

December 30, 2022

Ms. Cindy Koepke
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Re: DNR BRRTS Activity #02-33-582970
Landfill Gas Monitoring, Darlington City Historic Landfill
149 Wells Street, Darlington, WI
Monitoring Results, December 2022

Dear Ms. Koepke:

Ayres Associates Inc (Ayres), on behalf of the City of Darlington (City), is providing the results of the December 2022 landfill gas monitoring conducted at 149 Wells Street. This is the first round of quarterly monitoring requested by the Wisconsin Department of Natural Resources (WDNR) in email correspondence dated October 10, 2022.

Results Discussion

Landfill gas monitoring was conducted on December 2, 2022, at 11 sampling locations using a calibrated Landtec GEM 2000 landfill gas meter. Six of the locations are gas extraction wells designated with the GW identifier. The other five locations are soil gas probes designated with the identifier of GP. This round of monitoring generally indicated low concentrations of methane, less than 0.3%. Extraction wells GW-106R and GW-22R, along with gas probe GP-106, were the only locations with methane concentrations greater than 0.3%. The methane measured at these locations was above the lower explosive limit (LEL) of 5% methane by volume. These three locations have historically had periodic elevated methane concentrations. The elevated methane concentrations in extraction wells GW-106R and GW-22R date back to August 2008. Elevated methane concentrations in gas probe GP-106 dates to July 2011. Therefore, the elevated methane conditions at these locations are not considered a changed condition. The attached data sheet summarizes the December 2, 2022, gas monitoring results.

Indoor Air Alarms

The three alarms located within the Piggly Wiggly grocery were tested for an audible alert. All three alarms were operating properly when tested. Another alarm located in an office on the northeast end of the strip mall building could not be tested as the space was unoccupied and could not be accessed. To date, no audible alarms have been noted within the building from tenants or the landlord.

Next Sampling Round

The next quarterly landfill gas monitoring round will be conducted during the first quarter of 2023 before April 1.

Cindy Koepke
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Sincerely,

Ayres Associates Inc



Thomas P. Gaieck, PG
Hydrogeologist

TPG:amc

Enclosure

cc: Jeremy Williams – City of Darlington



Darlington
2-Dec-22

Table 1: Methane Gas Monitoring Results

ID	Sampler	Time	CH4 %	CO2 %	O2 %	Balance Gas	Barometric Pressure (inHg)	Barometric Trend	Relative Humidity	Wind Speed / Direction	Air Temp. (°F)	Cloud Cover	Precipitation	Valve Open (%)	Comments
GW-9R	TG	12:20	0.2	0.1	21.4	78.3	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GW-13R	TG	11:10	0.2	0.1	20.7	79.0	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GW-14R	TG	11:19	0.2	0.1	20.8	78.4	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GW-106R	TG	12:12	8.3	3.7	12.3	75.7	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GW-20R	TG	11:45	0.2	0.1	12.9	74.1	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GW-22R	TG	11:54	31.3	1.7	12.9	54.1	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GP-101	TG	11:59	0.3	0.1	21.4	78.2	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GP-104	TG	11:51	0.2	0.1	21.2	78.5	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GP-105	TG	11:34	0.3	3.0	18.3	78.5	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GP-106	TG	11:25	22.5	1.4	10.7	65.3	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
GP-108	TG	12:08	0.2	0.1	21.4	78.3	30.00	Steady	50%	20 mph/S	45	90%	0.0	100%	
BLOWER Port	TG	12:27	0.3	0.2	21.2	78.3	30.00	Steady	50%	20 mph/S	45	90%	0.0	N/A	
Gooseneck	TG							Steady	50%	20 mph/S	45	90%	0.0	N/A	