Ontario

Ministry of the Environment, Conservation and Parks
Ministère de l'Environnement, de la Protection de la nature et des Parcs

Solid Non-Hazardous Waste Disposal Site Inspection Report

Client:	The Corporation of the City of Kawartha Lakes Mailing Address: 12 Peel St, Post Office Box, 9000, Lindsay, Ontario, Canada, K9V 5R8 Physical Address: 12 Peel St Lindsay, Kawartha Lakes, City, Ontario, Canada, K9V 5R8 Telephone: (705)324-9411, Extension: 1151, email: rmacpherson@kawarthalakes.ca Client #: 4353-78NJW9, Client Type: Municipal Government, NAICS: 913910 Additional Address Info: Lindsay		
Inspection Site Address:	Lindsay-Ops Landfill Site Address: Lot: 25,26,27, Concession: 6, Ops, 51 Wilson Road Lot 252627 Conc. 6 former Ops Township, Geographic Township: LINDSAY, Kawartha Lakes, City, K9V 4R3 District Office: Peterborough GeoReference: Map Datum: NAD83, Zone: 17, Accuracy Estimate: 1-10 metres eg. Good Quality GPS, Method: Map, UTM Easting: 681075, UTM Northing: 4917997, , LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: 45.0668, Longitude: -81.4664 Site #: 0854-4KDHG6		
Contact Name:	Kerri Snoddy	**Title:**	Regulatory Compliance Officer
Contact Telephone:	(705)324-9411 **ext**2360	**Contact Fax:**	
Last Inspection Date:	2017/02/24		
Inspection Start Date:	2019/02/06	**Inspection Finish Date:**	2019/02/06
Region:	Eastern		

1.0 INTRODUCTION

The Lindsay Ops Landfill site is located at 51 Wilson Road, in the former Township of Ops. The site is just outside the town of Lindsay and is located next to the Lindsay Wastewater Treatment facility. The site is owned by the City of Kawartha Lakes.

Landfill operations originally began at the site in 1980. The original landfill at the site is now closed and the currently operating landfill, known as the north expansion area, is located to the north of the closed landfill. The current landfill operation was first approved in 2001.

The site consists of a 21.2 hectare waste fill area within a total site area of 53.9 hectares.

The landfill site is one of five operating Landfills serving the City of Kawartha Lakes, population approximately 76,000. The is approved to receive solid, non-hazardous municipal wastes generated within the City of Kawartha Lakes, including residential, commercial, institutional and industrial sectors, contaminated fill, and biosolids (processed organic wastes) restricted to treated and dewatered sewage sludge from the Lindsay Water Pollution Control Plant (WPCP).

The Lindsay Ops Landfill is open to the public on:

Monday: 8am to 5pm
Tuesday: 8am to 5pm
Wednesday: closed

Thursday: 8am to 5pm
Friday: 8am to 5pm
Saturday: 8am to 3pm

An inspection of the site was conducted by Ministry of the Environment, Conservation and Parks (MECP) staff. The inspection was undertaken to determine compliance with the Environmental Protection Act (EPA), Regulation 347 (O. Reg. 347), Environmental Compliance Approval (ECA) A321504 issued on March 8, 2013 and amended by Notices 1 through 6, and other relevant ministry legislation, policies and guidelines.

The inspection looked at site compliance since the last inspection in March 2017. The 2017 AMR for the site was reviewed during the inspection process. Comments from Easter Region Technical Support on the 2017 AMR were available for surface water but groundwater comments were not available at the time of the inspection.

This inspection report has been scoped to focus primarily on operations relating to the landfill and landfilling of wastes, including the receipt of waste, disposal of waste at the tipping face and associated activities such as covering of the waste. Other aspects of the Lindsay Ops Landfill site operation such as the closed (old) landfill area, leachate management, stormwater management, landfill gas, hazardous household waste collection, the curbside recycling transfer facility, the leaf and yard waste collection and composting operations, and the waste diversion operations (electonic, tires, metal, re-use bins), will be assessed in greater detail during separate inspection cycles.

A site visit was conducted on February 6, 2019. In attendance during the inspection were Kerri Snoddy, Regulatory Compliance Officer, and Heather Dzurko, Waste Management Operations Supervisor, both from Waste Management, City of Kawartha Lakes.

On the day of the inspection, the weather was overcast with a temperature around -2 C. Some ice pellets and freezing rain had fallen just prior to the inspection. The active waste area was largely free of snow accumulation.

INSPECTION NOTE: Changes to the EPA effective October 2011 have resulted in Certificates of Approval (CofA) now being referred to as Environmental Compliance Approvals (ECA). The electronic template for this inspection report form has not been updated to reflect this change, however, the text entered in the report reflects this change in terminology.

2.0 INSPECTION OBSERVATIONS

Certificate of Approval Number(s):
A321504

Notices:
Notice 1 - October 5, 2015
Notice 2 - May 26, 2016
Notice 3 - March 27, 2017
Notice 4 - July 11, 2017
Notice 5 - April 19, 2018
Notice 6 - November 14, 2018

It is anticipated that ECA # A321504 will be reviewed by the ministry in 2019 with the intent of consolidating all the notices and updating the conditions in the ECA to reflect current wordings. The municipality will be provided an opportunity to participate in the updating process.

2.1 FINANCIAL ASSURANCE:

Specifics:
Financial assurance is not required for this municipally owned landfill.

2.2 APPROVED AREA OF THE SITE:

Specifics:
As noted above, the site consists of a 21.2 hectare waste fill area within a total site area of 53.9 hectares. Of the 53.9 hectares, 36.9 hectares are located north of the Lagoon Road right-of-way and 17 hectares are located south of the Lagoon Road right-of-way.

The landfill footprint has been clearly identified by the municipality. Wastes are only being deposited within the waste

fill area.

Currently, Cells 4 and 5 (north expansion area) are being filled,

2.3 APPROVED CAPACITY:

Specifics:
ECA A321504 indicates that:

- The total waste disposal capacity of the Site expansion in the north expansion fill area, including waste, daily cover and interim cover, is 1,487,240 cubic metres. This volume does not include the composite liner, leachate collection system and final cover.
- The total waste disposal capacity of the Site (existing fill area and the north expansion fill area), including waste, daily cover and interim cover, is approximately 2.34 million cubic metres.
- Annual waste limit is 58,200 tonnes.
- The site daily waste limit is 240 tonnes per day.

The 2017 AMR indicates that in 2017:

- Total waste received at the site was 37,974 tonnes.
- Total waste disposed of at the site (landfilled) was 27,122 tonnes. This amount included soil which was segregated for use as daily cover and leaf and yard waste which was partly composed and used as daily cover.
- The daily waste limit was exceeded on 11 days in 2017 and no exceedances were on two consecutive days. A detailed explanation of each exceedances was provided in the AMR. On four of the exceedance days, the amount of waste received was significantly over the daily limit. On each of the 11 exceedance days, the cause of the exceedance was primarily related to the receipt of street sweepings/catchbasin wastes. Further, the AMR indicates that notably larger amounts of curbside wastes are collected on Thursdays as an artifact of the curbside collection schedule. Six of the 11 exceedance days were on Thursdays.

ECA Condition 4.6 indicates:
The maximum rates at which this Site may receive waste are 240 tonnes per day and 58,200 tonnes per calendar year. Receipt of waste in excess of the daily maximum fill rate may only be allowed on a limited short-term basis, on no more than two consecutive operating days, and only with prior notification and concurrence from the District Manager.

Prior notification of the District Manager did not take place for the 11 daily waste limit 11 exceedances. See Section 5, below, for required actions.

See Section 6, below, for a recommendations on the receipt of catchbasin/street sweeping wastes and general compliance with the daily waste limit.

2.4 ACCESS CONTROL:

Specifics:
Access to the site is controlled. The site is fenced and gated, and when open all vehicles entering the site must pass the scale house.

Signage at the site entrance complied with the Condition 4.19 of ECA A321504.

See Section 6, below, for a recommendation on visual screening.

2.5 COVER MATERIAL:

Specifics:
The site was closed on the day of the inspection and waste was not being received. Cover is applied daily.

Adequate cover was evident at the time of the inspection. Steel plates were in place as the alternative daily cover at the time of the inspection.

ECA Notice 3 (March 27, 2017) approved the use the following as alterative daily cover:

- soil
- foundry sand
- wood chips
- compost

- singles
- flexible membranes (tarps, Enviro Cover),
- blasting mats
- partially composed leaf and yard waste from onsite composting
- steel plates

2.6 WASTE BURNING:

Specifics:
Burning is not an operational practice at this site and is not permitted by the ECA.

2.7 GROUNDWATER/SURFACEWATER IMPACT:

Specifics:
There were no observed indications of groundwater or surface water impacts at the time of the inspection.

A brief review of the 2017 AMR was completed during the file review for the inspection.

Surface Water
Surface water comments on the 2017 AMR were available for this inspection. In summary, those comments indicated:

Runoff or effluent discharge from the Lindsay Ops waste disposal site and the Lindsay WPCP site enters the Scugog River at three locations: The northern section of the site through SW13 (north ditch), the closed landfill area and southern part of the site through SW3 (south ditch), and the WPCP outfall.

Runoff at SW13 is severely impaired compared to background. The possible cause is leachate contaminated water entering the north ditch between stations SW14 and SW13.

Runoff at SW3 shows elevated levels of leachate parameters compared to background. Possible causes are leaking from lagoons 5 and 6 or contaminated groundwater.

The review concludes that Scugog River water quality is impaired:
- Alpine Street sampling location demonstrates poorer water quality compared to the upstream location at McQuarrie Point.
- Embayment A is being negatively impacted by the SW13 discharge.
- Embayment C (further downstream) shows some impact similar to Embayment A but less severe likely resulting from the dilution effect of the river.
- Water quality at SW13 was worse in 2017 compared to historical averages.
- SW3 water quality showed some improvement or no change for 2017 compared to historical averages for most parameters with the exception of phenols, nickel and zinc.
- McQuarrie Point and Embayment B generally showed improvements or no change with the exception of 4 parameters. Embayment A showed a large number of parameters with poorer water quality in 2017 compared to averages except for nine parameters. Alpine Street showed no change or improvement for most parameters.
- The review notes that the source of these elevated parameters does not appear to be the landfill and suggests stormsewers between Embayment C and Alpine Street as the source.

See Section 5, below, for required actions.

The 2017 AMR notes that samples after precipitation events were missed in 2017 due to staffing changes. See Section 5, below for required actions.

Ongoing annual monitoring to identify trends and the 2018 wetlands study should assist in quantifying the impacts and identifying the primary sources of degraded water quality.

Surface water quality impacts from the Lindsay Ops Waste Disposal Site will be examined in more detail during an inspection focussing on stormwater management and leachate management at the site. It is anticipated that the inspection will be undertaken in 2019.

Groundwater
The 2017 AMR is currently under review by Eastern Region Technical Support groundwater staff and those comments will be examined when they are available, subsequent to this inspection. The most recent Eastern Region Technical Support groundwater staff review completed in 2015 made four conclusions about impacts to groundwater from the landfill:

- The site satisfies the intent of Reasonable Use Guideline B-7. Groundwater from the fill areas ultimately discharges to a surface water receiver.
- The likely primary pathway for migration of leachate is downward through the base of the unlined old landfill to the underlying limestone aquifer, then westward beneath the lagoons towards the Scugog River.
- Groundwater contamination in excess of the Provincial Water Quality Objectives persists at western monitoring wells adjacent to the Scugog River. The potential for surface water impacts exists.
- The results of tritium sampling and analyses suggest that the origin of groundwater at all of the tested wells is probably post-1953 precipitation and not deep upwelling groundwater.

The 2017 AMR report does note a number of groundwater impacts. Briefly in summary, these are:

- Landfill impacts detected in overburden monitoring wells west perimeter and south perimeter of the old landfill. Impacts also detected in the CAZ 50m south of the landfill. Report notes that these impacts have stabilized since the installation of the geomembrane at the old landfill.
- Leachate impacts detected in the upper bedrock wells located on the west and south perimeter of the old landfill. Report notes a stabilized or decreasing trend in concentrations since the geomembrane was installed.
- Elevated concentrations of chloride downgradient of the north landfill expansion are in one well nest. The high concentrations were attributed to road salt impacted stormwater collecting in a nearby drainage ditch.
- Elevated ammonia-N concentrations in overburden and bedrock wells west (downgradient) of the sewage lagoons. The report notes generally decreasing or stabilizing trends since 2012 when the sludge in Lagoon 6 was removed.
- Lagoon monitoring wells showing exceedances of PWQOs for a number of parameters in various wells. This includes iron, phenols, ammonia and aluminium. The report notes phenol concentrations are within the natural background range for the area.
- Minor, but unexpected detection of PCBs in a wells downgradient of the north expansion area. These wells have been resampled in 2018 to determined if these are actual impacts or laboratory error.

As noted under Surface Water, above, the impacts of the landfill on surface water quality will be examined in more detail during an upcoming inspection focussing on stormwater management and leachate management at the site.

2.8 LEACHATE CONTROL SYSTEM:

Specifics:
Leachate control at the site is provided by the following:

- An engineered leachate collection system was constructed to service the north expansion area (Cells 1, 2, 3, 6 and the western part of Cells 4 and 5).
- The old landfill is serviced by a perimeter leachate collection system installed as part of the site closure.

The collected leachate is pumped to the Lindsay waste water treatment plant for treatment and disposal. Flow volumes are monitored by the operators of the Lindsay wastewater treatment plant. The effluent from the plant is monitored for typical leachate parameters.

The 2017 AMR detailed the inspection of the leachate collection system and the flushing, maintenance and repair of system.

The leachate collection system will be inspected in greater detail during a future inspection cycle.

2.9 METHANE GAS CONTROL SYSTEM:

Specifics:
The Lindsay Ops Landfill is equipped with landfill gas collection. Landfill gas collection wells were added to the older sections of the landfill post-closure while the newer cells were engineered and built with landfill gas collection systems.

Landfill gas is collected and pumped to a central facility which cleans the gas for use in engines which are used to generate electricity. The facility is also equipped with a landfill gas flare which operates when the engines are not operational and for burning off wastes from the siloxane filter.

The 2017 AMR report detailed the landfill gas monitoring program that took place at the site to comply with the ECA. The report noted that landfill gas concentrations in 2017 were generally consistent with those observed in previous years. As well, the reported concluded that methane gas from the landfill is not migrating off-site at significant levels.

The landfill gas collection system, flaring systems and electricity generation system will be inspected in greater detail during a future inspection cycle.

2.10 OTHER WASTES:

Specifics:
The City of Kawartha Lakes inspects waste loads entering the site. Rejected loads are documented and notification is provided to the ministry.

The leaf and yard waste will be managed with hopes to meet all requirements for the compost to be used as compost rather than use it as alternative daily cover at the landfill site.

In an effort to achieve greater waste diversion, the City of Kawartha Lakes is a number of pilot projects at the site. A number of project updates were provided, including:

- The mattress collection pilot is going well. The assessment of the project will take place in mid-2019.
- Clean wood waste is being segregated and later chipped for use as alternative daily cover.
- A project to recycle drywall is still under development.
- A trial "Habitat for Humanity" donation bin is continuing.

ECA amendments for any pilot projects deemed successful will be undertaken during the next ECA amendment cycle.

3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES

There were no compliance issues identified during the previous inspection.

4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)

Was there any indication of a known or anticipated human health impact during the inspection and/or review of relevant material, related to this Ministry's mandate?
No

Specifics:
None were observed at the time of the inspection.
Was there any indication of a known or anticipated environmental impact during the inspection and/or review of relevant material ?
No

Specifics:
None were observed at the time of the inspection
Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment ?
Yes

Specifics:
Two compliance issues were noted during the review of the 2017 AMR:

- Prior notification of the District Manager did not take place for the 11 daily waste limit exceedances.
- The 2017 AMR notes that samples after precipitation events were missed in 2017 due to staffing changes.

Was there any indication of a potential for environmental impairment during the inspection and/or the review of relevant material ?
No

Specifics:
As noted in Section 2.7, comments received from Eastern Region Technical Support staff indicated some indications of contamination entering the north drainage ditch as evidenced by parameter concentrations at site SW13, and parameter concentrations of concern at some locations in the Scugog River.
Was there any indication of minor administrative non-compliance?
No

Specifics:
None were observed at the time of the inspection

5.0 ACTION(S) REQUIRED

1. By April 15, 2019, schedule a teleconference or meeting with the undersigned to discuss notifications for daily waste limit exceedances. The meeting will be evaluate options for notification to take place prior to the exceedances.

2. By April 15, 2019, confirm to the undersigned that procedures are now in place to ensure that all sampling events will be completed as per the ECA.

6.0 OTHER INSPECTION FINDINGS

In keeping with the required action in Section 5, above, the City of Kawartha Lakes may wish to consider options for ECA Condition 4.6, Daily Waste Limits. These options can be explored further during a future ECA amendment.

As a result of daily waste limit exceedances, it recommended that the City of Kawartha Lakes evaluate alternative options for the use and disposal of catchbasin/street sweeping wastes. These waste appears to be the most significant contributor to daily waste limit exceedances.

The City of Kawartha Lakes may wish to consider additional visual screening (e.g. trees) on the east side of the site along Wilson Road. It is recognized this step will not fully screen the waste mound but will enhance the visual screening effect for users of Wilson Road.

The AMR indicates that in 2017, a total of 15 complaints were received. The complaints related to litter in 14 cases and litter and odour in one case. City of Kawartha Lakes staff recalled that in 2018 no complaints were directly received but that some complaints were indirectly brought up at the monthly Public Relations Committee meetings.

7.0 INCIDENT REPORT

Applicable
4351-B9QSKY

8.0 ATTACHMENTS

PREPARED BY:
Environmental Officer:
Name: **Glenn M Rutherford**
District Office: **Peterborough District Office**
Date: **2019/02/25**
Signature

REVIEWED BY:
District Supervisor:
Name: **Courtney Redmond**
District Office: **Peterborough District Office**
Date: **2019/03/18**

Signature: CBRedmond.

File Storage Number: KL OP WI 250

Note:
"This inspection report does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements"