatory requirement of the Ministry of the Environment, Conservation and Parks for the Region's composting operation. Having a properly maintained and functioning biofilter system is vital to the continued operation of the composting system to maintain current service levels for green bin and yard waste programs.

Biorem Technologies Inc. designed and installed the biofilter system during construction of the composting facility in 2006 and is the sole proprietor of the proprietary biofilter media technology. The Region contracted with Biorem Technologies Inc. in 2017 for the provision of biofilter preventive maintenance and as required repairs and parts services. The Contract includes provisions for the replacement of the biofilter media by the vendor, at the request and with the prior approval for the total costs of the replacement by the Region.

#### **2. Proposed Direction**

A characterization analysis of the media performed in February 2020 found that the media has become less porous and is restricting the flow of the composting system process air, affecting overall performance of the biofilter system, resulting in odorous conditions. Results from core sampling of the media beds in August 2020 indicated that over time, the media within the media beds has significantly deteriorated and that remediation or partial replacement is not feasible.

Full replacement of the media is required to ensure continued reliability and performance of the system and to maintain compliance with regulatory requirements. Biorem Technologies Inc. guarantees the performance of replacement media and provides a 10-year warranty. This work has been identified as a state of good repair project in Waste Management long-term capital plan.

#### **3. Procurement Implications**

In 2017, the scope of procurement Document 2017-395N, for the supply of preventative maintenance and as required repairs and parts for waste management biofilters, included provisions for the replacement of the biofilter media; however, at the time of issue, it was not known when the biofilter would need to be replaced and the vendor Biorem Technologies Inc. was unable to provide pricing due to time and cost uncertainty.

## **Increase to Contract 2017-395N for Biofilter Media Replacement at the Peel Integrated Waste Management Facility**

Now that it has been identified that the biofilter media needs to be replaced, in accordance with the requirements of Contract 2017-395N, Biorem Technologies Inc. has provided the Region with a quotation for its approval outlining the areas and/or depth of the media that needs replacement as well as the total cost.

Staff is requesting authority to increase Contract 2017-395N to allow for the replacement of the media, in accordance with Procurement By-law 30-2018, as amended, and authority for the Commissioner of Public Works to sign any ancillary documents that may be required for the media replacement of the biofilters at the Peel Integrated Waste Management Facility by Biorem Technologies Inc.

### **RECOMMENDED NEXT STEPS**

It is recommended that replacement of the biofilter media be completed through the current service contract with Biorem Technologies Inc., Contract 2017-395N Supply of Preventative Maintenance and As Required Repairs and Parts for Waste Management Biofilters.

### **RISK CONSIDERATIONS**

Having a reliable composting facility is critical to the successful delivery of Peel's green bin and leaf and yard waste programs. Replacing the biofilter media will ensure a reliable system and help avoid impacts to the delivery of these programs.

Peel's composting facility must comply with emission regulations included in the *Environmental Protection Act, R.S.O. 1990* and the terms and conditions in the Environmental Compliance Approval, granted to the Region of Peel in 2006 for waste management activities at Peel Integrated Waste Management Facility. Failure to replace the media will impact the odour removal process, result in odorous emissions and put the Region at risk of receiving complaints from neighbouring properties and compliance orders from the Ministry of the Environment, Conservation and Parks.

### **FINANCIAL IMPLICATIONS**

The cost to replace the biofilter media is \$618,670 plus applicable taxes. Funds are available in Capital Project 20-6396.

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*For further information regarding this report, please contact Norman Lee, Director, Waste Management, Ext. 4703, [norman.lee@peelregion.ca](mailto:norman.lee@peelregion.ca).*

### ***Reviewed and/or approved in workflow by:***

Department Commissioner, Division Director, Financial Support Unit, Legal Services and Procurement.