February 9th, 2023

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Executive Summary - Annual Monitoring Report
Landfill Gas Collection and Flaring System (LGCFS), January 2022 – December 2022
Oxford County Waste Management Facility, Oxford County, ON

1.0 Introduction

Comcor has prepared the 2022 Annual Report for the LGCFS at the Oxford County Waste Management Facility (Salford Landfill) in Salford, Ontario. This is an Executive Summary of that report as requested by the County.

2.0 Summary

The LGCFS operated as intended in 2022 but with reduced annual runtimes as a result of declining gas quantities and an extended shutdown that occurred in November and extended throughout December in order for the County to complete work on the LGCFS. The LGCFS was shut down during this time for the installation of a foundation support system (helical piles) for the equipment and flare pads to address settlement issues first observed in 2021. The LGCFS run times varied throughout the year from 16.8% in August to 80.2% in February with an overall annual runtime of 39.6% for 2022. Monthly monitoring events showed that the flare was running at an average flow of 110 cfm and 50.3% methane by volume. Monthly monitoring was completed for every month with the exception of December due to the extended LGCFS shutdown. As the LGCFS shutdown started in November, monthly monitoring for this month was completed prior to the shut down as once the LGCFS is offline there is no longer gas flow which can be sampled for the monthly monitoring events.

The flare tripped numerous times over the course of 2022, and restarts were completed on 94 days throughout the year. A total of 426 alarms resulting in shutdowns were sent over the course of 2022, however in many instances, several of the alarms were associated with the same issue and were sent out simultaneously or in the same short time period. This contributed greatly to the high number of alarms over the course of the year. The primary causes of alarms in 2022 were those associated with flare flameouts (58.2%), compressed air related issues (15.5%), gas quality/quantity related issues (10.1%), power failures (8.5%), gas analyzer related issues (6.3%), and maintenance related/emergency stops (1.4%).

The underlying cause for most of these trips is the low flow of landfill gas as the existing gas collection system is in older waste with declining gas production. The existing gas collection

system has not been expanded due to filling activities at the site. Low tonnages and a large active face have not been conducive to a gas system expansion. The flare is designed to combust 1,400 cfm, however, as noted above, it only received 110 cfm on average in 2022. To accommodate these low gas flows, Comcor and Enviro EMD (the flare manufacturer) completed an investigation and modifications in 2021 to increase the runtime of the flare.

3.0 Conclusions and Recommendations

1. Although there is declining gas quantities at the site, the LGCFS operated as intended in 2022.

2. The monitoring and maintenance schedule should be continued in order to maintain a steady level of methane gas production and a safe environment in all of the major component areas of the Landfill Gas Collection and Flaring System. The system also must be monitored and maintained in order to remain in compliance with regulatory agency approvals. Future expansions and the use of temporary gas collection should be continued to be investigated on an annual basis.

3. The temporary portion of the wellfield should be replaced with permanent buried HDPE to prevent condensate accumulation, freezing, and breakage that all contribute to increased downtime and reduced collection efficiency. Without improved collection efficiency the collection system and flare will become increasingly difficult to operate.

4. The settlement issues and remediation work in the flaring compound should continue to be monitored to ensure the success of the remediation works.

Yours very truly,

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