



Solid Non-Hazardous Waste Disposal Site Inspection Report

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| Client: | The Corporation of the Municipality of Southwest Middlesex Mailing Address: 153 McKellar St P.O. Box 218, Southwest Middlesex, Ontario, Canada, N0L 1M0 Physical Address: 153 McKellar St, Southwest Middlesex, Municipality, County of Middlesex, Ontario, Canada, N0L 1M0 Telephone: (519)287-2015, FAX: (519)287-2359, email: jfrancisco@southwestmiddlesex.ca Client #: 2308-4XUQEP, Client Type: Municipal Government, NAICS: 913910 | | |
| Inspection Site Address: | Limerick Road Landfill (Mosa Landfill) Address: Lot: 23, Concession: 3, Southwest Middlesex, Municipality, County of Middlesex District Office: London - District GeoReference: Map Datum: NAD83, Zone: 17, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 431559, UTM Northing: 4724065, , | | |
| Contact Name: | Jaime Francisco | Title: | Public Works Manager |
| Contact Telephone: | 519-287-2015 ext119 | Contact Fax: | |
| Last Inspection Date: | 2004/07/08 | | |
| Inspection Start Date: | 2010/09/30 | Inspection Finish Date: | 2010/09/30 |
| Region: | Southwestern | | |

1.0 INTRODUCTION

The Corporation of the Municipality of Southwest Middlesex (SWM) operates two solid non-hazardous waste disposal sites. These sites are known as the Trillium Drive (formerly Ekfrid) and Limerick Road (formerly Mosa) landfill sites.

Both of these sites were inspected on October 1, 2010.

This inspection report addresses the Limerick Road site.

The site was inspected to determine compliance with the Environmental Protection Act (EPA), Regulations 347 (O. Reg. 347), the Certificates of Approval for the site, and other relevant ministry legislation, policies and guidelines.

During the inspection, Mr. Mike Shouldice (Landfill Site Supervisor/Contractor) was interviewed. Additional information for the inspection was obtained during a telephone conversation with Mr. Jaime Francisco, and from the SWM web site. Mr. Shouldice has been the supervisor at this site since January 2010.

A small number of digital photographs were taken during the inspection to support the inspection findings. Copies of the photographs are stored with the electronic copy of the inspection report in the Ministry of the Environment's reporting system.

2.0 INSPECTION OBSERVATIONS

Certificate of Approval Number(s):

A041902

CofA A041902 was issued on August 28, 1980 and approved a 6 hectare (15 acre) waste disposal site in accordance with the application and supporting information forms. The approval was issued originally in 1971 and renewed each year until 1980. After

1980 no renewals were required.

The site is approved to receive domestic, and non-hazardous solid industrial (limited to fencing etc. from agricultural) wastes.

There are two conditions on the approval. The first is the requirement to register the instrument (CofA) on title. The second is that the burning of domestic waste at this site is to be discontinued immediately (as of August 28, 1980).

2.1 FINANCIAL ASSURANCE:

Financial assurance is not required for this municipally owned landfill.

2.2 APPROVED AREA OF THE SITE:

The site is a 6 hectare (15 acre) landfilling site. The portion of the site approved for landfilling activities is not defined in the CofA.

The footprint of the cell currently being filled is identifiable. The footprint of previous landfilling activities is not as well defined but is generally known to the current site supervisor.

2.3 APPROVED CAPACITY:

There is no approved capacity listed on the CofA. The previous inspection report suggested that the landfill may have 15 years of capacity remaining, based on discussions with the operator at that time. Recycling efforts have extended the life of the landfill.

The 2004 document commissioned on behalf of the municipality entitled "An Outline of a Strategic Plan for the development of Waste Management Facilities" (later referred to as the Strategic Plan) does not estimate the amount of waste deposited at the site or the remaining site capacity. The Strategic Plan does make a number of recommendations related to site closure.

2.4 ACCESS CONTROL:

The site is fenced. The entrance is secured using a cable and lock. When open, the site is supervised. Signage is provided at the site entrance. Some minor updating to the signs should be done to update information and improve legibility.

The public can access the site on:
Wednesdays from noon to 5 pm
Saturday from 9 am to 5 pm

The site is restricted to use by residents of SWM. Residents of the former Zone Township in Chatham-Kent are also permitted to use the site based on an arrangements between the municipalities.

2.5 COVER MATERIAL:

There are no specific requirements for cover material identified on the CofA. On the day of the inspection, the area being used for waste tipping was relatively small and orderly with soil coverage on the access ramp. Applying cover material at the tipping face does not appear to be an operational practice at this site. A second tipping face is maintained for the disposal of roofing materials (mostly).

The access ramp and tipping face were judged to be somewhat more orderly compared to other similar landfilling operations. No on- or off-site wind-blown litter was observed and rodents/birds/insect vectors were not noted.

2.6 WASTE BURNING:

Burning is an operational practice at this site. Mr. Shouldice indicated that only clean wood and brush are burned.

Burning is generally conducted when the site is closed. The fire department is notified before each burn is conducted.

2.7 GROUNDWATER/SURFACEWATER IMPACT:

During the inspection, no groundwater or surface water impacts were noted. There are no known monitoring wells within the landfill boundary.

In 1981, the Ministry of the Environment conducted a preliminary hydrogeological assessment of the site. The report indicated that at that time the landfill operation was occurring in the north west corner of the landfill site. Three minor concerns were identified in the Discussion section of the report. The report indicated that the water table was shallow in the area of the landfill and that waste was likely contaminating the shallow aquifer but concluded that the threat to groundwater contamination in the bedrock was remote. The report noted that there was "domestic" well in the south east corner of the site associated with a "residence" used by the landfill operator and that the water quality in this well should be examined. The report also indicated that there was some potential for contamination to Fansher Creek from the landfill operation from two pipes which appear to drain the norther portion of the landfill. Limited sampling at that time did not reveal any water quality impacts to the creek.

There was no leachate or contaminated water in the active cell on the day of the inspection. Mr. Shouldice indicated that the current operational practices at the site are designed to minimize the collection of leachate or contaminated water in the active cell. Should any leachate or contaminated water be found, this material is pumped onto the active waste pile.

2.8 LEACHATE CONTROL SYSTEM:

This landfill does not have a leachate control system. No leachate control issues were noted.

2.9 METHANE GAS CONTROL SYSTEM:

This landfill does not have a methane control system. No landfill gas control issues were noted.

2.10 OTHER WASTES:

CofA A041902 approved the site to receive domestic, and non-hazardous solid industrial (limited to fencing etc. from agricultural) wastes.

No other waste types were noted.

The municipality operates recycling and composting programs at the site. The following waste types are being recycled:

- used tires (in dedicated bins) as part of the Ontario Tire Stewardship program.
- metals and white-goods (picked up yearly by Zubicks).
- traditional recycling materials (paper, glass, tin, plastics) collected in two on-site bins.
- compost - leaf and yard waste is composted at the site. In addition, oversized tree material primarily from roadside clean-up is collected at the site.

Concrete is collected for road building at the site. A number of other waste streams were traditionally segregated by the previous site operator. These piles include: porcelain (toilets mostly), vinyl siding, roofing material, and carpeting. These materials should be placed for final disposal and covered or recycled, if possible.

Mr. Shouldice indicated that he has been advised by the municipality that electronic waste collection will commence in the near future.

3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES

The previous inspection in 2004 identified several concerns with the landfill operation. Updates to these concerns are in **bold**:

- Waste shall be deposited in an orderly manner in the fill area, compacted adequately and covered by cover material by a proper landfilling operation (O. Reg 347 S. 11(13)). - **While waste is exposed at the tipping face, it appears that the size of the tipping face has been reduced from the time of the previous inspection, waste is being compacted on a regular basis and cover material is being applied to the top of the waste pile (ramp) as it advances.**
- There is visible evidence that a marsh on site was impacted by a burn area and possibly leachate. The extent of the impact can only be confirmed by analysis. Where there is a possibility of water pollution resulting from the operation of a landfilling site, samples shall be taken and tests made by the owner of the site to measure the extent of egress of contaminants and, if necessary, measures shall be taken for the collection and treatment of contaminants and for the prevention of water pollution (O. Reg 347 S. 11(7)). - **No record of the water in the marsh having been sampled and analysed could be located in the MOE files. SWM does not have records of the marsh having been sampled. At the time of the 2010 inspection, the marshy-area appeared dry. The method used for the landfilling operation has changed since the previous inspection and surface water and leachate do not appear to collect in significant quantities in the excavation at the toe of the tipping face.**
- Municipality personnel are determining if this landfilling site should be closed and the waste diverted to another site owned by the Municipality. A closure plan would be required for the Limerick Road Landfill (Mosa Landfill) should it be determined that the site closure is the best option. **The 2004 Strategic Plan did not indicate if the site should be closed or detail a closure plan for the site.**
- The Municipality shall ensure that there is adequate cover material on the waste to control rodents or other animals at the site. . **The municipality now has an adequate supply of cover material stored at the site.**

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 ?

No

Specifics: None were observed at the time of the inspection.

Was there any indication of a potential for environmental impairment during the inspection and/or the review of relevant material ?

No

Specifics: None were observed at the time of the inspection.

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

No actions are required as a result of this inspection.

6.0 OTHER INSPECTION FINDINGS

Overall, the landfill is well run in comparison to other rural landfills of a similar size.

A number of recommendations are made as a result of this inspection:

- Some minor updating to the signage at the site entrance should be done to update information and improve legibility. In particular, the signs should indicate that trespassing is not allowed at the site. As well, the municipality should consider placing a gate at the entrance of the landfill to replace the cable currently used. This would enhance the access control at the site.
- The site has likely exceeded its original life-expectancy. SWM should evaluate the installation of groundwater monitoring wells at the site to establish trends in groundwater quality around the site. This information would assist in obtaining a future amendment to the site CofA, should one be needed, or in establishing a baseline for monitoring groundwater quality post-closure. Similarly some surface water evaluation should be done in Fansher Creek to determine whether the landfill is having any impact on the creek. The 2004 Strategic Plan makes similar recommendations.
- The 2004 inspection noted that the Municipality had previously hired a consultant to evaluate all landfilling activities in the Municipality and provide a Strategic Plan for landfilling activities in SWM to the municipal council. A plan or outline was developed on behalf of the municipality. This document (the Strategic Plan) was developed in 2004 but appears to be an outline for a plan. The Municipality should continue to develop and then adopt a formal plan for the future operation and management landfilling operations within the municipality.
- The municipality should develop a design and operations report for the operation of the landfill. Examples of such reports were provided to the landfill supervisor. Within that report, the site supervisor should implement a formal (documented) inspection program for leachate seeps at the landfill site.

- A copy of the waste site CofA and site operations manual should be stored at the landfill site.
- Adequate cover should be applied to any exposed putrescible waste materials at a frequency sufficient to prevent problems such as rodents, vector insects, birds or litter.
- The municipality should investigate opportunities for roofing shingle material recycling. It is understood that bins for these materials can be obtained from local companies that recycle these materials.
- The segregated waste pile for porcelain (toilets mostly), vinyl siding, roofing material, and carpeting should be placed in the landfill for final disposal and covered or, if possible, recycled.

7.0 INCIDENT REPORT

Not Applicable

8.0 ATTACHMENTS

Limerick CofA.pdf; P1010202.JPG; P1010203.JPG; P1010204.JPG; P1010205.JPG; P1010206.JPG; P1010207.JPG; P1010208.JPG; P1010209.JPG; P1010210.JPG; P1010211.JPG; P1010212.JPG; P1010213.JPG; P1010214.JPG; P1010215.JPG; P1010216.JPG; P1010217.JPG

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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"