

3.8.4 HARRISON LANDFILL

Facility Name: City of Harrison Municipal Landfill

A.K.A.: N/A

Location: 10999 Campbell Road.

Parcel #: 56100140013

Lat, Long: 39.244095 -84.805735

Region: Harrison, OH 45030

Owner: City of Harrison

Operation (yrs): Pre 1970 – 1985 (based on aerials and records)



FACILITY OVERVIEW

The former City of Harrison Municipal Landfill is located in Harrison Township, Hamilton County, Ohio 45206. The parcel is located south of Campbell Road and north of Lawrenceburg Road. The fill is bounded to the north by the City of Harrison's wastewater treatment plant, and the Whitewater River is approximately 400' west of the western edge of the fill. The former landfill covers approximately 16.5 acres.

Topography of the former landfill is evident with a localized topographic high created in the area of waste placement; relief in the vicinity of waste placement is approximately twenty-two feet. Topography generally

risers to the north and east of the landfill, and is relatively flat toward the south and west (along the Whitewater River flood plain). Figure 3.8.4-A illustrates the topography of the site:

FIGURE 3.8.4-A



Based on records, the landfill was operated by the City of Harrison. The date of initial waste placement at the landfill is unknown/unrecorded, however, Health District documentation dates back to 1969 and filling on the property is evident in 1970 aerials.

In December of 1984 the City of Harrison was notified that the landfill's license may not be renewed due to violations at the landfill which had gone uncorrected for the previous 6 months. The violations noted were for inadequate intermediate cover, use of unsuitable cover material (sand and gravel), and ponding/erosion. In a January 1985 letter, the City of Harrison was informed that the landfill would be licensed until July 1 of that year and at that time the license would be re-evaluated with regard to compliance. In a letter dated July 15, 1985, the city was notified that the landfill's license had been suspended. The license was suspended for "repeated failure to correct violations", "water samplings near the landfill showing increased amounts of contaminating substances", and "geologically poor location of the landfill". The landfill was closed per applicable Ohio EPA and Hamilton County Health District requirements on August 1, 1985, after which no additional waste was received.

The city was informed in June of 2001 that several issues needed addressing at the former landfill. The issues included bush hogging the landfill, cap maintenance, and cleaning up the surface waste items on and around the landfill. Per a September 27, 2001, inspection, the cap of the landfill was regraded around this time.

In a letter dated January 9, 2002, the city was granted a Rule 13 authorization to construct a concrete pad and access road within the limits of waste placement. The pad is used to dewater sludge generated from the adjacent waste water treatment plant.

SAMPLING RESULTS

No surface water sampling or biological sampling is performed at this landfill.

The original explosive gas monitoring plan (EGMP) approved in 1998 included 15 sampling locations. In 2002 MP-1, MP-2, MP-3, TP-9, and TP-10 were removed due to construction. Three replacement gas monitoring probes (MP-4, MP-5, and MP-6) were installed in 2004 to replace these removed sampling locations. Under the current EGMP, there are a total of thirteen monitoring locations (Figure 3.8.4-B). City of Harrison personnel monitored the closed landfill monthly through 2014. In 2015 the Ohio EPA authorized the city to reduce gas monitoring to semi-annually but recommended quarterly monitoring to account for seasonal variability in the event the city requests cessation of the monitoring in the future. The facility was notified in August 2021 that due to recent rule changes they would need to submit a revised EGMP by March 28, 2022.

Based on discussions with Ohio EPA, it was discovered that concentrations of methane may have been mis-reported prior to the December 2021 monitoring event. Therefore, prior to this date, actual methane concentrations may have been significantly higher than what was reported. Methane has consistently been encountered in wells PMP-4, PMP-5, & PMP-6 since their installation. The first semiannual monitoring event of 2021 was completed on June 17, 2021 (Table 3.8.4-A). During this event there was one detection of methane in PMP-4 at a concentration of 16.1% LEL. During the second monitoring event completed on December 9, 2021, there were three detections of methane (PMP-4, PMP-5, and PMP-6) ranging from 3.3% to 16.1% methane (Table 3.8.4-B). A notice of violation dated August 6, 2020, was issued to the city for failing to complete the first semi-annual monitoring event. The landfill was monitored once during 2020 on September 8th and this monitoring resulted in one detection of methane in MP-5 at a concentration of 56% LEL. The landfill was monitored two times during 2019. There was a total of six detections of methane during 2019. Methane was detected in probes MP-4, MP-5, and MP-6 during both sampling events at concentrations ranging from 4.8 to 44% LEL. There were six total detections of methane over 3 sampling events conducted in 2018. All detections in 2018 occurred in probes MP-4, MP-5, and MP-6 at concentrations ranging from 1% to 34% LEL. The landfill was monitored four times during 2017 and methane was detected in MP-4, MP-5, and MP-6 during each sampling event excluding MP-5 during November 2017. Methane concentrations ranged from 5-34% LEL. WM Staff will monitor the data to determine trends in gas levels.

Ohio EPA conducted an explosive gas investigation at the landfill on December 9, 2021. Gas monitoring was conducted at 9 punch bar locations around the former landfill. Methane was detected at 6 locations in concentrations ranging from 0.05 – 53% methane. *(Data for this landfill is in the files at Hamilton County Public Health).*

TABLE 3.8.4-A (6/17/2021)

Probe Designation	EGTL 1	Time of Sampling	Pressure 2	% Combustible Gas Initial / Sustained 3	Water Depth 4	% LEL 5
PMP-4	100 %	13:54	0	0.81 / 0.81	0	16.1

TABLE 3.8.4-B (12/9/2021)

PROBE DESIGNATION	EGTL 1	TIME OF SAMPLING	PRESSURE 2	% COMBUSTIBLE GAS INITIAL / SUSTAINED 3	WATER DEPTH 4	% LEL 5
PMP-4	100 %	1038 hrs	0	16.1 / 16.1	0	
PMP-5	100 %	1046 hrs	0	12.2 / 12.2	0	
PMP-6	100 %	1050 hrs	0	3.3 / 3.3	1.5	

SITE INSPECTIONS

The site was last inspected by HCPH on December 22, 2021. No violations or nuisance conditions were observed during the inspection.

SITE PRESENT DAY

The above mentioned wastewater treatment plant occupies the northern section of the parcel. The former landfill is covered with established and maintained grass. The areas surrounding the landfill are undeveloped wooded land with no current activities other than an ATV/Motocross trail park that borders the landfill to the southwest and south.



Figure 3.8.4-B
Harrison Closed Landfill
10999 Campbell Road

▲ = Gas Monitoring Location

— = Approximate Limits of Waste

