

December 27, 2023

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

Re: DNR BRRS Activity #02-33-582970
Landfill Gas Monitoring, Darlington City Historic Landfill
149 Wells Street, Darlington, WI
Monitoring Results, December 2023

Dear Ms. Koepke:

Ayres Associates Inc (Ayres), on behalf of the City of Darlington (City), is providing the results of the December 2023 landfill gas monitoring conducted at 149 Wells Street.

Results Discussion

Landfill gas monitoring was conducted on December 19, 2023, at 9 sampling locations using a calibrated Landtec GEM 5000 landfill gas meter. The ports of two of the sampling locations, GP-22R and GP-104, were obstructed and did not provide sufficient air flow for sampling. Five of the locations that could be sampled are gas extraction wells designated with the GW identifier. The other four 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%. Gas probes GP-106 and GP-108 were the only locations with methane concentrations greater than 0.3%. The methane measured at GP-106 was above the lower explosive limit (LEL) of 5% methane by volume. Gas probes GP-106 and GP-108 have historically had periodic elevated methane concentrations dating back to 2011. Therefore, the elevated methane conditions at these locations are not considered a changed condition. The attached data sheet summarizes the December 19, 2023, 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 2024 before April 1.

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Sincerely,



Thomas P. Gaieck
Ayres Associates Inc

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Hydrogeologist
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TPG:amc

Enclosure

cc: Jeff McCarthy – City of Darlington



Darlington
19-Dec-23

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	11:50	0.0	0.1	21.1	78.8	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GW-13R	TG	12:00	0.1	0.1	21.4	78.4	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GW-14R	TG	11:55	0.0	0.1	21.3	78.6	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GW-106R	TG	9:36	0.0	0.1	22.5	77.4	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GW-20R	TG	12:14	0.1	0.1	22.5	77.4	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GW-22R	TG	No sample- port obstructed/frozen					29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GP-101	TG	12:30	0.0	1.4	21.3	77.3	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GP-104	TG	No sample- port obstructed/frozen					29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GP-105	TG	12:10	0.0	2.9	19.4	77.6	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GP-106	TG	12:04	19.1	0.7	13.4	66.4	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
GP-108	TG	12:34	0.4	1.3	19	77.8	29.30	Steady	51%	18mph/SW	30	50%	0.0	100%	
BLOWER Port	TG	12:43	0.1	0.1	22.4	77.3	29.30	Steady	51%	18mph/SW	30	50%	0.0	N/A	
Gooseneck	TG							Steady	51%	18mph/SW	30	50%	0.0	N/A	