

July 22, 2019

Ms. Cindy Koepke
Bureau for Remediation and Redevelopment
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Received electronically 7/23/2019
CORRECT SITE NAME IS
DARLINGTON CITY HISTORIC
LANDFILL
C. Koepke

Re: DNR BRRTS Activity #02-33-582970
Landfill Gas Monitoring, Dick's Supermarket Site
149 Wells Street, Darlington, WI
July 2019 Monitoring Results

Dear Ms. Koepke:

Ayres Associates Inc (Ayres), on behalf of the City of Darlington (City), is providing the July 2019 site sampling results of gas probes on the site perimeter at 149 Wells Street. This monitoring event was conducted on July 19, 2019. This is the eighth event conducted under the July/December monitoring events as noted in the September 10, 2015, Wisconsin Department of Natural Resources letter detailing monitoring frequency.

Results Discussion

All monitoring locations were accessible, dry, and the probes and sample ports appeared in good working order, except for GP-104 and GW-20R. GP-104's valve was accessible, but the box was filled with water and GW-20R could not be located due to overgrown grass. Also, the sample valve on GW-14R that was previously broken was replaced. The quarterly monitoring used a calibrated Landtec GEM 2000 landfill gas meter. The attached monitoring results show that no sample locations (probe or blower sampling ports) monitored had detections of methane in them. Compared to last year's summer sampling event, the July 2019 event had six fewer sample probes which detected methane. Compared to last winter's December 2018 monitoring results, the one location (GP-108) which had a methane detect was not detected in the July 2019 monitoring. Detailed sample results for this event are shown on attached Table 1.

Passively venting the system continues to provide an avenue for any subsurface gas to be released from beneath the site. Many of the sampling points that have had historical measurable levels of methane have been significantly reduced, with most having non-detects or non-detect equivalents in more recent sampling events. Attached Table 2 details historical sampling results noting these trends.

Indoor Air Monitoring

Alarms are installed within the building at various locations to alert personnel of the presence of methane should any venting occur within the building from subsurface conditions. New meters were

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installed in November 2014 and continue to appear to be operating properly. Alarm meter Number 1, located in the former Badgerland Financial office on the northeast side of that tenant space, could not be accessed by Ayres Associates staff during the sampling event since the location has been permanently closed. A new owner operates the retail space north of the grocery store, but the space is currently unoccupied. Other meters were tested and confirmed to be working. To date, no audible alarms have been noted within the building. If any audible alarms are noted within the building, the WDNR will be notified of this event and response actions will be taken according to the Explosive Gas Alarm Contingency Plan.

The next regularly scheduled sampling event will be in December 2019.

Please contact me with any further questions.

Sincerely,

Ayres Associates Inc



Ben Peotter, P.E.
Project Manager

Direct: 608.443.1206
Cell: 608.577.9593
PeotterB@AyresAssociates.com

BP:sm

Enclosure

cc: Stewart Wangard – Wangard Partners, Inc.
Bryson Family Rental LLC
Mayor Dave Breunig – City of Darlington
Jeremy Williams – City of Darlington

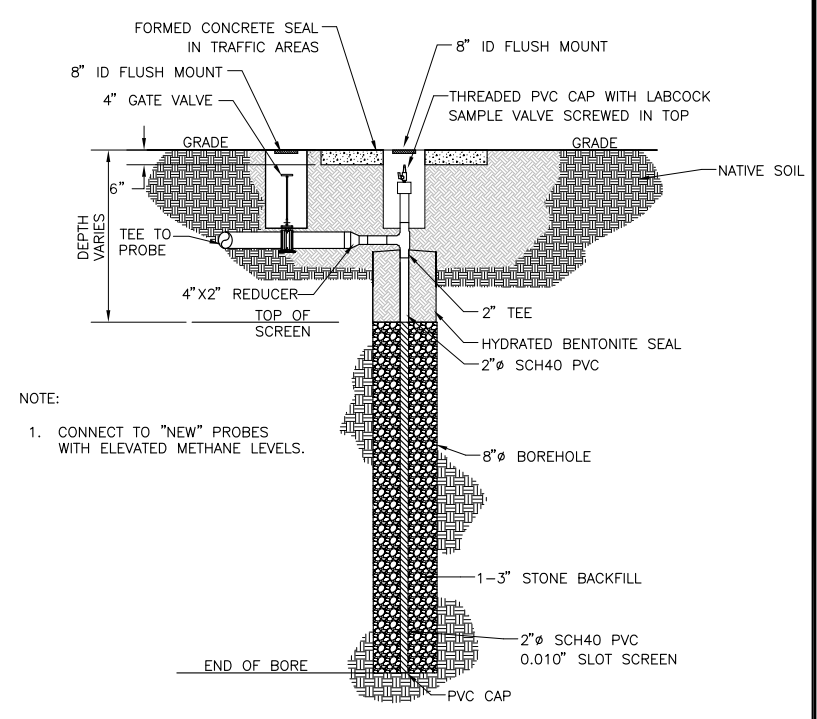
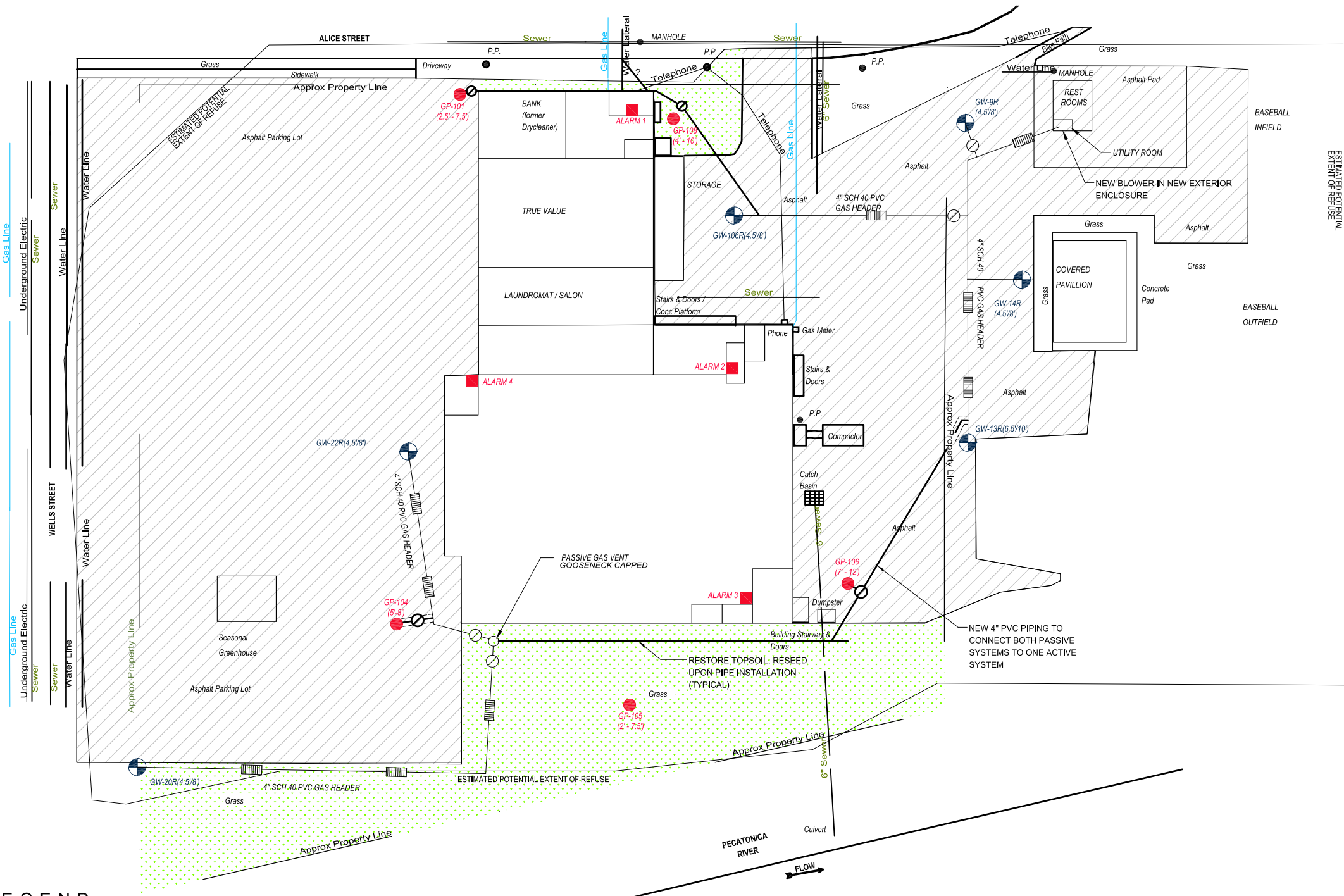
Dick's Supermarket Site - Darlington, WI

July 2019 Gas Monitoring Event

Table 2: Summary of Methane Sample Data (July 28, 2008 to July 19, 2019)

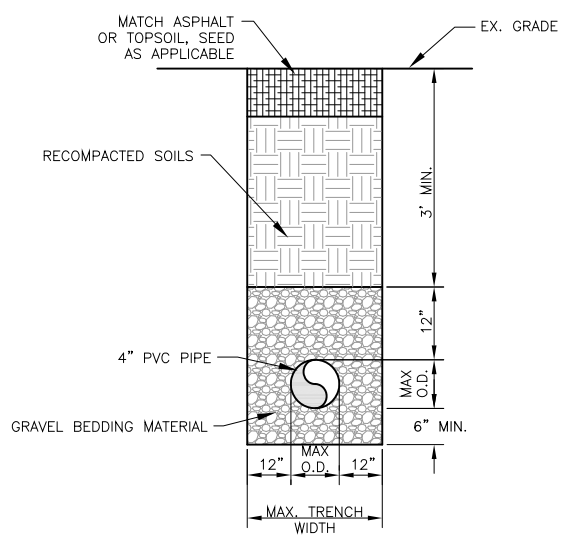
Percent by Volume Methane (LEL=5%, UEL=15%)													
Date	GW-9R	GW-13R	GW-14R	GW-106R	GW-20R	GW-22R	Gooseneck	GP-101	GP-104	GP-105	GP-106	GP-108	BLOWER
7/19/2019	0.0	0.0	0.0	0.0	NA-buried	0.0	NA	0.0	0.0	0.0	0.0	0.0	0.0
12/6/2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
7/10/2018	0.0	0.0	1.7	4.0	0.0	4.3	0.0	0.0	0.0	1.9	0.2	0.1	0.0
12/7/2017	0	0	0	0.2	1.2	0.1	1.4	0.1	0	1.7	1.8	0	0
7/11/17	0.0	0.2	0.1	0.1	0.1	0.2	--	0.1	0.1	0.2	0.2	0.0	0.0
12/2/2016	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7/13/2016	0.0	0.0	16.4	1.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/9/2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7/1/2015	0.0	0.0	10.7	0.0	0.0	3.7	--	0.0	0.0	0.0	10.6	0.0	0.0
4/14/2015	0.0	0.1	0.0	0.1	0.0	0.1	--	0.1	0.3	0.1	23.9	0.1	0.0
1/20/2015	0.0	Buried	0.0	0.0	Buried	0.0	0.1	0.0	0.0	0.0	Frozen	0.0	0.0
10/21/2014	0.2	0.2	5.6	0.2	0.2	0.2	--	0.3	0.3	0.3	3.1	0.3	0.2
8/19/2014	PASSIVE VENTING RESUMED												
7/9/2014	0.2	0.3	5.3	0.3	0	7.6		0.2	4.1	0.3	1.0	29.4	0.2
4/8/2014	0.0	1.2	0.9	0.4	0.2	0.2		0.1	0.4	0.2	13.0	15.1	0.2
1/24/2014	0.0	12.7	--	--	--	0.0		0.0	0.1	0.0	--	22.2	0.6
10/4/2013	0.0	7.2	11.9	7.3	0.0	13.5		0.0	0.0	0.0	40.0	24.3	0.5
7/9/2013	0.2	0.3	9.4	5.7	0.1	7.0		0.2	0.2	0.1	Watered Out	19.1	0.3
4/10/2013	0.0	0.0	0.0	0.0	Watered Out	2.0		0.0	0.6	0.0	0.0	12.5	0.1
1/11/2013	0.0	4.5	--	0.5	1.9	0.0		0.6	0.1	0.0	--	0.2	0.0
12/5/2012	0.0	0.6	0.1	0.8	0.0	8.8		0.0	1.0	0.0	5.0	13.3	0.1
11/8/2012	0.0	0.7	8.5	1.4	0.1	15.5		0.0	0.6	0.1	5.8	13.6	0.2
10/8/2012	0.3	0.9	0.0	2.1	0.1	22.6		0.0	0.0	0.0	9.5	9.3	0.1
9/6/2012	0.1	0.4	16.8	0.1	0.1	17.6		0.2	0.4	0.1	12.3	N/A	0.4
8/7/2012	0.2	0.1	27.3	2.8	0.1	17.5		0.2	0.8	0.1	16.3	0.2	0.4
7/12/2012	0.0	0.0	11.0	2.3	28.7	8.0		0.0	1.0	0.0	20.0	5.8	0.0
6/11/2012	0.1	0.0	14.7	0.0	Watered Out	1.2		0.0	Blockage	0.0	40.1	5.8	New probe installed July 12, 2012
5/4/2012	0.0	0.1	4.2	0.0	Watered Out	0.3		0.0	Blockage	0.1	0.1	0.0	
4/12/2012	0.0	0.0	0.0	0.1	Watered Out	0.1		0.5	0.0	0.0	0.0	32.9	
3/8/2012	0.2	0.2	0.2	1.8	Watered Out	0.1		0.1	Buried	0.1	4.3	35.8	
2/14/2012	Under Ice	0.0	0.1	0.1	17.5	25.2		0.1	Buried	0.1	12.2	31.0	
1/9/2012	0.1	0.3	0.1	1.0	0.2	0.5		0.2	N/A	0.2	29.9	8.5	
1/9/2012	BLOWER SYSTEM INSTALLED												
12/5/2011	0.8	0.0	Car	11.0	0.0	24.4	0.0	15.8	52.3	0.0	78.4	7.8	
11/10/2011	2.1	0.0	10.2	8.8		27.8	0.2	15.4	49.8	0.0	89.9	50.1	
10/7/2011	0.0	0.0		0.1	0.0	16.4	0.0	6.1	44.9	0.1	88.0	52.4	
9/8/2011			11.6	10.3		19.9		5.8	38.3		83.5	49.2	
8/12/2011	0.2	0.1	18.1	11.2	7.3	7.0	0.1	0.1	32.1	0.2	85.5	42.9	
7/6/2011	0.2			2.4	9.8	4.7		3.9	15.8		72.1	13.8	
6/9/2011			7.8	0.8		0.4		0.3	0.8			0.1	
4/12/2011	0.1				0.1								
4/20/2010				0.9									
3/30/2010				0.2									
2/24/2010					19.5	20.5	0.3						
1/26/2010				0.4	0.8	6.7							
12/29/2009													
11/15/2009	0.4	6.3		6.0	0.4	24.9							
10/27/2009	1.1		4.1	11.3	50.0		0.9						
9/29/2009	3.9		3.0										
8/25/2009	2.8			4.6	1.0	39.1							
7/28/2009	1.1		0.4		0.2	30.2							
6/30/2009	1.1				28.5		0.3						
5/27/2009					0.3	19.1							
4/28/2009			0.9			3.7							
3/31/2009		2.5				6.1	0.5						
2/24/2009					5.8	27.7	0.1						
1/27/2009			0.2		28.9		0.8						
12/23/2008				10.5	41.8	22.4	0.2						
11/25/2008	0.2			0.1	31.1	22.8	0.4						
10/3/2008	32.4		9.2	2.6	18.8	29.8							
9/26/2008	45.1	10.5	16.3		59.1	41.8	6.8						
8/28/2008	43.6	0.1	21.0	11.3	27.2	27.3	0.2						
7/28/2008	10.4				0.2		1.0						

Note: all blanks indicated non-detect for methane during sampling event



NOTE:
1. CONNECT TO "NEW" PROBES WITH ELEVATED METHANE LEVELS.

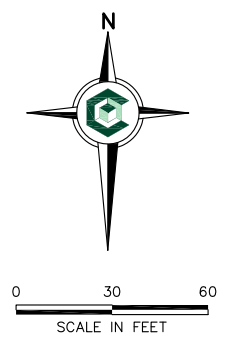
GAS PROBE
DETAIL 1
SCALE: NOT TO SCALE



TYPICAL TRENCH
DETAIL 2
SCALE: NOT TO SCALE

- LEGEND**
- GW-9R** REINSTALLED PASSIVE GAS EXTRACTION WELL WITH (SCREEN LENGTH/WELL DEPTH)
 - EXISTING VALVE
 - EXISTING ASPHALT
 - EXISTING GRASS
 - 4" PVC SLOTTED PIPE (10' LONG SECTIONS)
 - 4" PVC SOLID PIPE
 - EXPLOSIVE GAS ALARM LOCATION
 - NEW PROBE LOCATION (TOP OF SCREEN DEPTH - BOTTOM OF SCREEN / WELL BELOW GROUND SURFACE)
 - NEW VALVE
 - NEW 4" PVC SOLID PIPE

- NOTES**
1. EXISTING SYSTEM "A" INCLUDES GW-9R, 13R, 14R AND 106R.
 2. EXISTING SYSTEM "B" INCLUDES GW-20R, 22R.
 3. NEWLY INSTALLED PROBES ARE GP-101, 104, 105, 106 AND 108.



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE: JAN. 2012
 DRAWN BY: MW
 DESIGNED BY: BP
 CHECKED BY: SW
 APPROVED BY: BP

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CITY OF DARLINGTON LANDFILL
DARLINGTON, WISCONSIN

AS-BUILT GAS PIPING MODIFICATIONS

SHEET NO.
1
PROJECT NO.
100207