



February 9, 2023

Mr. Andy De Jong, Landfill Technologist
Regional Municipality of Halton
Public Works - Waste Management & Road Operations
1151 Bronte Road
Oakville, Ontario
L6M 3L1

Dear Mr. De Jong:

**Subject: Closed Oakville Ninth Line Landfill Site
2022 Combustible Gas Monitoring**

We are pleased to provide a summary of the 2022 combustible gas monitoring results at the Closed Ninth Line Landfill Site (Site). Field measurements were obtained from gas monitoring wells at the Site on a monthly basis throughout 2022. The locations of the gas monitoring wells are provided on Figure 1 and the results are summarized in Table 1.

Combustible gas concentrations were frequently detected at monitors 99-1 and 99-2 in 2022. The measured combustible gas concentrations in 2022 ranged from 0% to 27% by volume in air at monitors 99-1 and 99-2. Combustible gas has historically been detected at monitors 99-1 and 99-2, although elevated liquid levels have reduced the frequency of detections at monitor 99-2.

Additionally, combustible gas concentrations of 0.2% by volume in air or lower were detected at gas monitors GP6, GP8R, GP9R, GP15R, GP106, GP107 and GP108 on a least one occasion in 2022. Historically, combustible gas has been infrequently detected at these locations. Monitoring will continue to confirm combustible gas detections.

In general, the combustible gas readings in 2022 were comparable to the historical results. It is noted that monitors 99-1, 99-2, GP6, GP107 and GP108 are located within the refuse area and the presence of combustible gas at these locations is not unexpected.

A gas measurement was not obtained within the Club House during the 2022 monitoring events. Combustible gas concentrations have not been detected during historical monitoring events. Gas measurements will continue to be obtained within this building during future monitoring events, when access is available.



It is expected that the principal combustible gas generated within a landfill is methane, which has a lower explosive limit of 5% gas by volume in air, and an upper explosive limit of 15% gas by volume in air.

Based on the 2022 results, there was minimal hazard to structures on-site from combustible gases detected during the monitoring period.

We trust that this letter is satisfactory for your needs. If you have any questions or comments, please contact our office.

Yours truly,

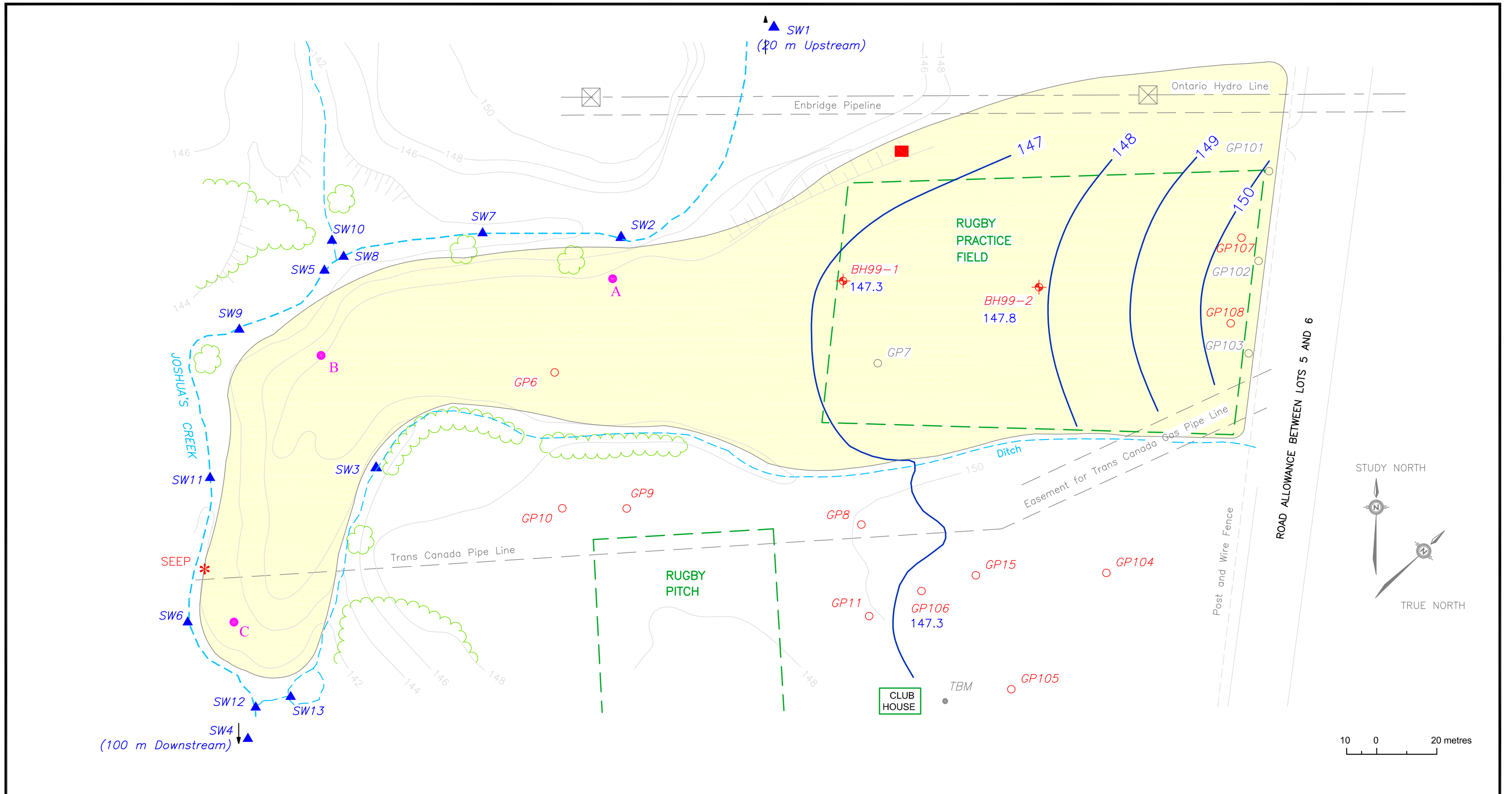
A handwritten signature in black ink, appearing to read 'Craig Leger'.

Craig Leger, M.Sc., C.E.T.
Environmental Consultant

Encl. Figure 1, Table 1

WSP ref.: 181-30000-00-106

H:\Data\Proj\18\30000-00\106 Oakville Ninth Line\1004\Tech\Ninth Line - October 2021 Combustible Gas Monitoring.docx



WSP

126 DON HILLOCK DRIVE, UNIT 2
 AURORA, ONTARIO CANADA L4G 0G9
 TEL.: 905-750-3080 | FAX: 905-727-0463 | WWW.WSP.COM

LEGEND	
	APPROXIMATE EXTENT OF RUGBY PRACTICE FIELD
	EXISTING GAS PROBE LOCATION, DESIGNATION, AND WATER LEVEL ELEVATION
	PREVIOUS GAS PROBE LOCATION AND DESIGNATION
	LEACHATE MONITOR LOCATION, DESIGNATION, AND LEACHATE ELEVATION
	TEMPORARY BENCH MARK LOCATION (Top of green hydro box, approx. 150.3 m)
	SW1 SURFACE WATER SAMPLING LOCATION AND DESIGNATION
	LOCATION OF MAXIMUM INSTANTANEOUS GAS EMISSION "HOT SPOT" (Comcor, 1998)
	APPROXIMATE EXTENT OF REFUSE
	PROPOSED LEACHATE MONITOR
	*SEEP INTERMITTENT SEEP (Detected only during the June 2000 surface water monitoring event)

CLIENT:	REGIONAL MUNICIPALITY OF HALTON
CLIENT REF. #:	
PROJECT:	2021 MONITORING PROGRAM CLOSED OAKVILLE NINTH LINE LANDFILL SITE

PROJECT NO:	181-30000-00 106
DESIGNED BY:	CL
DRAWN BY:	PLB
CHECKED BY:	CL
FIGURE NO:	1
DATE:	FEBRUARY 2022
SCALE:	1:1250

TITLE:	SITE PLAN
DISCIPLINE:	ENVIRONMENT
ISSUE:	
DATE OF:	

**TABLE 1
COMBUSTIBLE GAS READINGS
CLOSED OAKVILLE NINTH LINE LANDFILL SITE**

LOCATION	Jan-22	Feb-22	Mar-21	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
GP6	-	-	-	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
GP8R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
GP9R	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
GP10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GP11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GP15R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
GP106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
GP107	-	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2
GP108	-	-	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
99-1	-	-	10	0.0	0.0	0.1	0.1	11	27	25	20	18
99-2	-	-	0.4	0.0	0.1	0.2	0.0	0.0	3.1	4.5	3.0	2.5
CLUB HOUSE	-	-	-	-	-	-	-	-	-	-	-	-

NOTES: 1) All values are percent methane.

2) "-" - Indicates no measurement obtained.

3) Gas probes GP101, GP102, and GP103 were decommissioned in spring 2014 due to the roadwork expansion, and were replaced by gas probes GP107 and GP108 in June 2015.

4) Gas probes GP8, GP9 and GP15 were decommissioned and replaced with GP8R, GP9R, and GP15R in early September 2016.