

March 23, 2022
File No. 25221008.02

Mr. Trevor Bannister
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Additional Investigation Update
Chlorinated Volatile Organic Compounds in Bedrock Aquifer
Land & Gas Reclamation Landfill (Hechimovich Sanitary Landfill)
Dodge County, Wisconsin
BRRTS #02-14-000906

Dear Mr. Bannister:

On behalf of Glacier Ridge Landfill, LLC (GRL), SCS Engineers (SCS) is submitting this update on the progress of additional investigation of the extent of chlorinated volatile organic compounds (CVOCs) in bedrock at the former Land & Gas Reclamation Landfill (LGRL). The site is also known as the Hechimovich Sanitary Landfill Superfund site. The work described below is consistent with the proposed scope described in SCS's "Additional Investigation and Workplan Update" letter to the Wisconsin Department of Natural Resources (WDNR) dated February 10, 2021.

MONITORING WELL INSTALLATION AND DEVELOPMENT

SCS observed the installation of monitoring wells P-430D and P-426SS in May 2021. The well locations are shown on **Figure 1**. Boring logs and monitoring well construction and development forms are included in **Attachment A**.

SCS mobilized to the site on May 4, 2021, with Dan and Ryan Steffes of Badger Well Drilling (Badger) to convert PW-J to a NR 141 groundwater monitoring well. Badger first removed the pump from the well and then backfilled the bottom of the well with bentonite chips from the bottom of the well at 245 feet to a depth of about 216 feet below ground surface (bgs). The original well construction report and a well abandonment form for PW-J are included in **Attachment A**. Badger then constructed the monitoring well with 10 feet of screen from 215 to 205 feet bgs and 2-inch schedule 80 PVC casing to the surface.

On May 10, 2021, the same crew returned to start drilling bedrock monitoring well P-426SS approximately 10 feet west of existing monitoring well P-426D. Jackie Rennebohm of SCS observed the continuation of drilling on May 11 and Ryan Matzuk (SCS) observed the well construction and grouting on May 12 and 13, 2021. Trevor Bannister of WDNR was on site for a portion of the drilling activities on May 12, 2021. The P-426SS borehole encountered sandstone bedrock at approximately 410 feet bgs. Badger constructed the well with 20 feet of screen from 433 to 413 feet bgs and 2-inch schedule 80 PVC casing to the surface. Badger and Ground Source, Inc., sealed the annular spaces in both of the wells with high solids bentonite grout on May 13, 2021.



Zach Watson of SCS developed both wells on June 3, 2021. SCS first surged each well with a bailer and then pumped each well with a submersible pump. Purge water was discharged to the ground surface. Tetra Tech surveyed the well locations and elevations in June 2021.

GROUNDWATER SAMPLING AND ELEVATION MEASUREMENTS

Environmental Sampling Corporation (ESC) measured water levels in all of the bedrock monitoring wells and collected groundwater samples from only the two new wells on July 20, 2021. ESC collected a complete round of samples from the bedrock monitoring wells in October 2021. Groundwater elevation measurements are summarized in **Table 1**.

Potentiometric surface contour maps of the water elevation data collected from monitoring wells screened in the upper dolomite and sandstone bedrock aquifers in July and October 2021 are shown on **Figures 2** through **5**. The contours for both the dolomite and sandstone aquifers in July and October all show apparent groundwater flow to the east-northeast. The head gradient in the sandstone was steeper in October 2021 (0.004) compared to July 2021 (0.002).

The potentiometric surface maps for the dolomite show that P-430D (former PW-J) is up-gradient of the landfill area. Head elevations in the dolomite at P-430D are approximately 39 feet higher at this well compared to those measured on the east side of LGRL.

ANALYTICAL RESULTS

Groundwater volatile organic compound (VOC) results for samples collected from the bedrock monitoring wells are summarized in **Table 2**. Results of 2021 samples collected from the existing bedrock monitoring wells are consistent with previous data.

In samples from P-426SS, the only VOC detected was cis-1,2-dichloroethane (cis-1,2-DCE), which was present at concentrations less than the NR 140 preventive action limit (PAL). The detected cis-1,2-DCE concentrations in samples from P-426SS (0.77 and 1.7 ug/l) fall between those detected in water supply wells PW-32 (around 0.4 ug/l) and PW-28 (around 3.8 ug/l), and are consistent with groundwater flow toward the northeast in the sandstone aquifer.

In samples from P-430D, the only VOCs detected were cis-1,2-DCE and trans-1,2-Dichloroethene (trans-1,2-DCE). The trans-1,2-DCE concentrations are less than the PAL. The detected cis-1,2-DCE concentrations of 11.8 and 13.0 ug/l exceed the PAL and are about 70 percent higher than those detected in PW-J since May 2019. The relative increase in DCE concentrations in P-430D compared to the former water supply well at this location (PW-J) suggests that the well screen in P-430D is located at the correct depth and likely intersects the transmissive zone in the dolomite where migration of the DCE is occurring. Given the apparent upgradient position of P-430D relative to the LGRL area, it is unlikely that the contamination in this well migrated west within the dolomite aquifer from the landfill area to P-430D. Although the source of DCE in this well is not clear, additional source investigation is not warranted because concentrations remain below the NR 140 ES and the extent is limited based on the lack of DCE detections in the other water supply wells on the west side of Highway V that are sampled under the Glacier Ridge Landfill monitoring program.

FUTURE WORK

The installation and sampling of the two new wells, PW-426SS and P-430D, has addressed the objectives of the additional investigation, and no additional monitoring well installations are proposed at this time. The new wells will be included in the ongoing bedrock well monitoring program.

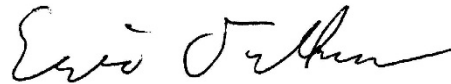
SCS will submit an annual report for LGRL by April 30, summarizing the complete monitoring results for 2021. The annual report will include additional discussion of the results from the new wells in the context of the overall site investigation.

Please do not hesitate to contact us at (608) 224-2830 if you have any questions or would like to discuss the investigation findings and recommendations.

Sincerely,



Sherren Clark, PE, PG
Project Director
SCS Engineers



Eric Oelkers, PG
Senior Project Manager/Hydrogeologist
SCS Engineers

EO/AJR_REO/SCC

cc: Jake Margelofsky, Glacier Ridge Landfill (2 copies)

cc via email: Ann Bekta, WDNR
Tim Curry, GFL Environmental
Kari Rabideau, GFL Environmental
Mark Torresani, Tetra Tech
Melanie Gotto, Deere & Company World Headquarters
Monica Rios, Deere & Company World Headquarters
George Marek, Quarles & Brady, LLP (for Mercury Marine)
Linda Benfeld, ESG Holdings, LLC c/o Foley & Lardner LLP (for Maysteel Corp.)
Nathan Kempke, City of Mayville
Paul Rosenfeldt, Edgerton, St. Peter, Petak & Rosenfeldt (for Mayville Engineering Corp.)
Frank Perugini, Environmental Sampling Corporation

Mr. Trevor Bannister

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Encl. Table 1 – Water Level Summary – Bedrock Monitoring Wells

Table 2 – Bedrock Well Sample Results – VOCs

Figure 1 – Monitoring Well and Private Well Locations

Figure 2 – Dolomite Bedrock Groundwater Elevations and Potentiometric Surface
Contours - July 2021

Figure 3 – Dolomite Bedrock Groundwater Elevations and Potentiometric Surface
Contours - October 2021

Figure 4 – Sandstone Bedrock Groundwater Elevations and Potentiometric Surface
Contours – July 2021

Figure 5 – Sandstone Bedrock Groundwater Elevations and Potentiometric Surface
Contours – October 2021

Attachment A – Borehole Logs and Well Construction and Development Reports

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Tables

- 1 Water Level Summary – Bedrock Monitoring Wells
- 2 Bedrock Well Sample Results - VOCs

Table 1. Water Level Summary - Bedrock Wells
Land and Gas Reclamation Landfill / File No. 25221008.02

Raw Data	Depth to Water in feet below top of well casing											
	P401D	P402E	P423D	Office Well	PW18	PW27	P424D	P424SS	P426D	P426SS	P429SS	P430D
Measurement Date												
March 12, 2010	76.87	73.58		53.82	108.25	91.44						
April 8, 2011	76.96	73.67	95.30									
October 6-7, 2011	81.26	78.00	100.50									
April 13, 2012	77.60	74.40	96.00									
October 3-5, 2012	81.70	78.43	99.72									
December 17, 2012	82.16	78.95	100.50			96.90	93.40	92.90				
February 20, 2013	82.11	78.88	99.55			96.20	92.75	92.10				
April 1, 2013	81.20	77.70	98.60				91.75	91.20				
September 30, 2013	83.33	80.09	101.30				94.80	94.22				
April 7, 2014	80.00	76.80	97.87				91.04	90.65				
October 6, 2014	80.35	77.15	98.75				91.91	91.55				
April 17, 2015	78.75	75.45	96.88				90.10	89.72				
May 20, 2015	78.93	75.72	97.27				90.42	90.06	104.15			
June 3, 2015	78.85	75.65	97.00				90.14	89.80	103.65			
October 9, 2015	83.10	79.90	100.80				93.80	93.50	107.50			
April 4, 2016	77.92	74.76	95.65				88.90	89.40	102.35			
October 7, 2016	80.35	77.5	98.60				91.6	91.3	105.3			
April 7, 2017	75.80	72.52	94.30				87.33	87.10	101.00			
October 6, 2017	79.56	76.35	98.12				91.10	90.85	103.82			
November 30, 2017											156.90	
December 28, 2017	77.65											
February 1, 2018											155.80	
April 5-6, 2018	78.60	75.50	96.90				89.90	89.62	103.65			
April 25, 2018											157.00	
October 4, 2018							90.38	90.20				
October 30, 2018	79.70	76.30	95.40						102.20			
January 9, 2019											158.20	
April 1, 2019	75.50	73.10	94.55				87.20	87.05	99.55		150.35	
October 28-29, 2019	76.70	73.60	94.95				88.20	88.05	101.75		152.50	
April 17, 24, and 27, 2020	73.25	70.84	91.61				84.70	84.50	98.50		149.15	
October 8-9, 2020	78.82	75.72	97.22				90.33	90.20	104.65		154.80	
April 9 and 29, 2021	76.88	73.75	94.25				87.30	87.20	101.00		153.80	
July 20, 2021	82.36	79.25	100.93				93.95	93.88	107.55	109.00	155.10	67.80
October 4, 2021	83.05	79.85	101.31				94.40	94.10	108.00	109.85	158.40	68.95

**Table 1. Water Level Summary - Bedrock Wells
Land and Gas Reclamation Landfill / File No. 25221008.02**

Well Number	Ground Water Elevation in feet above mean sea level (amsl)											
	P401D	P402E	P423D	Office Well	PW18	PW27	P424D	P424SS	P426D	P426SS	P429SS	P430D
Top of Casing Elevation (feet amsl)	932.30	929.08	948.99	958.14	947.56	946.15	942.60	941.88	955.65	954.65	999.24	956.84
Screen/Open Hole Length (ft)	15.00	20.00	18.00	46.00	60.00	43.00	20.00	20.00	20.00	20.00	15.00	10.00
Total Depth (ft from top of casing)	147.40	177.98	225.01	202.00	247.00	205.00	206.10	411.45	221.80	434.50	460.00	218.50
Top of Screen / Open Hole Elevation (ft)	799.90	771.10	205.01	802.14	760.56	784.15	756.50	550.43	753.85	540.15	554.24	748.34
Measurement Date												
March 12, 2010	855.43	855.50		904.32	839.31	854.71						
April 8, 2011	855.34	855.41	853.69									
October 6-7, 2011	851.04	851.08	848.49									
April 13, 2012	854.70	854.68	852.99									
October 3-5, 2012	850.60	850.65	849.27									
December 17, 2012	850.14	850.13	848.49			849.25	849.20	848.98				
February 20, 2013	850.19	850.20	849.44			849.95	849.85	849.78				
April 1, 2013	851.10	851.38	850.39				850.85	850.68				
September 30, 2013	848.97	848.99	847.69				847.80	847.66				
April 7, 2014	852.30	852.28	851.12				851.56	851.23				
October 6, 2014	851.95	851.93	850.24				850.69	850.33				
April 17, 2015	853.55	853.63	852.11				852.50	852.16				
May 20, 2015	853.37	853.36	851.72				852.18	851.82	851.50			
June 3, 2015	853.45	853.43	851.99				852.46	852.08	852.00			
October 9, 2015	849.20	849.18	848.19				848.80	848.38	848.15			
April 4, 2016	854.38	854.32	853.34				853.70	852.48	853.30			
October 7, 2016	851.95	851.58	850.39				851.00	850.58	850.35			
April 7, 2017	856.50	856.56	854.69				855.27	854.78	854.65			
October 6, 2017	852.74	852.73	850.87				851.50	851.03	851.83			
November 30, 2017											842.34	
December 28, 2017	854.65											
February 1, 2018											843.44	
April 5-6, 2018	853.70	853.58	852.09				852.70	852.26	852.00			
April 25, 2018											842.24	
October 4, 2018							852.22	851.68			Well	
October 30, 2018	852.60	852.78	853.59						853.45		Inaccessible	
January 9, 2019											841.04	
April 1, 2019	856.80	855.98	854.44				855.40	854.83	856.10		848.89	
October 28-29, 2019	855.60	855.48	854.04				854.40	853.83	853.90		846.74	
April 17, 24, and 27, 2020	859.05	858.24	857.38				857.90	857.38	857.15		850.09	
October 8-9, 2020	853.48	853.36	851.77				852.27	851.68	851.00		844.44	
April 9 and 29, 2021	855.42	855.33	854.74				855.30	854.68	854.65		845.44	
July 20, 2021	849.94	849.83	848.06				848.65	848.00	848.10	845.65	844.14	889.04
October 4, 2021	849.25	849.23	847.68				848.20	847.78	847.65	844.80	840.84	887.89
Bottom of Well Elevation (ft)	784.90	751.10	723.98	756.14	700.56	741.15	736.50	530.43	733.85		539.24	738.34

Created by: EO	Date: 3/16/2010
Last revision by: EO	Date: 11/19/2021
Checked by: RM	Date: 2/7/2022
Proj Mgr QA/QC: EO	Date: 3/10/2022

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2021
Land and Gas Reclamation Landfill / File No. 25221008.02
 (Results are in µg/L, except where otherwise noted)

Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
P-401D	10/7/2009	Siemens	6.37	452	194	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	ND
	4/6/2010	Siemens	12.3	400	278	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.10	<0.4	<0.2	o-Xylene 0.22 J
	10/27/2010	Siemens	10.4	345	277	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	ND
	11/29/2010	Siemens	11.6	340	--	<0.70	<0.40	<0.30	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	ND
	4/8/2011	Siemens	9.4	356	281	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	cis-1,3-Dichloropropylene 0.25 J
	10/6/2011	Siemens	9.36	332	273	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	Carbon Disulfide 28.8
	4/13/2012	Siemens	9.44	365	226	<0.70	<0.40	<0.40	<0.40	<0.4	<0.50	<0.30	<0.4	<0.2	ND
	10/4/2012	Pace	9.4	359	219	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND
	10/4/2013	Pace	12.6	360	251	<0.44	<0.39	<0.28	<0.43	<0.42	<0.37	<0.47	<0.36	<0.18	ND
	4/7/2014	Pace	10.9	362	255	<0.37	<0.50	<0.16	<0.41	<0.26	<0.24	<0.50	<0.33	<0.18	ND
	10/17/2014	Pace	12.4	340	280	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/17/2015	Pace	12.0	348	251	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/9/2015	Pace	12.6	350	289	<0.37	<0.50	<0.24	<0.41	11.0	0.43 J	<0.50	0.41 J	<0.18	Acetone 21.2
	4/7/2016	Pace	12.5	344	273	<0.37	<0.50	<0.24	<0.41	1.7	<0.26	<0.50	<0.33	<0.18	Acetone 3.0 J
	12/28/2017	Pace	16.4	340	323	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/6/2018	Pace	17.2	348	357	<0.37 L1	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone 3.0 J1
	10/30/2018	Pace	16.8	332	322	<1.3	<2.2	<0.27	<0.24	0.33 J1	<1.1	<0.33	<0.26	<0.17	Acetone 10.6 J1
	10/30/2018 (DUP)	Pace	16.9	336	309	<1.3	<2.2	<0.27	<0.24	0.61 J1	<1.1	<0.33	<0.26	<0.17	Acetone 7.3 J1
	4/4/2019	Pace	16.8	333	304	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	10/28/2019	Pace	15.7	321	320	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone 9.2 J1
4/24/2020	Pace	17.1	341	273	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	ND	
10/8/2020	Pace	17.8	342	339	<1.3	<2.2	<0.27	<0.24	1.8	<0.46	<0.33	<0.26	<0.17	Acetone 6.9 J1	
4/29/2021	Pace	16.5	351	285	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND	
10/8/2021	Pace	18.1	349	323	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND	
P-402D (Abandoned)	10/7/2009	Siemens	60.9	381	1,050	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	Toluene 0.43 J

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 (Results are in µg/L, except where otherwise noted)

Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
P-402E	1/22/2010	Siemens	47.3	439	516	2.6 CSH	0.53 J	2.9	0.5 J	120	4.18	<0.30	2.71	23.6	ND
	2/24/2010	Siemens	72.4	484	--	<3.50	<2.00	<2.00	<2.00	176	7.38	<1.50	2.66	26.6	ND
	2/24/2010	TA	--	--	--	3.9	<0.30	1.9	0.61	200	8	<0.50	1.9	35	ND
	4/7/2010	Siemens	68.5	414	486	7.25 J	<4.0	<4.0	<4.0	395	12.4 J	<3.0	4.84 J	48.8	ND
	10/27/2010	Siemens	78.4	403	505	<7.0	<4.0	<4.0	<4.0	459	14.8 J	<3.0	11.1 J	39.4	Methylene Chloride 8.47 J
	11/29/2010	Siemens	83.6	410	--	<7.0	<4.0	<4.0	<4.0	346	10.9 J	<3.0	9.16 J	40.6	ND
	4/8/2011	Siemens	87.7	404	483	7.64	<0.40	1.41	1.65	499	18.8	<0.30	15.7	53.5	Tetrahydrofuran 4.95 J
	10/7/2011	Siemens	73	392	502	5.87	<0.40	1.47	1.23 J	344	11.8	<0.30	13.6	41.9	Carbon Disulfide 3.30 J Tetrahydrofuran 2.77 J
	4/13/2012	Siemens	75.9	412	496	<7	<4	<4	<4	412	11.6 J	<3	11.5 J	41.4	ND
	10/4/2012	Pace	68.8	344	466	5.0	<0.24	1.3	1.2	360	13.0	<0.45	12.5	39.3	Tetrahydrofuran 2.7 J
	4/5/2013	Pace	60.2	397	566	5.8	<0.96	<3.0	<2.3	330	11.2	<1.8	10.2	35.5	ND
	10/4/2013	Pace	61.6	397	456	4.5	<0.78	1.3 J	<0.85	301	20.5	<0.94	8.3	25.3	ND
	4/7/2014	Pace	61.5	399	470	8.0	<2.0	1.2 J	<1.6	326	12.0	<2.0	8.3	42.6	ND
	10/15/2014	Pace	61.7	373	453	5.0	<2.5	<1.2	<2.1	283	17.9	<2.5	6.5	28.3	ND
	4/17/2015	Pace	62.8	383	450	4.8	<1.2	0.82 J	<1.0	298	8.5	<5.1	5.5	27.6	ND
	10/9/2015	Pace	64.5	389	465	5.2	<1.2	<0.60	<1.0	287	8.4	<1.2	4.8	25.2	Acetone 19.6 J
	4/7/2016	Pace	63.5	364	450	7.9	<1.2	1.1 J	<1.0	315	20.3	<1.2	4.4	28.8	ND
	10/7/2016	Pace	56.8	376	475	7.4	<2.0	<0.97	<1.6	309	9.4	<2.0	3.8 J	26.9	ND
	4/7/2017	Pace	65.3	392	442	7.1	<1.2	1.1 J	<1.0	324	14.3	<1.2	3.3	29.7	ND
	10/6/2017	Pace	58.4	379	452	5.2	<1.2	0.78 J	1.5 J	290	11.5	<1.2	3.5	27.2	ND
4/6/2018	Pace	54.9	388 M0	478	<0.94 L1	<1.2	1.2 J1	<1.0	337	<0.64	<1.2	2.4 J1	25.7	ND	
4/6/2018 (DUP)	Pace	55.3	366	482	3.1 L1	<0.50	1.2	1.1	324	4.5	<0.50	2.5	27.2	Acetone 7.2 J1 Tetrahydrofuran 3.2 J1	
10/30/2018	Pace	53.5	377	436	4.7 J1	<5.5	0.81 J1	<0.61	268	8.9 J1	<0.82	2.1 J1	27.9	ND	
4/4/2019	Pace	53.3	362	445	4.6 J1	<5.5	0.94 J1	<0.61	231	7.2 J1	1.5 J1	1.7 J1	25.5	ND	

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2021
Land and Gas Reclamation Landfill / File No. 25221008.02
 (Results are in µg/L, except where otherwise noted)

Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
P-402E (cont.)	10/28/2019	Pace	50.3	368	466	4.4 J1	<5.5	0.73 J1	0.74 J1	<u>237</u>	6.7 J1	<0.82	1.3 J1	<u>29</u>	Acetone 11 J1
	4/23/2020	Pace	48.7	365	436	4.7 J1	<5.5	1.2 J1	1.0 J1	<u>214</u>	8.1	<0.82	0.79 J1	<u>34</u>	ND
	10/8/2020	Pace	50.1	378	484	4.0 J1	<5.5	<0.68	<0.61	<u>225</u>	5.7	<0.82	0.86 J1	<u>29.1</u>	ND
	4/29/2021	Pace	44.7	375	416	4.0 J1	<4.1	0.85 J1	<1.5	<u>235</u>	6.6	<1.0	<0.80	<u>33.1</u>	ND
	10/8/2021	Pace	41.1	374	462	<3.4	<4.1	0.82 J1	<1.5	<u>235</u>	6.2	<1.0	0.85 J1	<u>24.6</u>	ND
P-423D	12/16/2010	Siemens	34.6	394	--	2.13 J	<0.40	0.60 J	<0.40	62.1	2.6	<0.30	0.9 J	<u>2.53</u>	ND
	4/8/2011	Siemens	29.7	360	427	1.38 J	<0.40	0.59 J	<0.40	52	2.04	<0.30	0.73 J	<u>1.2</u>	ND
	10/7/2011	Siemens	32.1	373	441	1.57 J	<0.40	0.44 J	<0.40	44.9	1.64 J	<0.30	0.74 J	<u>2.19</u>	Carbon Disulfide 1.99 J
	4/13/2012	Siemens	28.2	348	432	1.36 J	<0.40	0.59 J	<0.40	61.9	2.75	<0.30	0.92 J	<u>0.91</u> J	ND
	10/5/2012	Pace	8.8	364	227	1.1	<0.24	<0.75	<0.57	51.8	2.5	<0.45	0.68 J	<u>1.5</u>	ND
	4/5/2013	Pace	25.6	364	487	1.5	<0.24	<0.75	<0.57	59.4	2.6	<0.45	0.72 J	<u>2.1</u>	ND
	10/3/2013	Pace	30.6	356	413	1.1	<0.39	<0.28	<0.43	59.3	2.4	<0.47	0.74 J	<u>1.1</u>	ND
	4/7/2014	Pace	29.9	366	420	1.5	<0.50	0.41 J	<0.41	53.6	2.6	<0.50	0.75 J	<u>1.0</u> J	ND
	10/16/2014	Pace	32.4	347	410	0.95 J	<0.50	0.37 J	<0.41	51.2	2.5	<0.50	0.66 J	<u>0.91</u> J	ND
	4/17/2015	Pace	33.8	357	408	0.97 J	<0.50	0.35 J	<0.41	47.7	2.2	<0.50	0.66 J	<u>1.1</u>	ND
	10/9/2015	Pace	40.3	370	430	1.3	<0.50	0.32 J	<0.41	45.5	2.0	<0.50	0.60 J	<u>1.1</u>	ND
	4/8/2016	Pace	37.5	355	432	0.62 J	<0.50	<0.24	<0.41	29.7	1.2	<0.50	0.47 J	<0.18	ND
	10/7/2016	Pace	43.4	372	447	1.9	<0.50	0.38 J	<0.41	43.9	2.0	<0.50	0.57 J	<u>1.1</u>	ND
	4/7/2017	Pace	43.0	364	430	1.7	<0.50	0.44 J	<0.41	47.9	2.6	<0.50	0.73 J	<u>1.1</u>	ND
	10/6/2017	Pace	34.8	354	432	2.1	<0.50	0.38 J	<0.41	58.6	3.1	<0.50	0.59 J	<u>2.5</u>	ND
	4/6/2018	Pace	41.0	365	472	<0.37 L1	<0.50	0.65 J1	<0.41	<u>92.4</u>	<0.26	<0.50	0.74 J1	<u>3.3</u>	ND
10/30/2018	Pace	39.2	371	437	2.8 J1	<2.2	0.56 J1	<0.24	<u>82.5</u>	3.6 J1	<0.33	0.70 J1	<u>2.9</u>	Acetone 3.6 J1	
4/4/2019	Pace	36.3	358	428	2.8 J1	<2.2	0.66 J1	<0.24	<u>80.4</u>	4.1	<0.33	0.59 J1	<u>2.5</u>	Acetone 7.7 J1	

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2021
Land and Gas Reclamation Landfill / File No. 25221008.02
 (Results are in µg/L, except where otherwise noted)

Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
P-423D (cont.)	10/29/2019	Pace	28.6	336	434	1.8 J1	<2.2	0.53 J1	<0.24	<u>71.8</u>	3.3 J1	<0.33	0.71 J1	<u>2.1</u>	2-Butanone (MEK) 11.1 J1 Acetone 5.4 J1
	4/27/2020	Pace	44.3	344	453	2.2 J1	<2.2	0.60 J1	<0.24	<u>73.1</u>	3.4	<0.33	0.66 J1	<u>2.5</u>	ND
	10/8/2020	Pace	41.2	358	488	1.4 J1	<2.2	0.50 J1	<0.24	<u>76.4</u>	3.4	<0.33	0.86 J1	<u>1.2</u>	Acetone 4.5 J1
	4/29/2021	Pace	47.3	355	463	<1.4	<1.6	0.39 J1	<0.58	<u>57.3</u>	2.7	<0.41	0.89 J1	<u>1.7</u>	ND
	10/28/2021	Pace	45.8	365	486	1.5 J1	<1.6	0.39 J1	<0.58	<u>55.7</u>	2.6	<0.41	0.90 J1	<u>1.7</u>	ND
P-424D	12/17/2012	Pace	33.8	357	409	2.5	<0.48	<1.5	<1.1	<u>91.2</u>	3.5	<0.90	1.7 J	<u>7.0</u>	ND
	2/20/2013	Pace	32.6	382	432	2.6	<0.24	0.92 J	<0.57	<u>105</u>	3.2	<0.45	2.5	<u>5.8</u>	ND
	10/3/2013	Pace	38.5	379	444	2.6	<0.39	1.1	<0.43	<u>124</u>	3.5	<0.47	3.2	<u>10.1</u>	ND
	4/7/2014	Pace	34.8	369	427	3.1	<0.50	0.98 J	0.42 J	<u>114</u>	4	<0.50	3	<u>7.6</u>	Acetone 3.1 J
	10/16/2014	Pace	40.7	358	424	3.3	<1.0	0.92 J	<0.82	<u>122</u>	4.9	<1.0	2.4	<u>7.7</u>	ND
	4/17/2015	Pace	37.7	363	409	1.8	<0.50	0.54 J	<0.41	<u>79.6</u>	2.5	<0.50	2.3	<u>2.6</u>	ND
	10/9/2015	Pace	48.6	384	449	3.5	<0.50	0.88 J	<0.41	<u>120</u>	3.8	<0.50	2.2	<u>11.4</u>	ND
	4/8/2016	Pace	40.7	369	432	2.9	<0.50	0.82 J	<0.41	<u>111</u>	3.4	<0.50	2.3	<u>5.3</u>	ND
	10/7/2016	Pace	45.1	370	485	4.1	<1.2	0.94 J	<1.0	<u>125</u>	4.3	<1.2	2.3 J	<u>9.9</u>	ND
	4/7/2017	Pace	43.2	374	422	3.6	<0.50	0.84 J	<0.41	<u>119</u>	4.0	<0.50	2.1	<u>7.6</u>	ND
	10/6/2017	Pace	43.2	369	452	3.1	<0.50	1	0.51 J	<u>151</u>	4.7	<0.50	2	<u>9.4</u>	ND
	4/6/2018	Pace	41.1	371	466	0.41 J1,L1	<0.50	<0.24	0.54 J1	<u>156</u>	<0.26	<0.50	2.0	<u>9.7</u>	Tetrahydrofuran 2.6 J1
	10/5/2018	Pace	36.1	366	457	3.3 J1	<2.2	0.66 J1	0.41 J1	<u>104</u>	3.4 J1	<0.33	2.0	<u>10.5</u>	ND
	4/4/2019	Pace	38.1	356	436	2.9 J1	<2.2	0.82 J1	0.41 J1	<u>115</u>	3.6 J1	<0.33	1.9	<u>8.4</u>	Acetone 3.5 J1
	10/28/2019	Pace	36	357	452	2.4 J1	<2.2	0.82 J1	0.33 J1	<u>114</u>	3.6 J1	<0.33	1.9	<u>8.3</u>	Acetone 5.8 J1
	4/24/2020	Pace	40.2	361	429	1.8 J1	<2.2	0.75 J1	0.29 J1	<u>79.7</u>	3.5	<0.33	1.8	<u>3.5</u>	Acetone 5.5 J1
10/8/2020	Pace	35.2	367	474	2.2 J1	<2.2	0.76 J1	<0.24	<u>105</u>	3.3	<0.33	1.7	<u>7.4</u>	Acetone 3.2 J1	
4/9/2021	Pace	36.1	359	427	1.8 J1	<1.6	0.52 J1	<0.58	<u>83.7</u>	2.8	<0.41	1.5	<u>4.7</u>	ND	
10/28/2021	Pace	35.6	375	455	2.0 J1	<1.6	0.76 J1	<0.58	<u>113</u>	3.3	<0.41	1.6	<u>8.2</u>		

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Land and Gas Reclamation Landfill / File No. 25221008.02
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Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs	
P-424SS	12/17/2012	Pace	<2.0	303	287	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND	
	2/20/2013	Pace	2.1 J	309	298	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND	
	10/3/2013	Pace	2.8 J	320	298	<0.44	<0.39	<0.28	<0.43	<0.42	<0.37	<0.47	<0.36	<0.18	ND	
	4/7/2014	Pace	2.5 J	311	290	<0.37	<0.50	<0.16	<0.41	<0.26	<0.24	<0.50	<0.33	<0.18	ND	
	10/16/2014	Pace	2.8 J	303	283	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/17/2015	Pace	2.8 J	314	276	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone	3.7 J
	10/9/2015	Pace	2.4 J	323	295	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/8/2016	Pace	2.7 J	309	293	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	10/7/2016	Pace	1.0 JB	307	294	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/7/2017	Pace	0.92 J	314	288	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/7/2017 DUP	Pace	0.91 J	317	284	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	10/6/2017	Pace	0.80 J	310	306	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/6/2018	Pace	0.72 J1	318	329	<0.37 L1	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone	3.0 J1
	10/5/2018	Pace	0.96 J1	307 M0	326	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND	
	4/4/2019	Pace	0.76 J1	301	312	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone	5.9 J1
	10/28/2019	Pace	1.0 J1	291	318	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone	5.5 J1
	4/24/2020	Pace	1.3 J1	302	302	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.26	<0.26	<0.17	Acetone	2.8 J1
	10/8/2020	Pace	1.3 J1	307	347	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	Acetone	3.7 J1
4/9/2021	Pace	0.88 J1	309	308	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND		
10/28/2021	Pace	1.1 J1	335	333	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND		

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Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
P-426D	6/3/2015	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	8/12/2015	Pace	21.5	337	405	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/9/2015	Pace	59.6	369	499	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone 18.6 J
	4/8/2016	Pace	27.7	331	408	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/7/2016	Pace	55	362	532	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/7/2017	Pace	37.0	349	413	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/27/2017	Pace	44.4	334	480	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/6/2018	Pace	43.9	349	499	<0.37 L1	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/30/2018	Pace	59.2	356	492	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/5/2019	Pace	36.2	319	437	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	10/29/2019	Pace	60.6	350	536	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone 6.5 J1
	4/24/2020	Pace	23.8	323	402	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	Acetone 3.4 J1
	10/8/2020	Pace	48.0	352	528	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	Acetone 3.8 J1
	4/29/2021	Pace	30.0	339	416	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND
10/28/2021	Pace	18.7	342	428	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND	
P-426SS	7/20/2021	Pace	21.4	352	475	<1.4	<1.6	<0.30	<0.58	0.77 J1	<0.53	<0.41	<0.32	<0.17	ND
	10/28/2021	Pace	24.8	359	481	<1.4	<1.6	<0.30	<0.58	1.7	<0.53	<0.41	<0.32	<0.17	ND
P-429SS	11/30/2017	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	2/1/2018	Pace	1.3 J	318	322	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/25/2018	Pace	1.1 J1	313	314	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	1/9/2019	Pace	2.5	296	320	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone 4.3 J
	4/26/2019	Pace	1.2 J	317	328	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone 40.8
	10/29/2019	Pace	1.5 J1,B	306 M0	336	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	Acetone 11.9 J1
	4/27/2020	Pace	1.4 J1	310	319	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	Acetone 2.9 J1
	10/9/2020	Pace	1.9 J1	317	340	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	ND
	4/29/2021	Pace	1.1 J1	318	324	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND
10/28/2021	Pace	1.7J1	329	355	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND	

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Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs	
P-430D	7/20/2021	Pace	21.2	357	409	<1.4	<1.6	<0.30	<0.58	11.8	0.81 J1	<0.41	<0.32	<0.17	ND	
	10/28/2021	Pace	21.2	360	388	<1.4	<1.6	<0.30	<0.58	13.0	0.81 J1	<0.41	<0.32	<0.17	ND	
Trip Blank	1/22/2010	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	2/24/2010	TA	--	--	--	<1.0	<0.30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20	ND	
	2/24/2010	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	11/29/2010	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	12/16/2010	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	10/6/2011	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	10/7/2011	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	4/13/2012	Siemens	--	--	--	<0.70	<0.40	<0.40	<0.40	<0.40	<0.50	<0.30	<0.40	<0.20	ND	
	10/4/2012	Pace	--	--	--	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND	
	10/5/2012	Pace	--	--	--	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	Methylene Chloride Acetone	1.0 6.8 J
	12/17/2012	Pace	--	--	--	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND	
	10/3/2013	Pace	--	--	--	<0.44	<0.39	<0.28	<0.43	<0.42	<0.37	<0.47	<0.36	<0.18	ND	
	4/7/2014	Pace	--	--	--	<0.37	<0.50	<0.16	<0.41	<0.26	<0.24	<0.50	<0.33	<0.18	Methylene Chloride	0.25 J
	10/15/2014	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	4/17/2015	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone	8.5 J
	6/3/2015	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND	
	8/12/2015	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Methylene Chloride	0.28 J
10/9/2015	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND		
4/7/2016	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND		
4/8/2016	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND		
10/5/2017	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND		

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2021
Land and Gas Reclamation Landfill / File No. 25221008.02
 (Results are in µg/L, except where otherwise noted)

Note: See last page for abbreviations, notes, and groundwater standards.

Well Number	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
Trip Blank (cont.)	4/6/2018	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/25/2018	Pace	--	--	--	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/5/2018	Pace	--	--	--	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	10/30/2018	Pace	--	--	--	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/4/2019	Pace	--	--	--	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/26/2019	Pace	--	--	--	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/29/2021	Pace	--	--	--	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	Methylene Chloride 0.37 J1
	7/20/2021	Pace	--	--	--	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND
	10/8/2021	Pace	--	--	--	<1.4	<1.6	<0.30	<0.58	<0.47	<0.53	<0.41	<0.32	<0.17	ND
NR 140 Groundwater Enforcement Standard			250	NS	NS	400	30	850	7	70	100	5	5	0.2	1,4 Dichlorobenzene 75 Acetone 9,000 Carbon Disulfide 1,000 Chloroform 6 Methylene Chloride 5 Tetrahydrofuran 50 Toluene 800 Xylenes 2,000
NR 140 Preventive Action Limit			125	NS	NS	80	3	85	0.7	7	20	0.5	0.5	0.02	1,4 Dichlorobenzene 15 Acetone 1,800 Carbon Disulfide 200 Chloroform 0.6 Methylene Chloride 0.5 Tetrahydrofuran 10 Toluene 160 Xylenes 400

**Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2021
Land and Gas Reclamation Landfill / File No. 25221008.02**

Abbreviations:

ND = Not detected
NS = No standard established
mg/L = Milligrams per Liter
µg/L = Micrograms per Liter

Siemens = Siemens Water Technologies
TA = TestAmerica, Watertown, WI
Pace = Pace Analytical Services, Inc., Green Bay, WI
-- = Not Analyzed

Bold indicates detected compound.
Bold and underline indicates result above drinking water standard.

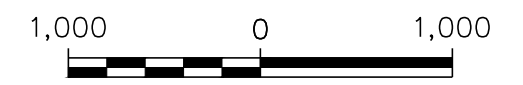
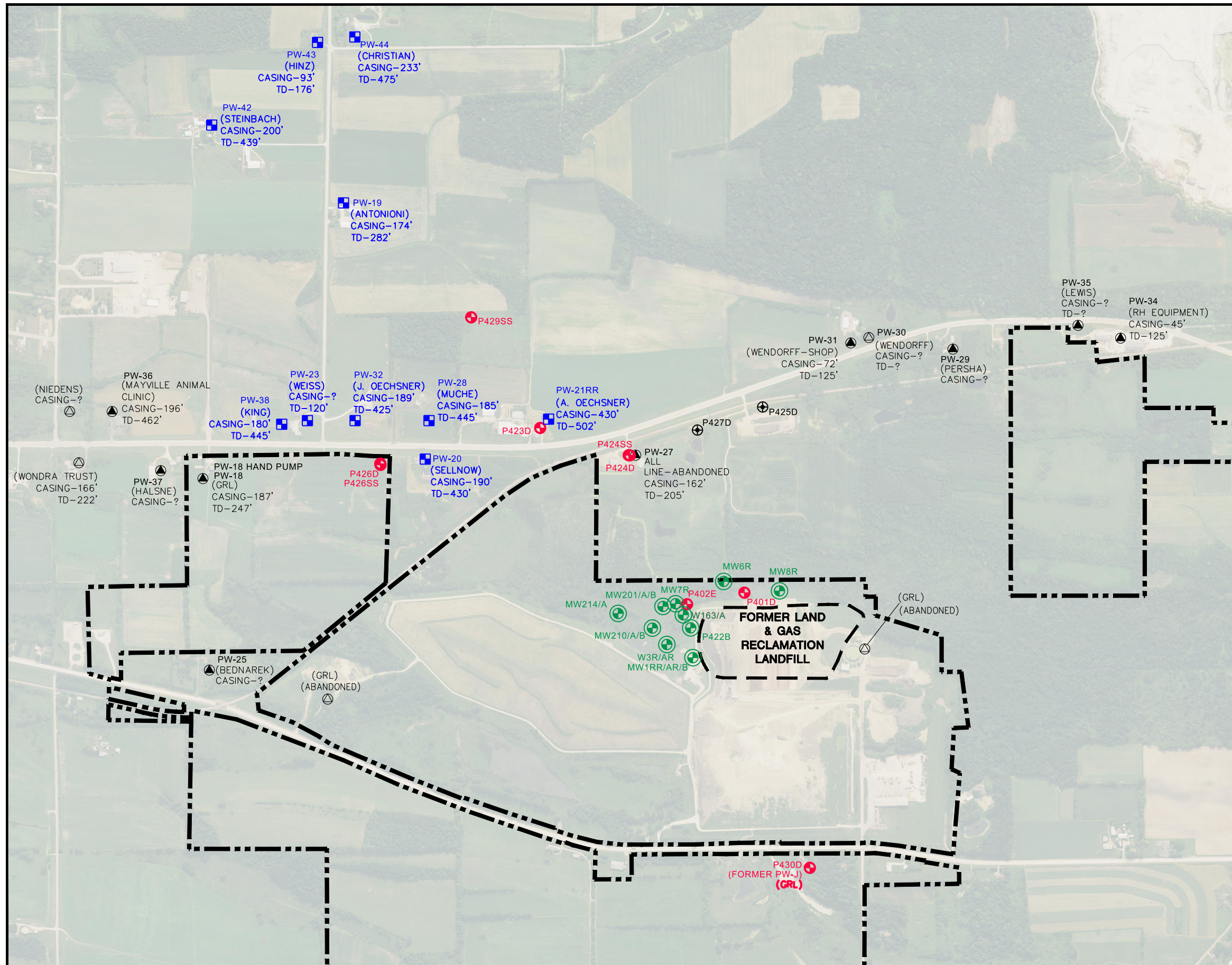
Lab Notes/Qualifiers:

B = Analyte was detected in the associated method blank.
CSH = Check standard for this analyte exhibited a high bias. Sample results may also be biased high.
J = Estimated value below laboratory limit of quantitation.
J1 = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ).
L1 = Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
R1 = Relative Percent Difference value was outside control limits.

Created by: MOB	Date: 9/5/2012
Last revision by: AJR	Date: 1/18/2022
Checked by: RM	Date: 1/20/2022
Proj Mgr QA/QC: SCC	Date: 1/25/2022

Figures

- 1 Well Locations
- 2 Dolomite Bedrock Groundwater Elevations and Potentiometric Surface Contours – July 2021
- 3 Dolomite Bedrock Groundwater Elevations and Potentiometric Surface Contours – October 2021
- 4 Sandstone Bedrock Groundwater Elevations and Potentiometric Surface Contours – July 2021
- 5 Sandstone Bedrock Groundwater Elevations and Potentiometric Surface Contours – October 2021



SCALE: 1" = 1,000'

LEGEND

- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
- FORMER LGRL LIMITS OF WASTE
- APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
- ▲ APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
- ⊖ APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
- PW-30 WELL NAME ASSIGNED FOR SAMPLING PROGRAM
- (PERSHA) WELL OWNER
- + BEDROCK MONITORING WELL (LGRL INVESTIGATION)
- + SHALLOW AQUIFER MONITORING WELL/NEST (LGRL MONITORING/INVESTIGATION)
- ⊕ INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)

NOTES:

1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 30, 2015.
2. PROPERTY BOUNDARIES ARE APPROXIMATE. PROPERTY INFORMATION OBTAINED FROM DODGE COUNTY LAND INFORMATION OFFICE ON FEBRUARY 6, 2020.
3. PRIVATE WELL LOCATIONS AND DEPTHS ARE APPROXIMATE BASED ON PLAT MAPS AND WELL LOGS.
4. WELL PW-27 AND BOREHOLES P425D AND P427D WERE ABANDONED IN APRIL 2016.
5. PW-J WAS HISTORICALLY MONITORED FOR GRL. OTHER GRL PRIVATE WELL SAMPLE LOCATIONS NOT SHOWN.

PROJECT NO.	25221008.02	DRAWN BY:	KP
DRAWN:	04/19/2021	CHECKED BY:	EO
REVISED:	02/07/2022	APPROVED BY:	EO 3/23/2022

ENGINEER	SCS ENGINEERS
	2830 DAIRY DRIVE MADISON, WI 53718-6751
	PHONE: (608) 224-2830

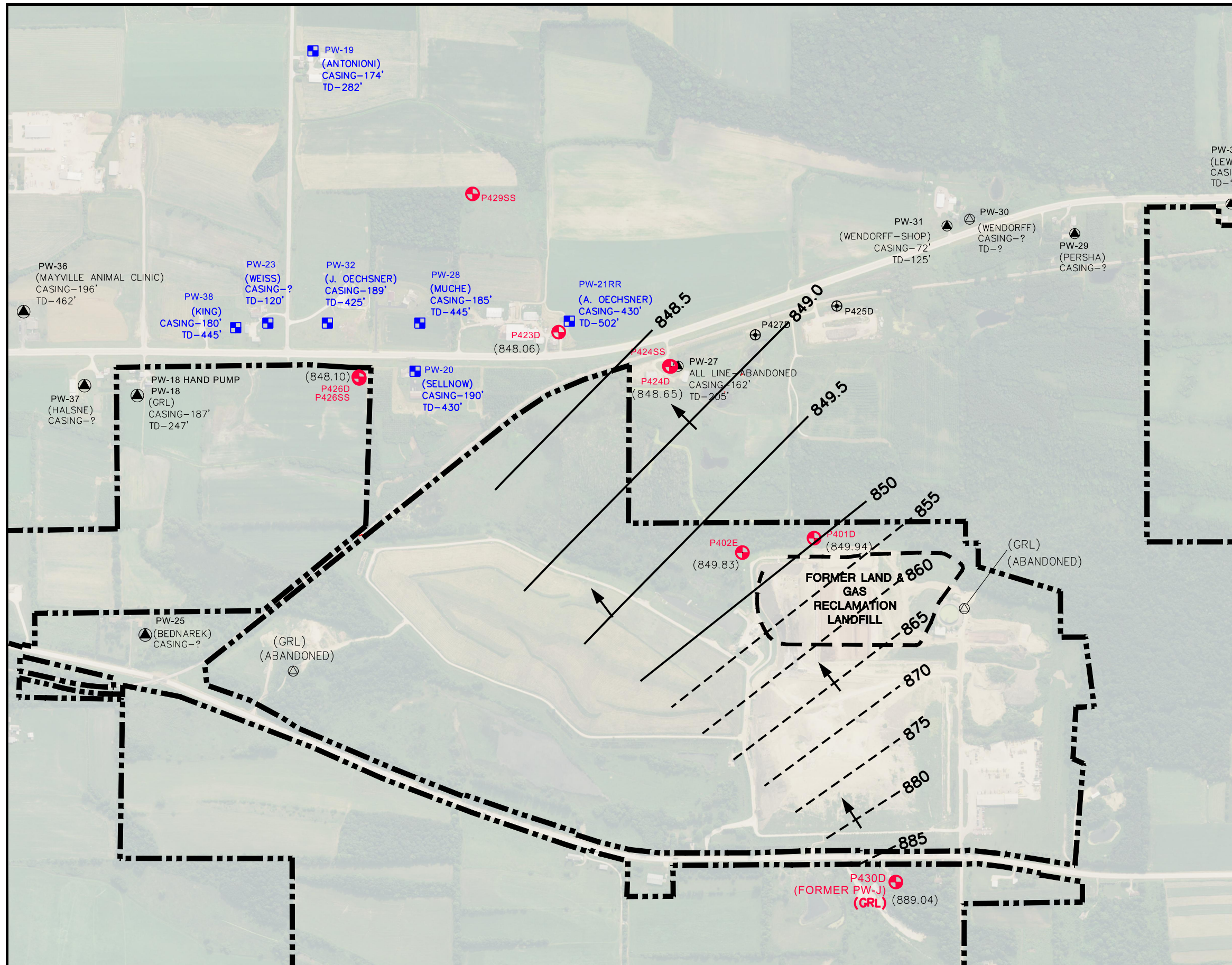
CLIENT	GFL
	GLACIER RIDGE LANDFILL, LLC.

SITE	APRIL 2021 SEMIANNUAL REPORT LAND AND GAS RECLAMATION LANDFILL DODGE COUNTY, WISCONSIN
------	--

MONITORING WELL AND PRIVATE WELL LOCATIONS

FIGURE	1
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N

800 0 800

SCALE: 1" = 800'

LEGEND

- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
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- APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
- ▲ APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
- ⊕ APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
- PW-30 WELL NAME ASSIGNED FOR SAMPLING PROGRAM
- (PERSHA) WELL OWNER
- + BEDROCK MONITORING WELL (LGRL INVESTIGATION)
- ⊕ INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- (849.25) DOLOMITE GROUNDWATER ELEVATION
- DOLOMITE GROUNDWATER ELEVATION CONTOUR (0.5' INTERVAL)
- - - DOLOMITE GROUNDWATER ELEVATION CONTOUR (5' INTERVAL)

- NOTES:
1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 30, 2015.
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 6. GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN ON JULY 20, 2021.

PROJECT NO.	25221008.02	DRAWN BY:	KP
DRAWN:	12/08/2021	CHECKED BY:	EO
REVISED:	02/14/2022	APPROVED BY:	EO 03/07/2022

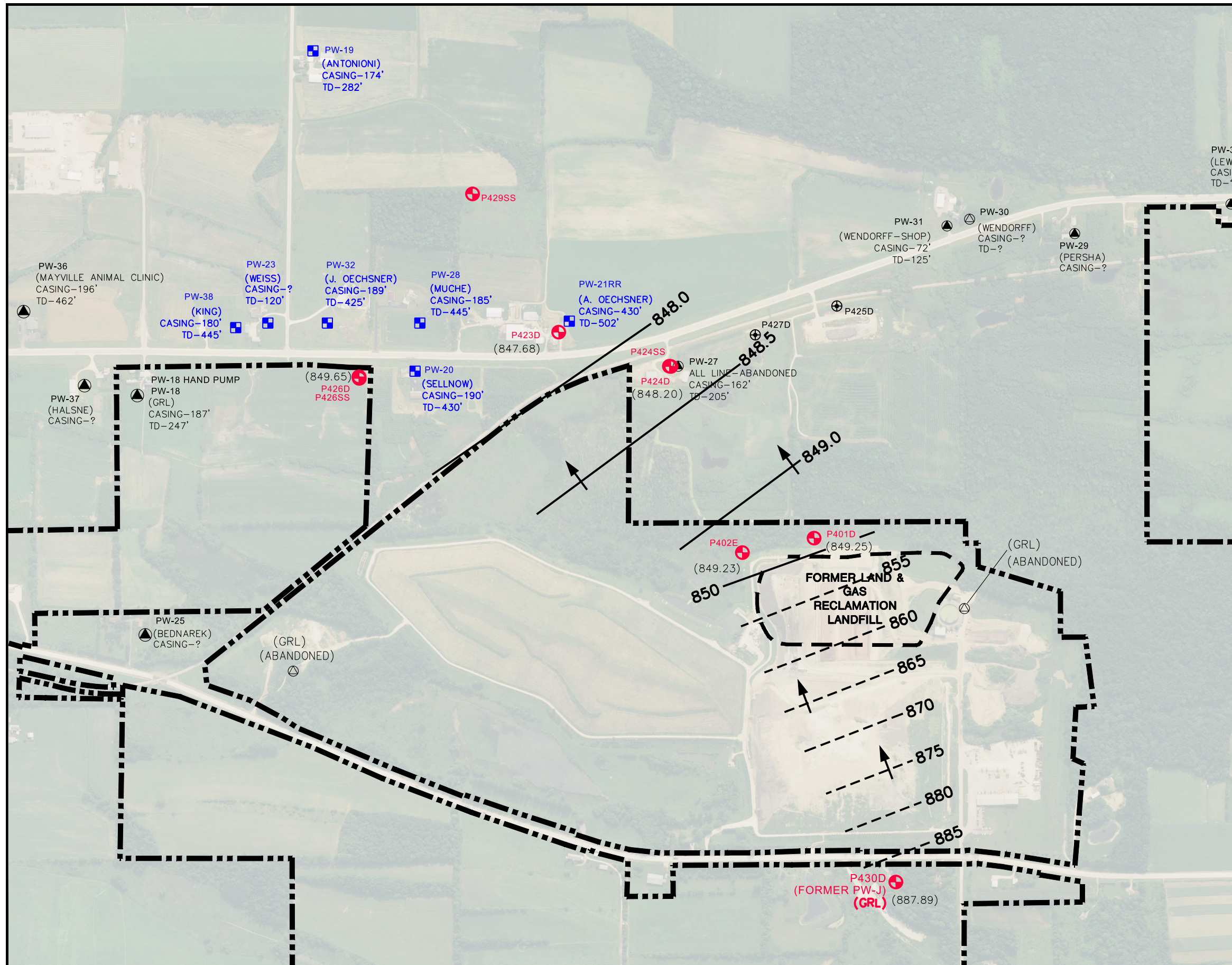
ENGINEER	SCS ENGINEERS
	2830 DAIRY DRIVE MADISON, WI 53718-6751
	PHONE: (608) 224-2830

CLIENT	GFL
	GLACIER RIDGE LANDFILL, LLC.

SITE	GROUNDWATER STATUS UPDATE LAND AND GAS RECLAMATION LANDFILL DODGE COUNTY, WISCONSIN
------	---

FIGURE	DOLOMITE BEDROCK GROUNDWATER ELEVATIONS AND POTENTIOMETRIC SURFACE CONTOURS - JULY 2021
	2

I:\25221008.02\Drawings\BEDROCK WTBL (Dolomite).dwg, 3/7/2022 8:21:10 AM



- LEGEND**
- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
 - FORMER LGRL LIMITS OF WASTE
 - APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
 - APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
 - APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
 - PW-30** WELL NAME ASSIGNED FOR SAMPLING PROGRAM
 - (PERSHA)** WELL OWNER
 - BEDROCK MONITORING WELL (LGRL INVESTIGATION)
 - INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
 - (849.94)** DOLOMITE GROUNDWATER ELEVATION
 - DOLOMITE GROUNDWATER ELEVATION CONTOUR (0.5' INTERVAL)
 - DOLOMITE GROUNDWATER ELEVATION CONTOUR (5' INTERVAL)

- NOTES:**
1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 30, 2015.
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 4. WELL PW-27 AND BOREHOLES P425D AND P427D WERE ABANDONED IN APRIL 2016.
 5. PW-J WAS HISTORICALLY MONITORED FOR GRL. OTHER GRL PRIVATE WELL SAMPLE LOCATIONS NOT SHOWN.
 6. GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN ON OCTOBER 4, 2021.

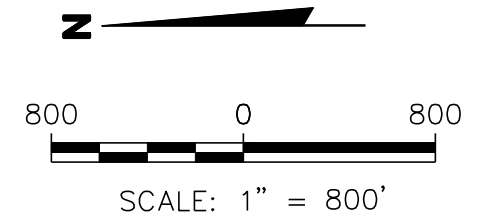
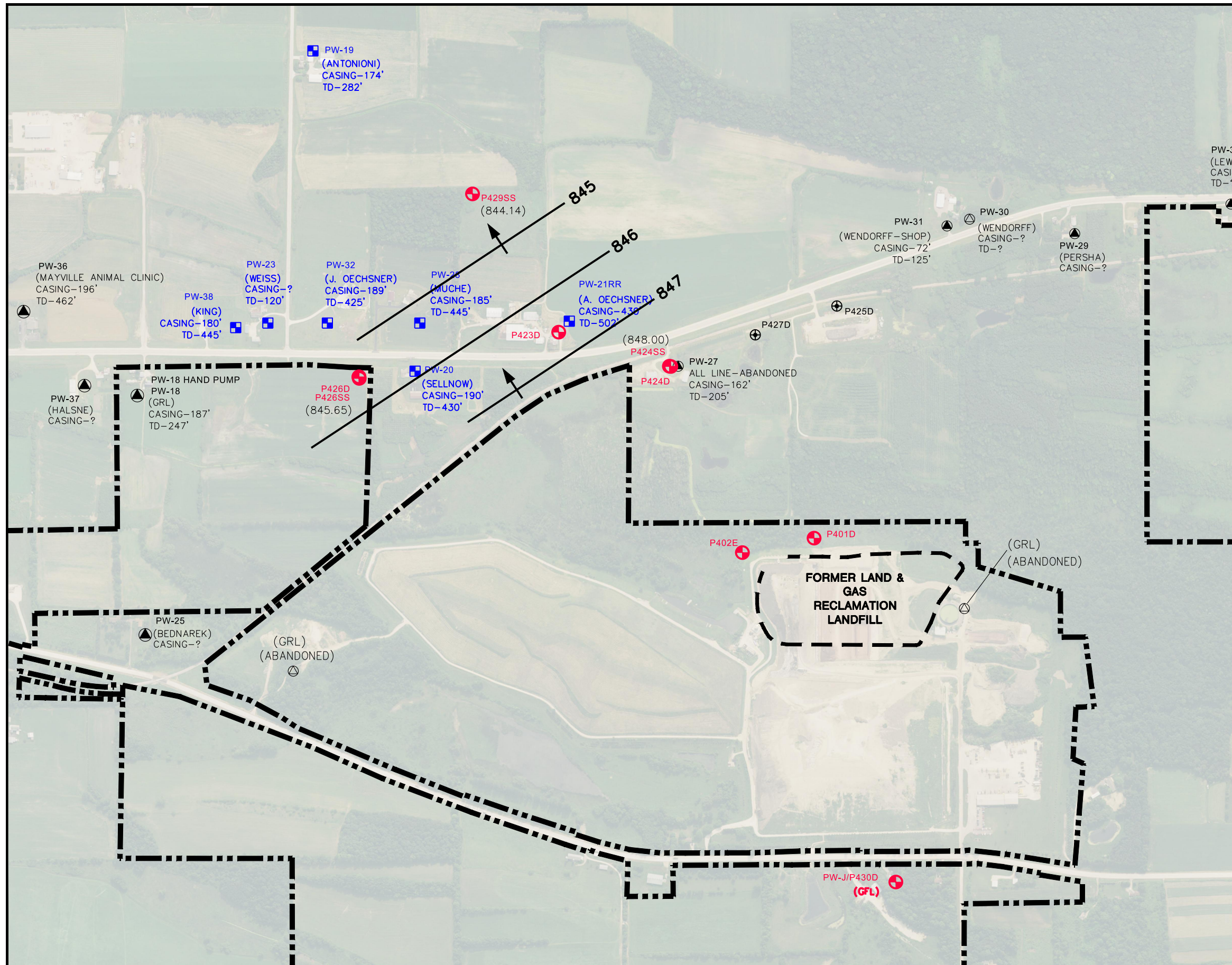
PROJECT NO.	25221008.02	DRAWN BY:	KP
DRAWN:	12/08/2021	CHECKED BY:	EO
REVISED:	03/07/2022	APPROVED BY:	EO 3/23/2022

ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830
CLIENT	GFL GLACIER RIDGE LANDFILL, LLC.

SITE	GROUNDWATER STATUS UPDATE LAND AND GAS RECLAMATION LANDFILL DODGE COUNTY, WISCONSIN
------	---

FIGURE	DOLOMITE BEDROCK GROUNDWATER ELEVATIONS AND POTENTIOMETRIC SURFACE CONTOURS - OCTOBER 2021
--------	--

FIGURE	3
--------	---



- LEGEND
- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
 - FORMER LGRL LIMITS OF WASTE
 - APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
 - APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
 - APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
 - WELL NAME ASSIGNED FOR SAMPLING PROGRAM (PERSHA)
 - WELL OWNER (PERSHA)
 - BEDROCK MONITORING WELL (LGRL INVESTIGATION)
 - INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
 - SANDSTONE GROUNDWATER ELEVATION (849.25)
 - SANDSTONE GROUNDWATER ELEVATION CONTOUR (1' INTERVAL)

- NOTES:
1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 30, 2015.
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PROJECT NO.	25221008.02	DRAWN BY:	KP
DRAWN:	12/08/2021	CHECKED BY:	EO
REVISED:	12/08/2021	APPROVED BY:	EO 3/23/2022

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830

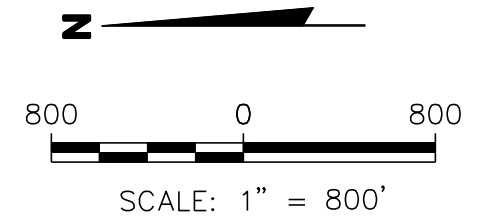
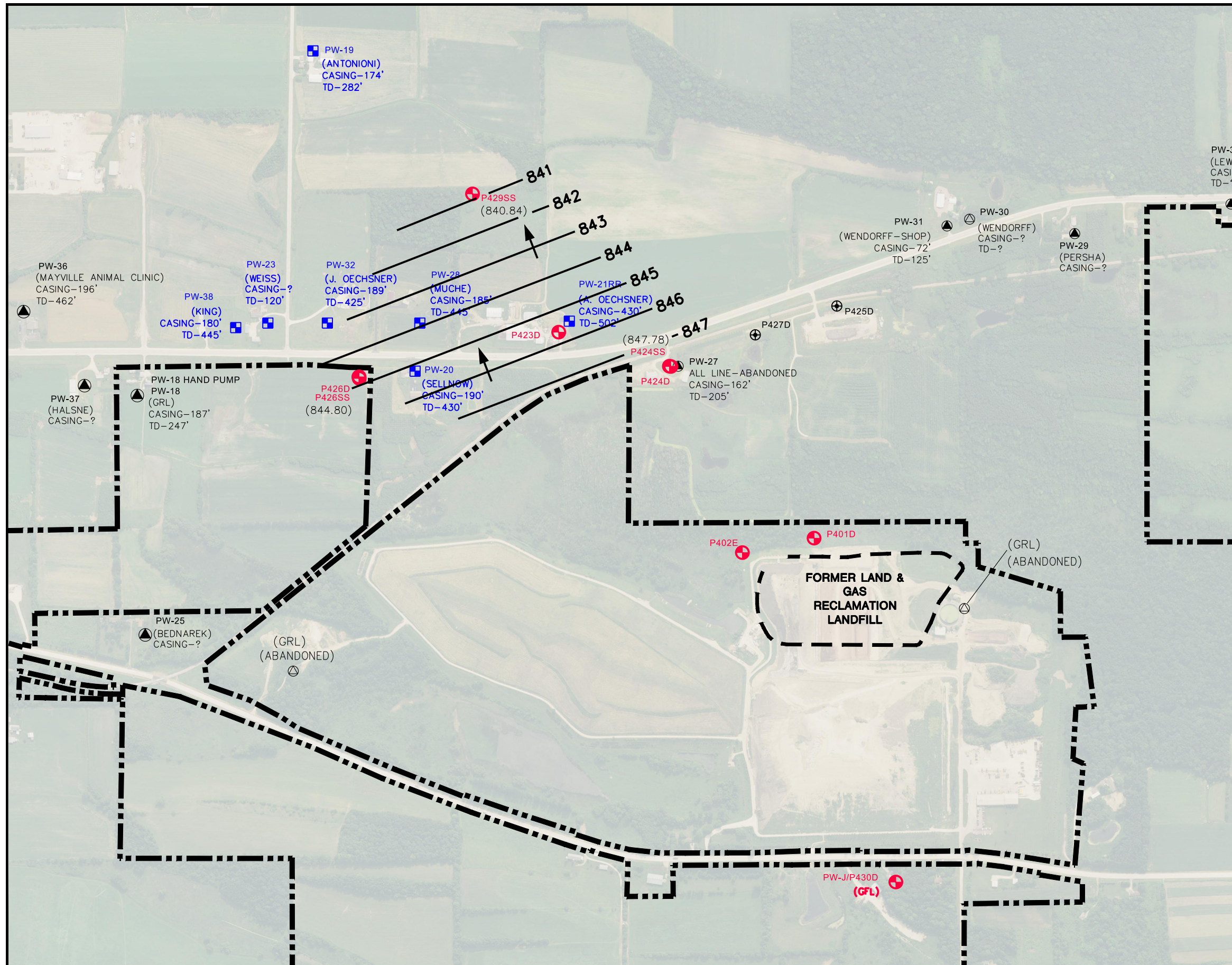
CLIENT **GFL** GLACIER RIDGE LANDFILL, LLC.

SITE GROUNDWATER STATUS UPDATE
 LAND AND GAS RECLAMATION LANDFILL
 DODGE COUNTY, WISCONSIN

SANDSTONE BEDROCK GROUNDWATER
 ELEVATIONS AND POTENTIOMETRIC
 SURFACE CONTOURS - JULY 2021

FIGURE
 4

I:\25221008.02\Drawings\BEDROCK WTBL (Sandstone).dwg, 12/8/2021 2:54:27 PM



- LEGEND
- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
 - FORMER LGRL LIMITS OF WASTE
 - APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
 - APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
 - APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
 - WELL NAME ASSIGNED FOR SAMPLING PROGRAM (PERSHA)
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 - (849.94) SANDSTONE GROUNDWATER ELEVATION
 - SANDSTONE GROUNDWATER ELEVATION CONTOUR (1' INTERVAL)

- NOTES:
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PROJECT NO.	25221008.02	DRAWN BY:	KP
DRAWN:	12/08/2021	CHECKED BY:	EO
REVISED:	12/08/2021	APPROVED BY:	EO 3/23/2022

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830


CLIENT **GFL** GLACIER RIDGE LANDFILL, LLC.

SITE
 GROUNDWATER STATUS UPDATE
 LAND AND GAS RECLAMATION LANDFILL
 DODGE COUNTY, WISCONSIN

SANDSTONE BEDROCK GROUNDWATER
 ELEVATIONS AND POTENTIOMETRIC
 SURFACE CONTOURS – OCTOBER 2021

FIGURE
 5

I:\25221008.02\Drawings\BEDROCK WTBL (Sandstone).dwg, 12/8/2021 3:08:17 PM



Attachment A

Boring Logs and Well Construction and Development Forms

WELL CONSTRUCTOR'S REPORT
FORM 3300-15

33AK 0 W/3

FEB - 8 1973 STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

NOTE
WHITE COPY - DIVISION'S COPY
GREEN COPY - DRILLER'S COPY
YELLOW COPY - OWNER'S COPY

COUNTY Dodge CHECK ONE Town Village City Williamstown

2. LOCATION - 1/4 Section SE SE 1/4 Section 34 Township 12N Range 16E 3. OWNER AT TIME OF DRILLING, Eugene Fischer
OR - Grid or street no. Street name ADDRESS R 2

AND - If available subdivision name, lot & block no. POST OFFICE Mayville 53050

4. Distance in feet from well to nearest:

BUILDING	SANITARY SEWER	FLOOR DRAIN	FOUNDATION DRAIN	WASTE WATER DRAIN
C. I.	TILE	C. I.	SEWER CONNECTED/INDEPENDENT	C. I.
<u>18</u>	<u>None</u>	<u>40</u>	<u>18</u>	<u>44</u>

CLEAR WATER DRAIN	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILLO	ABANDONED WELL	SINK HOLE
C. I.	TILE							
<u>18</u>	<u>60</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.) Controlled dump

5. Well is intended to supply water for: Home

6. DRILLHOLE						9. FORMATIONS			
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)	
<u>10</u>	<u>Surface</u>	<u>35</u>	<u>8</u>	<u>35</u>	<u>150</u>	<u>Hard Pan</u>	<u>Surface</u>	<u>20</u>	
<u>6"</u>	<u>150</u>	<u>250</u>				<u>Limestone boulders</u>	<u>20</u>	<u>35</u>	
						<u>Soft/Blue Clay</u>	<u>35</u>	<u>90</u>	
						<u>Thin layers soft</u>	<u>90</u>	<u>145</u>	
						<u>Hard shale</u>			
						<u>Limestone</u>	<u>145</u>	<u>250</u>	

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
<u>1"</u>	<u>Plain end</u>	<u>Surface</u>	<u>150</u>
<u>280</u>	<u>Wall</u>		
<u>19 1/8</u>	<u>in. ft.</u>		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
<u>Backfill</u>	<u>Surface</u>	<u>7</u>
<u>Cement Grout</u>	<u>7</u>	<u>150</u>

10. TYPE OF DRILLING MACHINE USED

Cable Tool Direct Rotary Reverse Rotary
 Rotary - air w/drilling mud Rotary - hammer with drilling mud & air Jetting with Air Water

11. MISCELLANEOUS DATA

Yield test: 27 Hrs. at 15 GPM

Well construction completed on Feb. 21 1973

Well is terminated 10 inches above below final grade

Depth from surface to normal water level 70 ft. Well disinfected upon completion Yes No

Depth to water level when pumping 75 ft. Well sealed watertight upon completion Yes No

Water sample sent to Madison laboratory on: Feb. 28 1973

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumphrooms, access pits, etc., should be given on reverse side.

SIGNATURE Eugene Fischer Registered Well Driller COMPLETE MAIL ADDRESS R 1 Box 31 Mayville Wis 53050

COLIFORM TEST RESULT 5430 GAS - 24 HRS. GAS - 48 HRS. CONFIRMED REMARKS

REV. 3-71



Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Route to DNR Bureau:

Verification Only of Fill and Seal

Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County: Dodge
 WI Unique Well # of Removed Well: _____
 Hicap #: _____

Facility Name: Land and Gas Reclamation Landfill

Latitude / Longitude (see instructions):
 43.459368 N
 -88.562194 W

Format Code: DD DDM
 Method Code: GPS008 SCR002 OTH001

Facility ID (FID or PWS): 114052290
 License/Permit/Monitoring #: 01118

1/4 / 1/4 SE 1/4 SE Section: 34 Township: 12 N Range: 16 E
 or Gov't Lot #: _____ E W

Original Well Owner: Eugene Fischer

Well Street Address: N7351 County Road V

Present Well Owner: Glacier Ridge Landfill, LLC

Well City, Village or Town: Village of Kekoskee Well ZIP Code: 53050

Mailing Address of Present Owner: N7296 County Road V

Subdivision Name: _____ Lot #: _____

City of Present Owner: Horicon State: WI ZIP Code: 53032

Reason for Removal from Service: Converted to Monitoring Well P-430D
 WI Unique Well # of Replacement Well: WC183

3. Filled & Sealed Well / Drillhole / Borehole Information

4. Pump, Liner, Screen, Casing & Sealing Material

Monitoring Well Original Construction Date (mm/dd/yyyy): 2/21/1973
 Water Well
 Borehole / Drillhole If a Well Construction Report is available, please attach.

Pump and piping removed? Yes No N/A
 Liner(s) removed? Yes No N/A
 Liner(s) perforated? Yes No N/A
 Screen removed? Yes No N/A
 Casing left in place? Yes No N/A
 Was casing cut off below surface? Yes No N/A
 Did sealing material rise to surface? Yes No N/A
 Did material settle after 24 hours? Yes No N/A
 If yes, was hole retopped? Yes No N/A
 If bentonite chips were used, were they hydrated with water from a known safe source? Yes No N/A

Construction Type:
 Drilled Driven (Sandpoint) Dug
 Other (specify): Cable tool

Required Method of Placing Sealing Material:
 Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Formation Type:
 Unconsolidated Formation Bedrock

Sealing Materials: High Solids Bentonite Grout
 Neat Cement Grout Concrete
 Sand-Cement (Concrete) Grout Bentonite Chips

Total Well Depth From Ground Surface (ft.): 250 Casing Diameter (in.): 6

Lower Drillhole Diameter (in.): 6 Casing Depth (ft.): 150

For Monitoring Wells and Monitoring Well Boreholes Only:
 Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? 150 Depth to Water (feet): 60

5. Material Used to Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	189.5	10 sacks	9.5 lb/gallon
189.5	217	5.5 bags sand + 2 bags chips	NA
217	250	7 sacks	NA

6. Comments

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing: Dan Steffes/Badger Well Drilling	License #: 6109	Date of Filling & Sealing or Verification (mm/dd/yyyy): 5/13/21	Date Received	Noted By
Street or Route: N7900 Locust Lane	Telephone Number: (715) 75304520	Comments		
City: Mt. Calvary	State: WI	ZIP Code: 53057	Signature of Person Doing Work: ES for Dan Steffes	Date Signed: 7/1/21

Facility/Project Name <u>Land & Gas Reclamation LP</u>		Local Grid Location of Well <u>800-79 ft. N. 2849.43 ft. E.</u>		Well Name <u>P-4300</u>	
Facility License, Permit or Monitoring No. <u>0118</u>		Local Grid Origin (estimated) or Well Location Lat. <u>42° 27' 33.11574" N</u> Long. <u>88° 33' 43.50333" W</u>		Wis. Unique Well No. <u>WCL83</u> DNR Well ID No. _____	
Facility ID <u>114052290</u>		St. Plane _____ ft. N. _____ ft. E. S/C/N		Date Well Installed <u>0510412021</u> m m d d y y v v	
Type of Well Well Code <u>12, PZ</u>		Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. _____ T. _____ N, R. _____		Well Installed By: Name (first, last) and Firm <u>Dan Steffes</u> <u>Bardgar Well Drilling</u>	
Distance from Waste/Source _____ ft.		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input checked="" type="checkbox"/> Not Known		Gov. Lot Number _____	

- A. Protective pipe, top elevation 956.47 ft. MSL
- B. Well casing, top elevation 956.84 ft. MSL
- C. Land surface elevation 953.71 ft. MSL
- D. Surface seal, bottom _____ ft. MSL or 150 ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

13. Sieve analysis performed? Yes No

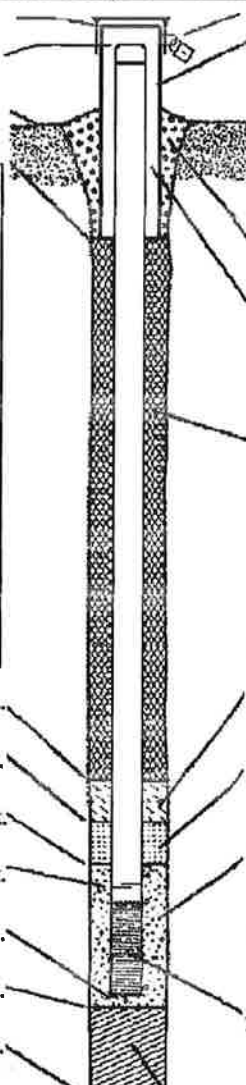
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
Cable Tool Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No

Describe _____

17. Source of water (attach analysis, if required): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 6.0 in.
 - b. Length: 150 ft.
 - c. Material: Steel 04
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 30
Concrete 01
Other
- 4. Material between well casing and protective pipe: Bentonite 30
Other
- 5. Annular space seal:
 - a. Granular/Chipped Bentonite 33
 - b. _____ Lbs/gal mud weight ... Bentonite-sand slurry 35
 - c. 9.5 Lbs/gal mud weight ... Bentonite slurry 31
 - d. _____ % Bentonite ... Bentonite-cement grout 50
 - e. 36 Ft³ volume added for any of the above
 - f. How installed: Tremie 01
Tremie pumped 02
Gravity 08
- 6. Bentonite seal:
 - a. Bentonite granules 33
 - b. 1/4 in. 3/8 in. 1/2 in. Bentonite chips 32
 - c. _____ Other
- 7. Fine sand material: Manufacturer, product name & mesh size
 a. Red Flint #15
 b. Volume added 0.25 ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. Red Flint #40
 b. Volume added 3 ft³
- 9. Well casing: Flush threaded PVC schedule 40 23
 Flush threaded PVC schedule 80 24
 Other
- 10. Screen material: PVC
 - a. Screen type: Factory cut 11
Continuous slot 01
Other
 - b. Manufacturer Environmental Mfg. Inc.
 - c. Slot size: 0.010 in.
 - d. Slotted length: 19 ft.
- 11. Backfill material (below filter pack): None 14
Bentonite Chips Other

- E. Bentonite seal, top _____ ft. MSL or 189.5 ft.
- F. Fine sand, top _____ ft. MSL or 198 ft.
- G. Filter pack, top _____ ft. MSL or 200 ft.
- H. Screen joint, top _____ ft. MSL or 205 ft.
- I. Well bottom _____ ft. MSL or 215 ft.
- J. Filter pack, bottom _____ ft. MSL or 217 ft.
- K. Borehole, bottom _____ ft. MSL or 245 ft.
- L. Borehole, diameter 6 in.
- M. O.D. well casing 2.38 in.
- N. I.D. well casing 1.9 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Eric J. Jansen Firm SCS Engineers

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name <u>Land & Gas Reclamation Landfill</u>	County Name <u>Dodge</u>	Well Name <u>P-4300</u>
Facility License, Permit or Monitoring Number <u>01118</u>	County Code <u>14</u>	Wis. Unique Well Number <u>WC 183</u>
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 41
 - surged with bailer and pumped 61
 - surged with block and bailed 42
 - surged with block and pumped 62
 - surged with block, bailed and pumped 70
 - compressed air 20
 - bailed only 10
 - pumped only 51
 - pumped slowly 50
 - Other _____

3. Time spent developing well 80 min.

4. Depth of well (from top of well casing) 218.5 ft.

5. Inside diameter of well 1.94 in.

6. Volume of water in filter pack and well casing 110 gal.

7. Volume of water removed from well 112.5 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added _____

10. Analysis performed on water added? Yes No
(If yes, attach results)

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. 65.17 ft. NM ft.

Date b. 06/03/2021 06/03/2021
m m d d y y y y m m d d y y y y

Time c. 11:50 a.m. 02:10 p.m.

12. Sediment in well bottom 0 inches 0 inches

13. Water clarity Clear 10 Clear 20
Turbid 15 Turbid 25

(Describe) slightly turbid clear
black

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended _____ mg/l _____ mg/l
solids

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: Zach Last Name: Watson

Firm: SCS Engineers

Name and Address of Facility Contact /Owner/Responsible Party

First Name: Jake Last Name: Margelofsky

Facility/Firm: Glacier Ridge Landfill, LLC

Street: N 7296 County Road V

City/State/Zip: Horicon, WI 53032

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Eric Oelkers

Print Name: SCS Eric Oelkers

Firm: SCS Engineers

Route To: Watershed/Wastewater Waste Management
Remediation/Revelopment Other _____

Facility/Project Name Land and Gas Reclamation Landfill		License/Permit/Monitoring Number 01118	Boring Number P-426SS
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Dan Last Name: Steffes Firm: Badger Well Drilling		Date Drilling Started 05 / 10 / 2021 m m d d y y y y	Date Drilling Completed 05 / 11 / 2021 m m d d y y y y
WI Unique Well No. WC182	DNR Well ID No.	Well Name P-426SS	Final Static Water Level ____ Feet MSL
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/>		Surface Elevation 954.3 Feet MSL	Borehole Diameter 6 inches
State Plane _____ N, _____ E		Lat _____ ' "	Local Grid Location <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> E
NW 1/4 of NE 1/4 of Section 35, T 12 N, R 16E		Long _____ ' "	5010.93Feet <input type="checkbox"/> S 6863.16 Feet <input type="checkbox"/> W
Facility ID	County Dodge	County Code 14	Civil Town/City/ or Village Town of Williamstown

Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
				0 to 63' Silty sand, light brownish gray, fine to medium with subrounded gravel											
				63 to 410' to Dolomite rock (Sinnipee Group)gray/brown											
				410-435' Sandstone rock											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Evan J. Allen</i>	Firm SCS Engineers
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This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name Land & Gas Reclamation Landfill	Local Grid Location of Well 5010.93 ft. <input checked="" type="checkbox"/> N. <input type="checkbox"/> S. 6863.15 ft. <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.	Well Name P-426SS
Facility License, Permit or Monitoring No. 1118	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input checked="" type="checkbox"/> Lat. 43° 28' 13.5570" Long. 88° 32' 48.18282" or	Wis. Unique Well No. <u>WC182</u> DNR Well ID No. _____
Facility ID 114052290	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed <u>05</u> / <u>13</u> / <u>2021</u> m m d d y y y y
Type of Well Well Code <u>12</u> / <u>PZ</u>	Section Location of Waste/Source NW 1/4 of NE 1/4 of Sec. 35, T. 12 N, R. 16 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: Name (first, last) and Firm <u>Dan Steffes</u>
Distance from Waste/Source <u>3,500</u> ft. Enf. Stds. Apply <input checked="" type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Badger Well Drilling

- A. Protective pipe, top elevation --- 954.29 ft. MSL
- B. Well casing, top elevation --- 954.65 ft. MSL
- C. Land surface elevation --- 952.41 ft. MSL
- D. Surface seal, bottom --- ft. MSL or --- 3 ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

13. Sieve analysis performed? Yes No

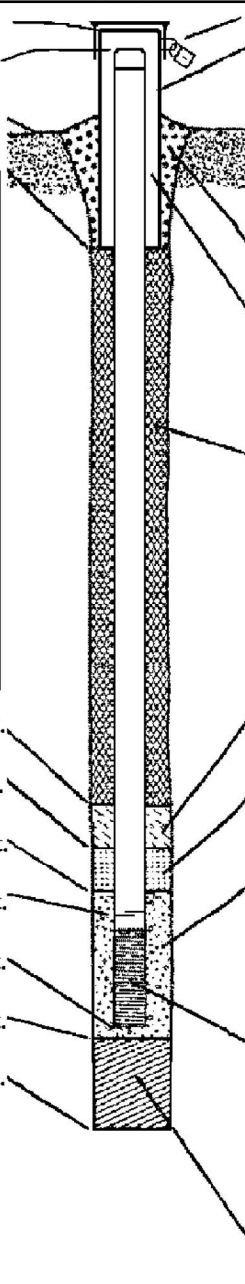
14. Drilling method used: Rotary 5 0
 Hollow Stem Auger 4 1
 Other

15. Drilling fluid used: Water 0 2 Air 0 1
 Drilling Mud 0 3 None 9 9

16. Drilling additives used? Yes No

Describe _____

17. Source of water (attach analysis, if required):
Badger Well Shop



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 4.0 in.
 - b. Length: 5.0 ft.
 - c. Material: Steel 0 4
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 3 0
Concrete 0 1
Other
- 4. Material between well casing and protective pipe: Bentonite 3 0
Filter Sand
- 5. Annular space seal: a. Granular/Chipped Bentonite 3 3
b. ___ Lbs/gal mud weight... Bentonite-sand slurry 3 5
c. 9.5 Lbs/gal mud weight... Bentonite slurry 3 1
d. ___ % Bentonite... Bentonite-cement grout 5 0
e. 18 bags Ft³ volume added for any of the above
f. How installed: Tremie 0 1
Tremie pumped 0 2
Gravity 0 8
- 6. Bentonite seal: a. Bentonite granules 3 3
b. 1/4 in. 3/8 in. 1/2 in. Bentonite chips 3 2
c. _____ Other
- 7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint Sand & Gravel #10
b. Volume added 0.5 ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint Sand & Gravel #40
b. Volume added 3.5 ft³
- 9. Well casing: Flush threaded PVC schedule 40 2 3
Flush threaded PVC schedule 80 2 4
Other
- 10. Screen material: PVC
a. Screen type: Factory cut 1 1
Continuous slot 0 1
Other
b. Manufacturer Johnson Screens
c. Slot size: 0.010 in.
d. Slotted length: 20.0 ft.
- 11. Backfill material (below filter pack): None 1 4
Other

- E. Bentonite seal, top --- ft. MSL or --- 402 ft.
- F. Fine sand, top --- ft. MSL or --- 408 ft.
- G. Filter pack, top --- ft. MSL or --- 410 ft.
- H. Screen joint, top --- ft. MSL or --- 413 ft.
- I. Well bottom --- ft. MSL or --- 433 ft.
- J. Filter pack, bottom --- ft. MSL or --- 433 ft.
- K. Borehole, bottom --- ft. MSL or --- 435 ft.
- L. Borehole, diameter --- 6 in.
- M. O.D. well casing --- 2.38 in.
- N. I.D. well casing --- 2.00 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name <u>Land & Gas Reclamation Landfill</u>	County Name <u>Dodge</u>	Well Name <u>P-42655</u>
Facility License, Permit or Monitoring Number <u>01118</u>	County Code <u>14</u>	Wis. Unique Well Number <u>WC182</u>
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No
2. Well development method
- surged with bailer and bailed 41
 - surged with bailer and pumped 61
 - surged with block and bailed 42
 - surged with block and pumped 62
 - surged with block, bailed and pumped 70
 - compressed air 20
 - bailed only 10
 - pumped only 51
 - pumped slowly 50
 - Other _____
3. Time spent developing well 110 min.
4. Depth of well (from top of well casing) 434.5 ft.
5. Inside diameter of well 1.94 in.
6. Volume of water in filter pack and well casing 170 gal.
7. Volume of water removed from well 170 gal.
8. Volume of water added (if any) _____ gal.
9. Source of water added _____

- | | Before Development | After Development |
|--|--|--|
| 11. Depth to Water (from top of well casing) | a. <u>103.40</u> ft. | <u>NM</u> ft. |
| Date | b. <u>06/03/2021</u>
m m d d y y y y | <u>06/03/2021</u>
m m d d y y y y |
| Time | c. <u>09:00</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m. | <u>10:50</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m. |
| 12. Sediment in well bottom | <u>0</u> inches | <u>0</u> inches |
| 13. Water clarity | Clear <input checked="" type="checkbox"/> 10
Turbid <input type="checkbox"/> 15
(Describe) _____ | Clear <input checked="" type="checkbox"/> 20
Turbid <input type="checkbox"/> 25
(Describe) _____ |
- Fill in if drilling fluids were used and well is at solid waste facility:
14. Total suspended solids _____ mg/l
15. COD _____ mg/l

10. Analysis performed on water added? Yes No
(If yes, attach results)

16. Well developed by: Name (first, last) and Firm
First Name: Zach Last Name: Watson
Firm: SCS Engineers

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Jake Last Name: Margelofsky

Facility/Firm: Glacier Ridge Landfill, LLC

Street: N7296 County Road V

City/State/Zip: Koricon, WI 53032

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Eric Oelkers

Print Name: Eric Oelkers

Firm: SCS Engineers