June 7, 2021
File No. 25221008.02

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

Subject: 2020 Annual Report
Land & Gas Reclamation Landfill/Hechimovich Sanitary Landfill Site
Dodge County, Wisconsin
BRRTS #02-14-000906

Dear Mr. Bannister:

On behalf of Glacier Ridge Landfill, LLC (GRL), SCS Engineers (SCS) is submitting this report summarizing the results of groundwater sampling completed in 2020 related to off-site investigation of chlorinated volatile organic compounds (CVOCs) in bedrock at Land & Gas Reclamation Landfill (LGRL). In response to Recommendation #5 in the Fifth Five -Year Review Report prepared by the Wisconsin Department of Natural Resources (WDNR), the annual report for the off-site investigation has been expanded to include groundwater monitoring performed for LGRL under the solid waste program.

BACKGROUND

LGRL is a Superfund site (EPA ID #WID052906088) located south of Mayville, Wisconsin. LGRL was formerly known as the Hechimovich Sanitary Landfill, and the Superfund list continues to refer to LGRL by that name. In 2014 through 2016, the waste that had been disposed of in LGRL was exhumed and relocated to the active Glacier Ridge Landfill (GRL). The GRL Southeast Expansion was then constructed in the area of the former LGRL. GRL is part of the group of potentially responsible parties (PRPs) responsible for remediation and monitoring of the LGRL site, along with John Deere, Mercury Marine, and several other area businesses that disposed of waste in LGRL.

The Fifth Five -Year Review Report for the site was prepared by the WDNR and was signed by the Director of the Superfund and Emergency Management Division of the U.S. Environmental Protection Agency (USEPA) on June 10, 2019. On behalf of GRL, SCS submitted a response to the Five-Year Review Report recommendations in a letter to WDNR dated April 15, 2020, including suggested clarifications and corrections to the Five-Year Review Report. The WDNR report and response letter provide additional site background information.

Although the waste exhumation project effectively removed LGRL, the site continues to be regulated under the WDNR Waste and Materials Management (WMM) program under WDNR Landfill License #1118. The approved groundwater monitoring plan under the solid waste program requires monitoring of several water table monitoring wells and piezometers for inorganic parameters and volatile organic compounds (VOCs). All wells sampled under the solid waste program approval are installed in the shallow unconsolidated aquifer.

After CVOCs were detected in the bedrock aquifer downgradient from LGRL in 2009, the WDNR requested additional investigation. The bedrock groundwater investigation has been implemented in accordance with work plans approved by the WDNR Remediation and Redevelopment (R&R) program. The objectives of the investigation have been to evaluate the vertical and horizontal extent of CVOCs in the bedrock aquifer and to characterize the flow directions and pathways in the bedrock. Investigation Phases 1, 2, and 3, which have been completed, evaluated the vertical, horizontal, and downgradient extents of the CVOC plume, respectively. A summary of the previous investigation work completed during Phases 1 through 3 was submitted to WDNR as part of the Phase 3 Investigation Update on May 10, 2018. An annual update on the bedrock investigation monitoring in 2019 was submitted on May 29, 2020.

GEOLOGY AND HYDROGEOLOGY

The geology in the site vicinity includes four major units: the shallow unconsolidated sediments, the Maquoketa shale, the Ordovician and Cambrian dolomite and sandstone bedrock, and the underlying Precambrian crystalline bedrock. The unconsolidated sediments above bedrock in the vicinity of the site consist primarily of silty sand and sandy silt deposited as glacial till. The shallow deposits in the wetlands around the drumlin include peat and organic clay. Based on water supply well logs, the thickness of the unconsolidated sediments near the site ranges from approximately 25 to 140 feet.

The uppermost bedrock unit beneath the site is the Maquoketa Shale, which consists of Ordovician blue-gray shale with dolomitic beds as much as 25 feet thick near the top of the unit. The bedrock units below the Maquoketa shale include the Sinnipee Group (primarily dolomite) and the underlying St. Peter Sandstone. The bedrock investigation wells are installed in the dolomite and sandstone units.

Monitoring well and water supply well locations are shown on **Figure 1**. The locations of cross sections showing the site geology and well construction are shown on **Figure 2**. Cross sections A-A' (**Figure 3**) and B-B' (**Figure 4**) show the bedrock geology and depths of monitoring wells and water supply wells. Cross section A-A' is oriented north-south, and cross section B-B' is oriented southwest-northeast, in the general direction of flow and CVOC impacts. Cross section C-C' (**Figure 5**) shows the monitoring well depths in the shallow unconsolidated aquifer along the general direction of flow and VOC impacts north of LGRL.

2020 MONITORING PROGRAMS

During 2020, groundwater monitoring continued under the plans approved by the WDNR WMM program for the shallow aquifer and by the WDNR R&R program for the bedrock aquifer. The bedrock investigation monitoring program also includes two deep piezometers installed at the base of the unconsolidated aquifer, just above the shale (MW-1B and P-422B).

Results of the monitoring performed under the WMM program have been reported semiannually to WDNR and the results have been submitted electronically, as required, for upload to the Groundwater and Environmental Monitoring System (GEMS) database. A summary of the 2016 to 2020 results for the LGRL shallow aquifer monitoring program is provided in **Attachment A**.

Monitoring is also performed under the WMM program for the active GRL site, which is not part of the Superfund site. Some of the monitoring results for GRL are useful for the LGRL groundwater

evaluation, either because they are in locations affected by the former LGRL site (impacted wells), or because they define the limits of impacts from LGRL (clean wells). Monitoring results for 2016 through 2020 for selected GRL monitoring wells in the shallow aquifer are provided in **Attachment B**.

For the bedrock groundwater investigation, the monitoring program during 2020 included the following wells (same program as 2019):

- Monthly water supply well: PW-21RR
- Semiannual water supply wells: PW-19, PW-20, PW-23, PW-28, PW-32, PW-38
- Annual water supply wells: PW-42, PW-43, PW-44
- Semiannual bedrock monitoring wells: P401D, P402E, P423D, P424D, P424SS, P426D, P429SS
- Semiannual deep unconsolidated aquifer monitoring wells: MW-1B, P-422B

Laboratory reports for water supply well sampling were previously submitted to the WDNR following each sampling event. Monitoring results for the bedrock investigation wells were reported to the R&R program on July 31, 2020, for the April 2020 monitoring event. Laboratory reports not previously submitted to WDNR (October 2020 monitoring wells) are included in **Appendix C**.

WATER LEVEL MONITORING AND GROUNDWATER FLOW

Shallow Groundwater Flow

Water level monitoring results obtained as part of the approved monitoring programs under the WMM program were used to evaluate the groundwater flow direction in the shallow aquifer. The water table map for October 2020 is shown on **Figure 6**. The water table map incorporates data from the LGRL and GRL water table monitoring wells. Groundwater flow in the LGRL area is generally to the north-northeast. Groundwater elevations for the LGRL monitoring wells are included in the historical results summary in **Appendix A.**

Bedrock Groundwater Flow

As part of the bedrock groundwater investigation, water level monitoring was performed to evaluate the groundwater flow direction in the upper dolomite and measure the vertical gradient between the dolomite and the deeper sandstone. Water level measurements and elevations in the monitoring wells are summarized in **Table 1**. Measured water elevations have ranged over about 7 feet in the period from 2010 through 2020.

The groundwater elevations measured in the upper dolomite monitoring wells in October 2020, and contours of the corresponding potentiometric surface, are shown on **Figure 7**. The October 2020 water levels in the upper dolomite indicate a flow direction to the northeast, consistent with the apparent northeast to east flow direction indicated by the VOC distribution. The apparent horizontal hydraulic gradient between LGRL (P401D) and downgradient well P424D was 0.0007 to the northeast in October 2020.

There appears to be relatively little head difference between the dolomite and upper sandstone aquifers on the All-Line property. The head in the dolomite was slightly higher than the sandstone during both measurement events in 2020, consistent with historical data. The vertical gradient

between the dolomite well P424D and the sandstone well P424SS, with a vertical separation of screen midpoints of 206 feet, was approximately 0.003 in April and October 2020. Given the apparent low hydraulic conductivity of the lower dolomite and the small vertical gradient, there appears to be limited potential for vertical groundwater flow between the upper dolomite and sandstone in the vicinity of the P424 well nest.

MONITORING WELL SAMPLING AND ANALYSIS

Shallow Monitoring Wells

During 2020, Environmental Sampling Corporation (ESC) collected groundwater samples from the existing shallow water table monitoring wells semiannually in April and October. The MW-210 nest was not accessible due to standing water in April, but was sampled in July 2020 and October 2020.

The two primary CVOCs detected in the shallow plume are cis-1,2-dichloroethene (DCE) and vinyl chloride. These CVOCs are typically formed as breakdown products in the natural degradation of trichloroethene (TCE) and tetrachloroethene (also known as perchoroethylene or PCE), which were common solvents that were likely disposed of historically at LGRL. The concentrations of DCE and vinyl chloride detected in October 2020, and the approximate extent of the CVOC contamination plume the shallow groundwater, are shown on **Figure 8**. Results are shown for LGRL monitoring wells in the shallow aquifer, including routine monitoring wells and the two deep unconsolidated aquifer investigation wells, and selected GRL monitoring wells that help define the limits of the LGRL CVOC impacts. In addition to DCE and vinyl chloride, TCE and PCE are shown for wells where they were detected.

The concentration trends for DCE and vinyl chloride in shallow water table monitoring wells are shown on **Figures G1** through **G3**. The graphs in **Figure G1** show concentration trends along the flow direction of the plume at the level of the "A" wells, which have the highest concentrations at each nest. The graphs in **Figures G2** and **G3** show concentration trends at well nests in the source area and downgradient.

The findings from the 2020 monitoring well sampling include the following:

- The area of CVOC concentrations exceeding enforcement standards (ESs) in shallow groundwater is limited to the immediate vicinity of LGRL and an area extending to the north through well nests MW1RR/AR/B, W3R/AR, MW210/A/B, and MW214/A (**Figure 8**).

- Among mid-depth wells along the plume extending to the north of LGRL (MW1AR, MW210A, and MW214A), DCE and vinyl chloride concentrations decrease with distance from LGRL (**Figure G1**).

- At the two well nests closest to the source area (MW1RR/AR/B and W3R/AR), CVOCs are generally highest in the mid-depth ("A") wells and have generally decreased with time (**Figure G2**).

    – Prior to 2008, concentrations of DCE and vinyl chloride were similar at MW1RR and MW1AR. Concentrations at MW1RR decreased and have been lower than

concentrations at MW1AR since 2008. Changes at this well nest beginning in 2008 are likely due at least in part due to the construction and operation of the groundwater control trench between LGRL and the GRL South Expansion. DCE concentrations at MW1AR have continued to decrease over time.

  - At deep piezometer MW1B, vinyl chloride concentrations have increased gradually, but are still very low in comparison to vinyl chloride results for MW1AR.

  - Concentrations of both DCE and vinyl chloride have decreased over time at W3AR.

  - Vinyl chloride concentrations detected at W3AR in 2020 were consistent with the historical decreasing trend. Concentrations at W3R increased slightly in 2020 and were similar to those detected at W3AR.

- At the two well nests further downgradient from LGRL (MW210/A/B and MW214/A), CVOCs are generally highest in the mid-depth ("A") wells and the results show the changes in the CVOC plume with time (**Figure G3**). At MW210A, concentrations of DCE and vinyl chloride have decreased significantly since the 1990's and have been relatively stable since about 2004. At MW214A, concentrations of vinyl chloride began increasing in about 2007, and in the last 5 years appear to have leveled off at a concentration similar to those observed recently at MW210A.

- CVOCs were also detected at GRL monitoring wells adjacent to the former LGRL footprint, including at least one result above the ES at wells P403A, P406A/P406B, and MW428. CVOC concentrations at the wells on the east side of LGRL (403 and 406 well nests) are much lower than those on the north side of LGRL. At monitoring well MW428, which was installed in 2018 on the south side of LGRL and is monitored as part of the GRL monitoring program, DCE and PCE concentrations exceeded the applicable PALs, and TCE exceeded the ES. The CVOCs detected at this well are similar to those previously detected at former well MW407, which was in the same general area and was abandoned due to cell construction.

Bedrock Monitoring Wells

During 2020, ESC collected groundwater samples from the existing bedrock monitoring wells semiannually in April and October.

The two primary CVOCs detected above NR 140 ESs in the off-site wells are DCE and vinyl chloride. Bedrock monitoring well analytical data is summarized in **Table 2**. The concentrations of DCE and vinyl chloride detected in October 2020, and the approximate extent of the CVOC contamination plume in bedrock, are shown on **Figure 9**. Concentration trends of DCE and vinyl chloride in bedrock monitoring wells are shown on **Figures G4** and **G5.**

The findings from the 2020 monitoring well sampling include the following:

- The highest CVOC concentrations detected in the bedrock aquifer in 2020 were detected in samples from monitoring well P402E, located near the northeast corner of the former LGRL site.

  - Concentrations of DCE and vinyl chloride in samples from P402E have consistently exceeded the NR 140 ES.

  - Concentrations of TCE exceeded the ES at P402E prior to October 2015. Since October 2015, concentrations of TCE at this well have been below the ES but have exceeded the preventive action limit (PAL). The reported TCE concentrations in 2020 were estimated results below the laboratory's limit of quantitation (LOQ).

  - The CVOC concentrations detected in P402E increased initially when the well was first sampled in 2010, but have since followed a decreasing or stable trend. It is possible that the initial increase following well installation represents equilibration of the well with the aquifer, with the initial sample results lower than true groundwater quality due to short-term effects of drilling with air to install the well.

- Monitoring well P424D, located on the All-Line property, contains concentrations of DCE and vinyl chloride greater than the corresponding ESs. The CVOC concentration trends at P424D have been generally stable over the last several years. The 2020 vinyl chloride results showed a slight decrease since 2019, and the results were within the range previously observed at this well. The DCE concentration decreased slightly in April and October 2020 relative to the October 2019 result.

- Monitoring well P423D, located on the Andrew Oechsner farm property, has detectable concentrations of several CVOCs. DCE and vinyl chloride concentrations exceeded the corresponding ESs in the April and October 2020 samples collected from this well. DCE and vinyl chloride concentrations at this well in 2020 were within the range of previous concentrations at this well.

- CVOCs were not detected at the following wells in 2020, consistent with historical results:

  - Monitoring well P426D, installed to define the northern limit of the CVOC plume.

  - Monitoring well P424SS, open to the sandstone bedrock below the dolomite on the All-Line property.

  - Monitoring well P429SS, screened at the top of the sandstone unit northeast of P423D and PW21RR.

WATER SUPPLY WELL SAMPLING AND ANALYSIS

LGRL Water Supply Well Monitoring Program Wells

Selected water supply wells have been sampled on a regular basis in accordance with the work plan. Water supply well sampling results are summarized in **Table 4**, and concentration trends for DCE and vinyl chloride are shown on **Figures G6** and **G7**.

The findings of the water supply well sampling include the following:

- The replacement water supply well for the Oechsner farm (PW-21RR) has been sampled monthly since October 2010.
  - The DCE concentrations for PW-21RR (**Figure G6**) initially increased from October 2010 through mid-2012, dropped slightly into the end of 2012, and then followed a gradual increasing trend before appearing to stabilize in the last 4 years.
  - Vinyl chloride concentrations in samples from PW-21RR have decreased slightly since mid-2012 (**Figure G7**), and have been generally stable in the last 6 years.
  - PW-21RR has a groundwater treatment system, and post-treatment samples demonstrate that the system is effectively removing vinyl chloride and DCE, with treated water concentrations well below the drinking water maximum contaminant levels (MCLs) (**Table 4**).
- The DCE concentrations in samples from PW-28 have shown a very gradually increasing trend since 2011. The detected DCE concentrations are still below the NR 140 PAL of 7 micrograms per liter (µg/L) and well below the MCL of 70 µg/L. No other CVOCs have been detected in this well. This well is open to both the dolomite and sandstone units.
- Samples from PW-19 also contain DCE at concentrations below the PAL and well below the ES and MCL. The 2020 DCE results show a slight decrease from 2019 observed concentrations.
- Trace concentrations of DCE have also been detected in some of the samples collected from the J. Oechsner well (PW-32). The DCE concentrations detected at this well in April 2020 were below the laboratory limit of quantitation, and DCE was not detected in the October 2020 sample.
- None of the other six water supply wells that were sampled in 2020 as part of the LGRL bedrock investigation (private wells PW-20, PW-23, PW-38, PW-42, PW-43, and PW-44) contained detectable concentrations of CVOCs.

WELL PW-J

Water supply well PW-J, which is owned by Glacier Ridge Landfill, is part of the routine monitoring program for GRL. Results for this well are included in this LGRL annual report (**Table 4**) because DCE has been detected in samples from this well. Although DCE is one of the primary CVOCs associated with the LGRL groundwater impacts, it has not been determined conclusively whether LGRL is the source of DCE at PW-J. During 2020, PW-J was sampled in April and October. The DCE concentration in the April sample was slightly below the PAL and in the October sample was slightly above the PAL. Vinyl chloride was not detected.

STATUS OF RECOMMENDATIONS FROM 2019 ANNUAL REPORT

Additional investigation recommendations from the 2019 Annual Report are listed below, along with the current implementation status:

- *Install a monitoring well in the sandstone aquifer in a nest with dolomite monitoring well P-426D.*
  - A work plan for the additional sandstone monitoring well (P-426SS) was submitted on September 22, 2020, and approved via email on October 16, 2020.
  - Installation of monitoring well P-426SS is in progress in May 2021.
  - The well will be surveyed, developed, and sampled following installation.
- *Complete downhole geophysical logging of PW-J, then install a bedrock monitoring well or well nest.*
  - A work plan for the geophysical logging was submitted on September 22, 2020, and approved via email on October 16, 2020.
  - The results of the geophysical logging and plan for monitoring well installation were submitted on February 10, 2021, and approved via email on February 23, 2021.
  - Installation of a monitoring well is in progress in May 2021.
  - The well will be surveyed, developed, and sampled following installation.

Copies of the referenced correspondence related to these investigation recommendations are included in Attachment D.

Monitoring recommendations from the 2019 Annual Report are listed below, along with the current implementation status:

- *Continue routine monitoring programs for bedrock aquifer and shallow aquifer.*
  - Continued in 2020.
- *Complete voluntary supplemental sampling for VOCs in October 2020 for LGRL wells MW-6R, MW-7R, MW-201, MW-201A, and MW-201B, and GRL well W-38.*
  - This voluntary sampling was not completed in October 2020, because SCS inadvertently did not communicate the plan to ESC prior to sampling; however, the sampling was completed in April 2021.
- *Improve access to the MW-210 well nest.*
  - GRL has been in discussions with WDNR in 2020 and 2021 to determine the best approach to permit and construct improved access. Although the well nest was not accessible in April 2020, it was sampled in July 2020, October 2020, and April 2021. Access to the MW-210 well nest has improved recently due to lower water levels in the surrounding wetland; however, a more permanent solution is still desired.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Conclusions related to the 2020 shallow aquifer monitoring activities include the following:

- The primary CVOC plume in the shallow aquifer extends north-northeast from the north end of LGRL. CVOCs have also been detected at lower concentrations in monitoring wells adjacent to the east and south limits of the former LGRL.

- CVOC concentrations within the shallow plume continue to indicate that the overall mass of CVOCs in the groundwater has decreased with time, particularly in the source area.

- Vinyl chloride concentrations at the furthest downgradient mid-depth piezometer (MW214A) increased beginning in 2008, but now appear to have leveled off. This well nest is located approximately 1,500 feet from the downgradient property line.

Conclusions related to the 2020 bedrock groundwater investigation activities include the following:

- Groundwater flow direction in the bedrock aquifer in 2020 was to the northeast, consistent with the northeastern flow direction observed during all previous monitoring events with the exception of October 2018.

- The lack of CVOCs in groundwater samples from monitoring well P429SS suggests that CVOC contamination in the sandstone aquifer does not extend to the northeast beyond the Andrew Oechsner property.

- Hydrogeologic and laboratory analytical data from the P424D/P424SS monitoring well nest on the All-Line property continue to indicate that horizontal movement of the CVOCs away from LGRL in groundwater is primarily occurring in the upper, fractured zone of the dolomite.

- Given the apparently low hydraulic conductivity of the lower portion of the dolomite and the low vertical hydraulic gradient across the lower dolomite observed at the P424 well nest, there appears to be little potential for significant vertical flow within the dolomite under ambient conditions.

- CVOC concentrations in the monitoring wells along the center of the bedrock plume, including P402E, P424D, and P423D, continue to show mostly stable or decreasing long-term concentration trends.

- The slight increasing trend of DCE concentrations in PW-28, and the consistent presence of low concentrations of DCE in PW19, with a slight increase in 2019, suggest that the leading edge of the dissolved CVOC plume may be continuing to migrate; however, vinyl chloride has not been detected in these wells, and the DCE concentrations remain well below the NR 140 PAL.

Additional Investigation Recommendations

Planned additional investigation of the bedrock aquifer includes installation of P-426SS and investigation of PW-J, which are in progress as described above and in the correspondence in **Attachment D**. These investigation activities were initially proposed in the April 15, 2020 Response to Recommendations in Fifth Five-Year Review Report.

Groundwater Monitoring Recommendations

We recommend continued groundwater monitoring to evaluate the groundwater conditions at the site. For the bedrock aquifer, we recommend continuing the routine bedrock monitoring program during 2021, including the following wells:

- Monthly water supply well: PW-21RR
- Semiannual water supply wells: PW-19, PW-20, PW-23, PW-28, PW-32, PW-38
- Annual water supply wells: PW-42, PW-43, PW-44
- Semiannual monitoring wells: P401D, P402E, P423D, P424D, P424SS, P426D, P429SS
- Annual deep unconsolidated aquifer monitoring wells: MW-1B, P-422B

Wells will continue to be sampled for VOCs, alkalinity, hardness, chloride, and field parameters. New monitoring wells installed in 2021 will be sampled following installation and then added to the semiannual monitoring program.

Private well monitoring results will continue to be provided to the WDNR within 10 days of receipt of the results, and an annual update report for 2021 will be submitted by April 30, 2022.

Monitoring of the shallow groundwater plume will continue under the sampling programs approved by the solid waste program for LGRL (License 1118), with supplemental information obtained from selected wells in the monitoring program for GRL (License 3068). As noted above, the supplemental shallow aquifer sampling recommended in the 2019 Annual Report was competed in April 2021, and included one-time sampling of the following additional wells for VOCs:

LGRL Wells
- MW-6R
- MW-7R
- MW-201, MW-201A, MW-201B

GRL Wells
- W-38

These wells are in the routine LGRL and GRL monitoring programs, but are not required to be sampled for VOCs. Sampling these wells will provide additional data to confirm the extent of shallow groundwater impacts east and northeast of the former LGRL.

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 Hydrogeologist
SCS Engineers

RM/jsn/EO/SCC

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

cc via email: Tim Curry, GFL Environmental
Mark Torresani, Tetra Tech
Melanie Gotto, Deere & Company World Headquarters
Monica Rios, Deere & Company World Headquarters
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Linda Benfeld, ESG Holdings, LLC c/o Foley & Lardner LLP (for Maysteel Corp.)
Nathan Kempke, City of Mayville
Paul Rosenfeldt, Edgarton, St. Peter, Petak & Rosenfeldt (for Mayville Engineering Corp.)

Encl. Table 1 – Water Level Summary-Bedrock Wells
Table 2 – LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
Table 3 – LGRL VOC Investigation Deep Unconsolidated Well Sample Results - Through October 2020
Table 4 – LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020

Figure 1 – Monitoring Well and Private Well Locations
Figure 2 – Cross Section Location Map
Figure 3 – Cross Section A-A'
Figure 4 – Cross Section B-B'
Figure 5 – Cross Section C-C'
Figure 6 – Shallow Groundwater Elevations and Water Table – October 2020
Figure 7 – Dolomite Bedrock Groundwater Elevations and Potentiometric Surface Contours – October 2020
Figure 8 – VOCs in Shallow Groundwater – October 2020
Figure 9 – VOCs in Bedrock Groundwater – October 2020

Figure G1 – Time Series Graphs for Mid-Depth Wells Along the Shallow Plume (MW-1AR, MW-210A, MW-214A)
Figure G2 – Time Series Graphs for Source Area Well Nests (MW-1 and W-3)
Figure G3 – Time Series Graphs for Downgradient Well Nests (MW-210 and MW-214)

Figure G4 – Time Series Graph for cis-1,2-DCE in Bedrock Monitoring Wells
Figure G5 – Time Series Graph for Vinyl Chloride in Bedrock Monitoring Wells
Figure G6 – Time Series Graph for cis-1,2-Dichloroethylene in Water Supply Wells Downgradient from LGRL
Figure G7 – Time Series Graph for Vinyl Chloride at PW-21RR Samples (Before Treatment System)

Attachment A – LGRL Solid Waste Program Monitoring Results: 2017-2020
Attachment B – Selected GRL Solid Waste Program Monitoring Results: 2017-2020
Attachment C – Bedrock Investigation Laboratory Report (October 2020)
Attachment D – 2020 Investigation Correspondence

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Tables

Table 1. Water Level Summary - Bedrock Wells
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Raw Data	Depth to Water in feet below top of well casing									
	P401D	P402E	P423D	Office Well	PW18	PW27	P424D	P424SS	P426D	P429SS
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	102.34	
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

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

Ground Water Elevation in feet above mean sea level (amsl)										
Well Number	**P401D**	**P402E**	**P423D**	**Office Well**	**PW18**	**PW27**	**P424D**	**P424SS**	**P426D**	**P429SS**
Top of Casing Elevation (feet amsl)	932.30	929.08	948.99	958.14	947.56	946.15	942.60	941.88	955.64	999.24
Screen/Open Hole Length (ft)	15.00	20.00	18.00	46.00	60.00	43.00	20.00	20.00	20.00	15.00
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	460.00
Top of Screen / Open Hole Elevation (ft)	799.90	771.10	205.01	802.14	760.56	784.15	756.50	550.43	753.84	554.24
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	851.49	
June 3, 2015	853.45	853.43	851.99				852.46	852.08	851.99	
October 9, 2015	849.20	849.18	848.19				848.80	848.38	848.14	
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	850.34	
April 7, 2017	856.50	856.56	854.69				855.27	854.78	854.64	
October 6, 2017	852.74	852.73	850.87				851.50	851.03	851.82	
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	851.99	
April 25, 2018										842.24
October 4, 2018							852.22	851.68		Well
October 30, 2018	852.60	852.78	853.59						853.44	Inaccessible
January 9, 2019										841.04
April 1, 2019	856.80	855.98	854.44				855.40	854.83	856.09	848.89
October 28-29, 2019	855.60	855.48	854.04				854.40	853.83	853.89	846.74
April 17, 24, and 27, 2020	859.05	858.24	857.38				857.90	857.38	857.14	850.09
October 8-9, 2020	853.48	853.36	851.77				852.27	851.68	850.99	844.44
Bottom of Well Elevation (ft)	784.90	751.10	723.98	756.14	700.56	741.15	736.50	530.43	733.84	539.24

Created by: EO Date: 3/16/2010
Last revision by: AJR Date: 3/2/2021
Checked by: RM Date: 3/4/2021

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
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	
	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
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

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
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	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**		
	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**		
	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	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
	(DUP)														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	

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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-402E	10/28/2019	Pace	**50.3**	**368**	**466**	**4.4** J1	<5.5	**0.73** J1	**0.74** J1	**237**	**6.7** J1	<0.82	**1.3** J1	**29**	Acetone	11 J1
(cont.)	4/23/2020	Pace	**48.7**	**365**	**436**	**4.7** J1	<5.5	**1.2** J1	**1.0** J1	**214**	**8.1**	<0.82	**0.79** J1	**34**	ND	
	10/8/2020	Pace	**50.1**	**378**	**484**	**4.0** J1	<5.5	<0.68	<0.61	**225**	**5.7**	<0.82	**0.86** J1	**29.1**	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	**2.53**	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	**1.2**	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	**2.19**	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	**0.91** 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	**1.5**	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	**2.1**	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	**1.1**	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	**1.0** 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	**0.91** 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	**1.1**	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	**1.1**	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	**1.1**	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	**1.1**	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	**2.5**	ND	
	4/6/2018	Pace	**41.0**	**365**	**472**	<0.37 L1	<0.50	**0.65** J1	<0.41	**92.4**	<0.26	<0.50	**0.74** J1	**3.3**	ND	
	10/30/2018	Pace	**39.2**	**371**	**437**	**2.8** J1	<2.2	**0.56** J1	<0.24	**82.5**	**3.6** J1	<0.33	**0.70** J1	**2.9**	Acetone	**3.6** J1
	4/4/2019	Pace	**36.3**	**358**	**428**	**2.8** J1	<2.2	**0.66** J1	<0.24	**80.4**	**4.1**	<0.33	**0.59** J1	**2.5**	Acetone	**7.7** J1

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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-423D (cont.)	10/29/2019	Pace	**28.6**	**336**	**434**	**1.8** J1	<2.2	**0.53** J1	<0.24	**71.8**	**3.3** J1	<0.33	**0.71** J1	**2.1**	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	**73.1**	**3.4**	<0.33	**0.66** J1	**2.5**	ND	
	10/8/2020	Pace	**41.2**	**358**	**488**	**1.4** J1	<2.2	**0.50** J1	<0.24	**76.4**	**3.4**	<0.33	**0.86** J1	**1.2**	Acetone	**4.5** J1
P-424D	12/17/2012	Pace	**33.8**	**357**	**409**	**2.5**	<0.48	<1.5	<1.1	**91.2**	**3.5**	<0.90	**1.7** J	**7.0**	ND	
	2/20/2013	Pace	**32.6**	**382**	**432**	**2.6**	<0.24	**0.92** J	<0.57	**105**	**3.2**	<0.45	**2.5**	**5.8**	ND	
	10/3/2013	Pace	**38.5**	**379**	**444**	**2.6**	<0.39	**1.1**	<0.43	**124**	**3.5**	<0.47	**3.2**	**10.1**	ND	
	4/7/2014	Pace	**34.8**	**369**	**427**	**3.1**	<0.50	**0.98** J	**0.42** J	**114**	**4**	<0.50	**3**	**7.6**	Acetone	**3.1** J
	10/16/2014	Pace	**40.7**	**358**	**424**	**3.3**	<1.0	**0.92** J	<0.82	**122**	**4.9**	<1.0	**2.4**	**7.7**	ND	
	4/17/2015	Pace	**37.7**	**363**	**409**	**1.8**	<0.50	**0.54** J	<0.41	**79.6**	**2.5**	<0.50	**2.3**	**2.6**	ND	
	10/9/2015	Pace	**48.6**	**384**	**449**	**3.5**	<0.50	**0.88** J	<0.41	**120**	**3.8**	<0.50	**2.2**	**11.4**	ND	
	4/8/2016	Pace	**40.7**	**369**	**432**	**2.9**	<0.50	**0.82** J	<0.41	**111**	**3.4**	<0.50	**2.3**	**5.3**	ND	
	10/7/2016	Pace	**45.1**	**370**	**485**	**4.1**	<1.2	**0.94** J	<1.0	**125**	**4.3**	<1.2	**2.3** J	**9.9**	ND	
	4/7/2017	Pace	**43.2**	**374**	**422**	**3.6**	<0.50	**0.84** J	<0.41	**119**	**4.0**	<0.50	**2.1**	**7.6**	ND	
	10/6/2017	Pace	**43.2**	**369**	**452**	**3.1**	<0.50	**1**	**0.51** J	**151**	**4.7**	<0.50	**2**	**9.4**	ND	
	4/6/2018	Pace	**41.1**	**371**	**466**	**0.41** J1,L1	<0.50	<0.24	**0.54** J1	**156**	<0.26	<0.50	**2.0**	**9.7**	Tetrahydrofuran	**2.6** J1
	10/5/2018	Pace	**36.1**	**366**	**457**	**3.3** J1	<2.2	**0.66** J1	**0.41** J1	**104**	**3.4** J1	<0.33	**2.0**	**10.5**	ND	
	4/4/2019	Pace	**38.1**	**356**	**436**	**2.9** J1	<2.2	**0.82** J1	**0.41** J1	**115**	**3.6** J1	<0.33	**1.9**	**8.4**	Acetone	**3.5** J1
	10/28/2019	Pace	**36**	**357**	**452**	**2.4** J1	<2.2	**0.82** J1	**0.33** J1	**114**	**3.6** J1	<0.33	**1.9**	**8.3**	Acetone	**5.8** J1
	4/24/2020	Pace	**40.2**	**361**	**429**	**1.8** J1	<2.2	**0.75** J1	**0.29** J1	**79.7**	**3.5**	<0.33	**1.8**	**3.5**	Acetone	**5.5** J1
	10/8/2020	Pace	**35.2**	**367**	**474**	**2.2** J1	<2.2	**0.76** J1	<0.24	**105**	**3.3**	<0.33	**1.7**	**7.4**	Acetone	**3.2** J1

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
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-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 R1	<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

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
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-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
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

Table 2. LGRL VOC Investigation Bedrock Well Sample Results - Through October 2020
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	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 **1.0** Acetone **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 2020
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
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 2020
Land and Gas Reclamation Landfill / File No. 25219008.02

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 contorl limits.
R1 = Relative Percent Difference value was outside control limits.

Created by:	MOB	Date:	9/5/2012
Last revision by:	AJR	Date:	3/3/2021
Checked by:	RM	Date:	3/4/2021
Proj Mgr QA/QC:	SCC	Date:	5/14/2021

Table 3. LGRL VOC Investigation Deep Unconsolidated Well Sample Results - Through October 2020
Land and Gas Reclamation Landfill / File No. 25221008.02
(Results are in µg/L, except where otherwise noted)

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	
MW-1B	10/27/2010	Siemens	**53.1**	**231**	**251**	<0.7	<0.4	<0.4	<0.4	**4.02**	<0.5	<0.30	<0.4	**0.33 J**	o-xylene	**0.28** J
	4/7/2011	Siemens	**72.3**	**174**	**271**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	<0.20	ND	
	10/7/2011	Siemens	**78.1**	**200**	**292**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	**0.58 J**	Carbon Disulfide	**2.77** J
	4/13/2012	Siemens	**84.3**	**186**	**291**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	<0.20	Acetone	**7.88** J
	10/4/2012	Siemens	**71.6**	**196**	**276**	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	**0.37 J**	Carbon Disulfide	**21.8**
	10/1/2013	Pace	**83.5**	**216**	**276**	<0.44	<0.39	<0.28	<0.43	**2.7**	<0.37	<0.47	<0.36	**4.1**	ND	
	4/7/2014	Pace	**69.8**	**219**	**276**	<0.37	<0.50	<0.16	<0.41	<0.26	<0.24	<0.50	<0.33	<0.18	ND	
	10/10/2014	Pace	**71.6**	**213**	**284**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	Acetone	**4.1** J
	4/17/2015	Pace	**67.6**	**224**	**265**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**1.1**	ND	
	10/9/2015	Pace	**64.4**	**227**	**290**	<0.37	**0.63 J**	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**1.3**	Acetone	**22.1**
	4/6/2016	Pace	**97.9**	**203**	**303**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**2.5**	**ND**	
	10/5/2016	Pace	**109**	**200**	**373**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**2.4**	**ND**	
	4/6/2017	Pace	**89**	**216**	**287**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**1.9**	**ND**	
	10/5/2017	Pace	**93.6**	**212**	**314**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**2.0**	**ND**	
	4/5/2018	Pace	**128**	**178**	**339**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	**3.4**	ND	
	10/3/2018	Pace	**109**	**215**	**335**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	**2.3**	Acetone	**5.3** J1
	4/4/2019	Pace	**124**	**186**	**345**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	**4.2**	Acetone	**10.3** J
	10/10/2019	Pace	**123**	**180**	**331**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	**5.1**	Acetone	**6.3** J1
															Carbon Disulfide	**0.98** J1
	4/23/2020	Pace	**133**	**190**	**339**	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	**2.2**	Carbon disulfide	**0.80** J1
	10/7/2020	Pace	**139**	**177**	**358**	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	**4.3**	Acetone	**3.5** J1

Table 3. LGRL VOC Investigation Deep Unconsolidated Well Sample Results - Through October 2020
Land and Gas Reclamation Landfill / File No. 25221008.02
(Results are in µg/L, except where otherwise noted)

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-422B	10/27/2010	Siemens	**6.9**	**218**	**152**	<0.7	<0.4	<0.4	<0.4	**8.7**	<0.5	<0.30	**0.51 J**	**0.26 J**	ND
	11/29/2010	Siemens	**7.16**	**225**	--	--	--	--	--	--	--	--	--	--	Methane **24.3**
	4/7/2011	Siemens	**8.15**	**183**	**149**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	< 0.20	ND
	10/6/2011	Siemens	**6.34**	**194**	**152**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	<0.20	ND
	4/13/2012	Siemens	**10.2**	**212**	**159**	<0.7	<0.4	<0.4	<0.4	<0.4	<0.5	<0.30	<0.4	<0.20	ND
	10/4/2012	Pace	**5.7**	**206**	**150**	<0.97	<0.24	<0.75	<0.57	<0.83	<0.89	<0.45	<0.48	<0.18	ND
	10/3/2013	Pace	**25.8**	**196**	**169**	<0.44	<0.39	<0.28	<0.43	<0.42	<0.37	<0.47	<0.36	<0.18	ND
	4/7/2014	Pace	**33.6**	**200**	**180**	<0.37	<0.50	<0.16	<0.41	<0.26	<0.24	<0.50	<0.33	<0.18	ND
	10/10/2014	Pace	**25.9**	**198**	**170**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/17/2015	Pace	**32.5**	**189**	**166**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/9/2015	Pace	**29**	**200**	**167**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	4/7/2016	Pace	**19.7**	**194**	**164**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/7/2016	Pace	**18.9**	**199**	**165**	<0.37	<0.50	<0.24	<0.41	**1.4**	<0.26	<0.50	<0.33	<0.18	ND
	4/7/2017	Pace	**12.2**	**209**	**157**	<0.37	<0.50	<0.24	<0.41	**7**	**0.27 J**	<0.50	<0.33	<0.18	ND
	10/6/2017	Pace	**10**	**212**	**166**	<0.37	<0.50	<0.24	<0.41	**0.85 J**	<0.26	<0.50	<0.33	<0.18	ND
	4/5/2018	Pace	**10.1**	**216**	**175**	<0.37	<0.50	<0.24	<0.41	<0.26	<0.26	<0.50	<0.33	<0.18	ND
	10/3/2018	Pace	**8.6**	**199**	**164**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/5/2019	Pace	**10.1**	**210**	**173**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	10/9/2019	Pace	**7.8**	**208**	**166**	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
	4/20/2020	Pace	**9.1** J1,D3	**216**	**180**	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	ND
	10/7/2020	Pace	**10.4** M0	**198**	**176**	<1.3	<2.2	<0.27	<0.24	<0.27	<0.46	<0.33	<0.26	<0.17	ND

Table 3. LGRL VOC Investigation Deep Unconsolidated Well Sample Results - Through October 2020
Land and Gas Reclamation Landfill / File No. 25221008.02
(Results are in µg/L, except where otherwise noted)

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	
NR 140 Groundwater Enforcement Standard			250	NS	NS	400	30	850	7	70	100	5	5	0.2	Acetone Carbon Disulfide Xylenes	9000 1,000 2,000
NR 140 Preventive Action Limit			125	NS	NS	80	3	85	0.7	7	20	0.5	0.5	0.02	Acetone Carbon Disulfide Xylenes	1,800 200 400

Abbreviations:
ND = Not detected
mg/L = Milligrams per Liter
µg/L = Micrograms per Liter
Siemens = Siemens Water Technologies
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:
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).
D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Created by: MDB Date: 6/12/2019
Last revision by: AJR Date: 3/3/2021
Checked by: RM Date: 3/4/2021
Proj Mgr QA/QC: SCC Date: 5/13/2021

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
Monthly Monitoring Locations															
PW-21R	A. Oechsner N7548 Hwy. 67 Mayville	1/29/2009	NLS	**12**	**310**	<0.79	<0.31	<0.21	<0.13	**11**	**0.26** J	<0.15	<0.18	**0.61**	ND
			NLS	--	--	<0.79	<0.31	<0.21	<0.13	**10**	**0.26** J	<0.15	<0.18	**0.56**	ND
		2/24/2009	NLS	--	--	<0.79	<0.31	<0.21	<0.13	**10**	<0.19	<0.15	<0.18	**0.35** J	ND
			CT	--	--	<0.40	**0.56** JB	<0.21	<0.24	**8.6**	<0.27	<0.30	<0.24	**0.39**	ND
		6/30/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	**19**	**0.52** J	<0.20	**0.26**	**0.53**	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	**12**	**0.23** J	<0.10	<0.12	**0.40** J	ND
PW-21RR Untreated	A. Oechsner N7548 Hwy. 67 Mayville	10/7/2010	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**2.74**	<0.50	<0.30	<0.40	**0.58** J	ND
			TA	--	--	<1.0	<0.30	<0.50	<0.50	**2.0**	<0.50	<0.50	<0.20	**0.37** J	ND
		11/11/2010	TA	**13**	**320**	<1.0	**0.47** J	<0.50	<0.50	**2.6**	<0.50	<0.50	<0.20	**0.76** J	Chloroform **0.29** J Toluene **21**
		11/29/2010	Siemens	**12.4**	**347**	<0.70	<0.40	<0.40	<1.30	**3.12**	<0.50	<0.30	<0.40	**0.61** J	Toluene **1.25**
		12/16/2010	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**3.75**	<0.50	<0.30	<0.40	**0.65** J	Toluene **0.99** J
		1/12/2011	NLS	--	--	<1.0	<0.16	<0.14	<0.11	**4.4**	**0.13** J	<0.10	<0.12	**0.75**	ND
		2/10/2011	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**6**	<0.50	<0.30	<0.40	**0.79**	ND
		3/1/2011	TA	--	--	<0.070	<0.063	<0.074	<0.059	**6.1**	<0.13	<0.067	<0.060	**0.92**	ND
		4/5/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	**8.9**	**0.32** J	<0.11	<0.28	**0.94**	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	**7.3**	**0.27** J	<0.050	<0.050	**0.79**	ND
		5/26/2011	TA	--	--	**0.34** J	<0.20	**0.080** J	<0.05	**12**	**0.44** J	<0.050	<0.050	**1.0**	ND
		6/28/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**9.8**	**0.37** J	<0.15	<0.25	**0.78**	ND
		7/14/2011	TA	--	--	<0.50	**0.33** J	<0.25	<0.15	**10**	**0.40** J	<0.15	<0.25	**0.75**	ND
		8/16/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**9.7**	**0.31** J	<0.15	<0.25	**0.46** J	ND
		9/1/2011	TA	--	--	<0.50	**0.46** J	<0.25	<0.15	**11**	**0.45** J	<0.15	<0.25	**0.67**	ND
		10/6/2011	TA	--	--	**0.52**	<0.30	<0.25	<0.15	**10**	**0.40** J	<0.15	<0.25	**0.63**	ND
		11/14/11 *	TA	--	--	<0.50	<0.30	<0.25	<0.15	**11**	**0.43** J	<0.15	<0.25	**0.82**	ND
		11/14/11 **	TA	--	--	**0.64**	<0.30	<0.25	<0.15	**12**	**0.43** J	<0.15	<0.25	**0.81**	ND
		12/12/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**12**	**0.42** J	<0.15	<0.25	**0.83**	ND
		12/27/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**12**	**0.45** J	<0.15	<0.25	**0.74**	ND
			Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**13.9**	**0.57** J	<0.30	<0.40	**0.85** J	ND
		1/4/2012	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**15.4**	**0.62** J	<0.30	<0.40	**1.09**	ND
		1/11/2012	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**15.5**	**0.66** J	<0.30	<0.40	**1.02**	ND
		1/18/2012	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**15.2**	**0.66** J	<0.30	<0.40	**1.01**	ND
		1/25/2012	Siemens	--	--	<0.70	<0.40	<0.40	<0.40	**16.6**	**0.61** J	<0.30	<0.40	**1.10**	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR Untreated (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	2/15/2012	TA	--	--	<0.50	<0.30	<0.25	<0.15	**13**	**0.47** J	<0.15	<0.25	**0.86**	ND
		3/1/2012	TA	--	--	<0.50	<0.30	<0.25	<0.15	**13**	**0.48** J	<0.15	<0.25	**0.96**	ND
		4/11/2012	TA	**16**	**290**	<0.50	<0.30	<0.25	<0.15	**14**	**0.69**	<0.15	<0.25	**0.89**	ND
		5/2/2012	Siemens	--	--	**0.92** J	<0.40	<0.40	<0.40	**19.8**	**0.80** J	<0.30	<0.40	**1.52**	ND
		6/20/2012	Pace	--	--	**0.25** J	**0.73** J	**0.11** J	<0.16	**15.1**	**0.51**	<0.16	<0.11	**0.62**	ND
		7/18/2012	Pace	--	--	<0.20	<0.13	<0.072	<0.16	**16**	**0.47** J	<0.16	<0.11	**0.62**	ND
		8/2/2012	Pace	--	--	**0.46** J	<0.13	**0.12** J	<0.16	**18.6**	**0.64**	<0.16	<0.11	**0.75**	ND
		9/13/2012	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**16.1**	**0.49** J	<0.16	<0.11	**0.55**	Benzene **0.050** J Toluene **0.088** J
		10/5/2012	Pace	**13.6**	**316**	<0.31	<0.13	<0.072	<0.16	**14.6**	**0.51**	<0.16	<0.11	**0.63**	ND
		11/29/2012	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**10.9**	**0.30** J	<0.16	<0.11	**0.44**	ND
		12/17/2012	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**14.8**	**0.45** J	<0.16	<0.11	**0.62**	ND
		1/8/2013	Pace	--	--	**0.62** J	<0.13	<0.072	<0.16	**14.4**	**0.40** J	<0.16	<0.11	**0.52**	ND
		2/20/2013	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**14**	**0.39** J	<0.16	<0.11	**0.52**	ND
		3/21/2013	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**13.2**	**0.42** J	<0.16	<0.11	**0.48**	ND
		4/2/2013	Pace	**13.1**	**294**	<0.31	<0.13	<0.072	<0.16	**9.2**	**0.25** J	<0.16	<0.11	**0.34** J	ND
		5/7/2013	Pace	--	--	<0.31	<0.13	<0.072	<0.16	**14.4**	**0.43** J	<0.16	<0.11	**0.64**	ND
		6/27/2013	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**12.5**	**0.32** J	<0.25	<0.12	**0.5**	m&p-Xylene **0.22** JB
		7/29/2013	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**14.9**	**0.35** J	<0.25	<0.12	**0.6**	ND
		8/26/2013	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**18**	<0.20	<0.19	<0.18	<0.19	ND
		9/12/2013	Pace	--	--	<0.22 L3	<0.40 L3	<0.20	<0.23	**16.1**	<0.20	<0.19	<0.18	<0.19 L3	ND
		10/1/13	Pace	**14.6**	**349**	<0.22	<0.40	<0.20	<0.23	**16.5**	**0.47** J	<0.19	<0.18	<0.19	ND
		11/7/13	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**14.5**	**0.44** J	<0.19	<0.18	**0.67**	Methylene Chloride **0.48** J 1,2-Dichloroethane **0.55**
		12/9/13	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**13.3**	**0.39** J	<0.25	<0.13	**0.58**	ND
		1/9/2014	Pace	--	--	<0.50	<0.50 M1	<0.25	<0.24	**14.9**	**0.33** J	<0.25	<0.13	**0.75**	ND
		2/11/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**12.2**	**0.32** J	<0.25	<0.13	**0.52**	ND
		3/11/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**14.4**	**0.46** J	<0.25	<0.13	**0.50**	ND
		4/25/2014	Pace	**14.7**	**356**	<0.50	<0.50	<0.25	<0.24	**15.3**	**0.42** J	<0.25	<0.13	**0.66**	ND
		5/12/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**13.8**	**0.26** J	<0.099	<0.084	**0.56**	ND
		6/10/2014	Pace	--	--	**0.21** J	<0.34	<0.077	<0.13	**15.0**	**0.38** J	<0.099	<0.084	**0.78**	ND
		7/8/2014	Pace	--	--	**0.29** J	<0.34 M1	<0.077	<0.13	**16.4**	**0.38** J	<0.099	<0.084	**0.64** M1	ND
		8/1/2014	Pace	--	--	**0.25** J	<0.34	<0.077	<0.13	**14.6**	**0.43** J	<0.099	<0.084	**0.56**	ND
		9/3/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**13.9**	**0.27** J	<0.099	<0.084	**0.58**	ND
		9/3/2014 DUP	Pace	--	--	**0.27** J	<0.34	<0.077	<0.13	**14.8**	**0.30** J	<0.099	<0.084	**0.67**	ND
		10/6/2014	Pace	**14.7**	**338**	**0.47** J	<0.34	<0.087	<0.17	**15.9**	**0.48** J	<0.12	<0.084	**0.53**	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR Untreated (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	11/20/2014	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**16.2**	**0.47** J	<0.12	<0.084	**0.57**	ND
		12/12/2014	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**19.0**	<0.15	<0.12	<0.084	**1.2**	ND
		1/21/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**17.1**	<0.15	<0.12	<0.084	**0.43**	ND
		2/18/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**14.2**	**0.37** J	<0.12	<0.084	**0.55**	ND
		3/5/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**16.6**	<0.15	<0.12	<0.084	**0.50**	ND
		4/17/2015	Pace	**15.5** B	**328**	<0.27	<0.34	<0.087	<0.17	**18.3**	**0.48** J	<0.12	<0.084	**0.50**	ND
		5/20/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**16.7**	**0.44** J	<0.15	<0.14	**0.55**	ND
		6/3/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**18.8**	**0.52**	<0.15	<0.14	**0.56**	ND
		7/16/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**18.5**	**1.2**	<0.15	<0.14	**0.58**	ND
		8/31/2015	Pace	--	--	<0.34	<0.64 L2	<0.19	<0.17	**18.0**	**1.1**	<0.15	<0.14	**0.47**	ND
		9/21/2015	Pace	--	--	<0.34 H1	<0.64 H1,L3	**0.19** J,H1	<0.17 H1	**18.1** H1	**0.53** H1	<0.15 H1	**0.18** J,H1	**0.60** H1	ND
		10/6/2015	Pace	**16.0**	**328**	<0.88	<0.20	**0.18**	<0.17	**20**	**0.35**	<0.13	<0.19	**0.76**	ND
		11/4/2015	Pace	--	--	<0.24 N2	<0.23 N2	<0.17 N2	<0.17 N2	**17.7** N2	**0.42** J,N2	<0.32 N2	<0.21 N2	<0.23 N2	ND
		12/3/2015	Pace	--	--	<0.24	<0.23	<0.17	<0.17	**18.2**	**0.37** J	<0.32	<0.21	<0.23	ND
		1/5/2016	Pace	--	--	**0.36** J	<0.64	<0.19 M1	<0.17	**18.7**	<0.18	<0.15	<0.14	**0.55**	ND
		2/9/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**18.3**	**0.41** J	<0.15	<0.14	**0.50**	Toluene **0.27** JB
		3/10/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**17.5**	**0.52** J	<0.15	<0.14	**0.55**	ND
		4/5/2016	Pace	**16.0**	**345**	<0.34	<0.64	<0.19	<0.17	**17.5**	**0.42** J	<0.15	<0.14	**0.47**	ND
		5/19/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**19.7**	**0.24** J	<0.15	<0.14	**0.45**	ND
		6/22/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**18**	**0.46** J	<0.15	<0.14	**0.37**	ND
		7/7/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**18.8**	**0.48** J	<0.15	<0.14	**0.64**	ND
		8/11/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**17.9**	**0.35** J	<0.12	<0.044	**0.46**	ND
		9/9/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**17**	**0.47** J	<0.12	<0.044	**0.42**	ND
		10/4/2016	Pace	**17.0**	**345**	**0.28** J	<0.21	<0.088	<0.089	**20.7**	**0.53**	<0.12	<0.044	**0.57**	ND
		11/14/2016	Pace	--	--	**0.29** J	<0.21	<0.088	<0.089	**16.7**	**0.47** J	<0.12	<0.044	**0.45**	ND
		12/1/2016	Pace	--	--	**0.37** J	<0.21	<0.088	<0.089	**19.2**	**0.51**	<0.12	<0.044	**0.48**	ND
		1/27/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**21.1**	**0.42** J	<0.12	<0.044	**0.5**	ND
		2/2/2017	Pace	--	--	**0.31** J	<0.21	<0.088	<0.089	**22.1**	**0.44** J	<0.12	<0.044	**0.46**	ND
		3/9/2017	Pace	--	--	**0.53** J	<0.21	<0.088	<0.089	**25**	**0.63**	<0.12	<0.044	**0.5**	ND
		4/4/2017	Pace	**18.4**	**339**	**0.32** J	<0.21	<0.088	<0.089	**20.3**	**0.75**	<0.12	<0.044	**0.54**	ND
		5/19/2017	Pace	--	--	**0.54** J	<0.21	<0.088	<0.089	**20.8**	**0.48 J**	<0.12	<0.044	**0.62**	ND
		6/22/2017	Pace	--	--	**0.28** J	<0.21	<0.088	<0.089	**19.5**	**0.51**	<0.12	<0.044	**0.59**	ND
		7/17/2017	Pace	--	--	**0.58** J	<0.21	<0.088	<0.089	**18.3**	**0.42** J	<0.12	<0.044	**0.52**	ND
		8/2/2017	Pace	--	--	**0.33** J	<0.21	**0.20** J	<0.089	**24.1**	**0.68**	<0.12	<0.044	**0.71**	ND
		9/7/2017	Pace	--	--	**0.32** J	<1.1	<0.14	<0.18	**20.6**	**0.51** J	<0.12	<0.11	**0.51**	ND
		10/3/2017	Pace	**18**	**335**	<0.32	<1.1	<0.14	<0.18	**19.4**	**0.41** J	<0.12	<0.11	**0.59**	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR Untreated (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	11/1/2017	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**17**	**0.46** J	<0.12	<0.11	**0.49**	ND
		1/18/2018	Pace	--	--	**0.33** J	<1.1	<0.14	<0.18	**20.6**	**0.50** J	<0.12	<0.11	**0.63**	ND
		2/1/2018	Pace	--	--	**0.35** J	<1.1	<0.14	<0.18	**19.5**	**0.40** J	<0.12	<0.11	**0.49**	ND
		3/14/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**18.9**	**0.37** J1	<0.12	<0.11	**0.52**	ND
		4/3/2018	Pace	**17.5**	**323**	<0.32	<1.1	<0.14	<0.18	**18.4**	**0.36** J1	<0.12	<0.11	**0.59**	ND
		5/15/2018	Pace	--	--	**0.26**	<0.023	**0.14**	<0.034	**20.5**	**0.49**	<0.040	<0.044	**0.58**	ND
		6/1/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**17.6**	**0.44** J1	<0.12	<0.11	**0.55**	ND
		7/12/2018	Pace	--	--	**0.81**	<0.15	<0.16	<0.19	**20.1**	**0.54** J1	<0.17	<0.12	**0.48**	ND
		8/2/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**19.5**	**0.42** J1	<0.17	<0.12	**0.55**	ND
		9/4/2018	Pace	--	--	<0.14	**0.47** J1	<0.16	<0.19	**21.2**	**0.70**	<0.17	<0.12	**0.50**	ND
		10/1/2018	Pace	**17.6**	**325**	<0.14	<0.15	<0.16	<0.19	**21.8**	**0.53** J1	<0.17	<0.12	**0.41**	ND
		11/20/2018	Pace	--	--	<0.14	**0.30** J1	<0.16	<0.19	**20.1**	**0.50** J1	<0.17	<0.12	**0.71**	ND
		12/20/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**19.7**	**0.52** J1	<0.17	<0.12	**0.67**	ND
		1/9/2019	Pace	--	--	<0.37	<0.22	<0.28	<0.21	**17.6**	<0.35	<0.48	<0.23	<0.37	ND
		2/19/2019	Pace	--	--	**0.39** J	<0.15	<0.16	<0.19	**24.2**	**0.53** J	<0.17	<0.12	**0.68**	ND
		3/13/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**20.9**	**0.47** J	<0.17	<0.12	**0.64**	ND
		4/3/2019	Pace	**17.4**	**328**	**0.34** J1	<0.15	<0.16	<0.19	**20.1**	**0.51** J1	<0.17	<0.12	**0.50**	ND
		5/20/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**17.8**	**0.30** J	<0.17	<0.12	**0.46**	ND
		6/12/2019	Northern Lake Services	--	--	<1.5	<0.23	<0.31	<0.25	**20**	<0.47	<0.28	<0.30	**0.64** J2	ND
		7/9/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**18.1**	**0.30** J1	<0.17	<0.12	**0.45**	ND
		8/15/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**20.9**	**0.36** J1	<0.17	<0.12	**0.63**	ND
		9/19/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**19.1**	**0.35** J1	<0.17	<0.12	**0.41**	ND
		10/8/2019	Pace	**18.1**	**331**	<0.14	<0.15	<0.16	<0.19	**26**	**0.52** J1	<0.17	<0.12	**0.52**	ND
		11/19/2019	Pace	--	--	<1.5	<0.23	<0.31	<0.25	**19**	**0.67** J1	<0.28	<0.30	**0.7**	ND
		12/6/2019	Pace	--	--	<1.5	<0.23	<0.31	<0.25	**17**	**0.48** J1	<0.28	<0.30	**0.51** J1	ND
		1/8/2020	Pace	--	--	<0.071	<0.087	<0.079	<0.088	**20.6**	**0.45**	<0.064	**0.12** J2	**0.47**	ND
		2/3/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**20.4**	**0.43** J2	<0.17	<0.12	**0.49**	ND
		3/4/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**20.6**	**0.50** J2	<0.17	<0.12	**0.6**	ND
		6/11/2020	Pace	**16.8**	**329**	**0.18** J2	<0.087	<0.079	<0.088	**18.3**	**0.34**	<0.064	<0.053	**0.43**	ND
		7/6/2020	Pace	--	--	**0.23** J2	<0.087	**0.11** J2	<0.088	**15.4**	**0.33**	<0.064	**0.061** J2	**0.43**	ND
		8/3/2020	Pace	--	--	<2.7	<0.40	<0.28	<0.28	**15**	**0.29** J2	<0.27	<0.46	**0.39**J2	ND
		9/18/2020	Pace	--	--	<0.40	<0.40	<0.28	<0.28	**19**	**0.46** J2	<0.27	<0.46	**0.61** J2	ND
		10/14/2020	Pace	**17.6**	**339**	<2.7	<0.40	<0.28	<0.28	**25**	**0.58** J2	<0.27	<0.46	**0.69** J2	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR Untreated (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	11/12/2020	Pace	--	--	<0.34	<0.15	**0.17** J1	<0.19	**18.8**	**0.67**	<0.17	<0.12	**0.4**	Chlorobenzene **0.25** J1 1,4-Dichlorobenzene **0.092** J1 1,2-Dichloroethane **0.22** J1
		12/21/2020	Pace	--	--	**0.36** J2	<0.15	**0.18** J1	<0.19	**20.5**	**0.55** J1	<0.17	<0.12	**0.47**	Chlorobenzene **0.16** J1
PW-21RR After Treatment System	A. Oechsner N7548 Hwy. 67 Mayville	6/27/13	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**1.5**	<0.21	<0.25	<0.12	<0.20	m&p-Xylene **0.25** JB
		7/29/13	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**1.4**	<0.21	<0.25	<0.12	<0.20	ND
		8/26/13	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**2.3**	<0.20	<0.19	<0.18	<0.19	ND
		9/12/13	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**2.1**	<0.20	<0.19	<0.18	<0.19	ND
		10/1/13	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**2.4**	<0.20	<0.19	<0.18	<0.19	ND
		11/7/13	Pace	--	--	<0.22	<0.40	<0.20	<0.23	**1.2**	<0.20	<0.19	<0.18	<0.19	Methylene Chloride **0.46** J
		12/9/13	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**0.74**	<0.21	<0.25	<0.13	<0.20	ND
		1/9/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**0.84**	<0.21	<0.25	<0.13	<0.20	ND
		2/11/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**0.73**	<0.21	<0.25	<0.13	<0.20	ND
		3/11/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**1.6**	<0.21	<0.25	<0.13	<0.20	ND
		4/25/2014	Pace	--	--	<0.50	<0.50	<0.25	<0.24	**1.2**	<0.21	<0.25	<0.13	<0.20	ND
		5/12/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**1.5**	<0.15	<0.099	<0.084	<0.20	ND
		6/10/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**1.4**	<0.15	<0.099	<0.084	<0.20	ND
		7/8/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**1.3**	<0.15	<0.099	<0.084	<0.20	ND
		8/1/2014	Pace	--	--	<0.17	<0.34	<0.077	<0.13	**1.7**	<0.15	<0.099	<0.084	<0.082	ND
		10/6/2014	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**1.5**	<0.15	<0.12	<0.084	<0.082	ND
		11/20/2014	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**0.63**	<0.15	<0.12	<0.084	<0.082	ND
		12/12/2014	Pace	--	--	<0.27 H1	<0.34 H1,L3	<0.087 H1	<0.17 H1	**9.9** H1	**0.17** J, H1	<0.12 H1	<0.084 H1	**0.35** H1	ND
		1/21/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**9.9**	**0.21** J	<0.12	<0.084	**0.28**	ND
		2/18/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**1.0**	<0.15	<0.12	<0.084	<0.082	ND
		3/5/2015	Pace	--	--	<0.27	<0.34	<0.087	<0.17	**1.3**	<0.15	<0.12	<0.084	<0.082	ND
		4/17/2015	Pace	**15.6** B	**333**	<0.27	<0.34	<0.087	<0.17	**1.6**	<0.15	<0.12	<0.084	<0.082	ND
		5/20/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**0.83**	<0.18	<0.15	<0.14	<0.081	ND
		6/3/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**1.3**	<0.18	<0.15	<0.14	<0.15	Isopropylbenzene (Cumene) **0.11** J
		7/16/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**2.3**	<0.18	<0.15	<0.14	<0.081	ND
		8/31/2015	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**2.1**	<0.18	<0.15	<0.14	<0.081	ND
		9/21/2015	Pace	--	--	<0.34 H1	<0.64 H1,L3	<0.19 H1	<0.17 H1	**1.9** H1	<0.18 H1	<0.15 H1	<0.14 H1	<0.081 H1	ND
		10/6/2015	Pace	--	--	<0.88	<0.20	<0.15	<0.17	**2.5**	<0.18	<0.13	<0.19	<0.10	ND
		11/4/2015	Pace	--	--	<0.24 N2	<0.23 N2	<0.17 N2	<0.17 N2	**1.6** N2	<0.19 N2	<0.32 N2	<0.21 N2	<0.23 N2	Isopropylbenzene (Cumene) **0.81** N2 Benzene **2.4** N2
		12/3/2015	Pace	--	--	<0.24	<0.23	<0.17	<0.17	**1.1**	<0.19	<0.32	<0.21	<0.23	ND
		2/9/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**2.7**	<0.18	<0.15	<0.14	<0.15	Toluene **0.26** J
		3/10/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**1.2**	<0.18	<0.15	<0.14	<0.15	ND
		4/5/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**0.98**	<0.18	<0.15	<0.14	<0.081	ND

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Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR After Treatment System (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	5/19/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**1.2**	<0.18	<0.15	<0.14	<0.081	ND
		6/22/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**1.6**	<0.18	<0.15	<0.14	<0.081	ND
		7/7/2016	Pace	--	--	<0.34	<0.64	<0.19	<0.17	**2.2**	<0.18	<0.15	<0.14	<0.081	ND
		8/11/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.9**	<0.11	<0.12	<0.044	<0.098	ND
		9/9/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.9**	<0.11	<0.12	<0.044	<0.098	ND
		10/4/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.9**	<0.11	<0.12	<0.044	<0.098	ND
		11/14/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.8**	<0.11	<0.12	<0.044	<0.098	ND
		12/1/2016	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.7**	<0.11	<0.12	<0.044	<0.098	ND
		1/27/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.1**	<0.11	<0.12	<0.044	<0.098	ND
		2/2/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.1**	<0.11	<0.12	<0.044	<0.098	ND
		3/9/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.4**	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.4**	<0.11	<0.12	<0.044	<0.098	ND
		5/19/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.5**	<0.11	<0.12	<0.044	<0.098	ND
		6/22/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.9**	<0.11	<0.12	<0.044	<0.098	ND
		7/17/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.4**	<0.11	<0.12	<0.044	<0.098	ND
		8/2/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.9**	<0.11	<0.12	<0.044	<0.098	ND
		9/7/2017	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.5**	<0.21	<0.12	<0.11	<0.074	ND
		10/3/2017	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**4.1**	<0.21	<0.12	<0.11	<0.074	ND
		11/1/2017	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.5**	<0.21	<0.12	<0.11	<0.074	ND
		1/18/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.1**	<0.21	<0.12	<0.11	<0.074	ND
		2/1/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.3**	<0.21	<0.12	<0.11	<0.074	ND
		3/14/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.1**	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.0**	<0.21	<0.12	<0.11	<0.074	ND
		5/15/2018	Pace	--	--	<0.053	**0.14**	<0.033	<0.034	**1.5**	<0.028	<0.040	<0.044	<0.016	ND
		6/1/2018	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**1.6**	<0.21	<0.12	<0.11	<0.074	ND
		7/12/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.8**	<0.18	<0.17	<0.12	<0.086	Isopropylbenzene (Cumene) **0.51** J1 N2
		8/2/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**2.9**	<0.18	<0.17	<0.12	<0.086	ND
		9/4/2018	Pace	--	--	<0.14	0.54	<0.16	<0.19	**2.6**	<0.18	<0.17	<0.12	<0.086	ND
		10/1/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**2.2**	<0.18	<0.17	<0.12	<0.086	Isopropylbenzene **0.69**
		11/20/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.3**	<0.18	<0.17	<0.12	<0.086	ND
		12/20/2018	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.5**	<0.18	<0.17	<0.12	<0.086	ND
		1/9/2019	Pace	--	--	<0.37	<0.22	<0.28	<0.21	<0.39	<0.35	<0.48	<0.23	<0.37	ND
		2/19/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.3**	<0.18	<0.17	<0.12	<0.086	ND
		3/13/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.9**	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**3.5**	<0.18	<0.17	<0.12	<0.086	ND
		5/20/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.2**	<0.18	<0.17	<0.12	<0.086	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-21RR After Treatment System (cont.)	A. Oechsner N7548 Hwy. 67 Mayville	6/12/2019	Northern Lake Services	--	--	<1.5	<0.23	<0.31	<0.25	**1.4**	<0.47	<0.28	<0.30	<0.20	ND
		7/9/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**2.6**	<0.18	<0.17	<0.12	<0.086	ND
		8/15/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**4.2**	<0.18	<0.17	<0.12	<0.086	ND
		9/19/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**1.5**	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	--	--	<0.14	<0.15	<0.16	<0.19	**4.9**	<0.18	<0.17	<0.12	<0.086	ND
		11/19/2019	Pace	--	--	<1.5	<0.23	<0.31	<0.25	**3**	<0.47	<0.28	<0.30	<0.20	ND
		12/6/2019	Pace	--	--	<1.5	<0.23	<0.31	<0.25	**2.3**	<0.47	<0.28	<0.30	<0.20	ND
		1/8/2020	Pace	--	--	<0.071	<0.087	<0.079	<0.088	**3.7**	<0.045	<0.064	<0.053	<0.068	ND
		2/3/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**3.9**	<0.18	<0.17	<0.12	<0.086	ND
		3/4/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**5.6**	<0.18	<0.17	<0.12	<0.086	ND
		6/11/2020	Pace	--	--	<0.071	<0.087	<0.079	<0.088	**2.1**	<0.045	<0.064	<0.053	<0.068	ND
		7/6/2020	Pace	--	--	<0.071	<0.087	<0.079	<0.088	**1.3**	<0.045	<0.064	<0.053	<0.068	ND
		8/3/2020	Pace	--	--	<2.7	<0.40	<0.43	<0.28	**1.2**	<0.24	<0.27	<0.46	<0.19	ND
		9/18/2020	Pace	--	--	<2.7	<0.40	<0.28	<0.28	**1.7**	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	--	--	<2.7	<0.40	<0.28	<0.28	**1.7**	<0.24	<0.27	<0.46	<0.19	ND
		11/12/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**2.2**	<0.18	<0.17	<0.12	<0.086	Chlorobenzene **0.23** J2
		12/21/2020	Pace	--	--	<0.34	<0.15	<0.16	<0.19	**1.7**	<0.18	<0.17	<0.12	<0.086	Chlorobenzene **0.19** J2
Semi-annual Monitoring Locations															
PW-19	Antonioni W2831 Zion Church Rd. Mayville	6/28/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**0.30** J	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	**45.1**	**372**	<0.31	<0.13	<0.072	<0.16	<0.08	<0.14	<0.16	<0.11	<0.16	ND
		4/3/2013	Pace	**40.2**	**339**	<0.31	<0.13	<0.072	<0.16	**0.55**	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**38.3**	**355**	<0.22	<0.40	<0.20	<0.23	**0.82**	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**37.9**	**375**	<0.50	<0.50	<0.25	<0.24	**0.65**	<0.21	<0.25	<0.13	<0.20	ND
		10/6/2014	Pace	**43.1**	**341**	<0.27	<0.34	<0.087	<0.17	**0.63** J	<0.15	<0.12	<0.084	<0.082	ND
		6/3/2015	Pace	**41.1**	**352**	<0.34	<0.64	<0.19	<0.17	**0.63**	<0.18	<0.15	<0.14	<0.15	ND
		10/6/2015	Pace	**47.7**	**340**	<0.88	<0.20	<0.15	<0.17	**0.73**	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**42.6**	**335**	<0.34	<0.64	<0.19	<0.17	**0.59**	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**45.7**	**349**	<0.18	<0.21	<0.088	<0.089	**0.64**	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	**45.7**	**353**	<0.18	<0.21	<0.088	<0.089	**0.55**	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**55.9**	**360**	<0.32	<1.1	<0.14	<0.18	**0.45**	<0.21	<0.12	<0.11	<0.074	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-19 (cont.)	Antonioni W2831 Zion Church Rd. Mayville	4/3/2018	Pace	**52**	**362**	<0.32	<1.1	<0.14	<0.18	**0.54**	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**51.3**	**348**	<0.14	<0.15	<0.16	<0.19	**0.58**	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	**41.4**	**326**	<0.14	<0.15	<0.16	<0.19	**1.2**	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**54.1**	**347**	<0.14	<0.15	<0.16	<0.19	**2.2**	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**45.1**	**353**	<2.7	<0.40	<0.28	<0.28	**1.2**	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	**54.2**	**362**	<2.7	<0.40	<0.28	<0.28	**1.1** J2	<0.24	<0.27	<0.46	<0.19	ND
PW-20	Sellnow N7627 Hwy. 67 Mayville	3/11/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	**0.22** JB	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
		1/21/2010	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	<0.13	<0.11	<0.10	<0.12	<0.13	ND
		4/6/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	<0.30	<0.30	<0.11	<0.28	<0.20	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.032	ND
		10/6/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		4/13/2012	TA	**33**	**310**	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	**45.6**	**323**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**29.3**	**340**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**22.3**	**312**	<0.22	<0.40	<0.20	<0.23	<0.12	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**27.7**	**385**	<0.50	<0.50	<0.25	<0.24	<0.23	<0.21	<0.25	<0.13	<0.20	ND
		10/6/2014	Pace	**28.4**	**315**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		4/17/2015	Pace	**62.8**	**365**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**26.4**	**327**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**23.0**	**330**	<0.34	<0.64	<0.19	<0.17	<0.17	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**27.2**	**325**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		4/6/2017	Pace	**30.4**	**333**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/5/2017	Pace	**22.5**	**327**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	**20.6**	**334**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**19.3**	**323** M0	<1.3	<2.2	<0.27	<0.24	<0.27	<1.1	<0.33	<0.26	<0.17	ND
		4/5/2019	Pace	**25.8**	**319**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**18.8**	**319**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**16.7**	**325**	<0.27	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
		11/12/2020	Pace	**14.6**	**310** M0	<0.34	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND

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Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-23	Weiss W2978 Zion Church Rd. Mayville	3/11/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	**0.25** JB	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	<0.13	<0.11	<0.10	<0.12	<0.13	ND
		4/6/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	<0.30	<0.30	<0.11	<0.28	<0.20	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.032	ND
		10/6/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		4/11/2012	TA	**160**	**320**	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	**135**	**358**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**108**	**385**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**107**	**426**	<0.22	<0.40	<0.20	<0.23	<0.12	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**94.4**	**383**	<0.50	<0.50	<0.25	<0.24	<0.23	<0.21	<0.25	<0.13	<0.20	ND
		10/6/2014	Pace	**99.3**	**405**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		4/17/2015	Pace	**108**	**379**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**100**	**424**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**66.7**	**353**	<0.34	<0.64	<0.19	<0.17	<0.17	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**76.7**	**391**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	**83.6**	**411**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**103**	**412**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	**84.1**	**501**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**111**	**382**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	**94.1**	**379**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**62.7**	**367**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**106**	**375**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	**105**	**398**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
PW-27 (Abandoned)	All Line Construction N7477 Hwy. 67 Mayville	2/24/2009	NLS	--	--	<0.79	<0.31	**0.91**	**0.36** J	**120**	**3.9**	<0.15	**2.9**	**12**	ND
			CT	--	--	**3.0**	**1.1** B	**1.0**	**0.47** J	**110**	**4.4**	<0.30	**2.8**	**9.4**	ND
		3/11/2009	NLS	--	--	<0.95	<0.16	**0.70** J	**0.26** J	**100**	**3.2**	<0.20	**2.4**	**8.3**	ND
			CT	--	--	**2.4**	<0.22	**0.81**	**0.41** J	**89**	**4.1**	<0.30	**2.7**	**7.1**	ND
		6/30/2009	Siemens	--	--	**2.55**	<0.40	**0.91** J	**0.45** J	**115**	**3.71**	<0.30	**2.83**	**8.26**	ND
		2/10/2011	Siemens	**32.3**	**386**	**1.98** J	<0.40	**0.74** J	<0.40	**101**	**3.45**	<0.30	**2.31**	**6.48**	ND
		5/2/2012	Siemens	**26.4**	**334**	**1.42** J	<0.40	**0.42** J	<0.40	**53.6**	**1.81**	<0.30	**1.19** J	**4.02**	ND
		12/17/2012	Pace	**39.9**	**349**	**2.3**	<0.13	**0.69**	**0.17** J	**86.2**	**2.8**	<0.16	**1.2**	**9.1**	Methyl-tert-butyl ether **0.092** J 1,2,4 Trimethylbenzene **0.052** J
		2/20/2013	Pace	**36.7**	**360**	**2.30**	<0.13	**0.77**	<0.16	**87**	**3.30**	<0.16	**1.90**	**7.10**	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-28	W. Muche N7650 Hwy. 67 Mayville	3/11/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	**0.18** J	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	**0.24** J	<0.27	<0.30	<0.24	<0.11	ND
		6/30/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	**0.19** J	<0.28	<0.20	<0.25	<0.19	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	**0.28** J	<0.11	<0.10	<0.12	<0.13	ND
		4/6/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	**0.39** J	<0.30	<0.11	<0.28	<0.20	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	**0.30** J	<0.050	<0.050	<0.050	<0.032	ND
		10/6/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	**0.33** J	<0.30	<0.15	<0.25	<0.032	ND
		4/11/2012	TA	**17**	**280**	<0.50	<0.30	<0.25	<0.15	**0.45** J	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	**15.3**	**316**	<0.31	<0.13	<0.072	<0.16	**0.74**	<0.14	<0.16	<0.11	<0.16	ND
		4/3/2013	Pace	**16.1**	**339**	<0.31	<0.13	<0.072	<0.16	**1**	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**18.0**	**353**	<0.22	<0.40	<0.20	<0.23	**1.4**	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**18.3**	**374**	<0.17	<0.34	<0.077	<0.13	**1.2**	<0.15	<0.099	<0.084	<0.20	ND
		10/6/2014	Pace	**26.2**	**331**	<0.27	<0.34	<0.087	<0.17	**1.8**	<0.15	<0.12	<0.084	<0.082	ND
		4/17/2015	Pace	**21.7**	**344**	<0.27	<0.34	<0.087	<0.17	**2.0**	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**24.4**	**365**	<0.88	<0.20	<0.15	<0.17	**2.5**	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**24.1**	**362**	<0.34	<0.64	<0.19	<0.17	**2.2**	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**27.2**	**354**	<0.18	<0.21	<0.088	<0.089	**2.1**	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	**27.4**	**354**	<0.18	<0.21	<0.088	<0.089	**2.3**	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**26.8**	**352**	<0.32	<1.1	<0.14	<0.18	**2.6**	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	**27.3**	**370**	<0.32	<1.1	<0.14	<0.18	**2.5**	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**27**	**354**	<0.14	<0.15	<0.16	<0.19	**3.0**	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	**26.9**	**350**	<0.14	<0.15	<0.16	<0.19	**2.8**	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**29.8**	**341**	<0.14	<0.15	<0.16	<0.19	**3.7**	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**31.6**	**356**	<2.7	<0.40	<0.28	<0.28	**2.8**	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	**32.3**	**364**	<2.7	<0.40	<0.28	<0.28	**3.7**	<0.24	<0.27	<0.46	<0.19	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-32	J. Oechsner W2983 Zion Church Rd. Mayville	4/7/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	**0.12** J2	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
		9/23/2009	NLS	--	--	<1.2	<0.48	<0.19	<0.22	<0.17	<0.19	<0.17	<0.23	<0.21	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	**0.14** J	<0.11	<0.10	<0.12	<0.13	ND
		4/5/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	<0.30	<0.30	<0.11	<0.28	<0.20	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.032	Chlorobenzene **0.050** J
		10/6/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		4/11/2012	TA	**41**	**300**	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	**40.2**	**349**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**39.8**	**478**	<0.31	<0.13	<0.072	<0.16	**0.27** J	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**40.5**	**362**	<0.22	<0.40	<0.20	<0.23	<0.12	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**40.7**	**374**	<0.50	<0.50	<0.25	<0.24	**0.30** J	<0.21	<0.25	<0.13	<0.20	ND
		10/6/2014	Pace	**41.2**	**355**	<0.27	<0.34	<0.087	<0.17	**0.33** J	<0.15	<0.12	<0.084	<0.082	ND
		4/24/2015	Pace	**35.4**	**334**	<0.27	<0.34	<0.087	<0.17	**0.16** J	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**37.1**	**355**	<0.88	<0.20	<0.15	<0.17	**0.53**	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**39.0**	**348**	<0.34	<0.64	<0.19	<0.17	**0.32** J	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**42.3**	**345**	<0.18	<0.21	<0.088	<0.089	**0.39** J	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	**41.6**	**340**	<0.18	<0.21	<0.088	<0.089	**0.26** J	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**45.1**	**358**	<0.32	<1.1	<0.14	<0.18	**0.31**	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	**43.6**	**373** M0	<0.32	<1.1	<0.14	<0.18	**0.21** J1	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**43.2**	**347**	<0.14	<0.15	<0.16	<0.19	**0.37** J1	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	**44**	**337**	<0.14	<0.15	<0.16	<0.19	**0.33** J1	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**48.1**	**342**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**45**	**345**	<2.7	<0.40	<0.28	<0.28	**0.42** J2	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	**43.4**	**353**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-38	King N7746 Hwy. 67 Mayville	5/14/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	**0.57** J	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
		7/14/2010	NLS	--	--	<1.0	<0.16	<0.14	<0.11	<0.13	<0.11	<0.10	<0.12	<0.13	ND
		4/6/2011	NLS	--	--	<1.6	<0.29	<0.23	<0.13	<0.30	<0.30	<0.11	<0.28	<0.20	ND
			TA	--	--	<0.10	<0.20	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.032	Toluene **0.22** J
		10/6/2011	TA	--	--	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	Toluene **0.35** J
		4/11/2012	TA	<3.1	**310**	<0.50	<0.30	<0.25	<0.15	<0.30	<0.30	<0.15	<0.25	<0.032	ND
		10/5/2012	Pace	<2.0	**338**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**2.4** J	**268**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/1/2013	Pace	**3.2** J	**349**	<0.22	<0.40	<0.20	<0.23	<0.12	<0.20	<0.19	<0.18	<0.19	ND
		4/25/2014	Pace	**2.9** J	**361**	<0.50	<0.50	<0.25	<0.24	<0.23	<0.21	<0.25	<0.13	<0.20	ND
		10/6/2014	Pace	**3.2** J	**335**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		4/24/2015	Pace	**2.9** JB	**338**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**2.7** J	**341**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		4/5/2016	Pace	**3.0** J	**344**	<0.34	<0.64	<0.19	<0.17	<0.17	<0.18	<0.15	<0.14	<0.081	ND
		10/4/2016	Pace	**1.6** J	**340**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	**1.5** J	**339**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**2.5**	**334**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		4/3/2018	Pace	**1.8** J1	**350**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**1.6** J1	**330**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		4/3/2019	Pace	**1.8** J1	**330**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**2.1**	**328**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		6/24/2020	Pace	**2**	**340**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
		10/14/2020	Pace	**1.6** J2	**340**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND

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Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-J	Glacier Ridge Landfill	10/30/2013	Pace	**28.8**	**395**	<0.44	<0.39	<0.28	<0.43	<0.42	<0.37	<0.47	<0.36	<0.18	ND
		10/8/2014	Pace	**27.3**	**369**	<0.37	<0.5	<0.24	<0.41	<0.26	<0.26	<0.5	<0.33	<0.18	ND
		10/7/2015	Pace	**27.7**	**387**	<0.37	<0.5	<0.24	<0.41	<0.26	<0.26	<0.5	<0.33	<0.18	ND
		10/6/2016	Pace	**30.1**	**368**	<0.37	<0.5	<0.24	<0.41	**0.8** J	<0.26	<0.5	<0.33	<0.18	ND
		2/2/2017	Pace	--	--	<0.18	<0.21	<0.088	<0.089	**1.5**	<0.11	<0.12	<0.044	<0.098	ND
		4/4/2017	Pace	--	--	<0.37	<0.5	<0.24	<0.41	**1.7**	<0.26	<0.5	<0.33	<0.18	ND
		10/3/2017	Pace	**27.8**	**367**	<0.37	<0.5	<0.24	<0.41	**4.6**	**0.35** J	<0.5	<0.33	<0.18	ND
		12/8/2017	Pace	--	--	<0.32	<1.1	<0.14	<0.18	**3.0**	<0.21	<0.12	<0.11	<0.074	Naphthalene **0.73** J Toluene **0.62**
		4/3/2018	Pace	**24.5**	**379 M**	<0.37	<0.5	<0.24	<0.41	**7.1**	**0.43** J	<0.5	<0.33	<0.18	ND
		6/1/2018	Pace	--	--	<0.37	<0.5	<0.24	<0.41	**6.5**	**0.38** J	<0.5	<0.33	<0.18	ND
		6/1/2018 (Dup)	Pace	--	--	<0.5	<0.7	<0.3	<0.4	**5.5**	<0.6	<0.5	<0.3	<0.19	ND
		10/5/2018	Pace	**18.1**	**346**	<1.3	<2.2	<0.27	<0.24	**4.8**	<1.1	<0.33	<0.26	**0.19** J	ND
		10/5/2018 (Dup)	Pace	**18.3**	**348**	<1.3	<2.2	<0.27	<0.24	**4.9**	<1.1	<0.33	<0.26	<0.17	ND
		5/31/2019	Pace	**23.5**	**325**	<1.3	<2.2	<0.27	<0.24	**8.1**	<1.1	<0.33	<0.26	<0.17	Acetone **3.0** J1
		7/9/2019	Pace	--	--	<1.3	<2.2	<0.27	<0.24	**7.3**	<1.1	<0.33	<0.26	<0.17	ND
		10/8/2019	Pace	**23.6**	**345**	<1.3	<2.2	<0.27	<0.24	**6.8**	<1.1	<0.33	<0.26	<0.17	Acetone **7.7** J1
		10/8/2019 (Dup)	Pace	**23.9**	**335**	<1.3	<2.2	<0.27	<0.24	**7.4**	<1.1	<0.33	<0.26	<0.17	Acetone **6.2** J1
		4/22/2020	Pace	**25.1**	**341**	<1.3	<2.2	<0.27	<0.24	**6.8**	**0.64** J2	<0.33	<0.26	<0.17	Acetone **4.2** J2
		10/8/2020	Pace	**24.6**	**370**	<1.3	<2.2	<0.27	<0.24	**8.4**	**0.51** J2	<0.33	<0.26	<0.17	Acetone **4.2** J2
Annual Monitoring Locations															
PW-42	Steinbach W2772 Zion Church Rd. Mayville	10/5/2012	Pace	<2.0	**324**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**2.2** J	**320**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/6/2014	Pace	**3.4** J	**327**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**3.0** J	**342**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		10/4/2016	Pace	**1.6** J	**330**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**2.3**	**328**	<0.32	<1.1	<0.14	<0.018	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**1.9** J1	**322**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<-0.12	<0.086	ND
		10/9/2019	Pace	**2.8**	**327**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/14/2020	Pace	**1.9** J2	**330**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-43	Hinz W2698 Zion Church Rd. Mayville	10/5/2012	Pace	**11.4**	**215**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/3/2013	Pace	**10.8**	**211**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/6/2014	Pace	**12.9**	**226**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**15**	**223**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		10/4/2016	Pace	**12.5**	**218**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**12.2**	**225**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.21	<0.11	<0.074	ND
		10/1/2018	Pace	**16.4**	**217**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/8/2019	Pace	**13.2**	**218**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/14/2020	Pace	**11.7**	**211**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
PW-44	Christian N7686 Ekren Rd. Mayville	10/5/2012	Pace	<2.0	**291**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		4/2/2013	Pace	**2.3** J	**316**	<0.31	<0.13	<0.072	<0.16	<0.080	<0.14	<0.16	<0.11	<0.16	ND
		10/6/2014	Pace	**2.9** J	**319**	<0.27	<0.34	<0.087	<0.17	<0.11	<0.15	<0.12	<0.084	<0.082	ND
		10/6/2015	Pace	**2.7** J	**342**	<0.88	<0.20	<0.15	<0.17	<0.16	<0.18	<0.13	<0.19	<0.10	ND
		10/4/2016	Pace	**1.2** J	**326**	<0.18	<0.21	<0.088	<0.089	<0.085	<0.11	<0.12	<0.044	<0.098	ND
		10/3/2017	Pace	**1.6** J	**332**	<0.32	<1.1	<0.14	<0.18	<0.073	<0.21	<0.12	<0.11	<0.074	ND
		10/1/2018	Pace	**1.3** J1	**316**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	Styrene **0.92**
		10/8/2019	Pace	**2**	**323**	<0.14	<0.15	<0.16	<0.19	<0.14	<0.18	<0.17	<0.12	<0.086	ND
		10/14/2020	Pace	**1.4** J2	**330**	<2.7	<0.40	<0.28	<0.28	<0.35	<0.24	<0.27	<0.46	<0.19	ND
Non-Routine Monitoring Locations															
PW-1	Church View Farms J. Qualmann N7110 Hwy. V Horicon	4/7/2009	NLS	**34**	**240**	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
PW-3	Horicon Marsh Bowmen N7240 Hwy. V	4/30/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-4	Advanced Disposal N7271 Hwy. V Horicon	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
None	Wondra N7877 Hwy 67 Mayville	10/22/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	Chloroform **0.36**
PW-18	Advanced Disposal N7785 Hwy. 67 Mayville	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-18 Hand Pump	Advanced Disposal N7785 Hwy. 67 Mayville	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs
PW-24	St. John's Lutheran Church N7074 Hwy. V	4/30/2009	NLS	**33**	**320**	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	**0.3** J	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-26	Goodearle W3653 Decora Rd. Horicon	4/30/2009	NLS	**13**	**310**	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
PW-29	Persha N7241 Hwy. 67 Mayville	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-30	Wendorff N7306 Hwy. 67 Mayville	6/23/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-31	Wendorff N7306 Hwy. 67 Mayville	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-33	Lagerman W3230 STH 33 Iron Ridge	4/3/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-34	R H Equipment N7123 Hwy. 67 Mayville	4/13/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-35	Lewis N7143 Hwy. 67 Mayville	4/13/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-36	Mayville Animal Clinic N7860 Hwy. 67 Mayville	4/21/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND
PW-37	Halsne N7817 Hwy. 67 Mayville	4/30/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND
			CT	--	--	<0.40	**0.40** J	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020
(Results are in µg/L, except where otherwise noted)

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

Well Number	Well Owner	Sample Date	Lab	Chloride (mg/L)	Alkalinity (mg/L)	Chloroethane	Chloromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Other VOCs	
PW-Office Well	Advanced Disposal N7296 Hwy. V Horicon	4/7/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	**3.5**	<0.25	<0.19	1,4 Dichlorobenzene	**0.27** J
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	**3.3**	<0.24	<0.11	1,4 Dichlorobenzene	**0.22** J
		4/30/2009	NLS	--	--	<0.95	<0.16	<0.25	<0.18	<0.10	<0.28	<0.20	<0.25	<0.19	ND	
			CT	--	--	<0.40	<0.22	<0.21	<0.24	<0.21	<0.27	<0.30	<0.24	<0.11	ND	
NR 140 Groundwater Enforcement Standard				250	NS	400	30	850	7	70	100	5	5	0.2	1,2-Dichloroethane 1,4 Dichlorobenzene Benzene Chloroform Chlorobenzene Methyl-tert-butyl ether Methylene Chloride Styrene Toluene Trimethylbenzenes Acetone	5 75 5 6 100 60 5 100 800 480 9000
Drinking Water Standard (Maximum Contaminant Level)				250	NS	NS	NS	NS	7	70	100	5	5	0.2	1,2-Dichloroethane 1,4 Dichlorobenzene Benzene Chloroform (TTHM) Methylene Chloride Styrene Toluene Acetone	5 75 5 80 5 100 1,000 NE

\\Mad-fs01\data\Projects\25221008.02\Deliverables\2020 Annual Report\Tables\[Table4_Water Supply Well VOCs.xlsx]Results

Table 4. LGRL VOC Investigation Water Supply Well Sample Results - Through December 2020

Abbreviations:
NS = No standard established
TTHM = Trihalomethanes (disinfection byproducts including chloroform)
ND = Not detected
mg/L = Milligrams per Liter
µg/L = Micrograms per Liter
-- = Not Analyzed

CT = CT Laboratories, Baraboo, WI
NLS = Northern Lake Service, Inc., Crandon, WI
Siemens = Siemens Water Technologies
TA = TestAmerica, Watertown, WI
Pace = Pace Analytical Services, Inc., Green Bay, WI

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

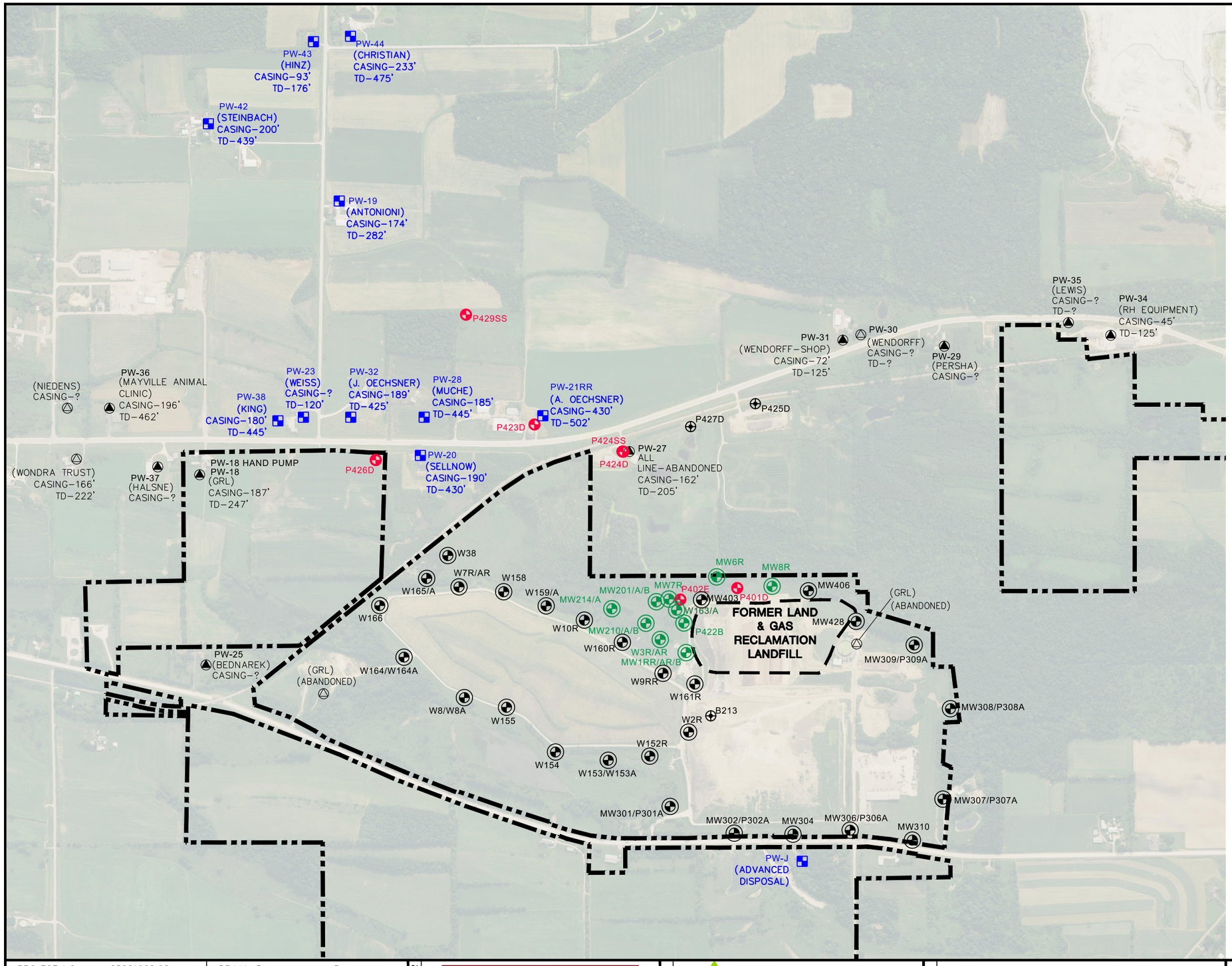
Notes:
* Sample collected at the pressure tank prior to the iron filtration system.
** Sample collected at the kitchen tap after the water passed through the iron filtration system.

Laboratory Notes/Qualifiers:
B = Compound also detected in blank sample
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).
J2 = Result enclosed in brackets is between the Limit of Detection (LOD) and Limit of Quantitation (LOQ), and region of less certain quantititaion.
H1 = Analysis conducted outside the recognized method holding time. Analyzed 2 days outside of hold time.
L2 = Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
L3 = Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
N2 = The lab does not hold The Nelac Institute (NELAC/TNI) accreditation for this parameter.

Created by:	JSN	Date:	4/27/2009
Last revision by:	AJR	Date:	5/14/2021
Checked by:	SCC	Date:	5/14/2021
Proj Mgr QA/QC:	SCC	Date:	5/14/2021

\\Mad-fs01\data\Projects\25221008.02\Deliverables\2020 Annual Report\Tables\[Table4_Water Supply Well VOCs.xlsx]Notes

Figures



N

1,000 0 1,000

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)
- SHALLOW AQUIFER MONITORING WELL/NEST (GRL MONITORING)
- 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. GRL MONITORING WELLS SHOWN ARE NOT PART OF THE LGRL INVESTIGATION BUT ARE USED TO PROVIDE SUPPLEMENTAL INFORMATION ON GROUNDWATER FLOW AND LIMITS OF LGRL IMPACTS ON GROUNDWATER.
6. PW-J IS 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:	04/19/2021	APPROVED BY:	SCC 05/18/2021

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

CLIENT: GFL GREEN FOR LIFE — GLACIER RIDGE LANDFILL, LLC.

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LAND AND GAS RECLAMATION LANDFILL
DODGE COUNTY, WISCONSIN

MONITORING WELL AND PRIVATE WELL LOCATIONS

FIGURE 1

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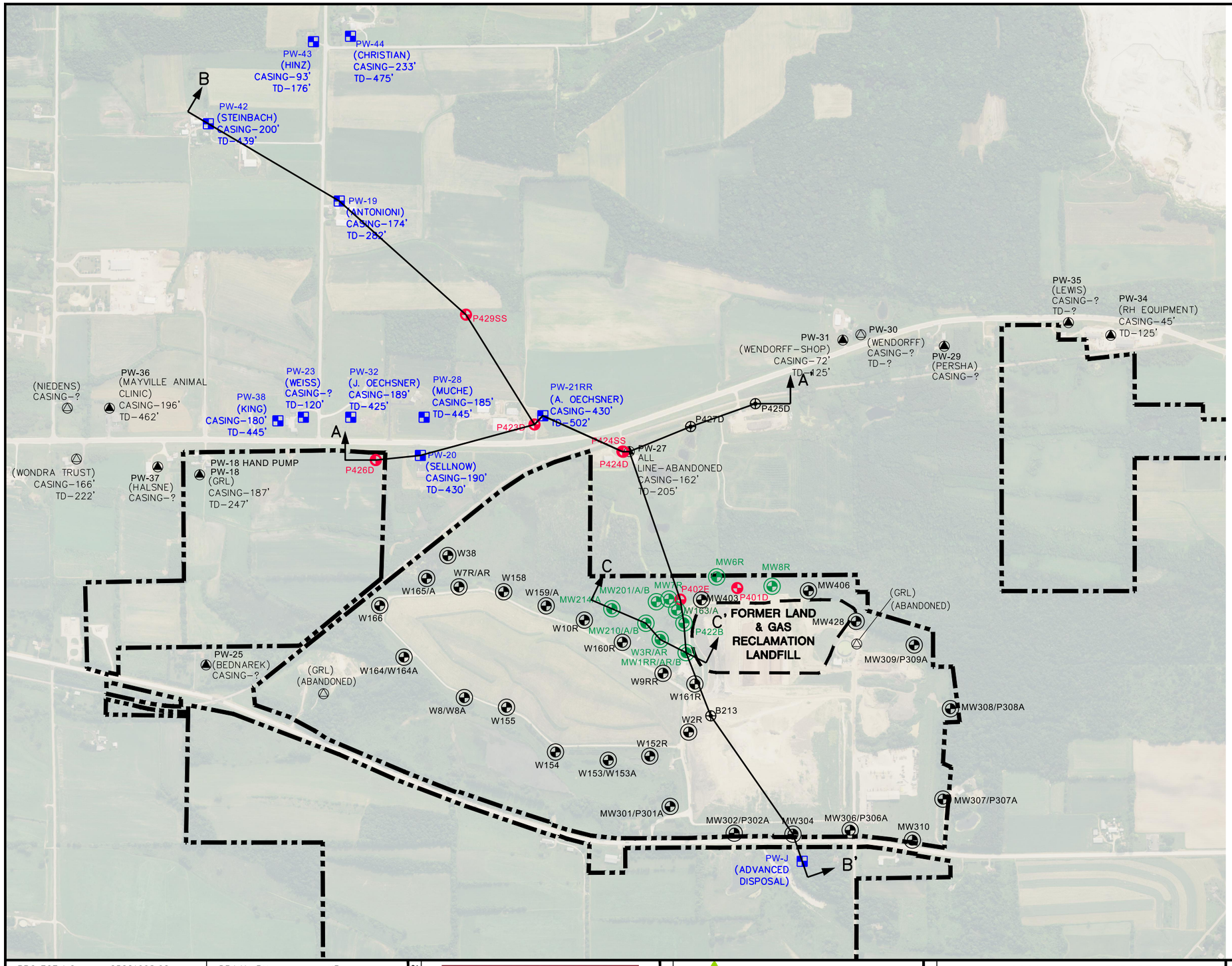

N

1,000 0 1,000

SCALE: 1" = 1,000'

LEGEND

- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
- FORMER LGRL LIMITS OF WASTE
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- SHALLOW AQUIFER MONITORING WELL/NEST (LGRL MONITORING/INVESTIGATION)
- SHALLOW AQUIFER MONITORING WELL/NEST (GRL MONITORING)
- INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- CROSS SECTION LOCATION

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:	04/19/2021	CHECKED BY:	EO
REVISED:	04/19/2021	APPROVED BY:	SCC 05/18/2021

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

CLIENT: GFL GREEN FOR LIFE — GLACIER RIDGE LANDFILL, LLC.

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CROSS SECTION LOCATION MAP

FIGURE 2

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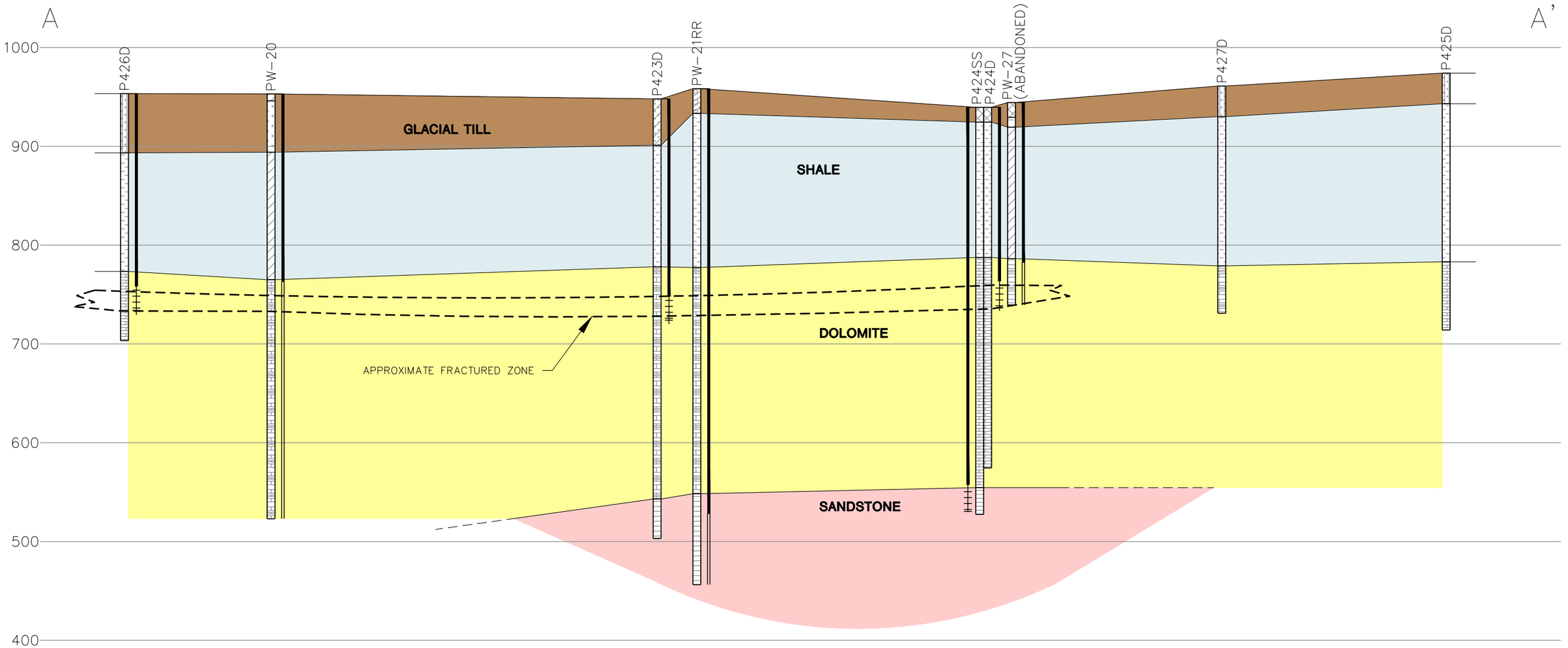

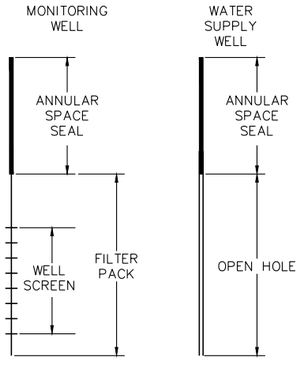

WELL DETAIL

NOTES:

1. THE PORTION OF ANY BOREHOLE EXTENDING BELOW THE MONITORING WELL SCREEN AND FILTER PACK WAS BACKFILLED WITH BENTONITE CHIPS PRIOR TO WELL CONSTRUCTION.
2. MONITORING WELL P423D WAS INSTALLED IN FORMER WATER SUPPLY WELL PW-21R AFTER BACKFILLING THE LOWER PORTION WITH BENTONITE CHIPS.
3. APPROXIMATE FRACTURED ZONE BASED ON BOREHOLE LOGGING AND PACKER PUMPING TEST IN MONITORING WELL BOREHOLES AND PW-27. THE ZONE IS INFERRED AT PW-20 AND PW-21RR, WHICH WERE NOT TESTED.

0 300

HORIZONTAL SCALE: 1" = 300'
VERTICAL SCALE: 1" = 100'
VERTICAL EXAGGERATION = 3X

LEGEND

- SILTY SAND
- SHALE
- DOLOMITE
- LIMESTONE
- LEAN CLAY
- SAND, WELL GRADED
- SAND WITH GRAVEL
- SANDSTONE
- CLAYEY CRAVEL
- FILL

PROJECT NO.	25221008.02	DRAWN BY:	BSS
DRAWN:	04/19/2021	CHECKED BY:	EO
REVISED:	04/19/2021	APPROVED BY:	SCC 05/18/2021

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
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DODGE COUNTY, WISCONSIN

CROSS SECTION A-A'

FIGURE 3

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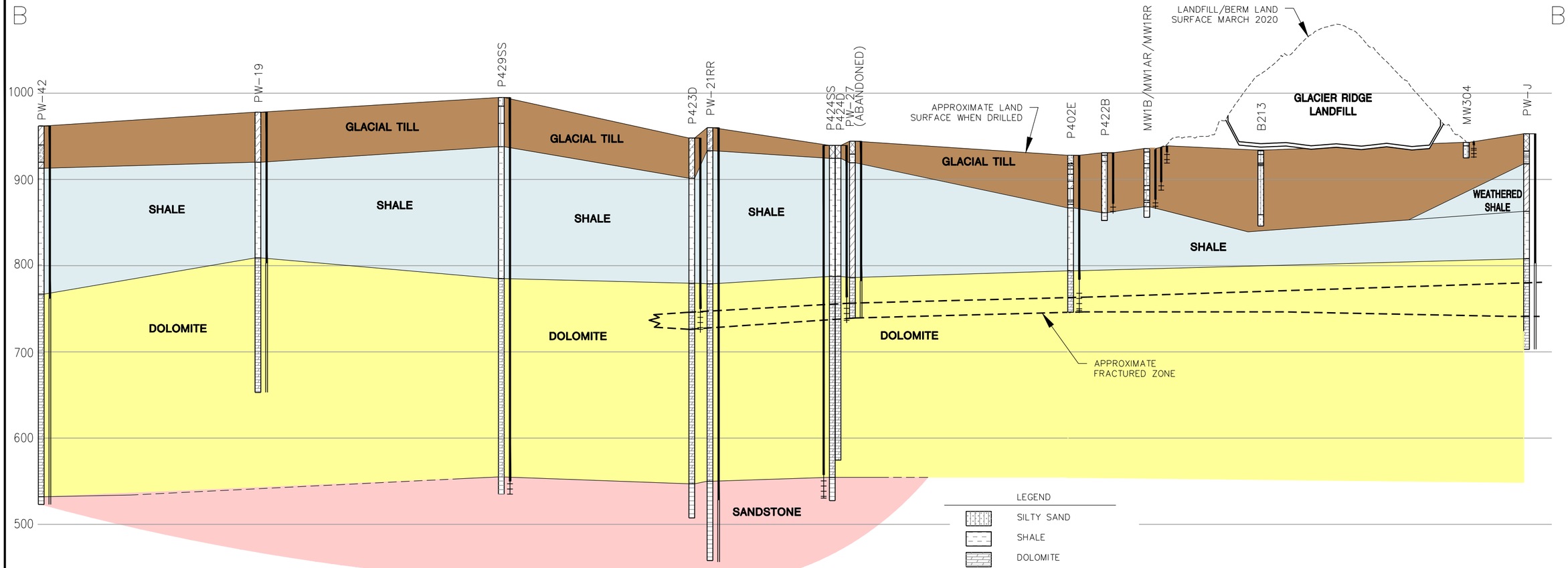

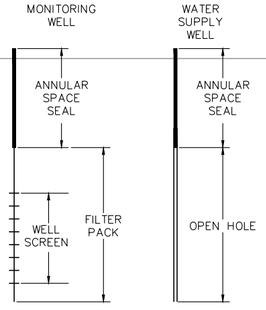

WELL DETAIL

NOTES:

1. APPROXIMATE FRACTURED ZONE BASED ON BOREHOLE LOGGING AND PACKER PUMPING TEST IN MONITORING WELL BOREHOLES AND PW-27. THE ZONE IS INFERRED AT PW-21RR, WHICH WAS NOT TESTED.
2. PW-19 WELL CONSTRUCTION REPORT INDICATES THIS WELL WAS ORIGINALLY DRILLED TO A DEPTH OF 282 FEET. DAN ANTONIONI, THE PRESENT OWNER, STATED ON 02/27/2017 THAT THE WELL WAS DEEPENED TO 325 FEET IN 1962.
3. THE PORTION OF P423D EXTENDING BELOW THE MONITORING WELL SCREEN AND FILTER PACK WAS BACKFILLED WITH BENTONITE CHIPS PRIOR TO WELL CONSTRUCTION.

0 600

HORIZONTAL SCALE: 1" = 600'
VERTICAL SCALE: 1" = 100'
VERTICAL EXAGGERATION = 6X

LEGEND

- SILTY SAND
- SHALE
- DOLOMITE
- LIMESTONE
- LEAN CLAY
- SAND, WELL GRADED
- SAND WITH GRAVEL
- SANDSTONE
- CLAYEY GRAVEL
- FILL
- SILT
- GRAVEL
- SAND, POORLY GRADED
- PEAT

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

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CROSS SECTION B-B'

FIGURE 4

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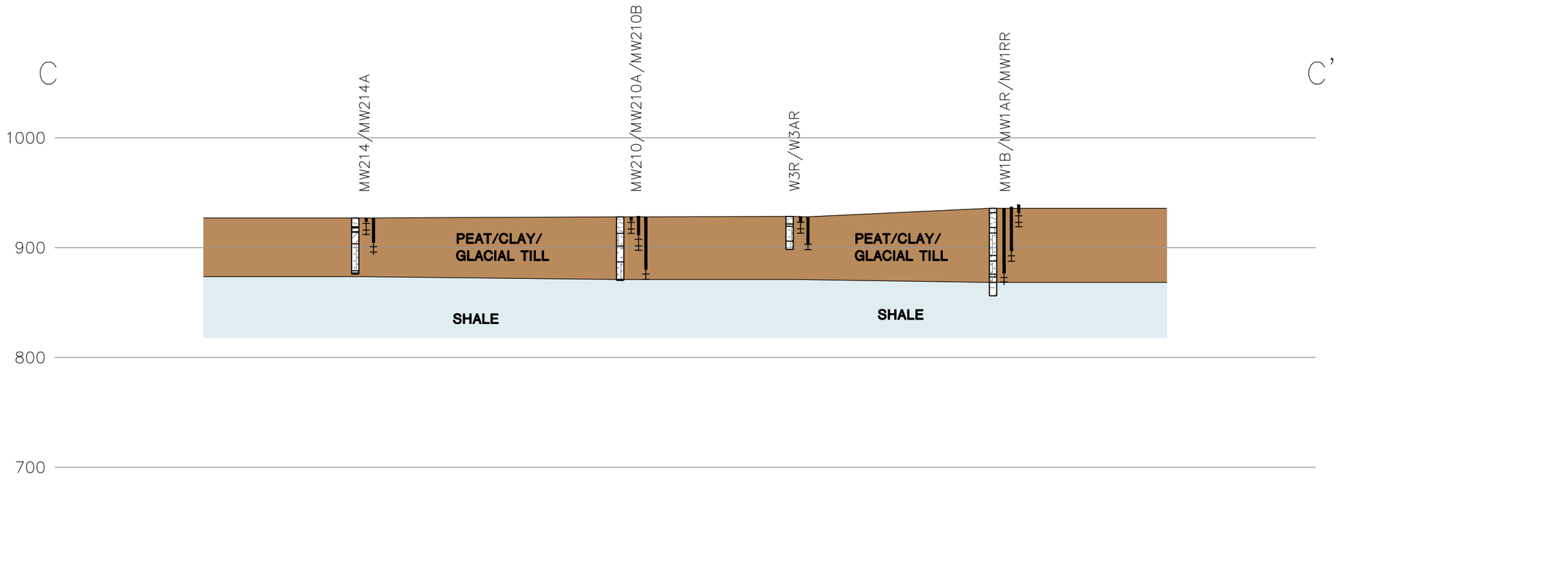

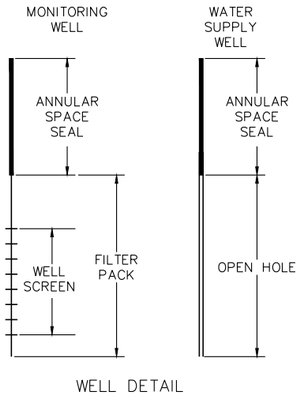

WELL DETAIL

HORIZONTAL SCALE: 1" = 150'
VERTICAL SCALE: 1" = 100'
VERTICAL EXAGGERATION = 1.5X

LEGEND

- SILTY SAND
- SHALE
- DOLOMITE
- LIMESTONE
- LEAN CLAY
- SAND, WELL GRADED
- SAND WITH GRAVEL
- SANDSTONE
- CLAYEY GRAVEL
- FILL
- SILT
- GRAVEL
- SAND, POORLY GRADED
- PEAT

PROJECT NO.	25221008.02	DRAWN BY:	BSS
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REVISED:	04/19/2021	APPROVED BY:	SCC 05/18/2021

ENGINEER

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

CLIENT

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CROSS SECTION C-C'

FIGURE
5

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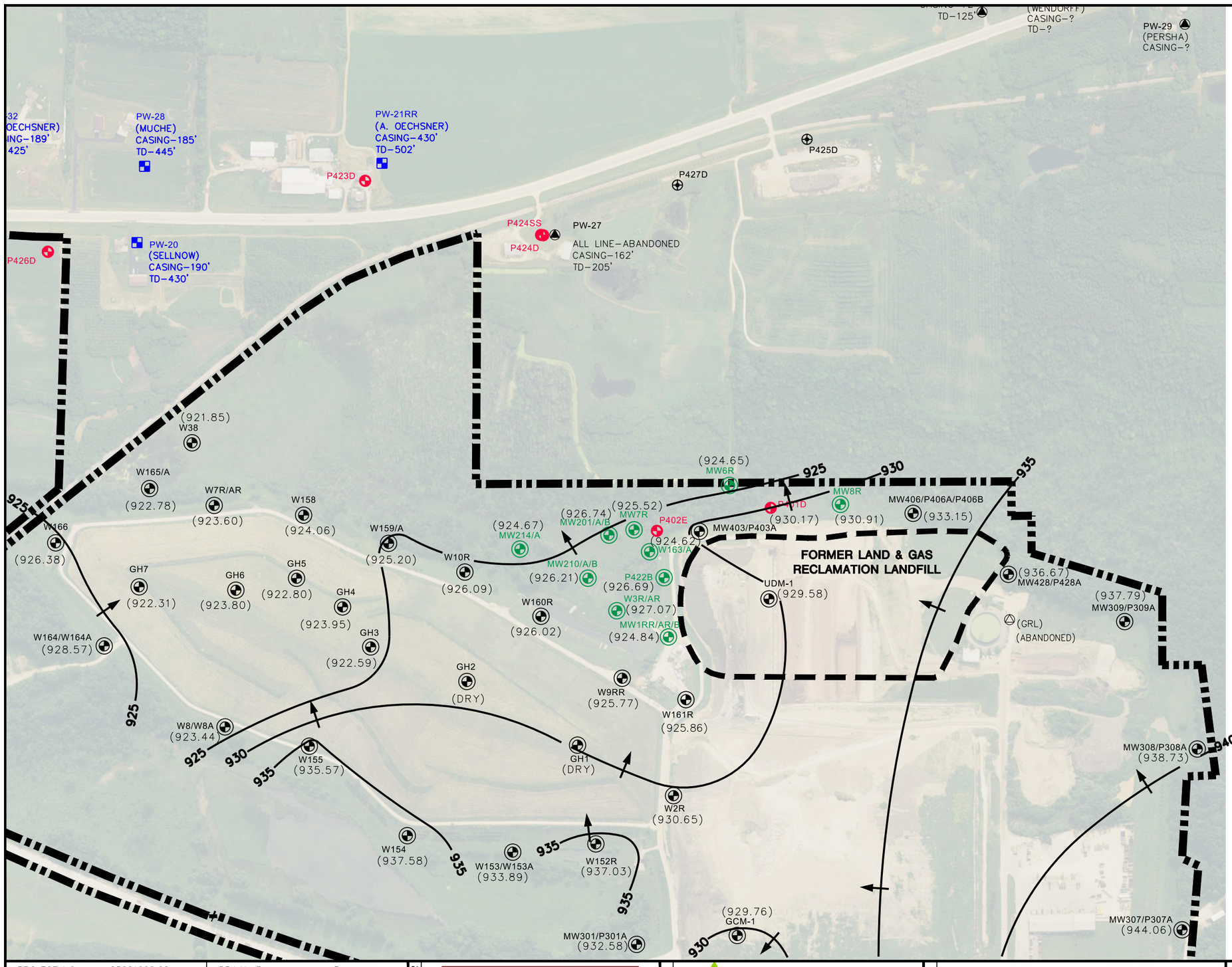

N

500 0 500

SCALE: 1" = 500'

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)
- SHALLOW AQUIFER MONITORING WELL/NEST (GRL MONITORING)
- INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- (939.32) — WATER TABLE ELEVATION MEASURED ON OCTOBER 1–9, 2020
- WATER TABLE 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.
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.

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2830 DAIRY DRIVE MADISON, WI 53718–6751
PHONE: (608) 224–2830

CLIENT: GFL GREEN FOR LIFE — GLACIER RIDGE LANDFILL, LLC.

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DODGE COUNTY, WISCONSIN

SHALLOW GROUNDWATER ELEVATIONS AND WATER TABLE – OCTOBER 2020

FIGURE 6

I:\25221008.02\Drawings\SHALLOW WTBL.dwg, 5/18/2021 12:59:05 PM

N

800 0 800

SCALE: 1" = 800'

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)
- (853.95) — DOLOMITE GROUNDWATER ELEVATION MEASURED IN OCTOBER 2020
- [852.26]* — SANDSTONE GROUNDWATER ELEVATION MEASURED IN OCTOBER 2020 (NOT CONTOURED)
- DOLOMITE GROUNDWATER ELEVATION CONTOUR (0.5' 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.
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.

PW-19 (ANTONIONI) CASING-174' TD-282'
P429SS [844.44]*
PW-36 (MAYVILLE ANIMAL CLINIC) CASING-196' TD-462'
PW-38 (KING) CASING-180' TD-445'
PW-23 (WEISS) CASING-? TD-120'
PW-32 (J. OECHSNER) CASING-189' TD-425'
PW-28 (MUCHE) CASING-185' TD-445'
851.5
852.0
PW-21RR (A. OECHSNER) CASING-430' TD-502'
P423D (851.77)
[851.68]*
P424SS
P424D (852.27)
PW-27 ALL LINE - ABANDONED CASING-162' TD-205'
P425D
P427D
852.5
PW-31 (WENDORFF-SHOP) CASING-72' TD-125'
PW-30 (WENDORFF) CASING-? TD-?
PW-29 (PERSHA) CASING-?
PW-3 (LEWI CASIN TD-?
851.0
PW-37 (HALSNE) CASING-?
PW-18 HAND PUMP
PW-18 (GRL) CASING-187' TD-247'
P426D (850.99)
PW-20 (SELLNOW) CASING-190' TD-430'
853.0
P402E (853.36)
P401D (853.48)
(GRL) (ABANDONED)
FORMER LAND & GAS RECLAMATION LANDFILL
PW-25 (BEDNAREK) CASING-?
(GRL) (ABANDONED)
PW-J (ADVANCED DISPOSAL)

PROJECT NO.	25221008.02	DRAWN BY:	KP
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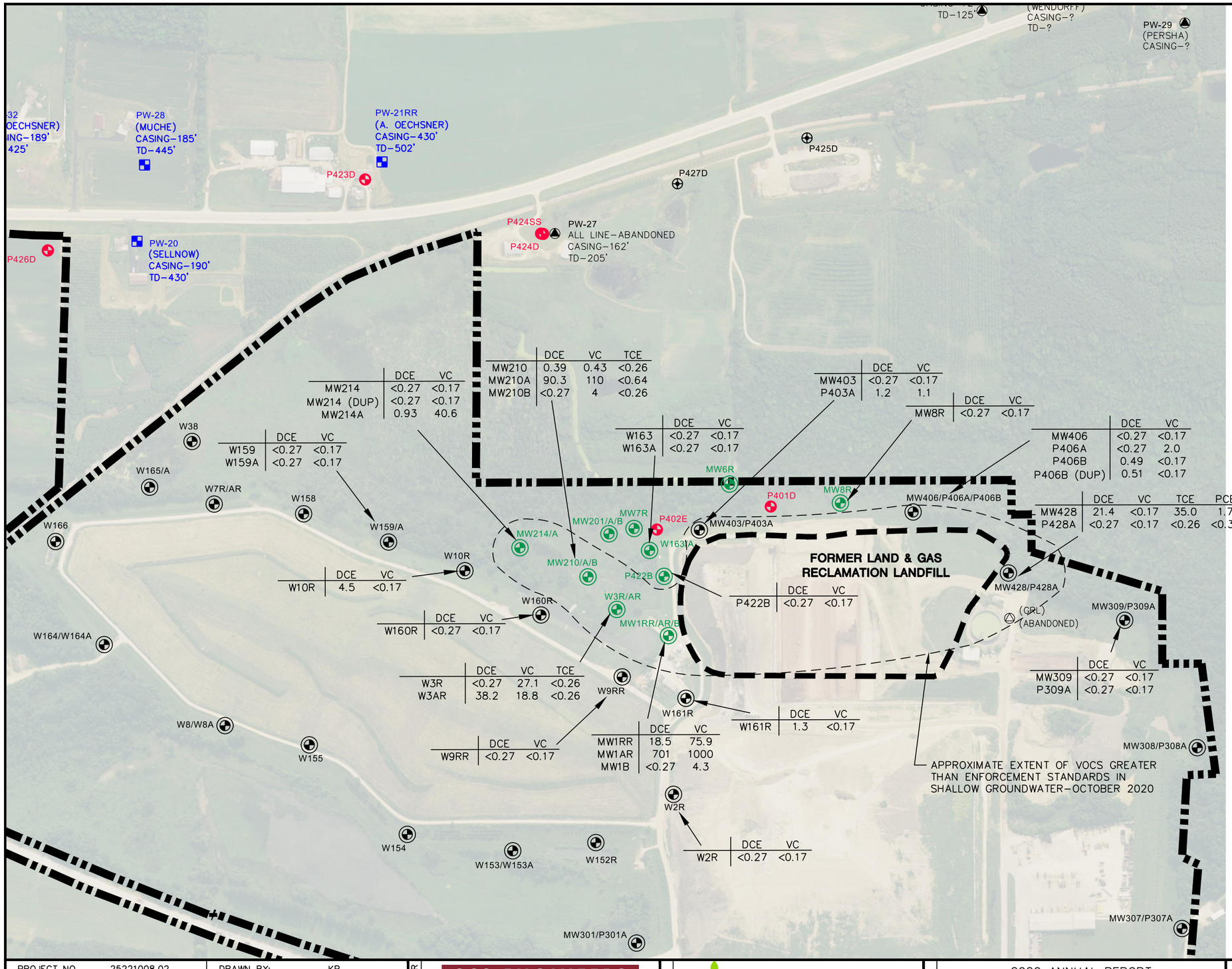
DODGE COUNTY, WISCONSIN

DOLOMITE BEDROCK GROUNDWATER ELEVATIONS AND POTENTIOMETRIC SURFACE CONTOURS – OCTOBER 2020

FIGURE 7

I:\25221008.02\Drawings\BEDROCK WTBL (Dolomite).dwg, 5/18/2021 12:56:34 PM



N

500 0 500

SCALE: 1" = 500'

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)
- SHALLOW AQUIFER MONITORING WELL/NEST (GRL MONITORING)
- INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- DCE — CIS–1,2–DICHLOROETHYLENE (µg/L) (PAL=7; ES=70)
- VC — VINYL CHLORIDE (µg/L) (PAL=0.02; ES=0.2)
- TCE — TRICHLOROETHYLENE (µg/L) (PAL=0.5; ES=5)
- PCE — TETRACHLOROETHYLENE (µg/L) (PAL=0.5; ES=5)

NOTES:

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3. PRIVATE WELL LOCATIONS AND DEPTHS ARE APPROXIMATE BASED ON PLAT MAPS AND WELL LOGS.
4. VOC RESULTS ARE NOT SHOWN FOR ALL WELLS. VOC RESULTS SHOWN ARE FROM OCTOBER 2–9, 2020 SAMPLING EVENT.

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

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DODGE COUNTY, WISCONSIN

VOCS IN SHALLOW GROUNDWATER
OCTOBER 2020

FIGURE 8

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	DCE	VC
PW-43	<0.35	<0.19

PW-43
(HINZ)
CASING-93'
TD-176'

	DCE	VC
PW-44	<0.35	<0.19

PW-44
(CHRISTIAN)
CASING-233'
TD-475'

	DCE	VC
PW-42	<0.35	<0.19

PW-42
(STEINBACH)
CASING-200'
TD-439'

	DCE	VC
PW-19	1.1	<0.19

PW-19
(ANTONIONI)
CASING-174'
TD-282'

	DCE	VC
P429SS	<0.27	<0.17

P429SS

	DCE	VC
PW-28	3.7	<0.19

	DCE	VC
PW-21RR	25	0.69

	DCE	VC
PW-23	<0.35	<0.19

	DCE	VC
PW-32	<0.35	<0.19

	DCE	VC
PW-38	<0.35	<0.19

	DCE	VC
P424D	105	7.4
P424SS	<0.27	<0.17

PW-35
(LEWIS)
CASING-?
TD-?

PW-34
(RH EQUIPMENT)
CASING-45'
TD-125'

PW-31
(WENDORFF-SHOP)
CASING-72'
TD-125'

PW-30
(WENDORFF)
CASING-?
TD-?

PW-29
(PERSHA)
CASING-?

(NIEDENS)
CASING-?

PW-36
(MAYVILLE ANIMAL CLINIC)
CASING-196'
TD-462'

PW-38
(KING)
CASING-180'
TD-445'

PW-23
(WEISS)
CASING-?
TD-120'

PW-32
(J. OECHSNER)
CASING-189'
TD-425'

PW-28
(MUCHE)
CASING-185'
TD-445'

PW-21RR
(A. OECHSNER)
CASING-430'
TD-502'

P423D

P424SS

P424D

P425D

P427D

PW-27
ALL
LINE-ABANDONED
CASING-162'
TD-205'

APPROXIMATE EXTENT OF VOCS GREATER THAN ENFORCEMENT STANDARDS IN BEDROCK-OCTOBER 2020

(WONDRA TRUST)
CASING-166'
TD-222'

PW-37
(HALSNE)
CASING-?

PW-18 HAND PUMP
PW-18
(GRL)
CASING-187'
TD-247'

P426D

	DCE	VC
P426D	<0.27	<0.17

PW-20
(SELLNOW)
CASING-190'
TD-430'

	DCE	VC
P423D	76.4	1.2

	DCE	VC
P401D	1.8	<0.17

	DCE	VC
PW-20	<0.14	<0.086

(SAMPLED IN NOVEMBER 2020)

P402E

P401D

	DCE	VC
P402E	225	29.1

FORMER LAND & GAS RECLAMATION LANDFILL

(GRL)
(ABANDONED)

PW-25
(BEDNAREK)
CASING-?

(GRL)
(ABANDONED)

PW-J
(ADVANCED DISPOSAL)

	DCE	VC
PW-J	8.4	<0.17

N

1,000 0 1,000

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)
- INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- DCE — CIS-1,2-DICHLOROETHYLENE (µg/L) (PAL=7; ES=70)
- VC — VINYL CHLORIDE (µg/L) (PAL=0.02; ES=0.2)

NOTES:

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4. WELL PW-27 AND BOREHOLES P425D AND P427D WERE ABANDONED IN APRIL 2016.

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

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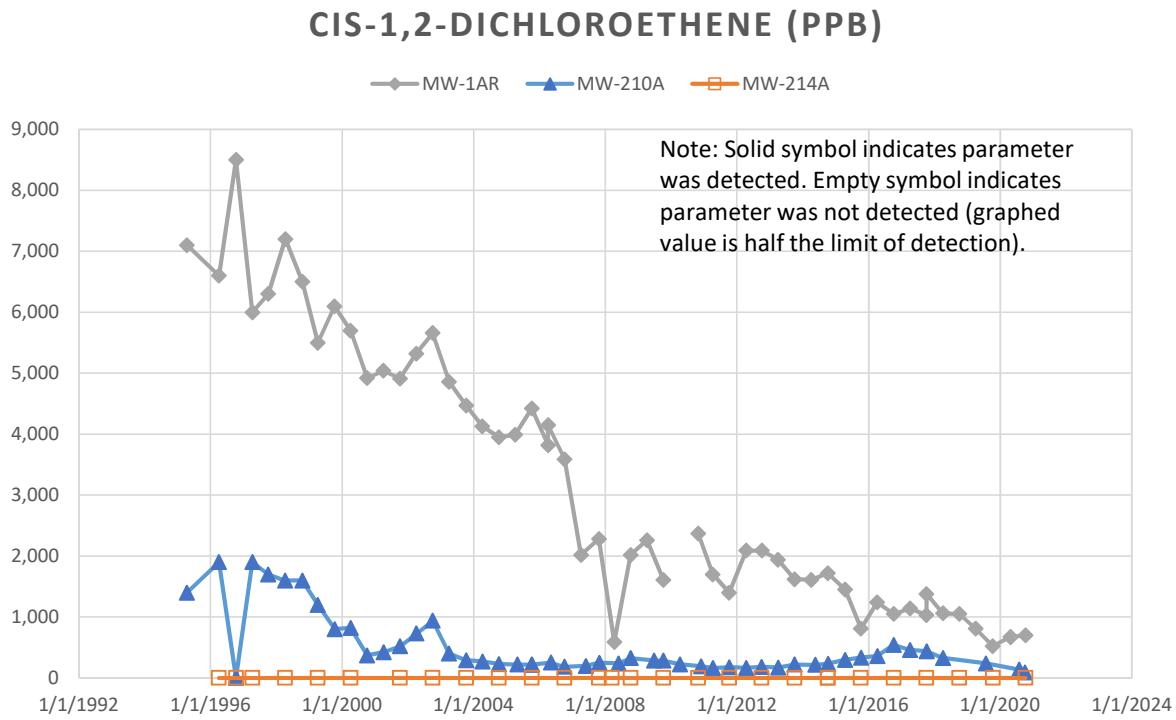
DODGE COUNTY, WISCONSIN

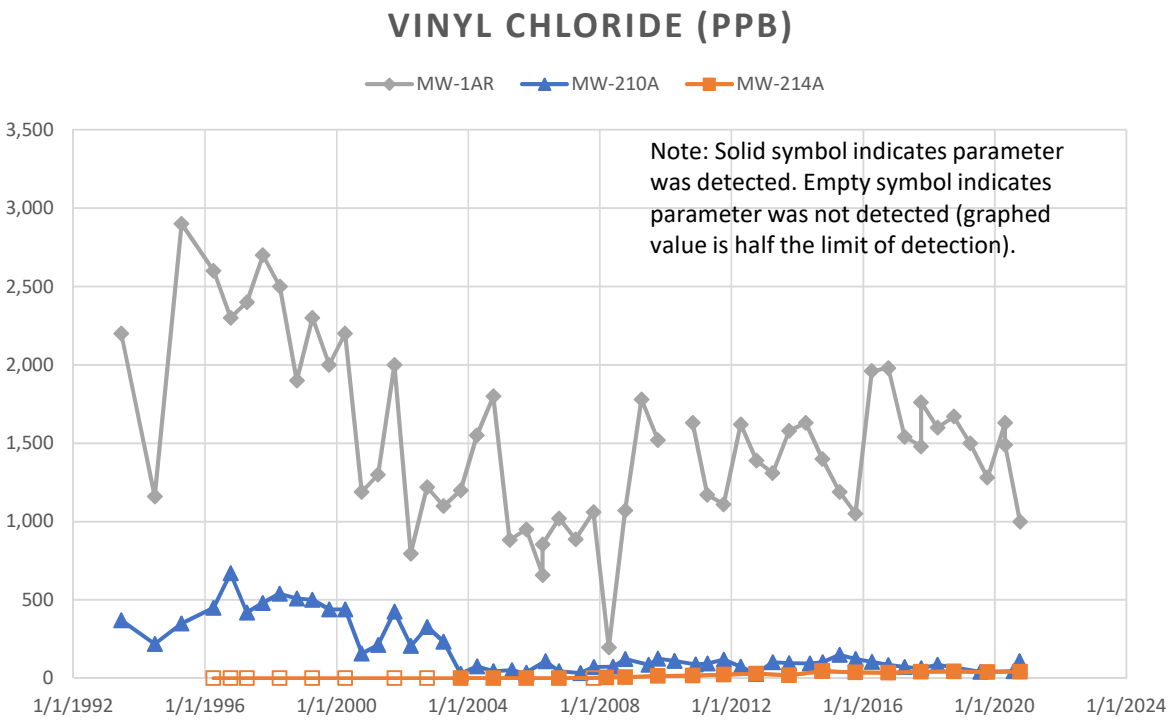
VOCS IN BEDROCK GROUNDWATER
OCTOBER 2020

FIGURE
9

I:\25221008.02\Drawings\RSLTS_VOC Bedrock.dwg, 5/18/2021 12:57:10 PM

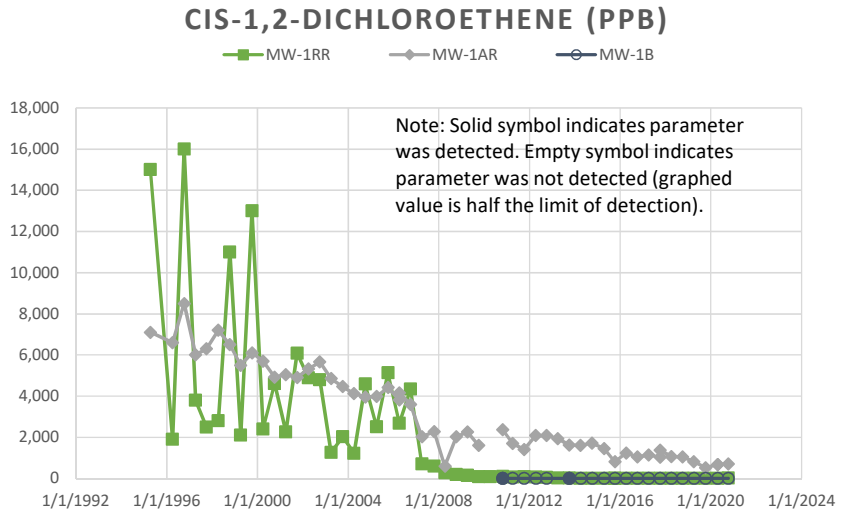
Figure G1. Time Series Graphs for Mid-Depth Wells Along the Shallow Plume (MW-1AR, MW-210A, MW-214A)

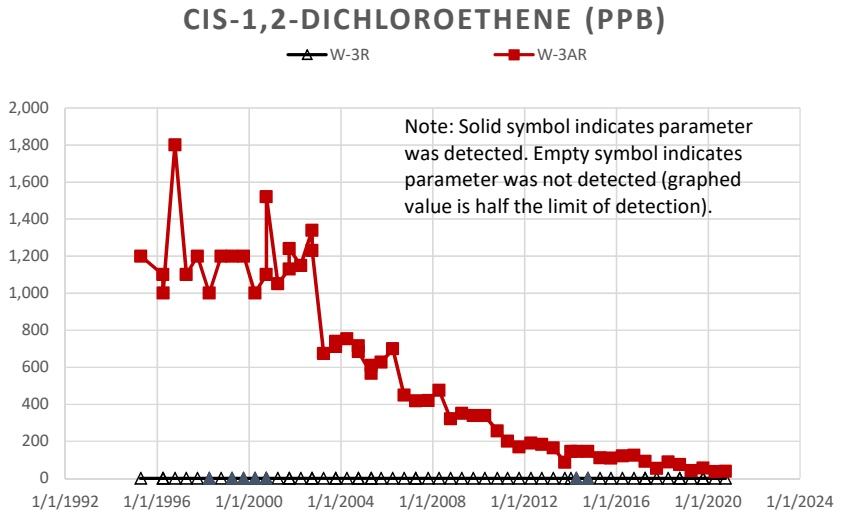


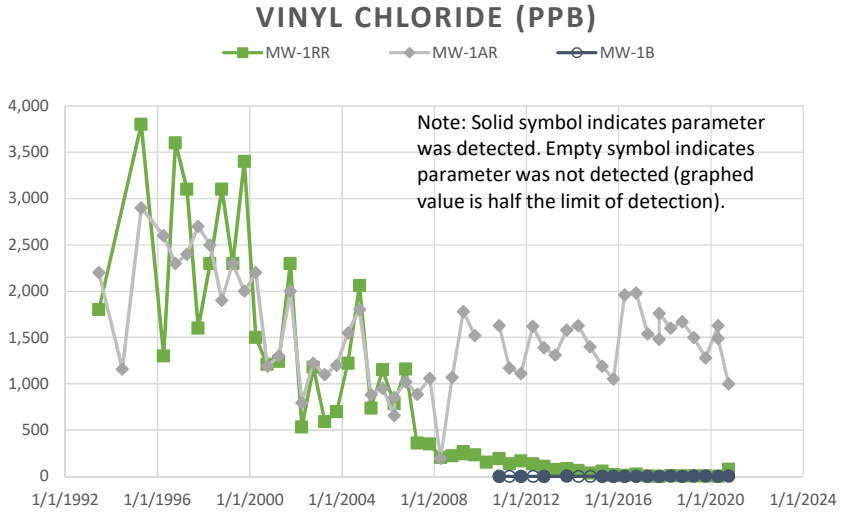


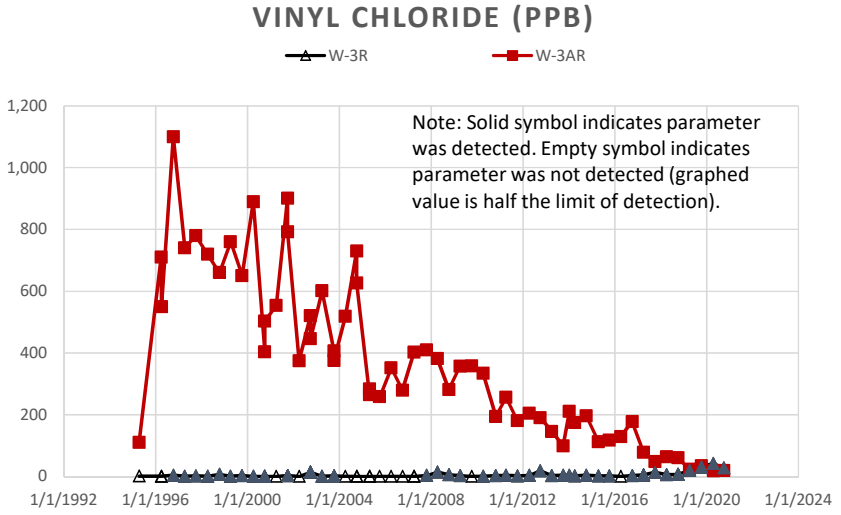
Note: When comparing between graphs, be aware that vertical scales vary.

Figure G2. Time Series Graphs for Source Area Well Nests (MW-1 and W-3)



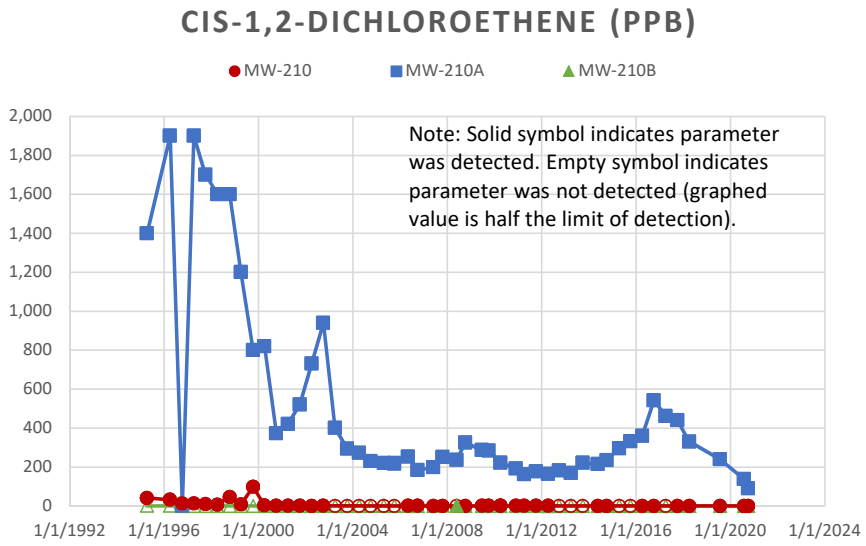


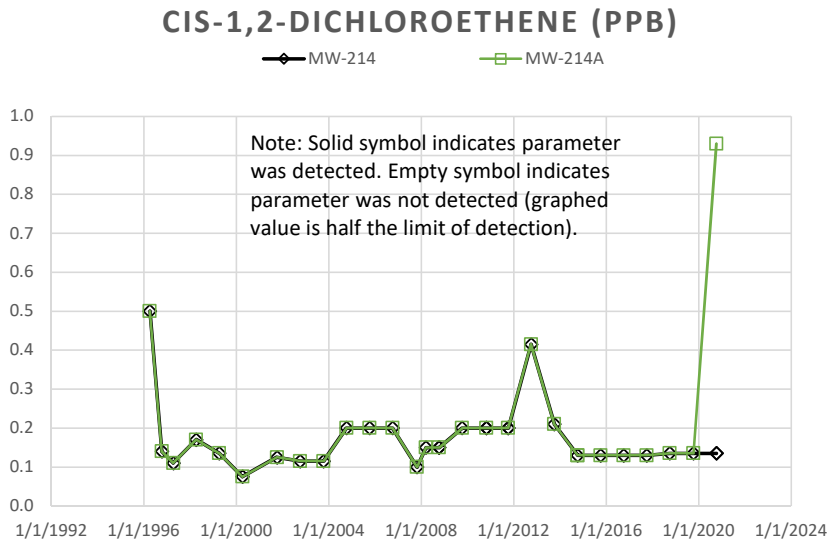


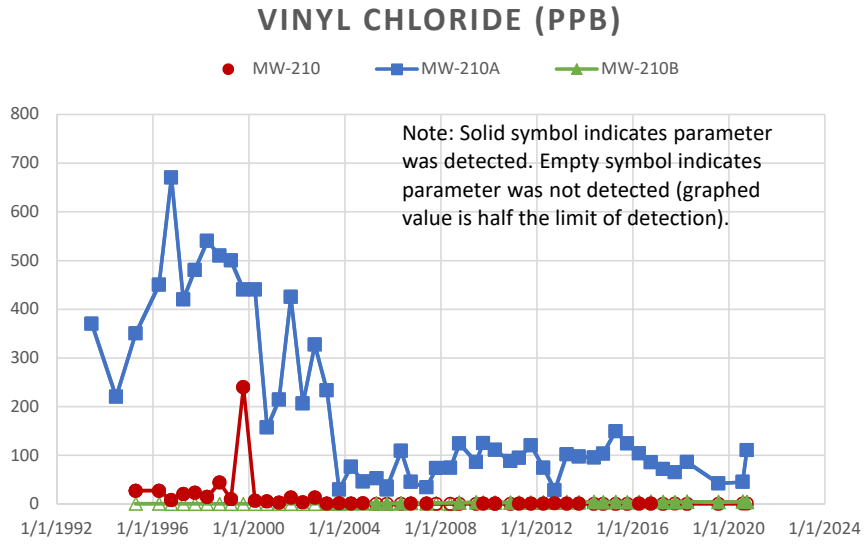


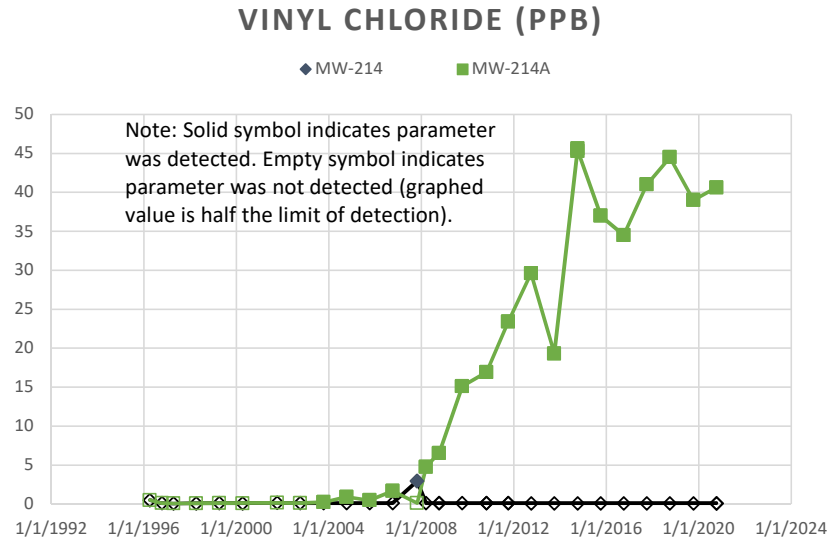
Note: When comparing between graphs, be aware that vertical scales vary.

Figure G3. Time Series Graphs for Downgradient Well Nests (MW-210 and MW-214)









Note: When comparing between graphs, be aware that vertical scales vary.

Figure G4. Time Series Graph for cis-1,2-DCE in Bedrock Monitoring Wells

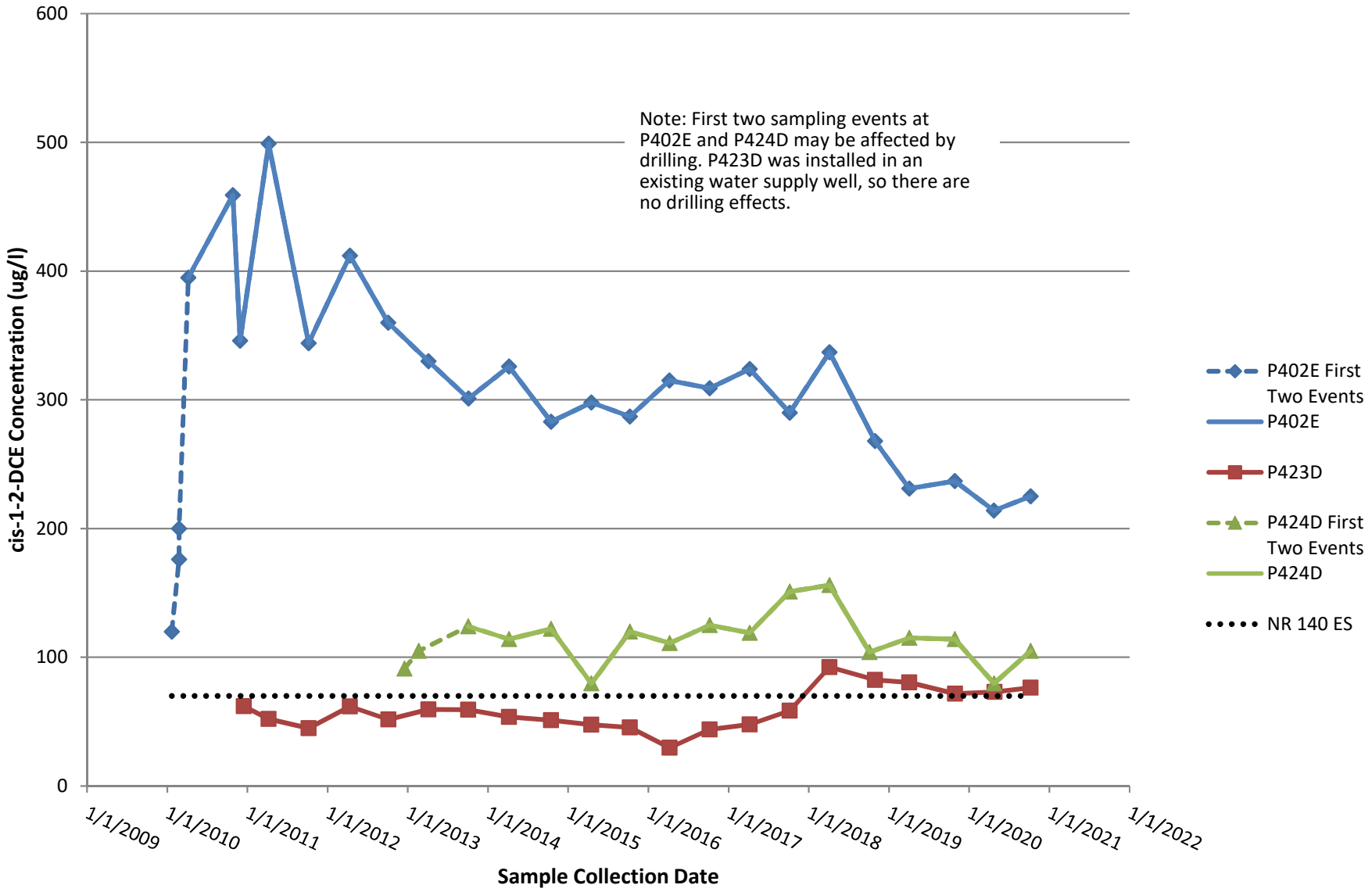


Figure G5. Time Series Graph for Vinyl Chloride in Bedrock Monitoring Wells

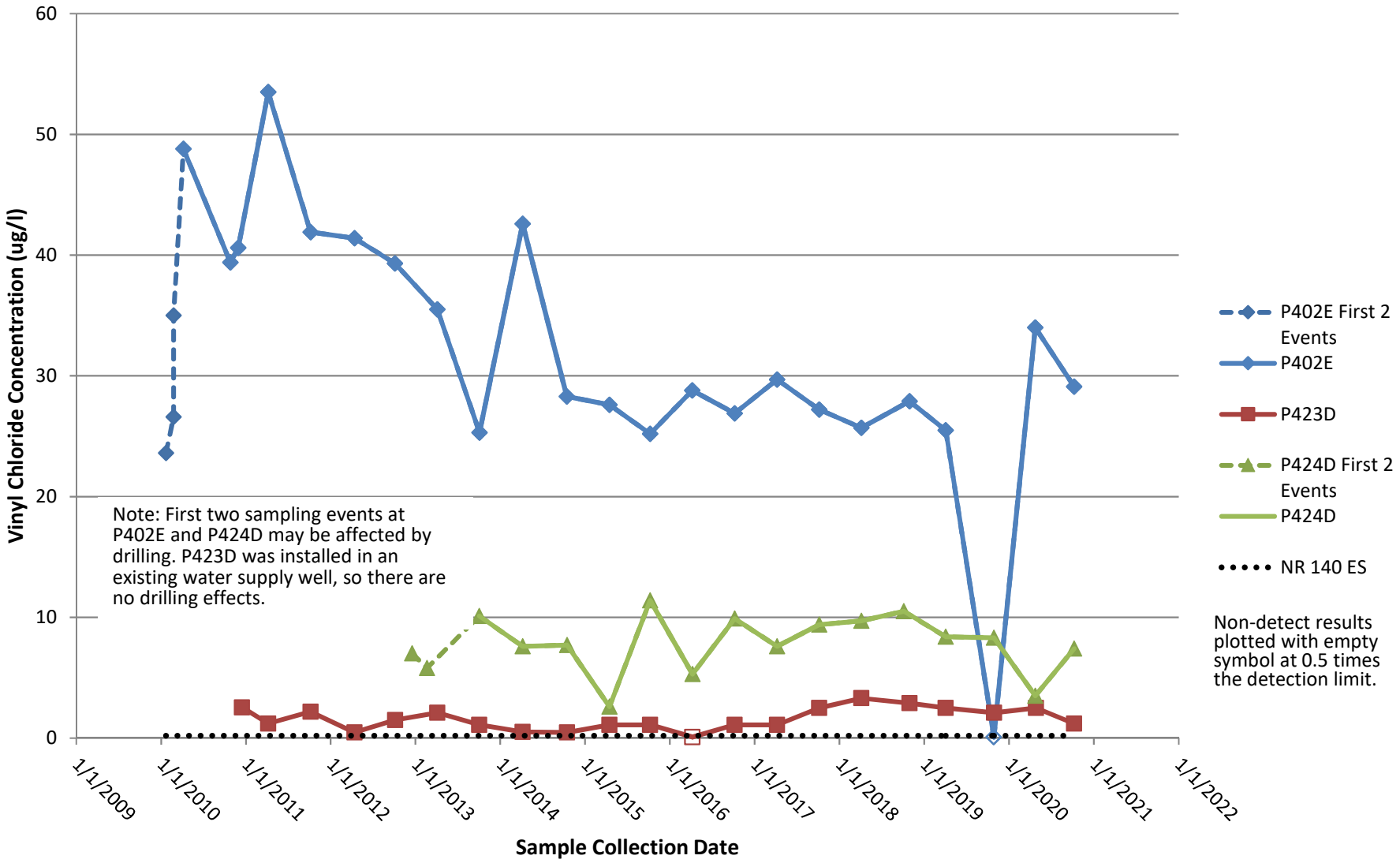


Figure G6. Time Series Graph for Cis-1,2-Dichloroethylene in Water Supply Wells Downgradient from LGRL

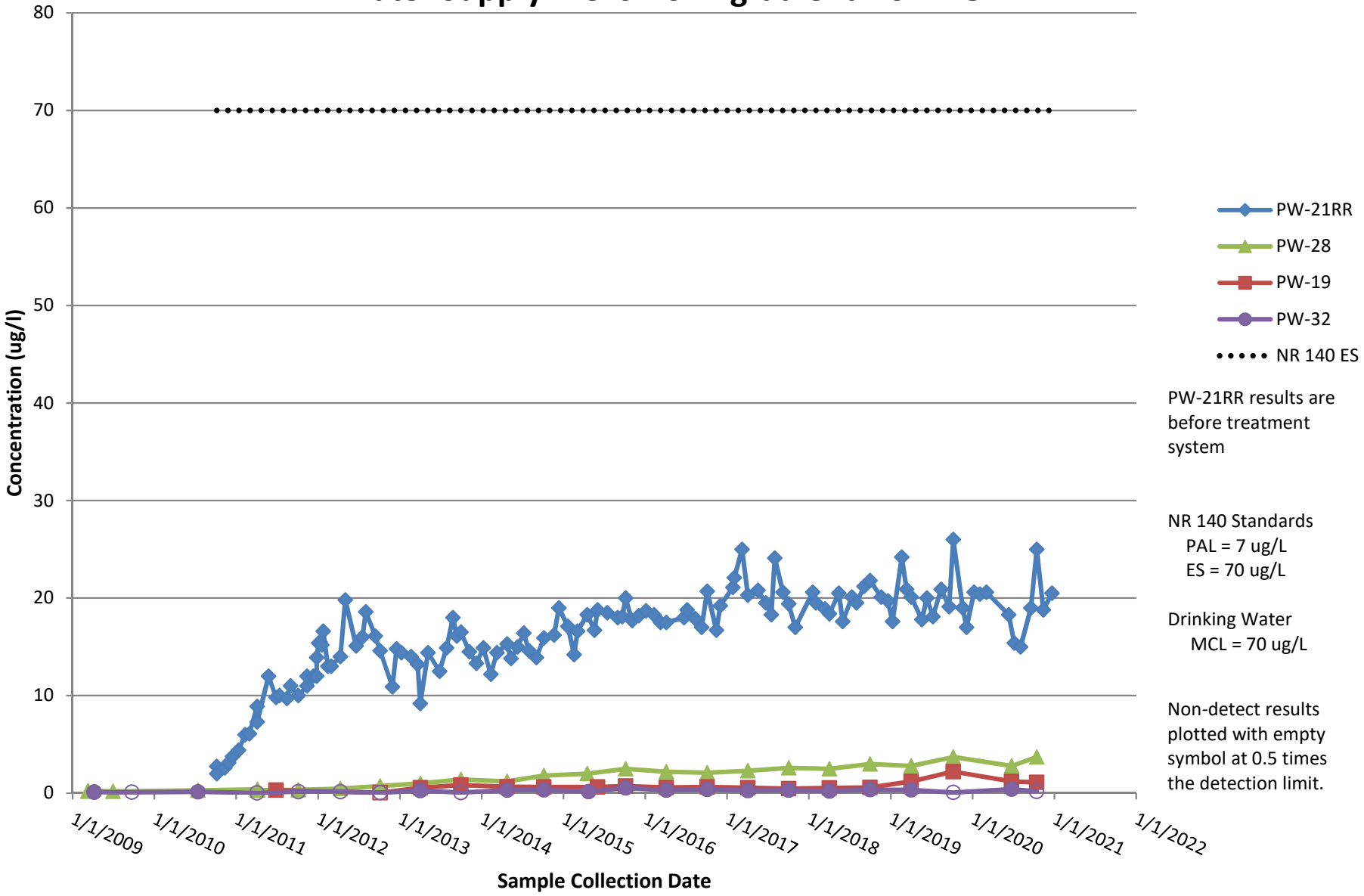
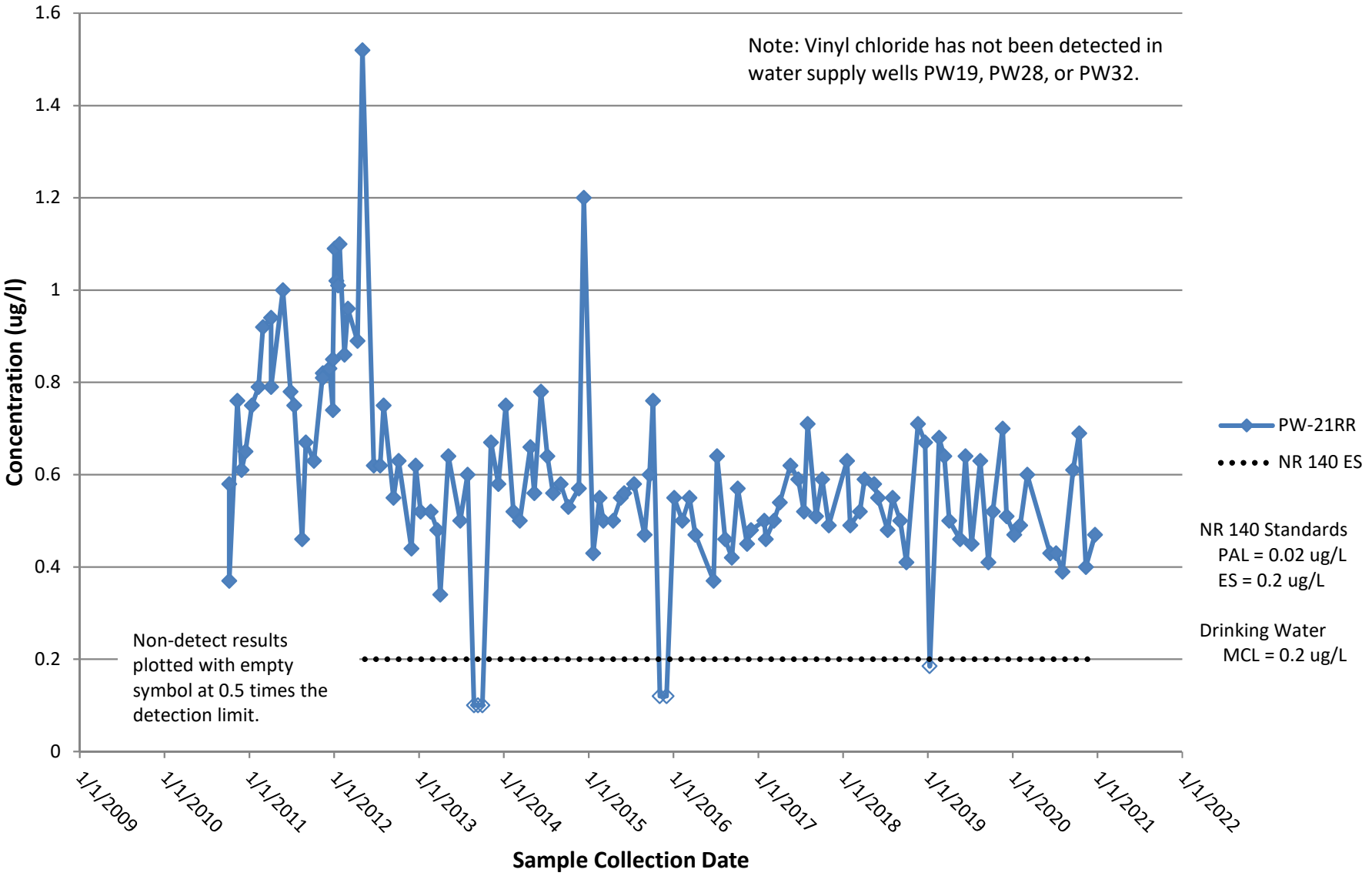


Figure G7. Time Series Graph for Vinyl Chloride at PW-21RR Samples (Before Treatment System)



Attachment A

LGRL Solid Waste Program Monitoring Results: 2017-2020

Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-001AR (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			929.04	928.14	927.69	928.04	927.69	929.19	928.44	926.54
ph-Field (standard units)			7.32	6.73	7.17	7.29	7.61	7.34	7.39	7.5
				6.73					7.39	
Specific conductance-field (umhos/cm @ 25c)			2120	2240	2320	2210	2140	1547	812	2132
				2240					812	
Temperature, water (degrees centigrade)			11.5	12.1	10.3	19.6	11.5	9.5	10.2	12
				12.1					10.2	
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			496	520	518	521	539	461	501	474
				537					489	
Arsenic, dissolved (ug/l As)	10	1	**3.2**	**2.9**	**3**	**3**	**3.1**	**3.3**	**3.4**	**3.1**
	10	1		**3**					**3.4**	
Chloride, dissolved (mg/l as Cl)	250	125	**551**	**526**	**586 M**	**506**	**617**	**499**	**538**	**543**
	250	125		**507**					**542**	
Hardness, total, filtered (mg/l as CaCO3)			679	665	646	676	728	690	695	641
				681					664	
Organic										
1,1-Dichloroethane (ug/l)	850	85	19.7	24.4	19.7	20	18.7 J	21	27.8	17.7 J
	850	85		25.2					24.4	
1,1-Dichloroethylene (ug/l)	7	0.7	**7 J**	<4.1	**7.2 J**	**6.9 J**	**6.5 J**	**2 J**	**5.8**	<4.9
	7	0.7		**9.8 J**					**4.9 J**	

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

J Result is an estimated value below the laboratory's limit of quantitation.
B Compound detected in blank.
P Did not meet required preservation and/or hold time.
M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-001AR (LGRL)										
1,2-Dichloroethane (ug/l)	5	0.5	<1.7	<1.7	<1.7	<2.8	<5.6	<1.4	**0.67 J**	<5.6
	5	0.5		<1.7					<5.6	
Acetone (ug/l)	9000	1800	<29.5	<29.5	<29.5	<27.4	<54.8	<13.7	3 J	<54.8
	9000	1800		<29.5					<54.8	
Benzene (ug/l)	5	0.5	<5	<5	<5	<2.5	<4.9	<1.2	**2.1**	<4.9
	5	0.5		<5					<4.9	
Chloroethane (ug/l)	400	80	<3.7	<3.7	4.1 J	<13.4	<26.8	<6.7	<1.3	<26.8
	400	80		<3.7					<26.8	
cis-1,2-Dichloroethene (ug/l)	70	7	**1140**	**1030**	**1060**	**1050**	**808**	**524**	**673**	**701**
	70	7		**1380**					**670**	
Dichloromethane (ug/l)	5	0.5	<2.3	<2.3	<2.3	<5.8	<11.6	**6.4 J**	<0.58	<11.6
	5	0.5		<2.3					<11.6	
Methyl-tert-butyl ether (ug/l)	60	12	<1.7	<1.7	<1.7	<12.5	<24.9	<6.2	1.5 J	<24.9
	60	12		<1.7					<24.9	
Tetrahydrofuran (ug/l)	50	10	**46.7 J**	<20.3	**34.6 J**	**54.2 J**	**50.7 J**	**87.2 J**	**62.1**	<46.4
	50	10		**33 J**					<46.4	
trans-1,2-Dichloroethene, total (ug/l)	100	20	5.6 J	5.9 J	7.9 J	<10.9	<21.8	<5.5	5.1	**20 J**
	100	20		7.2 J					**25.9 J**	
Trichloroethylene (ug/l)	5	0.5	<3.3	<3.3	<3.3	<2.6	<5.1	<1.3	0.32 J	<5.1
	5	0.5		<3.3					<5.1	
Vinyl chloride (ug/l)	0.2	0.02	**1540**	**1480**	**1600**	**1670**	**1500**	**1280**	**1630**	**1000**
	0.2	0.02		**1760**					**1490**	

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J Result is an estimated value below the laboratory's limit of quantitation.
B Compound detected in blank.
P Did not meet required preservation and/or hold time.
M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-001B										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.48	926.13	925.87	924.68	926.68	927.82	927.13	925.53
ph-Field (standard units)			7.87	7.32	7.56	7.77	7.02	7.63	7.31	7.72
Specific conductance-field (umhos/cm @ 25c)			783	821	778	688	662	458	516	633
Temperature, water (degrees centigrade)			10.6	13.6	9.1	17.4	12.5	13.7	9.3	12.5
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			216	212	178	215	186	180	190	177
Chloride, dissolved (mg/l as Cl)	250	125	89	93.6	**128**	109	124	123	**133**	**139**
Hardness, total, filtered (mg/l as CaCO3)			287	314	339	335	345	331	339	358
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	5.3 J	10.3 J	6.3 J	<2.7	3.5 J
Carbon disulfide (ug/l)	1000	200	<0.61	<0.61	<0.61	<0.37	<0.37	0.98 J	0.8 J	<0.45
Vinyl chloride (ug/l)	0.2	0.02	**1.9**	**2**	**3.4**	**2.3**	**4.2**	**5.1**	**2.2**	**4.3**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-001RR (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.67	926.77	926.29	927.57	926.02	927.82	926.82	924.84
ph-Field (standard units)			6.84	6.79	6.73	6.9	7.21	7.28	7.02	6.92
Specific conductance-field (umhos/cm @ 25c)			1615	1846	1920	1780	1711	1144	758	1499
Temperature, water (degrees centigrade)			10.9	13.6	8.9	21.1	11	8.1	9	13.5
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			942 M	1120	1110	1160	1050	979	913	1010
Arsenic, dissolved (ug/l As)	10	1	**7**	**7.8**	**5.9**	**9.5**	**7**	**7.8**	**4.5**	**5**
Chloride, dissolved (mg/l as Cl)	250	125	84.7	75.7	76.3	77.6	91.9	87.5	80.1	110
Hardness, total, filtered (mg/l as CaCO3)			857	907	796	884	845	808	807	930
Organic										
1,1-Dichloroethane (ug/l)	850	85	0.41 J	<0.24	0.53 J	0.47 J	0.5 J	0.44 J	<0.27	0.29 J
Acetone (ug/l)	9000	1800	3.8 J	7.5 J	<3	7.3 J	4.4 J	30.5	<2.7	4.5 J
Benzene (ug/l)	5	0.5	<0.5	<0.5	**0.58 J**	**0.52 J**	**0.5 J**	0.44 J	<0.25	0.32 J
cis-1,2-Dichloroethene (ug/l)	70	7	1.3	<0.26	1.4	1.4	0.94 J	0.93 J	<0.27	**18.5**
Vinyl chloride (ug/l)	0.2	0.02	**5.2**	**2.5**	**6.9**	**5.2**	**5.8**	**4.5**	**0.68 J**	**75.9**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-006R										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			925.95	924.23	925.74	924.9	925.55	925.85	925.72	924.65
ph-Field (standard units)			7.07	7.09	7.18	7.02	7.82	7.07	7.1	7.44
					7.18			7.07		
Specific conductance-field (umhos/cm @ 25c)			735	675	627	705	364	445	352	829
					627			445		
Temperature, water (degrees centigrade)			8.5	10.9	9.9	8.5	7.9	12.5	8.3	9.9
					9.9			12.5		
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			361	378	378	366	373	407	407	380
					366			405		
Arsenic, dissolved (ug/l As)	10	1	0.14 J	<0.28	**1 J**	0.45 J	0.29 J	0.5 J	0.41 J	0.62 J
	10	1			0.75 J			0.5 J		
Chloride, dissolved (mg/l as Cl)	250	125	25.3	26.2	27.2	23.5	24.2	24.4	24	23.2
	250	125			27.2			24.3		
Hardness, total, filtered (mg/l as CaCO3)			360	367	385	377	386	421	416	376
					371			428		
Organic										
Acetone (ug/l)	9000	1800				4.1 J				

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-007R										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well frozen					Yes					
Groundwater elevation (ft MSL)			926.27	925.87		926.22	927.17	926.27	923.97	925.52
ph-Field (standard units)			7.21	7.3		7.06	7.2	7.29	7.4	7.22
						7.06	7.2			7.22
Specific conductance-field (umhos/cm @ 25c)			790	911		659	363	470	380	842
						659	363			842
Temperature, water (degrees centigrade)			5	15.5		15.8	4.8	15.7	8.4	11.9
						15.8	4.8			11.9
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			334	429		333	352	367	397	428
						340	371			408
Arsenic, dissolved (ug/l As)	10	1	0.85 J	**2**		**1.8**	0.73 J	**7.3**	**3.6**	**5.5**
	10	1				**1.7**	0.74 J			**4.7**
Chloride, dissolved (mg/l as Cl)	250	125	69.1	96.3		47.5	57.1	47.6	45.7 M	31.9
	250	125				47	56.4			36.2
Hardness, total, filtered (mg/l as CaCO3)			405	483		355	391	380	401	422
						366	375			420

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-008R (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			931.59	929.19	930.95	931.19	931.09	931.25	931.24	930.91
ph-Field (standard units)			7.02	6.96	7.43	6.82	7.13	7.04	7.04	7.34
				6.96						
Specific conductance-field (umhos/cm @ 25c)			1544	1210	1260	1320	508	839	455	1309
				1210						
Temperature, water (degrees centigrade)			7.7	11.8	9.1	9.5	9.9	12.2	9.1	10.5
				11.8						
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			889	698	802	813	822	875	851	823
				734						
Arsenic, dissolved (ug/l As)	10	1	**2.2**	**3.7**	**3.6**	**2.5**	**2.8**	**2.3**	**2.7**	**3.2**
	10	1		**3.7**						
Chloride, dissolved (mg/l as Cl)	250	125	42.4	36.2	40	43.1	43	40.5	36.3 M	37.6
	250	125		35.7						
Hardness, total, filtered (mg/l as CaCO3)			811	713	764	832	763	794	820	715
				674						
Organic										
Acetone (ug/l)	9000	1800								5.2 J

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-201										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.19	927.22	926.81	927.26	926.73	927.26	927.01	926.74
ph-Field (standard units)			6.93	7.21	6.99	7.44	7.36	7.32	7.26	7.22
Specific conductance-field (umhos/cm @ 25c)			891	967	680	717	352	458	446	841
Temperature, water (degrees centigrade)			9	15.2	8.4	14.8	8.4	16.5	12.2	10.1
MW-201A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.19	926.66	926.61	926.84	925.54	925.79	925.42	926.48
ph-Field (standard units)			7.46	7.47	7.16	7.39	7.28	7.34	7.12	6.91
Specific conductance-field (umhos/cm @ 25c)			1110	864	689	744	398	494	501	821
Temperature, water (degrees centigrade)			9.9	15.3	8.7	15.2	8.5	19.1	13.6	10
MW-201B										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.47	926.67	926.47	926.97	926.57	927.33	926.82	925.42
ph-Field (standard units)			7.94	7.89	7.77	7.45	7.61	7.7	7.5	7.1
Specific conductance-field (umhos/cm @ 25c)			465	463	412	443	226	277	321	486
Temperature, water (degrees centigrade)			9.9	15.1	9.1	14.8	8.8	16.5	12.3	9.6

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-203A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.71	926.42	927.29	926.96	927.16	927.58	927.21	926.61
ph-Field (standard units)			7.47	7.26	7.25	7.23	7.24	7.52	7.55	7.64
Specific conductance-field (umhos/cm @ 25c)			674	660	563	621	336	383	344	741
Temperature, water (degrees centigrade)			9	10.4	11	9.8	7.1	11.3	9.3	10.4
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			354	365	352	344 M	309	316	319	318
Arsenic, dissolved (ug/l As)	10	1	**7.5**	**8.8**	**8.3**	**8.7**	**8.1**	**5.6**	**7.4**	**8.4**
Chloride, dissolved (mg/l as Cl)	250	125	23.4	21.1	24.4	27	27.9	29.9	32.7	32.3
Hardness, total, filtered (mg/l as CaCO3)			340	332	330	368	355	332	351	355

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-210										
Reporting Period			4/1/2016	10/1/2016	4/1/2017	10/1/2017	4/1/2018	7/1/2019	7/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.04	927.04	927.01	926.81	927.01	927.06	927.06	926.21
ph-Field (standard units)			6.65	6.89	6.97	7.13	7.44	6.93	6.98	6.89
Specific conductance-field (umhos/cm @ 25c)			1380	1443	1427	1311	1290	1433	1514	2350
Temperature, water (degrees centigrade)			6.6	19.5	14.7	16.5	9.4	16.2	17.1	15.2
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			713	804	867	837	836	777	795	839
Arsenic, dissolved (ug/l As)	10	1	**2.8**	**4.3**	**2.3**	**4.8**	**2.4**	**2.2**	**2.5**	**2.2**
Chloride, dissolved (mg/l as Cl)	250	125	78.3	86	84.1	77.9	89.2	77.3	72.8	74.9
Hardness, total, filtered (mg/l as CaCO3)			817	913	885	885	911	845	861	850
Organic										
Acetone (ug/l)	9000	1800	<3	7.8 J	<3	<3	3.9 J	4 J	3.8 J	6.7 J
cis-1,2-Dichloroethene (ug/l)	70	7	0.36 J	0.44 J	<0.26	0.32 J	0.39 J	0.45 J	0.3 J	0.39 J
Dichloromethane (ug/l)	5	0.5	<0.23	<0.23	<0.23	0.31 JB	<0.23	<0.58	<0.58	<0.58
Vinyl chloride (ug/l)	0.2	0.02	**0.19 J**	**0.23 J**	<0.18	**0.2 J**	<0.18	<0.17	**0.34 J**	**0.43 J**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-210A										
Reporting Period			4/1/2016	10/1/2016	4/1/2017	10/1/2017	4/1/2018	7/1/2019	7/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.33	927.43	927.45	926.95	926.6	926.95	926.95	925.05
ph-Field (standard units)			7.04	7.25	7.34	7.32	7.72	7.19	6.92	7.34
Specific conductance-field (umhos/cm @ 25c)			1332	1335	1384	1215	1180	1114	1085	1180
Temperature, water (degrees centigrade)			8.4	19.4	7.7	17.3	9.5	13.5	13.5	10.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			471	481	525	543	537	477	464	460
Arsenic, dissolved (ug/l As)	10	1	**6.3**	**8.5**	**8.8**	**9.4**	**8.6**	**7.1**	**7.6**	**7**
Chloride, dissolved (mg/l as Cl)	250	125	**192**	**168**	**160**	**136**	**140**	111	106	108
Hardness, total, filtered (mg/l as CaCO3)			549	570	575	534	517	491	494	481
Organic										
1,1-Dichloroethane (ug/l)	850	85	15.7	15.9	13	15.5	11.3	7	6.6	5.5
1,1-Dichloroethylene (ug/l)	7	0.7	**1.6 J**	**2.1 J**	**2.1 J**	**2.2 J**	**1.6 J**	**1.1 J**	**0.87 J**	<0.61
1,2-Dichloroethane (ug/l)	5	0.5	0.48 J	<0.42	<0.42	<0.42	<0.42	<0.7	<0.7	<0.7
Benzene (ug/l)	5	0.5	<1.2	<1.2	<1.2	<1.2	<1.2	<0.62	**0.73 J**	<0.62
Chloroethane (ug/l)	400	80	10.1	11.1	7.4	6.6	7.4	4.7 J	4.4 J	4.4 J
cis-1,2-Dichloroethene (ug/l)	70	7	**360**	**542**	**461**	**440**	**330**	**239**	**137**	**90.3**
Tetrahydrofuran (ug/l)	50	10	**11.2 J**	**11.3 J**	7.5 J	<5.1	<5.1	<5.8	<5.8	<5.8
trans-1,2-Dichloroethene, total (ug/l)	100	20	4	6.3	3.3	3.8	9.7	<2.7	<1.2	<1.2
Trichloroethylene (ug/l)	5	0.5	**1.9 J**	**2.4 J**	**2 J**	**2.3 J**	**1.9 J**	**1.5 J**	**1.1 J**	<0.64

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-210A										
Vinyl chloride (ug/l)	0.2	0.02	**104**	**85.5**	**71.7**	**64.7**	**86**	**42.2**	**44.9**	**110**
MW-210B										
Reporting Period			4/1/2016	10/1/2016	4/1/2017	10/1/2017	4/1/2018	7/1/2019	7/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.4	927.43	927.48	927.1	926.66	927.08	927.08	925.28
ph-Field (standard units)			7.14	7.03	7.73	7.42	7.99	7.79	7.55	7.64
Specific conductance-field (umhos/cm @ 25c)			712	752	712	684	742	734	776	886
Temperature, water (degrees centigrade)			8.3	18.6	14	16.6	10.1	15.7	14.2	12
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			298	279	282	273	277	271	275	267
Arsenic, dissolved (ug/l As)	10	1	0.27 J	0.17 J	<0.099	<0.28	<0.28	<0.28	<0.28	<0.28
Chloride, dissolved (mg/l as Cl)	250	125	81.5	78.1	73	69.6	98.4	82.1	85.4	91.4
Hardness, total, filtered (mg/l as CaCO3)			368	411	374	345	384	373	389	363
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	<3	<3	4.3 J	16.6 J	<2.7
Vinyl chloride (ug/l)	0.2	0.02	**3.6**	**4.4**	**3.7**	**3.4**	**4.3**	**3.9**	**4.5**	**4**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-214										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well frozen					Yes					
Groundwater elevation (ft MSL)			925.52	924.62		925.67	925.57	925.77	925.67	924.67
ph-Field (standard units)			7.33	7.29		7.15	7.2	7.4	7.56	7.23
										7.23
Specific conductance-field (umhos/cm @ 25c)			813	1040		593	433	414	358	600
										600
Temperature, water (degrees centigrade)			6.9	14		18	16.1	12.3	9.1	14.6
										14.6
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			397	511		373	369	347	369	377
										378
Arsenic, dissolved (ug/l As)	10	1	**1.3**	**1.6**		<1.4	0.98 J	**1.3**	0.79 J	**2.1**
	10	1								**1.7 J**
Chloride, dissolved (mg/l as Cl)	250	125	65.7	82.9		54.4	56.7	53.1	46.3	46.6
	250	125								49.8
Hardness, total, filtered (mg/l as CaCO3)			445	540		392	370	365	383	385
										393
Organic										
Acetone (ug/l)	9000	1800		<3		7.9 J		8.5 J		4.8 J
	9000	1800								5.4 J

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-214										
Toluene (ug/l)	800	160		0.91 J		<0.17		<0.17		<0.27
	800	160								<0.27

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-214A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.64	926.69	926.79	927.29	927.54	927.44	927.59	925.59
ph-Field (standard units)			7.53	7.55	7.67	7.12	7.36	7.28	7.38	7.55
									7.38	
Specific conductance-field (umhos/cm @ 25c)			1081	1111	1230	701	577	614	444	818
									444	
Temperature, water (degrees centigrade)			9.2	11.7	8.3	13.8	11.2	10.5	12.9	13.2
									12.9	
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			358	354	353	357	354	344	352	359
									353	
Arsenic, dissolved (ug/l As)	10	1	0.54 J	0.86 J	0.69 J	<1.4	0.78 J	**1**	0.9 J	0.86 J
	10	1							**1**	
Chloride, dissolved (mg/l as Cl)	250	125	**197**	**201**	**185**	**187**	**205**	**191**	**202**	**197**
	250	125							**181**	
Hardness, total, filtered (mg/l as CaCO3)			579	555	523	530	522	516	542	522
									515	
Organic										
Acetone (ug/l)	9000	1800		<3		3.7 J		7.5 J		3.8 J
Chloroethane (ug/l)	400	80		1.1		1.4 J		<1.3		<1.3
cis-1,2-Dichloroethene (ug/l)	70	7		<0.26		<0.27		<0.27		0.93 J
Methylethylketone (ug/l)	4000	800		<3		<2.9		<2.9		7.1 J

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-214A										
Tetrahydrofuran (ug/l)	50	10		6.1		8 J		9.4 J		8.7 J
Vinyl chloride (ug/l)	0.2	0.02		**41**		**44.5**		**39**		**40.6**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-422B										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.59	927.49	927.37	927.09	927.09	928.49	927.39	926.69
ph-Field (standard units)			7.98	7.36	7.91	7.78	7.62	7.89	7.65	7.88
							7.62			
Specific conductance-field (umhos/cm @ 25c)			407	431	408	396	209	242	263	418
							209			
Temperature, water (degrees centigrade)			12.4	14.4	9.4	12	10.1	11.9	10.4	10.7
							10.1			
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			209	212	216	199 B	210 M	208	216	198
							204			
Chloride, dissolved (mg/l as Cl)	250	125	12.2	10	10.1	8.6	10.1	7.8	9.1 J	10.4 M
	250	125					10.1			
Hardness, total, filtered (mg/l as CaCO3)			157	166	175	164	173	166	180	176
							168			
Organic										
cis-1,2-Dichloroethene (ug/l)	70	7	**7**	0.85 J	<0.26	<0.27	<0.27	<0.27	<0.27	<0.27
	70	7					<0.27			
trans-1,2-Dichloroethene, total (ug/l)	100	20	0.27 J	<0.26	<0.26	<1.1	<1.1	<1.1	<0.46	<0.46
	100	20					<1.1			

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-003AR (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.14	927.29	927.22	927.49	926.89	928.07	927.22	926.13
ph-Field (standard units)			7.23	7.12	7.1	7.3	7.29	7.31	7.39	7.29
Specific conductance-field (umhos/cm @ 25c)			1105	1280	1260	1340	722	787	571	1218
Temperature, water (degrees centigrade)			8.7	11.8	9.9	8.1	4.9	13.3	8.4	14.4
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			692	640	686	628	607	636	593	605
Arsenic, dissolved (ug/l As)	10	1	**1.4**	**1.4**	**1.3**	**1.6**	**2.2**	**2.6**	**3.6**	**4.1**
Chloride, dissolved (mg/l as Cl)	250	125	**135**	**140**	**129**	**128**	**155**	**162**	**152**	**159**
Hardness, total, filtered (mg/l as CaCO3)			672	620	622	639	606	598	629	614
Organic										
1,1-Dichloroethane (ug/l)	850	85	13.4	15.6	14.6	14.9	12	16.9	16	14.3
1,1-Dichloroethylene (ug/l)	7	0.7	**0.92 J**	0.67 J	**0.89 J**	**0.78 J**	0.4 J	0.66 J	0.31 J	0.35 J
1,2-Dichloroethane (ug/l)	5	0.5	0.21 J	<0.17	<0.34	<0.28	<0.28	<0.28	<0.28	<0.28
Acetone (ug/l)	9000	1800	<3	<3	6.2 J	<2.7	<2.7	6.8 J	<2.7	3.2 J
Benzene (ug/l)	5	0.5	**1.3**	**1.2**	**1.3 J**	**1.1**	**1.1**	**1.1**	**0.93 J**	**0.82 J**
Chloroethane (ug/l)	400	80	6.2	5.9	7.4	7.2	6.1	7.2	7	8.2
cis-1,2-Dichloroethene (ug/l)	70	7	**92.6**	**53.5**	**88.9**	**74.5**	**42.1**	**55.6**	**37.6**	**38.2**
Dichlorodifluoromethane (ug/l)	1000	200	1	1	1 J	1 J	0.72 J	0.78 J	1.1 J	0.67 J
Methyl-tert-butyl ether (ug/l)	60	12	0.25 J	<0.17	<0.35	<1.2	<1.2	<1.2	<1.2	<1.2

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-003AR (LGRL)										
Tetrahydrofuran (ug/l)	50	10	8.6	**10.2**	5.5 J	7.8 J	8.6 J	**10.4 J**	9.1 J	8.9 J
trans-1,2-Dichloroethene, total (ug/l)	100	20	0.62 J	0.51 J	1.3 J	<1.1	<1.1	<1.1	<0.46	0.47 J
Trichloroethylene (ug/l)	5	0.5	<0.33	<0.33	<0.66	0.36 J	0.27 J	0.31 J	0.35 J	<0.26
Vinyl chloride (ug/l)	0.2	0.02	**78.4**	**47.7**	**63.3**	**60.7**	**23.1**	**34.6**	**18.4**	**18.8**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-003R (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.35	927.35	927.35	927.55	927.65	927.62	926.45	927.07
ph-Field (standard units)			6.97	7.25	6.73	6.71	7.26	6.9	7.35	7.04
			6.97			6.71		6.9		
Specific conductance-field (umhos/cm @ 25c)			1323	1220	1230	1350	656	828	513	1101
			1323			1350		828		
Temperature, water (degrees centigrade)			7.2	12.8	8	9.4	3.2	12.8	6.9	13.6
			7.2			9.4		12.8		
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			673	596	778	763	637	607	588	681
			694			813		610		
Arsenic, dissolved (ug/l As)	10	1	**1**	**1.1**	**1.1**	**1.5**	0.76 J	0.81 J	0.86 J	**1.1**
	10	1	0.9 J			**1.8**		0.96 J		
Chloride, dissolved (mg/l as Cl)	250	125	89.3	86.7	85.8 M	90.1	90.3	89	79.2	86.7
	250	125	84.3			90.4		88.1		
Hardness, total, filtered (mg/l as CaCO3)			864	775	865	889	719	734	722	738
			884			880		710		
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	<2.7	<2.7	8.4 J	3.8 J	5.7 J
	9000	1800	<3			2.8 J		7.2 J		
cis-1,2-Dichloroethene (ug/l)	70	7	<0.26	<0.26	<0.26	<0.27	<0.27	<0.27	<0.27	<0.27
	70	7	<0.26			<0.27		0.33 J		

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-003R (LGRL)										
Toluene (ug/l)	800	160	<0.5	1.4	<0.5	<0.17	<0.17	<0.17	<0.27	<0.27
	800	160	<0.5			<0.17		<0.17		
Vinyl chloride (ug/l)	0.2	0.02	**5.1**	**12.9**	**5.6**	**6.4**	**20.3**	**30.7**	**42.4**	**27.1**
	0.2	0.02	**5.1**			**6.8**		**30.3**		
W-163 (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			925.47	925.13	924.98	925.43	924.48	925.43	924.35	924.62
ph-Field (standard units)			7.86	6.95	7.84	7.7	7.77	7.36	7.39	7.14
Specific conductance-field (umhos/cm @ 25c)			630	768	598	718	374	511	369	855
Temperature, water (degrees centigrade)			8.5	15.8	8.1	15.6	8.5	12	9	11.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			307	367	406	335	357	369	360	372
Arsenic, dissolved (ug/l As)	10	1	**2.8 J**	**5.3**	**6**	**3.1**	**1.9**	**5.3**	**1.4**	**4.7**
Chloride, dissolved (mg/l as Cl)	250	125	45.9	53	56	56.7	64.5	62.5	60.8	64.2
Hardness, total, filtered (mg/l as CaCO3)			502	378	747	429	388	688	349	535
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		12.4 J	2.8 J	11.2 J
Toluene (ug/l)	800	160		<0.5		<0.17		0.24 J	<0.27	0.27 J

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

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B Compound detected in blank.
P Did not meet required preservation and/or hold time.
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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-163A (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.87	926.47	926.47	926.67	926.12	927.36	926.02	926.07
ph-Field (standard units)			7.12	7.17	7.7	7.56	6.94	7.79	7.52	7.34
Specific conductance-field (umhos/cm @ 25c)			350	1561	326	418	209	213	331	343
Temperature, water (degrees centigrade)			7.1	15.5	8.6	14.9	8.8	15.5	14.1	9.4
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			188	192	211 M	214	188	189	192	175 M
Arsenic, dissolved (ug/l As)	10	1	**2.9**	**3.2**	**2.3**	**1.6**	**1.9**	**2.8**	**2.5**	**3.1**
Chloride, dissolved (mg/l as Cl)	250	125	3.6	2.1	12.2	11.9	9.7 M	7.6	3.8	2.2
Hardness, total, filtered (mg/l as CaCO3)			166	155	195	191	187	193	159	140
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		10.2 J	4.3 J	5.5 J
Chloroethane (ug/l)	400	80		<0.37		<1.3		1.6 J	<1.3	<1.3

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells - Bedrock	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-401D (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well obstructed			Yes	Yes						
Groundwater elevation (ft MSL)			856.5	852.74	853.7	852.6	856.8	855.6	859.05	853.48
ph-Field (standard units)					7.5	7.41	7.4	7.29	7.32	7.32
						7.41				
Specific conductance-field (umhos/cm @ 25c)					641	652	622	594	720	693
						652				
Temperature, water (degrees centigrade)					9.2	11.8	8.8	12.4	11.6	14.6
						11.8				
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)					348	332	333	321	341	342
						336				
Chloride, dissolved (mg/l as Cl)	250	125			17.2	16.8	16.8	15.7	17.1	17.8
	250	125				16.9				
Hardness, total, filtered (mg/l as CaCO3)					357	322	304	320	273	339
						309				
Organic										
Acetone (ug/l)	9000	1800			3 J	10.6 J	<2.7	9.2 J	<2.7	6.9 J
	9000	1800				7.3 J				
cis-1,2-Dichloroethene (ug/l)	70	7			<0.26	0.33 J	<0.27	<0.27	<0.27	1.8
	70	7				0.61 J				

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells - Bedrock	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-402E (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			856.56	852.73	853.58	852.78	855.98	855.48	858.24	853.36
ph-Field (standard units)			7.02	6.58	6.98	7.08	7.02	7.45	7.11	7.58
					6.98					
Specific conductance-field (umhos/cm @ 25c)			880	818	873	868	858	765	870	758
					873					
Temperature, water (degrees centigrade)			13.3	14.4	11	12.4	10.8	8.1	11.5	13.8
					11					
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			392	379	388 M	377	362	368	365	378
					366					
Chloride, dissolved (mg/l as Cl)	250	125	65.3	58.4	54.9	53.5	53.3	50.3	48.7	50.1
	250	125			55.3					
Hardness, total, filtered (mg/l as CaCO3)			442	452	478	436	445	466	436	484
					482					
Organic										
1,1-Dichloroethane (ug/l)	850	85	1.1 J	0.78 J	1.2 J	0.81 J	0.94 J	0.73 J	1.2 J	<0.68
	850	85			1.2					
1,1-Dichloroethylene (ug/l)	7	0.7	<1	**1.5 J**	<1	<0.61	<0.61	**0.74 J**	**1 J**	<0.61
	7	0.7			**1.1**					
Acetone (ug/l)	9000	1800	<7.4	<7.4	<7.4	<6.9	<6.9	11 J	<6.9	<6.9
	9000	1800			7.2 J					

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells - Bedrock	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-402E (LGRL)										
Chloroethane (ug/l)	400	80	7.1	5.2	<0.94 M	4.7 J	4.6 J	4.4 J	4.7 J	4 J
	400	80			3.1 M					
cis-1,2-Dichloroethene (ug/l)	70	7	**324**	**290**	**337**	**268**	**231**	**237**	**214**	**225**
	70	7			**324**					
Tetrachloroethylene (ug/l)	5	0.5	<1.2	<1.2	<1.2	<0.82	**1.5 J**	<0.82	<0.82	<0.82
	5	0.5			<0.5					
Tetrahydrofuran (ug/l)	50	10	<5.1	<5.1	<5.1	<5.8	<5.8	<5.8	<5.8	<5.8
	50	10			3.2 J					
trans-1,2-Dichloroethene, total (ug/l)	100	20	14.3	11.5	<0.64	8.9 J	7.2 J	6.7 J	8.1	5.7
	100	20			4.5					
Trichloroethylene (ug/l)	5	0.5	**3.3**	**3.5**	**2.4 J**	**2.1 J**	**1.7 J**	**1.3 J**	**0.79 J**	**0.86 J**
	5	0.5			**2.5**					
Vinyl chloride (ug/l)	0.2	0.02	**29.7**	**27.2**	**25.7**	**27.9**	**25.5**	**29**	**34**	**29.1**
	0.2	0.02			**27.2**					

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Monitoring Wells - Bedrock	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-423D										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			854.69	850.87	852.09	853.59	854.44	854.04	857.38	851.77
ph-Field (standard units)			7.57	7.32	7.28	7.5	7.3	7.38	7.44	7.42
Specific conductance-field (umhos/cm @ 25c)			799	741	812	752	799	662	836	730
Temperature, water (degrees centigrade)			14.3	13.7	11.8	12.2	11.3	9.6	12.3	15.3
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			364	354	365	371	358	336	344	358
Chloride, dissolved (mg/l as Cl)	250	125	43	34.8	41	39.2	36.3	28.6	44.3	41.2
Hardness, total, filtered (mg/l as CaCO3)			430	432	472	437	428	434	453	488
Organic										
1,1-Dichloroethane (ug/l)	850	85	0.44 J	0.38 J	0.65 J	0.56 J	0.66 J	0.53 J	0.6 J	0.5 J
Acetone (ug/l)	9000	1800	<3	<3	<3	3.6 J	7.7 J	5.4 J	<2.7	4.5 J
Chloroethane (ug/l)	400	80	1.7	2.1	<0.37 M	2.8 J	2.8 J	1.8 J	2.2 J	1.4 J
cis-1,2-Dichloroethene (ug/l)	70	7	**47.9**	**58.6**	**92.4**	**82.5**	**80.4**	**71.8**	**73.1**	**76.4**
Methylethylketone (ug/l)	4000	800	<3	<3	<3	<2.9	<2.9	11.1 J	<2.9	<2.9
trans-1,2-Dichloroethene, total (ug/l)	100	20	2.6	3.1	<0.26	3.6 J	4.1	3.3 J	3.4	3.4
Trichloroethylene (ug/l)	5	0.5	**0.73 J**	**0.59 J**	**0.74 J**	**0.7 J**	**0.59 J**	**0.71 J**	**0.66 J**	**0.86 J**
Vinyl chloride (ug/l)	0.2	0.02	**1.1**	**2.5**	**3.3**	**2.9**	**2.5**	**2.1**	**2.5**	**1.2**

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Historic Monitoring Results - Last 8 Events
Land and Gas Reclamation Landfill

Staff Gauges	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
SW-02										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well dry					Yes	Yes				Yes
Elevation, surface water (ft above MSL)			926.32	924.99			925.39	923.84	925.44	
SW-03										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well dry										Yes
Comment, well frozen					Yes		Yes			
Elevation, surface water (ft above MSL)			923.63	925.72				928.6	926.12	
SW-04										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well dry					Yes					Yes
Elevation, surface water (ft above MSL)			927.64	927.64		927.71	927.66	927.91	928.01	
SW-05										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Comment, well dry					Yes		Yes			Yes
Elevation, surface water (ft above MSL)			923.84	924.95				925.01	925.42	

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Attachment B

Selected GRL Solid Waste Program Monitoring Results: 2017-2020

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-008R (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			931.59	929.19	930.95	931.19	931.09	931.25	931.24	930.91
ph-Field (standard units)			7.02	6.96	7.43	6.82	7.13	7.04	7.04	7.34
Specific conductance-field (umhos/cm @ 25c)		2100	1544	1210	1260	1320	508	839	455	1309
Temperature, water (degrees centigrade)			7.7	11.8	9.1	9.5	9.9	12.2	9.1	10.5
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		1200	889	698	802	813	822	875	851	823
Chloride, dissolved (mg/l as Cl)	250	125	42.4	36.2	40	43.1	43	40.5	36.3 M	37.6
Hardness, total, filtered (mg/l as CaCO3)		1100	811	713	764	832	763	794	820	715
Organic										
Acetone (ug/l)	9000	1800		<3		4.3 J		<2.7		5.2 J

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-008R (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			931.59	929.19	930.95	931.19	931.09	931.25	931.24	930.91
ph-Field (standard units)			7.02	6.96	7.43	6.82	7.13	7.04	7.04	7.34
				6.96						
Specific conductance-field (umhos/cm @ 25c)			1544	1210	1260	1320	508	839	455	1309
				1210						
Temperature, water (degrees centigrade)			7.7	11.8	9.1	9.5	9.9	12.2	9.1	10.5
				11.8						
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			889	698	802	813	822	875	851	823
				734						
Arsenic, dissolved (ug/l As)	10	1	**2.2**	**3.7**	**3.6**	**2.5**	**2.8**	**2.3**	**2.7**	**3.2**
	10	1		**3.7**						
Chloride, dissolved (mg/l as Cl)	250	125	42.4	36.2	40	43.1	43	40.5	36.3 M	37.6
	250	125		35.7						
Hardness, total, filtered (mg/l as CaCO3)			811	713	764	832	763	794	820	715
				674						
Organic										
Acetone (ug/l)	9000	1800								5.2 J

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-309										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			939.44	937.05	937.84	938.37	939.27	939.32	939.25	937.79
ph-Field (standard units)			7.09	7.09	7.31	7.41	7.44	7.17	7.38	7.55
								7.17		
Specific conductance-field (umhos/cm @ 25c)		1800	1174	908	1210	966	438	1084	475	954
		1800						1084		
Temperature, water (degrees centigrade)			11.7	12.9	8.2	12.2	7.6	12.7	9	11.3
								12.7		
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		520	499	504	505	504	454	494	432	399
		520						481		
Chloride, dissolved (mg/l as Cl)	250	125	28.2	45	46.7	37.6	17.6	21.9	8.9	12.1
	250	125						22		
Hardness, total, filtered (mg/l as CaCO3)		630	**767**	**898**	**823**	**797**	603	624	526	535
		630						**653**		
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		5.5 J		3.7 J
	9000	1800						3.8 J		
Chloromethane (ug/l)	30	3		<0.5		<2.2		<2.2		<2.2
	30	3						2.7 J		

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-403										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			930.32	929.72	932.77	930.35	930.54	930.77	931.07	930.17
ph-Field (standard units)			7.37	6.76	7.36	6.92	6.85	6.85	7.4	6.77
					7.36					
Specific conductance-field (umhos/cm @ 25c)		1900	**2920**	**2230**	**2460**	**2270**	**1990**	1068	765	1623
		1900			**2460**					
Temperature, water (degrees centigrade)			6.7	14.6	9.1	13.8	9	10	9.6	11.9
					9.1					
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		870	**937**	**1170**	**1290**	**1070**	**996**	**1120**	**1010**	**1130**
		870			**1270**					
Chloride, dissolved (mg/l as Cl)	250	125	**284**	**244**	**253**	**211**	**135**	95.8	46.4	59
	250	125			**272**					
Hardness, total, filtered (mg/l as CaCO3)		830	**1460**	**1330**	**1270**	**1400**	**1300**	**1080**	**985**	**1110**
		830			**1220**					
Organic										
1,1-Dichloroethane (ug/l)	850	85	0.45 J	0.39 J	<0.24	0.72 J	0.55 J	0.37 J	0.52 J	0.35 J
	850	85			<0.24					
Acetone (ug/l)	9000	1800	<3	<3	4.7 J	<2.7	4.9 J	6.1 J	6.2 J	12.9 J
	9000	1800			6.6 J					
Benzene (ug/l)	5	0.5	**0.54 J**	**0.91 J**	**1.4**	**1**	0.44 J	**0.6 J**	0.36 J	**0.71 J**
	5	0.5			**1.4**					
cis-1,2-Dichloroethene (ug/l)	70	7	**21.1**	**12.6**	0.97 J	2.2	1	0.61 J	0.56 J	<0.27
	70	7			0.99 J					
Naphthalene (ug/l)	100	10	<2.5	<2.5	<2.5	<1.2	3.1 J	<1.2	<1.2	<1.2
	100	10			<2.5					

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-403										
Tetrahydrofuran (ug/l)	50	10	<2	<2	2.2 J	<2.3	<2.3	<2.3	<2.3	<2.3
	50	10			2.2 J					
Toluene (ug/l)	800	160	<0.5	<0.5	1.1	<0.17	<0.17	<0.17	<0.27	<0.27
	800	160			1					
trans-1,2-Dichloroethene, total (ug/l)	100	20	0.83 J	0.77 J	<0.26	<1.1	<1.1	<1.1	<0.46	<0.46
	100	20			<0.26					
Trichloroethylene (ug/l)	5	0.5	**1.6**	**0.67 J**	<0.33	<0.26	<0.26	<0.26	<0.26	<0.26
	5	0.5			<0.33					
Vinyl chloride (ug/l)	0.2	0.02	**13.4**	**16.9**	**0.76 J**	**4.3**	**1.9**	<0.17	**0.89 J**	<0.17
	0.2	0.02			**0.74 J**					

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-406										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			934.23	931.76	934.15	932.83	933.53	933.68	933.6	933.15
ph-Field (standard units)			7.42	7.18	7.06	6.95	7.57	7	7.06	6.94
				7.18		6.95	7.57	7		
Specific conductance-field (umhos/cm @ 25c)		1200	**1235**	1017	1140	1170	588	712	451	1142
		1200		1017		1170	588	712		
Temperature, water (degrees centigrade)			9.4	11.2	9.1	10.1	6.2	10.6	7.5	11
				11.2		10.1	6.2	10.6		
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		640	359	623	**770**	**756**	**711**	**774**	**721**	**663**
		640		613		**807**	**715**	**776**		
Chloride, dissolved (mg/l as Cl)	250	125	18.8	30	33	34.7	27.6	29.9	29	21.9
	250	125		29.7		32.9	27.3	29		
Hardness, total, filtered (mg/l as CaCO3)		590	306	**653**	**782**	**799**	**733**	**735**	**718**	**717**
		590		**616**		**822**	**723**	**744**		
Organic										
Acetone (ug/l)	9000	1800	<3	5.8 J	3.7 J	4.1 J	5.3 J	6.7 J	5.3 J	<2.7
	9000	1800		6 J		<2.7		<2.7		
Vinyl chloride (ug/l)	0.2	0.02	**1.2**	<0.18	<0.18	<0.17	<0.17	<0.17	<0.17	<0.17
	0.2	0.02		<0.18		<0.17		<0.17		

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-428 (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)							936.87	939.01	938.75	936.67
ph-Field (standard units)							7.27	7.04	7.32	7.48
Specific conductance-field (umhos/cm @ 25c)							604	1339	611	1307
Temperature, water (degrees centigrade)							8.7	12.8	7.7	12.8
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)							670	709	674	619
Arsenic, dissolved (ug/l As)	10	1					0.36 J			
Barium, dissolved (ug/l as Ba)	2000	400					61.2			
Boron, dissolved (mg/l as B)	1	0.2					0.0445	0.0418		
Cadmium, dissolved (ug/l as Cd)	5	0.5					<0.15			
Chloride, dissolved (mg/l as Cl)	250	125					40.5	30.8	30.1	41.9
Chromium, dissolved (ug/l as Cr)	100	10					<1			
COD, filtered (mg/l)							<13.4	<13.4		
Copper, dissolved (ug/l Cu)	1300	130					3.2 J			
Cyanide, total (mg/l as CN)	0.2	0.04					<0.0068			
Fluoride, dissolved (mg/l as F)	4	0.8					<0.5 M	<0.1		
Hardness, total, filtered (mg/l as CaCO3)							806	799	831	784
Lead, dissolved (ug/l as Pb)	15	1.5					<0.24			
Manganese, dissolved (ug/l as Mn)	50	25					**467**	**455**		
Mercury, dissolved (ug/l as Hg)	2	0.2					<0.084			
Nitrite + nitrate, dis. (mg/l as N)	10	2					**3.7**	**4.3**		
Nitrogen, ammonia, dissolved (mg/l as N)	9.7	0.97					<0.25	<0.25		
Selenium, dissolved (ug/l as Se)	50	10					<0.32			

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
MW-428 (GRL)										
Silver, dissolved (ug/l as Ag)	50	10					<0.1			
Sodium, dissolved (mg/l as Na)							19	20		
Sulfate, dissolved (mg/l as SO4)	250	125					88.9	89.1		
Zinc, dissolved (ug/l as Zn)	5000	2500					20			
Organic										
1,1,1-Trichloroethane (ug/l)	200	40					0.31 J			0.3 J
1,1-Dichloroethane (ug/l)	850	85					2.2			1.9
1,2-Dichloropropane (ug/l)	5	0.5					**3.1**			**2.7**
Acetone (ug/l)	9000	1800					3.3 J			<2.7
Chlorobenzene (ug/l)	100	20					1.1 J			1 J
cis-1,2-Dichloroethene (ug/l)	70	7					**20.3**			**21.4**
Tetrachloroethylene (ug/l)	5	0.5					**1.5**			**1.7**
trans-1,2-Dichloroethene, total (ug/l)	100	20					<1.1			0.91 J
Trichloroethylene (ug/l)	5	0.5					**37.4**			**35**

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-309A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			939.48	937.11	937.84	938.48	939.28	939.33	939.25	937.76
ph-Field (standard units)			8.1	7.92	8.16	7.63	7.96	7.8	7.82	7.92
Specific conductance-field (umhos/cm @ 25c)		610	261	290	345	302	140	266	358	339
Temperature, water (degrees centigrade)			11	14.5	9.6	13.3	8.2	12.1	9.7	11.2
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		250	142	149	139	143	134	123 B	140	132
Chloride, dissolved (mg/l as Cl)	250	125	2.9	3.1	2.7	2.4	2.4	3	2.6	2.6
Hardness, total, filtered (mg/l as CaCO3)		170	61.2	66	67.7	69.6	60.2	59.9	65.8	65.2
Organic										
Acetone (ug/l)	9000	1800		<3		3.6 J		3.4 J		<2.7
Benzene (ug/l)	5	0.5		<0.5		0.25 J		0.45 J		<0.25
Chloromethane (ug/l)	30	3		<0.5		<2.2		2.6 J		<2.2
Toluene (ug/l)	800	160		<0.5		0.34 J		0.52 J		<0.27

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-403A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.62	927.64	927.91	928.27	928.31	928.99	928.77	927.79
ph-Field (standard units)			7.54	7.04	7.5		6.96	7.48	7.45	7.11
Specific conductance-field (umhos/cm @ 25c)		2900	1932	1640	1820		1720	1011	622	1504
Temperature, water (degrees centigrade)			11.2	13.8	9.4		8.9	14.1	6.4	13.5
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		860	689	694	707 M		848 M	**862**	**950**	**909**
Chloride, dissolved (mg/l as Cl)	400	400	294	305	262		264	227	214	199
Hardness, total, filtered (mg/l as CaCO3)		1300	839	925	963		1110	1030	1040	1110
Organic										
1,1-Dichloroethane (ug/l)	850	85	0.51 J	0.74 J	0.55 J		0.33 J	0.42 J	0.44 J	0.52 J
Acetone (ug/l)	9000	1800	6 J	<3	<3		6 J	7.3 J	6.2 J	3.7 J
Benzene (ug/l)	5	0.5	<0.5	**0.61 J**	**1.3**		**0.78 J**	**1.3**	**0.78 J**	**1.1**
cis-1,2-Dichloroethene (ug/l)	70	7	0.79 J	0.84 J	1.4		0.85 J	1.3	0.65 J	1.2
Ethylbenzene (ug/l)	700	140	<0.5	<0.5	<0.5		0.29 J	<0.22	<0.32	<0.32
m&p-Xylene (ug/l)	2000	400	<1	<1	<1		1.3 J	<0.47		
Methyl-tert-butyl ether (ug/l)	60	12	<0.17	<0.17	0.2 J		<1.2	<1.2	<1.2	<1.2
Naphthalene (ug/l)	100	10	<2.5	<2.5	<2.5		3.5 J	<1.2	<1.2	<1.2
o-Xylene (ug/l)	2000	400	<0.5	<0.5	<0.5		0.62 J	<0.26		
Tetrahydrofuran (ug/l)	50	10	3.5 J	<2	<2		3.2 J	2.6 J	3.6 J	2.5 J
Toluene (ug/l)	800	160	<0.5	<0.5	<0.5		0.7 J	<0.17	<0.27	<0.27
Vinyl chloride (ug/l)	0.2	0.02	<0.18	<0.18	**1**		**0.61 J**	**1.4**	**0.46 J**	**1.1**

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-406A										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			933.17	931.97	932.62	932.65	932.73	933.27	932.95	932.47
ph-Field (standard units)			7.25	7.68	7.34	7.61	7.4	7.75	7.62	7.62
			7.25				7.4			
Specific conductance-field (umhos/cm @ 25c)		1100	635	706	683	634	326	396	343	724
		1100	635				326			
Temperature, water (degrees centigrade)			9.7	11.7	8.8	10.5	8	10.7	9.4	10.7
			9.7				8			
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		560	**749**	413	347	336	350	353	353	344
		560	388				347			
Chloride, dissolved (mg/l as Cl)	250	125	39	29.1	23.7	19.8	22.7	21.3	19	22.3
	250	125	18.7				22.7			
Hardness, total, filtered (mg/l as CaCO3)		570	**646**	423	374	365	362	336	335	361
		570	305				345			
Organic										
1,1-Dichloroethane (ug/l)	850	85	<0.24	<0.24	0.25 J	<0.27	<0.27	<0.27	<0.27	<0.27
	850	85	<0.24							
Acetone (ug/l)	9000	1800	3.1 J	<3	<3	3.3 J	3.6 J	<2.7	<2.7	<2.7
	9000	1800	<3							
Methyl-tert-butyl ether (ug/l)	60	12	<0.17	<0.17	0.18 J	<1.2	<1.2	<1.2	<1.2	<1.2
	60	12	<0.17							
Tetrahydrofuran (ug/l)	50	10	<2	<2	2.2 J	<2.3	<2.3	<2.3	<2.3	<2.3
	50	10	<2							
Vinyl chloride (ug/l)	0.2	0.02	<0.18	**4**	**3.5**	**2.7**	**2.2**	**3.6**	**1.2**	**2**
	0.2	0.02	**1.2**							

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-406B										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			933.72	932.72	933.26	933.17	933.42	933.77	933.52	933.02
ph-Field (standard units)			7.58	7.93	7.49	7.58	7.48	7.51	7.42	7.67
							7.48		7.42	7.67
Specific conductance-field (umhos/cm @ 25c)		970	783	701	703	636	341	384	327	717
		970					341		327	717
Temperature, water (degrees centigrade)			9.7	10.8	10	10.9	7.5	11.3	9.3	9.9
							7.5		9.3	9.9
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		560	392	365	356	358	343	333	353	333
		560					321		351	334
Chloride, dissolved (mg/l as Cl)	250	125	11.8	10.6	10 M	11	10.1 M	10.2	10.2	10.5
	250	125					10		10.2	10.5
Hardness, total, filtered (mg/l as CaCO3)		630	420	446	432	457	399	394	376	409
		630					399		372	406
Organic										
1,1-Dichloroethane (ug/l)	850	85	2.3	2.8	2.2	2.3	1.8	2.3	1.8	1.6
	850	85					1.8		1.9	1.6
1,2-Dichloropropane (ug/l)	5	0.5	<0.23	<0.23	0.42 J	0.34 J	0.29 J	0.42 J	<0.28	0.45 J
	5	0.5					<0.28		0.36 J	0.48 J
Acetone (ug/l)	9000	1800	<3	<3	<3	<2.7	4.6 J	8.3 J	4.7 J	<2.7
	9000	1800					3.1 J		3.8 J	10.7 J
Benzene (ug/l)	5	0.5	**1.2**	**1.3**	**1.3**	**1.1**	**0.96 J**	**1.1**	**1.2**	**1.2**
	5	0.5					**1.1**		**1.2**	**1.3**
cis-1,2-Dichloroethene (ug/l)	70	7	0.72 J	0.89 J	1.1	0.79 J	0.71 J	0.79 J	0.51 J	0.49 J
	70	7					0.67 J		0.46 J	0.51 J

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-406B										
Vinyl chloride (ug/l)	0.2	0.02	**1.3**	**0.99 J**	**0.75 J**	**0.72 J**	**0.29 J**	**0.22 J**	<0.17	<0.17
	0.2	0.02					**0.27 J**		<0.17	<0.17

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-428A (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)							936.61	937.68	937.16	935.7
ph-Field (standard units)							7.84	7.68	7.55	7.59
Specific conductance-field (umhos/cm @ 25c)							393	824	459	866
Temperature, water (degrees centigrade)							9	12.9	10	10.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)							353	373	372	357
Arsenic, dissolved (ug/l As)	10	1					**4.4**	**4.6**		
Barium, dissolved (ug/l as Ba)	2000	400					68.2			
Boron, dissolved (mg/l as B)	1	0.2					0.0377	0.0348		
Cadmium, dissolved (ug/l as Cd)	5	0.5					<0.15			
Chloride, dissolved (mg/l as Cl)	250	125					29.3	29.7	29.8	30.5
Chromium, dissolved (ug/l as Cr)	100	10					<1			
COD, filtered (mg/l)							<13.4	<13.4		
Copper, dissolved (ug/l Cu)	1300	130					<1.1			
Cyanide, total (mg/l as CN)	0.2	0.04					<0.0068			
Fluoride, dissolved (mg/l as F)	4	0.8					<0.1	<0.1		
Hardness, total, filtered (mg/l as CaCO3)							465	499	518	444
Lead, dissolved (ug/l as Pb)	15	1.5					<0.24			
Manganese, dissolved (ug/l as Mn)	50	25					21.3	12.7		
Mercury, dissolved (ug/l as Hg)	2	0.2					<0.084			
Nitrite + nitrate, dis. (mg/l as N)	10	2					<0.095	0.13 J		
Nitrogen, ammonia, dissolved (mg/l as N)	9.7	0.97					<0.25	<0.25		
Selenium, dissolved (ug/l as Se)	50	10					<0.32			

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
P-428A (GRL)										
Silver, dissolved (ug/l as Ag)	50	10					<0.1			
Sodium, dissolved (mg/l as Na)							11.1	9.99		
Sulfate, dissolved (mg/l as SO4)	250	125					84.2	82.1		
Zinc, dissolved (ug/l as Zn)	5000	2500					5.4 J			
Organic										
Acetone (ug/l)	9000	1800					5.2 J			<2.7
W-009RR										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.77	927.72	926.72	927.22	926.97	927.92	928.72	925.77
ph-Field (standard units)			7.56	6.75	7.31	7.58	6.89	7.11	7.33	7.14
Specific conductance-field (umhos/cm @ 25c)		2100	860	1072	1390	731	1120	930	1295	1123
Temperature, water (degrees centigrade)			13.5	14.1	10.7	14.5	11.3	14	12.8	13.2
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		1200	444	701	836	631	613	707	753	661
Chloride, dissolved (mg/l as Cl)	250	125	18.9	34.4	35.3	22.4	23.4	32.2	28.9	33.5
Hardness, total, filtered (mg/l as CaCO3)		1300	450	767	865	775	630	757	786	747
Organic										
Acetone (ug/l)	9000	1800		<3		4 J		4.6 J		<2.7
Tetrahydrofuran (ug/l)	50	10		**34.7**		**14.4 J**		**36.5**		**19.3 J**
Toluene (ug/l)	800	160		0.66 J		<0.17		<0.17		<0.27

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

J Result is an estimated value below the laboratory's limit of quantitation.
B Compound detected in blank.
P Did not meet required preservation and/or hold time.
M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-010R										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			927.19	924.64	926.14	926.19	926.94	926.72	926.56	926.09
ph-Field (standard units)			6.97	6.97	7.29	7.4	7.47	7.05	7.29	7.3
Specific conductance-field (umhos/cm @ 25c)		2100	1442	1147	1400	1720	1320	1245	1371	1290
Temperature, water (degrees centigrade)			9.3	13.7	2	13.3	7.9	13.3	8.9	12.5
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		950	738	716	721	706	676	682	690	654
Chloride, dissolved (mg/l as Cl)	250	125	19.3	43	34.8	35.5	33.7	38.1	32.5	39.2
Hardness, total, filtered (mg/l as CaCO3)		960	834	892	847	899	864	867	822	855
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		6.9 J		<2.7
cis-1,2-Dichloroethene (ug/l)	70	7		2.7		1.3		3.9		4.5

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B Compound detected in blank.
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M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-158 (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.33	923.46	925.01	924.96	924.76	926.61	925.21	924.06
ph-Field (standard units)			7.21	7.35	7.1	7.5	7.1	7	7.57	6.94
Specific conductance-field (umhos/cm @ 25c)		800	**898**	**850**	**1000**	**830**	**870**	**862**	**855**	**965**
Temperature, water (degrees centigrade)			8.9	14.3	6.9	7.5	7.4	15.3	6.5	13.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		440	**514**	**571**	**585**	**557**	**528**	**472**	**488**	**536**
Chloride, dissolved (mg/l as Cl)	250	125	5.8	4.9	5.6 M	1.5 J	3.1	1.8 J	2.3	2.1
Hardness, total, filtered (mg/l as CaCO3)		500	**512**	**532**	**577**	**642**	**546**	484	**512**	**601**
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	3.3 J	3.8 J	7.6 J	8.2 J	<2.7

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

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B Compound detected in blank.
P Did not meet required preservation and/or hold time.
M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-159 (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.6	924.25	924.65	925.5	925.22	926.6	925.5	925.2
ph-Field (standard units)			7.27	7.04	7.55	7.61	7.33	7.32	7.59	7.29
Specific conductance-field (umhos/cm @ 25c)		1100	757	924	957	647	619	**1540**	730	880
Temperature, water (degrees centigrade)			10.5	13.1	8.2	9.4	8.7	12.1	9.2	12.9
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		500	462	**500**	**555**	455	335	437	474	471
Chloride, dissolved (mg/l as Cl)	250	125	4.9	7.2	9.2 J	2	2.2	2.5	1.8 J	7.1
Hardness, total, filtered (mg/l as CaCO3)		640	415	**648**	556	435	445	515	528	566
Organic										
Acetone (ug/l)	9000	1800		<3		4.1 J		2.9 J		14.6 J

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M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-159A (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.52	924.47	925.37	925.42	925.22	926.67	925.52	925.18
ph-Field (standard units)			7.06	6.91	7.6	7.57	7.29	7.3	7.34	7.37
					7.6					
Specific conductance-field (umhos/cm @ 25c)		720	640	**954**	**746**	641	599	**1300**	664	671
		720			**746**					
Temperature, water (degrees centigrade)			8.9	13.6	9	8.3	9.3	10.8	9.8	11.8
					9					
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		430	360	400	400	**434**	320	385	355	353
		430			366 B					
Chloride, dissolved (mg/l as Cl)	250	125	3.2	3.7	4.5	2.2	3.5	3.1	3.1	4.3
	250	125			4.4					
Hardness, total, filtered (mg/l as CaCO3)		440	332	409	381	**443**	346	389	387	391
		440			379					
Organic										
Acetone (ug/l)	9000	1800		<3		6.6 J		<2.7		<2.7

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M Failed method QC check.

Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-160R										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			928.09	927.29	926.94	927.24	926.69	928.14	928.34	926.02
ph-Field (standard units)			7.55	6.85	7.48	7.33	7.6	7.46	7.69	7.58
				6.85						
Specific conductance-field (umhos/cm @ 25c)		2000	1210	1072	1180	1380	1050	865	1033	977
		2000		1072						
Temperature, water (degrees centigrade)			9	14.5	7	14.5	8.4	16.2	9.2	15.4
				14.5						
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		1100	581	570	536	503	522	495	487	485
		1100		573						
Chloride, dissolved (mg/l as Cl)	250	125	81.7	87.4	94.8	78.7	65.7	56.8	59.4	44
	250	125		85.3						
Hardness, total, filtered (mg/l as CaCO3)		1100	646	690	645	645	620	553	553	624
		1100		692						
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	<2.7	3.6 J	8.4 J	4 J	12.3 J
	9000	1800		<3						
Toluene (ug/l)	800	160	<0.5	<0.5	<0.5	<0.17	<0.17	0.29 J	<0.27	<0.27
	800	160		<0.5						

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-161R (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			929.16	928.21	940.78	927.21	927.46	940.46	926.36	925.86
ph-Field (standard units)			7.46	7.46	7.27	7.47	7.57	7.06	7.71	6.99
Specific conductance-field (umhos/cm @ 25c)		1100	**1111**	1023	**1190**	890	**1170**	985	**1186**	1058
Temperature, water (degrees centigrade)			13.3	13.6	9.2	13.6	8.9	13.9	9.5	12.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		740	495	584	541	563	571	592 M	559	517
Chloride, dissolved (mg/l as Cl)	250	125	38.1	48	45.2	42.8	40	56	28.6	35.9
Hardness, total, filtered (mg/l as CaCO3)		640	638	**735**	**661**	**728**	**698**	**660**	**734**	**694**
Organic										
1,1-Dichloroethane (ug/l)	850	85		0.97 J		0.35 J		<0.27		<0.27
Acetone (ug/l)	9000	1800		<3		3.8 J		8 J		<2.7
cis-1,2-Dichloroethene (ug/l)	70	7		1.2		0.33 J		0.44 J		1.3
Vinyl chloride (ug/l)	0.2	0.02		<0.18		**0.73 J**		**0.86 J**		<0.17

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-163 (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			925.47	925.13	924.98	925.43	924.48	925.43	924.35	924.62
ph-Field (standard units)			7.86	6.95	7.84	7.7	7.77	7.36	7.39	7.14
Specific conductance-field (umhos/cm @ 25c)		1400	630	768	598	718	374	511	369	855
Temperature, water (degrees centigrade)			8.5	15.8	8.1	15.6	8.5	12	9	11.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		520	307	367	406	335	357	369	360	372
Chloride, dissolved (mg/l as Cl)	250	140	45.9	53	56	56.7	64.5	62.5	60.8	64.2
Hardness, total, filtered (mg/l as CaCO3)		790	502	378	747	429	388	688	349	535
Organic										
Acetone (ug/l)	9000	1800	<3	<3	<3	<2.7	<2.7	12.4 J	2.8 J	11.2 J
Toluene (ug/l)	800	160	<0.5	<0.5	<0.5	<0.17	<0.17	0.24 J	<0.27	0.27 J

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-163 (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			925.47	925.13	924.98	925.43	924.48	925.43	924.35	924.62
ph-Field (standard units)			7.86	6.95	7.84	7.7	7.77	7.36	7.39	7.14
Specific conductance-field (umhos/cm @ 25c)			630	768	598	718	374	511	369	855
Temperature, water (degrees centigrade)			8.5	15.8	8.1	15.6	8.5	12	9	11.7
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			307	367	406	335	357	369	360	372
Arsenic, dissolved (ug/l As)	10	1	**2.8 J**	**5.3**	**6**	**3.1**	**1.9**	**5.3**	**1.4**	**4.7**
Chloride, dissolved (mg/l as Cl)	250	125	45.9	53	56	56.7	64.5	62.5	60.8	64.2
Hardness, total, filtered (mg/l as CaCO3)			502	378	747	429	388	688	349	535
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		12.4 J	2.8 J	11.2 J
Toluene (ug/l)	800	160		<0.5		<0.17		0.24 J	<0.27	0.27 J

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-163A (GRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.87	926.47	926.47	926.67	926.12	927.36	926.02	926.07
ph-Field (standard units)			7.12	7.17	7.7	7.56	6.94	7.79	7.52	7.34
Specific conductance-field (umhos/cm @ 25c)		760	350	**1561**	326	418	209	213	331	343
Temperature, water (degrees centigrade)			7.1	15.5	8.6	14.9	8.8	15.5	14.1	9.4
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)		320	188	192	211 M	214	188	189	192	175 M
Chloride, dissolved (mg/l as Cl)	250	125	3.6	2.1	12.2	11.9	9.7 M	7.6	3.8	2.2
Hardness, total, filtered (mg/l as CaCO3)		360	166	155	195	191	187	193	159	140
Organic										
Acetone (ug/l)	9000	1800	4.4 J	<3	<3	<2.7	<2.7	10.2 J	4.3 J	5.5 J
Chloroethane (ug/l)	400	80	<0.37	<0.37	<0.37	<1.3	<1.3	1.6 J	<1.3	<1.3

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

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Historic Monitoring Results - Last 8 Events
Selected Wells in Glacier Ridge Landfill Monitoring Program

Monitoring Wells	ES	PAL	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
W-163A (LGRL)										
Reporting Period			4/1/2017	10/1/2017	4/1/2018	10/1/2018	4/1/2019	10/1/2019	4/1/2020	10/1/2020
Field										
Groundwater elevation (ft MSL)			926.87	926.47	926.47	926.67	926.12	927.36	926.02	926.07
ph-Field (standard units)			7.12	7.17	7.7	7.56	6.94	7.79	7.52	7.34
Specific conductance-field (umhos/cm @ 25c)			350	1561	326	418	209	213	331	343
Temperature, water (degrees centigrade)			7.1	15.5	8.6	14.9	8.8	15.5	14.1	9.4
Inorganic										
Alkalinity, total filtered (mg/l as CaCO3)			188	192	211 M	214	188	189	192	175 M
Arsenic, dissolved (ug/l As)	10	1	**2.9**	**3.2**	**2.3**	**1.6**	**1.9**	**2.8**	**2.5**	**3.1**
Chloride, dissolved (mg/l as Cl)	250	125	3.6	2.1	12.2	11.9	9.7 M	7.6	3.8	2.2
Hardness, total, filtered (mg/l as CaCO3)			166	155	195	191	187	193	159	140
Organic										
Acetone (ug/l)	9000	1800		<3		<2.7		10.2 J	4.3 J	5.5 J
Chloroethane (ug/l)	400	80		<0.37		<1.3		1.6 J	<1.3	<1.3

Notes: Bold = PAL exceedance, bold + underlined = ES exceedance (groundwater samples only). Only VOCs detected at each sampling point in at least one of the sampling events are shown. Where more than one sample was collected per reporting period (duplicates and/or resampling), these results are shown in the rows below the original sample.

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B Compound detected in blank.
P Did not meet required preservation and/or hold time.
M Failed method QC check.

Attachment C

Bedrock Investigation Laboratory Report (October 2020)

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

November 09, 2020

Lonn Walter
GFL Enviromental
N7296 Hwy V
Horicon, WI 53032

RE: Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Dear Lonn Walter:

Enclosed are the analytical results for sample(s) received by the laboratory between October 08, 2020 and October 10, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cindy K Varga

Cindy Varga
cindy.varga@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Sherren Clark, SCS Engineers
Environmental Sampling Corporation Staff, Environmental Sampling Corporation
Jake Margelofsky, GFL Enviromental
Frank Perugini, Environmental Sampling Corporation
Kari Rabideau, GFL Environmental
Ashley Radunzel, SCS ENGINEERS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40216102001	**P-422B**	Water	10/07/20 14:00	10/08/20 09:05
40216102002	**MW-1B**	Water	10/07/20 14:20	10/08/20 09:05
40216102003	**TRIP BLANK**	Water	10/07/20 00:00	10/08/20 09:05
40216187001	**P-401D**	Water	10/08/20 11:00	10/09/20 09:00
40216187002	**P-402E**	Water	10/08/20 10:35	10/09/20 09:00
40216187003	**P-423D**	Water	10/08/20 13:05	10/09/20 09:00
40216187004	**P-424D**	Water	10/08/20 13:50	10/09/20 09:00
40216187005	**P-424SS**	Water	10/08/20 15:55	10/09/20 09:00
40216187006	**P-426D**	Water	10/08/20 12:20	10/09/20 09:00
40216187007	**TRIP BLANK**	Water	10/08/20 00:00	10/09/20 09:00
40216318001	**P-429SS**	Water	10/09/20 13:30	10/10/20 08:30
40216318002	**TRIP BLANK**	Water	10/09/20 00:00	10/10/20 08:30

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SAMPLE ANALYTE COUNT

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40216102001	**P-422B**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216102002	**MW-1B**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216102003	**TRIP BLANK**	EPA 8260	LAP	45	PASI-G
40216187001	**P-401D**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187002	**P-402E**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187003	**P-423D**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187004	**P-424D**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187005	**P-424SS**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187006	**P-426D**	EPA 6010	TXW	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216187007	**TRIP BLANK**	EPA 8260	LAP	45	PASI-G
40216318001	**P-429SS**	EPA 6010	TXW	1	PASI-G
		EPA 8260	LAP	45	PASI-G
			VGC	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40216318002	**TRIP BLANK**	EPA 8260	LAP	45	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-422B **Lab ID: 40216102001** Collected: 10/07/20 14:00 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**176000**	ug/L	2000	150	1		10/13/20 16:26		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/12/20 22:02	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/12/20 22:02	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:02	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/12/20 22:02	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/12/20 22:02	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/12/20 22:02	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/12/20 22:02	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/12/20 22:02	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/12/20 22:02	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/12/20 22:02	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/12/20 22:02	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/12/20 22:02	78-93-3	
Acetone	**<2.7**	ug/L	20.0	2.7	1		10/12/20 22:02	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/12/20 22:02	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/12/20 22:02	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/12/20 22:02	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/12/20 22:02	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/12/20 22:02	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/12/20 22:02	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/12/20 22:02	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/12/20 22:02	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/12/20 22:02	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/12/20 22:02	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/12/20 22:02	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/12/20 22:02	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/12/20 22:02	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/12/20 22:02	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/12/20 22:02	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/12/20 22:02	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/12/20 22:02	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/12/20 22:02	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/12/20 22:02	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/12/20 22:02	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:02	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/12/20 22:02	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/12/20 22:02	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/12/20 22:02	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/12/20 22:02	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:02	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/12/20 22:02	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-422B **Lab ID: 40216102001** Collected: 10/07/20 14:00 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/12/20 22:02	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/12/20 22:02	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		10/12/20 22:02	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		10/12/20 22:02	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		10/12/20 22:02	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.88**	Std. Units			1		10/07/20 14:00		
Field Specific Conductance	**418**	umhos/cm			1		10/07/20 14:00		
Turbidity	**N**	NTU			1		10/07/20 14:00		
Apparent Color	**N**	no units			1		10/07/20 14:00		
Odor	**N**	no units			1		10/07/20 14:00		
Temperature, Water (C)	**10.7**	deg C			1		10/07/20 14:00		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**10.4**	mg/L	2.0	0.43	1		10/14/20 20:57	16887-00-6	M0
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**198**	mg/L	24.8	7.4	1		10/12/20 12:55		

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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: MW-1B **Lab ID: 40216102002** Collected: 10/07/20 14:20 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**358000**	ug/L	2000	150	1		10/13/20 16:28		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/12/20 22:24	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/12/20 22:24	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:24	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/12/20 22:24	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/12/20 22:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/12/20 22:24	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/12/20 22:24	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/12/20 22:24	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/12/20 22:24	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/12/20 22:24	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/12/20 22:24	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/12/20 22:24	78-93-3	
Acetone	**3.5J**	ug/L	20.0	2.7	1		10/12/20 22:24	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/12/20 22:24	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/12/20 22:24	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/12/20 22:24	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/12/20 22:24	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/12/20 22:24	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/12/20 22:24	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/12/20 22:24	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/12/20 22:24	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/12/20 22:24	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/12/20 22:24	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/12/20 22:24	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/12/20 22:24	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/12/20 22:24	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/12/20 22:24	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/12/20 22:24	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/12/20 22:24	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/12/20 22:24	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/12/20 22:24	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/12/20 22:24	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/12/20 22:24	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:24	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/12/20 22:24	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/12/20 22:24	75-69-4	
Vinyl chloride	**4.3**	ug/L	1.0	0.17	1		10/12/20 22:24	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/12/20 22:24	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/12/20 22:24	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/12/20 22:24	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: MW-1B **Lab ID: 40216102002** Collected: 10/07/20 14:20 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/12/20 22:24	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/12/20 22:24	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		10/12/20 22:24	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		10/12/20 22:24	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		10/12/20 22:24	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.72**	Std. Units			1		10/07/20 14:20		
Field Specific Conductance	**633**	umhos/cm			1		10/07/20 14:20		
Turbidity	**N**	NTU			1		10/07/20 14:20		
Apparent Color	**N**	no units			1		10/07/20 14:20		
Odor	**N**	no units			1		10/07/20 14:20		
Temperature, Water (C)	**12.5**	deg C			1		10/07/20 14:20		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**139**	mg/L	10.0	2.2	5		10/14/20 21:41	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**177**	mg/L	24.8	7.4	1		10/12/20 12:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216102003** Collected: 10/07/20 00:00 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 11:30	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 11:30	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:30	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 11:30	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 11:30	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 11:30	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 11:30	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 11:30	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 11:30	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 11:30	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 11:30	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 11:30	78-93-3	
Acetone	**<2.7**	ug/L	20.0	2.7	1		10/19/20 11:30	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 11:30	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 11:30	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 11:30	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 11:30	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 11:30	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 11:30	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 11:30	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/19/20 11:30	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 11:30	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 11:30	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 11:30	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 11:30	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 11:30	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 11:30	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 11:30	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 11:30	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 11:30	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 11:30	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 11:30	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 11:30	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:30	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/19/20 11:30	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 11:30	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/19/20 11:30	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 11:30	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:30	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 11:30	10061-01-5	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/19/20 11:30	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 11:30	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/19/20 11:30	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		10/19/20 11:30	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216102003** Collected: 10/07/20 00:00 Received: 10/08/20 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Surrogates									
Toluene-d8 (S)	99	%	70-130		1		10/19/20 11:30	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-401D **Lab ID: 40216187001** Collected: 10/08/20 11:00 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**339000**	ug/L	2000	150	1		10/13/20 22:50		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 14:06	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 14:06	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/19/20 14:06	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 14:06	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 14:06	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 14:06	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 14:06	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 14:06	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 14:06	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 14:06	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 14:06	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 14:06	78-93-3	
Acetone	**6.9J**	ug/L	20.0	2.7	1		10/19/20 14:06	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 14:06	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 14:06	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 14:06	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 14:06	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 14:06	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 14:06	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 14:06	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/19/20 14:06	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 14:06	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 14:06	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 14:06	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 14:06	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 14:06	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 14:06	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 14:06	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 14:06	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 14:06	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 14:06	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 14:06	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 14:06	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 14:06	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/19/20 14:06	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 14:06	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/19/20 14:06	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 14:06	1330-20-7	
cis-1,2-Dichloroethene	**1.8**	ug/L	1.0	0.27	1		10/19/20 14:06	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 14:06	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-401D **Lab ID: 40216187001** Collected: 10/08/20 11:00 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/19/20 14:06	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 14:06	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		10/19/20 14:06	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		10/19/20 14:06	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		10/19/20 14:06	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.32**	Std. Units			1		10/08/20 11:00		
Field Specific Conductance	**693**	umhos/cm			1		10/08/20 11:00		
Turbidity	**N**	NTU			1		10/08/20 11:00		
Apparent Color	**N**	no units			1		10/08/20 11:00		
Odor	**N**	no units			1		10/08/20 11:00		
Temperature, Water (C)	**14.6**	deg C			1		10/08/20 11:00		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**17.8**	mg/L	10.0	2.2	5		10/16/20 13:15	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**342**	mg/L	24.8	7.4	1		10/19/20 11:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-402E **Lab ID: 40216187002** Collected: 10/08/20 10:35 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**484000**	ug/L	2000	150	1		10/13/20 22:53		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.61**	ug/L	2.5	0.61	2.5		10/19/20 19:09	71-55-6	
1,1,2-Trichloroethane	**<1.4**	ug/L	12.5	1.4	2.5		10/19/20 19:09	79-00-5	
1,1-Dichloroethane	**<0.68**	ug/L	2.5	0.68	2.5		10/19/20 19:09	75-34-3	
1,1-Dichloroethene	**<0.61**	ug/L	2.5	0.61	2.5		10/19/20 19:09	75-35-4	
1,2-Dibromo-3-chloropropane	**<4.4**	ug/L	14.7	4.4	2.5		10/19/20 19:09	96-12-8	
1,2-Dibromoethane (EDB)	**<2.1**	ug/L	6.9	2.1	2.5		10/19/20 19:09	106-93-4	
1,2-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	2.5		10/19/20 19:09	95-50-1	
1,2-Dichloroethane	**<0.70**	ug/L	2.5	0.70	2.5		10/19/20 19:09	107-06-2	
1,2-Dichloropropane	**<0.71**	ug/L	2.5	0.71	2.5		10/19/20 19:09	78-87-5	
1,3-Dichlorobenzene	**<1.6**	ug/L	5.2	1.6	2.5		10/19/20 19:09	541-73-1	
1,4-Dichlorobenzene	**<2.4**	ug/L	7.9	2.4	2.5		10/19/20 19:09	106-46-7	
2-Butanone (MEK)	**<7.3**	ug/L	50.0	7.3	2.5		10/19/20 19:09	78-93-3	
Acetone	**<6.9**	ug/L	50.0	6.9	2.5		10/19/20 19:09	67-64-1	
Benzene	**<0.62**	ug/L	2.5	0.62	2.5		10/19/20 19:09	71-43-2	
Bromodichloromethane	**<0.91**	ug/L	3.0	0.91	2.5		10/19/20 19:09	75-27-4	
Bromoform	**<9.9**	ug/L	33.1	9.9	2.5		10/19/20 19:09	75-25-2	
Bromomethane	**<2.4**	ug/L	12.5	2.4	2.5		10/19/20 19:09	74-83-9	
Carbon disulfide	**<1.1**	ug/L	3.7	1.1	2.5		10/19/20 19:09	75-15-0	
Carbon tetrachloride	**<2.7**	ug/L	9.0	2.7	2.5		10/19/20 19:09	56-23-5	
Chlorobenzene	**<1.8**	ug/L	5.9	1.8	2.5		10/19/20 19:09	108-90-7	
Chloroethane	**4.0J**	ug/L	12.5	3.4	2.5		10/19/20 19:09	75-00-3	
Chloroform	**<3.2**	ug/L	12.5	3.2	2.5		10/19/20 19:09	67-66-3	
Chloromethane	**<5.5**	ug/L	18.2	5.5	2.5		10/19/20 19:09	74-87-3	
Dibromochloromethane	**<6.5**	ug/L	21.7	6.5	2.5		10/19/20 19:09	124-48-1	
Dibromomethane	**<2.3**	ug/L	7.8	2.3	2.5		10/19/20 19:09	74-95-3	
Dichlorodifluoromethane	**<1.2**	ug/L	12.5	1.2	2.5		10/19/20 19:09	75-71-8	
Ethylbenzene	**<0.80**	ug/L	2.7	0.80	2.5		10/19/20 19:09	100-41-4	
Methyl-tert-butyl ether	**<3.1**	ug/L	10.4	3.1	2.5		10/19/20 19:09	1634-04-4	
Methylene Chloride	**<1.5**	ug/L	12.5	1.5	2.5		10/19/20 19:09	75-09-2	
Naphthalene	**<2.9**	ug/L	12.5	2.9	2.5		10/19/20 19:09	91-20-3	
Styrene	**<7.5**	ug/L	25.1	7.5	2.5		10/19/20 19:09	100-42-5	
Tetrachloroethene	**<0.82**	ug/L	2.7	0.82	2.5		10/19/20 19:09	127-18-4	
Tetrahydrofuran	**<5.8**	ug/L	50.0	5.8	2.5		10/19/20 19:09	109-99-9	
Toluene	**<0.67**	ug/L	2.5	0.67	2.5		10/19/20 19:09	108-88-3	
Trichloroethene	**0.86J**	ug/L	2.5	0.64	2.5		10/19/20 19:09	79-01-6	
Trichlorofluoromethane	**<0.54**	ug/L	2.5	0.54	2.5		10/19/20 19:09	75-69-4	
Vinyl chloride	**29.1**	ug/L	2.5	0.44	2.5		10/19/20 19:09	75-01-4	
Xylene (Total)	**<3.8**	ug/L	7.5	3.8	2.5		10/19/20 19:09	1330-20-7	
cis-1,2-Dichloroethene	**225**	ug/L	2.5	0.68	2.5		10/19/20 19:09	156-59-2	
cis-1,3-Dichloropropene	**<9.1**	ug/L	30.2	9.1	2.5		10/19/20 19:09	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-402E **Lab ID: 40216187002** Collected: 10/08/20 10:35 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**5.7**	ug/L	3.9	1.2	2.5		10/19/20 19:09	156-60-5	
trans-1,3-Dichloropropene	**<10.9**	ug/L	36.4	10.9	2.5		10/19/20 19:09	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		2.5		10/19/20 19:09	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		2.5		10/19/20 19:09	1868-53-7	
Toluene-d8 (S)	100	%	70-130		2.5		10/19/20 19:09	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.58**	Std. Units			1		10/08/20 10:35		
Field Specific Conductance	**758**	umhos/cm			1		10/08/20 10:35		
Turbidity	**N**	NTU			1		10/08/20 10:35		
Apparent Color	**N**	no units			1		10/08/20 10:35		
Odor	**N**	no units			1		10/08/20 10:35		
Temperature, Water (C)	**13.8**	deg C			1		10/08/20 10:35		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**50.1**	mg/L	2.0	0.43	1		10/15/20 16:46	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**378**	mg/L	49.6	14.9	2		10/19/20 11:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-423D **Lab ID: 40216187003** Collected: 10/08/20 13:05 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**488000**	ug/L	2000	150	1		10/13/20 22:55		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 17:34	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 17:34	79-00-5	
1,1-Dichloroethane	**0.50J**	ug/L	1.0	0.27	1		10/19/20 17:34	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 17:34	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 17:34	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 17:34	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 17:34	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 17:34	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 17:34	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 17:34	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 17:34	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 17:34	78-93-3	
Acetone	**4.5J**	ug/L	20.0	2.7	1		10/19/20 17:34	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 17:34	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 17:34	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 17:34	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 17:34	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 17:34	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 17:34	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 17:34	108-90-7	
Chloroethane	**1.4J**	ug/L	5.0	1.3	1		10/19/20 17:34	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 17:34	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 17:34	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 17:34	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 17:34	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 17:34	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 17:34	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 17:34	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 17:34	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 17:34	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 17:34	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 17:34	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 17:34	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 17:34	108-88-3	
Trichloroethene	**0.86J**	ug/L	1.0	0.26	1		10/19/20 17:34	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 17:34	75-69-4	
Vinyl chloride	**1.2**	ug/L	1.0	0.17	1		10/19/20 17:34	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 17:34	1330-20-7	
cis-1,2-Dichloroethene	**76.4**	ug/L	1.0	0.27	1		10/19/20 17:34	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 17:34	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-423D **Lab ID: 40216187003** Collected: 10/08/20 13:05 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**3.4**	ug/L	1.5	0.46	1		10/19/20 17:34	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 17:34	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		10/19/20 17:34	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		10/19/20 17:34	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		10/19/20 17:34	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.42**	Std. Units			1		10/08/20 13:05		
Field Specific Conductance	**730**	umhos/cm			1		10/08/20 13:05		
Turbidity	**N**	NTU			1		10/08/20 13:05		
Apparent Color	**N**	no units			1		10/08/20 13:05		
Odor	**N**	no units			1		10/08/20 13:05		
Temperature, Water (C)	**15.3**	deg C			1		10/08/20 13:05		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**41.2**	mg/L	2.0	0.43	1		10/15/20 17:01	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**358**	mg/L	24.8	7.4	1		10/19/20 11:46		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-424D **Lab ID: 40216187004** Collected: 10/08/20 13:50 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**474000**	ug/L	2000	150	1		10/13/20 22:58		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 17:53	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 17:53	79-00-5	
1,1-Dichloroethane	**0.76J**	ug/L	1.0	0.27	1		10/19/20 17:53	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 17:53	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 17:53	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 17:53	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 17:53	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 17:53	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 17:53	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 17:53	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 17:53	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 17:53	78-93-3	
Acetone	**3.2J**	ug/L	20.0	2.7	1		10/19/20 17:53	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 17:53	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 17:53	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 17:53	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 17:53	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 17:53	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 17:53	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 17:53	108-90-7	
Chloroethane	**2.2J**	ug/L	5.0	1.3	1		10/19/20 17:53	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 17:53	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 17:53	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 17:53	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 17:53	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 17:53	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 17:53	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 17:53	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 17:53	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 17:53	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 17:53	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 17:53	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 17:53	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 17:53	108-88-3	
Trichloroethene	**1.7**	ug/L	1.0	0.26	1		10/19/20 17:53	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 17:53	75-69-4	
Vinyl chloride	**7.4**	ug/L	1.0	0.17	1		10/19/20 17:53	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 17:53	1330-20-7	
cis-1,2-Dichloroethene	**105**	ug/L	1.0	0.27	1		10/19/20 17:53	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 17:53	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-424D **Lab ID: 40216187004** Collected: 10/08/20 13:50 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**3.3**	ug/L	1.5	0.46	1		10/19/20 17:53	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 17:53	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		10/19/20 17:53	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		10/19/20 17:53	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		10/19/20 17:53	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.38**	Std. Units			1		10/08/20 13:50		
Field Specific Conductance	**671**	umhos/cm			1		10/08/20 13:50		
Turbidity	**N**	NTU			1		10/08/20 13:50		
Apparent Color	**N**	no units			1		10/08/20 13:50		
Odor	**N**	no units			1		10/08/20 13:50		
Temperature, Water (C)	**15.5**	deg C			1		10/08/20 13:50		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**35.2**	mg/L	2.0	0.43	1		10/15/20 17:16	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**367**	mg/L	24.8	7.4	1		10/19/20 11:47		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-424SS **Lab ID: 40216187005** Collected: 10/08/20 15:55 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**347000**	ug/L	2000	150	1		10/13/20 23:05		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/14/20 11:54	71-55-6	M1,R1
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/14/20 11:54	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/14/20 11:54	75-34-3	R1
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/14/20 11:54	75-35-4	M1,R1
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/14/20 11:54	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/14/20 11:54	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/14/20 11:54	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/14/20 11:54	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/14/20 11:54	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/14/20 11:54	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/14/20 11:54	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/14/20 11:54	78-93-3	
Acetone	**3.7J**	ug/L	20.0	2.7	1		10/14/20 11:54	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/14/20 11:54	71-43-2	R1
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/14/20 11:54	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/14/20 11:54	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/14/20 11:54	74-83-9	R1
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/14/20 11:54	75-15-0	R1
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/14/20 11:54	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/14/20 11:54	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/14/20 11:54	75-00-3	R1
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/14/20 11:54	67-66-3	R1
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/14/20 11:54	74-87-3	R1
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/14/20 11:54	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/14/20 11:54	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/14/20 11:54	75-71-8	R1
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/14/20 11:54	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/14/20 11:54	1634-04-4	R1
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/14/20 11:54	75-09-2	R1
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/14/20 11:54	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/14/20 11:54	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/14/20 11:54	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/14/20 11:54	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/14/20 11:54	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/14/20 11:54	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/14/20 11:54	75-69-4	R1
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/14/20 11:54	75-01-4	R1
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/14/20 11:54	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/14/20 11:54	156-59-2	R1
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/14/20 11:54	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-424SS **Lab ID: 40216187005** Collected: 10/08/20 15:55 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/14/20 11:54	156-60-5	M1,R1
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/14/20 11:54	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		10/14/20 11:54	460-00-4	
Dibromofluoromethane (S)	115	%	70-130		1		10/14/20 11:54	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		10/14/20 11:54	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.52**	Std. Units			1		10/08/20 15:55		
Field Specific Conductance	**590**	umhos/cm			1		10/08/20 15:55		
Turbidity	**N**	NTU			1		10/08/20 15:55		
Apparent Color	**N**	no units			1		10/08/20 15:55		
Odor	**N**	no units			1		10/08/20 15:55		
Temperature, Water (C)	**13.0**	deg C			1		10/08/20 15:55		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**1.3J**	mg/L	2.0	0.43	1		10/15/20 19:45	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**307**	mg/L	24.8	7.4	1		10/19/20 11:48		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-426D **Lab ID: 40216187006** Collected: 10/08/20 12:20 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**528000**	ug/L	2000	150	1		10/13/20 23:08		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 12:08	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 12:08	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/19/20 12:08	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 12:08	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 12:08	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 12:08	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 12:08	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 12:08	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 12:08	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 12:08	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 12:08	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 12:08	78-93-3	
Acetone	**3.8J**	ug/L	20.0	2.7	1		10/19/20 12:08	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 12:08	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 12:08	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 12:08	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 12:08	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 12:08	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 12:08	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 12:08	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/19/20 12:08	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 12:08	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 12:08	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 12:08	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 12:08	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 12:08	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 12:08	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 12:08	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 12:08	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 12:08	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 12:08	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 12:08	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 12:08	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 12:08	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/19/20 12:08	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 12:08	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/19/20 12:08	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 12:08	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 12:08	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 12:08	10061-01-5	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-426D **Lab ID: 40216187006** Collected: 10/08/20 12:20 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/19/20 12:08	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 12:08	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/19/20 12:08	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		10/19/20 12:08	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		10/19/20 12:08	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.48**	Std. Units			1		10/08/20 12:20		
Field Specific Conductance	**680**	umhos/cm			1		10/08/20 12:20		
Turbidity	**N**	NTU			1		10/08/20 12:20		
Apparent Color	**N**	no units			1		10/08/20 12:20		
Odor	**N**	no units			1		10/08/20 12:20		
Temperature, Water (C)	**15.6**	deg C			1		10/08/20 12:20		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride, Dissolved	**48.0**	mg/L	10.0	2.2	5		10/15/20 19:59	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**352**	mg/L	24.8	7.4	1		10/19/20 11:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216187007** Collected: 10/08/20 00:00 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/19/20 11:49	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/19/20 11:49	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:49	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/19/20 11:49	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/19/20 11:49	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/19/20 11:49	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 11:49	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 11:49	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/19/20 11:49	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/19/20 11:49	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/19/20 11:49	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/19/20 11:49	78-93-3	
Acetone	**<2.7**	ug/L	20.0	2.7	1		10/19/20 11:49	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/19/20 11:49	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/19/20 11:49	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/19/20 11:49	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/19/20 11:49	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/19/20 11:49	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/19/20 11:49	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/19/20 11:49	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/19/20 11:49	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/19/20 11:49	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/19/20 11:49	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/19/20 11:49	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/19/20 11:49	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/19/20 11:49	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/19/20 11:49	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/19/20 11:49	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/19/20 11:49	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/19/20 11:49	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/19/20 11:49	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/19/20 11:49	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/19/20 11:49	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:49	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/19/20 11:49	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/19/20 11:49	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/19/20 11:49	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/19/20 11:49	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/19/20 11:49	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/19/20 11:49	10061-01-5	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/19/20 11:49	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/19/20 11:49	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		10/19/20 11:49	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		10/19/20 11:49	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216187007** Collected: 10/08/20 00:00 Received: 10/09/20 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Surrogates									
Toluene-d8 (S)	99	%	70-130		1		10/19/20 11:49	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-429SS **Lab ID: 40216318001** Collected: 10/09/20 13:30 Received: 10/10/20 08:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Total Hardness by 2340B, Dissolved	**340000**	ug/L	2000	150	1		10/13/20 16:31		
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/13/20 17:13	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/13/20 17:13	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/13/20 17:13	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/13/20 17:13	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/13/20 17:13	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/13/20 17:13	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/13/20 17:13	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/13/20 17:13	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/13/20 17:13	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/13/20 17:13	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/13/20 17:13	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/13/20 17:13	78-93-3	
Acetone	**<2.7**	ug/L	20.0	2.7	1		10/13/20 17:13	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/13/20 17:13	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/13/20 17:13	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/13/20 17:13	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/13/20 17:13	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/13/20 17:13	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/13/20 17:13	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/13/20 17:13	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/13/20 17:13	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/13/20 17:13	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/13/20 17:13	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/13/20 17:13	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/13/20 17:13	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/13/20 17:13	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/13/20 17:13	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/13/20 17:13	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/13/20 17:13	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/13/20 17:13	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/13/20 17:13	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/13/20 17:13	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/13/20 17:13	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/13/20 17:13	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/13/20 17:13	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/13/20 17:13	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/13/20 17:13	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/13/20 17:13	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/13/20 17:13	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/13/20 17:13	10061-01-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: P-429SS **Lab ID: 40216318001** Collected: 10/09/20 13:30 Received: 10/10/20 08:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/13/20 17:13	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/13/20 17:13	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		10/13/20 17:13	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		10/13/20 17:13	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		10/13/20 17:13	2037-26-5	
Field Data	Analytical Method: Pace Analytical Services - Green Bay								
Field pH	**7.62**	Std. Units			1		10/09/20 13:30		
Field Specific Conductance	**582**	umhos/cm			1		10/09/20 13:30		
Turbidity	**N**	NTU			1		10/09/20 13:30		
Apparent Color	**N**	no units			1		10/09/20 13:30		
Odor	**N**	no units			1		10/09/20 13:30		
Temperature, Water (C)	**15.0**	deg C			1		10/09/20 13:30		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride, Dissolved	**1.9J**	mg/L	2.0	0.43	1		10/20/20 14:15	16887-00-6	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**317**	mg/L	24.8	7.4	1		10/19/20 12:32		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216318002** Collected: 10/09/20 00:00 Received: 10/10/20 08:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		10/13/20 16:31	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		10/13/20 16:31	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		10/13/20 16:31	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		10/13/20 16:31	75-35-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		10/13/20 16:31	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		10/13/20 16:31	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/13/20 16:31	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		10/13/20 16:31	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		10/13/20 16:31	78-87-5	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		10/13/20 16:31	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		10/13/20 16:31	106-46-7	
2-Butanone (MEK)	**<2.9**	ug/L	20.0	2.9	1		10/13/20 16:31	78-93-3	
Acetone	**<2.7**	ug/L	20.0	2.7	1		10/13/20 16:31	67-64-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		10/13/20 16:31	71-43-2	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		10/13/20 16:31	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		10/13/20 16:31	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		10/13/20 16:31	74-83-9	
Carbon disulfide	**<0.45**	ug/L	1.5	0.45	1		10/13/20 16:31	75-15-0	
Carbon tetrachloride	**<1.1**	ug/L	3.6	1.1	1		10/13/20 16:31	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		10/13/20 16:31	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		10/13/20 16:31	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		10/13/20 16:31	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		10/13/20 16:31	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		10/13/20 16:31	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		10/13/20 16:31	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		10/13/20 16:31	75-71-8	
Ethylbenzene	**<0.32**	ug/L	1.1	0.32	1		10/13/20 16:31	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		10/13/20 16:31	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		10/13/20 16:31	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		10/13/20 16:31	91-20-3	
Styrene	**<3.0**	ug/L	10.0	3.0	1		10/13/20 16:31	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		10/13/20 16:31	127-18-4	
Tetrahydrofuran	**<2.3**	ug/L	20.0	2.3	1		10/13/20 16:31	109-99-9	
Toluene	**<0.27**	ug/L	1.0	0.27	1		10/13/20 16:31	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		10/13/20 16:31	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		10/13/20 16:31	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		10/13/20 16:31	75-01-4	
Xylene (Total)	**<1.5**	ug/L	3.0	1.5	1		10/13/20 16:31	1330-20-7	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		10/13/20 16:31	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		10/13/20 16:31	10061-01-5	
trans-1,2-Dichloroethene	**<0.46**	ug/L	1.5	0.46	1		10/13/20 16:31	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		10/13/20 16:31	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		10/13/20 16:31	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		10/13/20 16:31	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Sample: TRIP BLANK **Lab ID: 40216318002** Collected: 10/09/20 00:00 Received: 10/10/20 08:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Surrogates									
Toluene-d8 (S)	96	%	70-130		1		10/13/20 16:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368139
QC Batch Method: EPA 6010
Analysis Method: EPA 6010
Analysis Description: ICP Metals, Trace, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216102001, 40216102002, 40216318001

METHOD BLANK: 2128070 Matrix: Water
Associated Lab Samples: 40216102001, 40216102002, 40216318001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Hardness by 2340B, Dissolved	ug/L	<150	2000	10/13/20 15:44	

LABORATORY CONTROL SAMPLE: 2128071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Hardness by 2340B, Dissolved	ug/L		31100			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128073 2128074

Parameter	Units	40216136001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Hardness by 2340B, Dissolved	ug/L	633000			944000	980000				4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368147
QC Batch Method: EPA 6010
Analysis Method: EPA 6010
Analysis Description: ICP Metals, Trace, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216187001, 40216187002, 40216187003, 40216187004, 40216187005, 40216187006

METHOD BLANK: 2128114 Matrix: Water
Associated Lab Samples: 40216187001, 40216187002, 40216187003, 40216187004, 40216187005, 40216187006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Hardness by 2340B, Dissolved	ug/L	404J	2000	10/13/20 22:09	

LABORATORY CONTROL SAMPLE: 2128115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Hardness by 2340B, Dissolved	ug/L		31700			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128117 2128118

Parameter	Units	40216113001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Hardness by 2340B, Dissolved	ug/L	179J			34700	35000				1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 367887
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216102001, 40216102002

METHOD BLANK: 2126860 Matrix: Water
Associated Lab Samples: 40216102001, 40216102002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.24	1.0	10/12/20 15:36	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	10/12/20 15:36	
1,1-Dichloroethane	ug/L	<0.27	1.0	10/12/20 15:36	
1,1-Dichloroethene	ug/L	<0.24	1.0	10/12/20 15:36	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	10/12/20 15:36	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	10/12/20 15:36	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	10/12/20 15:36	
1,2-Dichloroethane	ug/L	<0.28	1.0	10/12/20 15:36	
1,2-Dichloropropane	ug/L	<0.28	1.0	10/12/20 15:36	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	10/12/20 15:36	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	10/12/20 15:36	
2-Butanone (MEK)	ug/L	<2.9	20.0	10/12/20 15:36	
Acetone	ug/L	<2.7	20.0	10/12/20 15:36	
Benzene	ug/L	<0.25	1.0	10/12/20 15:36	
Bromodichloromethane	ug/L	<0.36	1.2	10/12/20 15:36	
Bromoform	ug/L	<4.0	13.2	10/12/20 15:36	
Bromomethane	ug/L	<0.97	5.0	10/12/20 15:36	
Carbon disulfide	ug/L	<0.45	1.5	10/12/20 15:36	
Carbon tetrachloride	ug/L	<1.1	3.6	10/12/20 15:36	
Chlorobenzene	ug/L	<0.71	2.4	10/12/20 15:36	
Chloroethane	ug/L	<1.3	5.0	10/12/20 15:36	
Chloroform	ug/L	<1.3	5.0	10/12/20 15:36	
Chloromethane	ug/L	<2.2	7.3	10/12/20 15:36	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	10/12/20 15:36	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	10/12/20 15:36	
Dibromochloromethane	ug/L	<2.6	8.7	10/12/20 15:36	
Dibromomethane	ug/L	<0.94	3.1	10/12/20 15:36	
Dichlorodifluoromethane	ug/L	<0.50	5.0	10/12/20 15:36	
Ethylbenzene	ug/L	<0.32	1.1	10/12/20 15:36	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	10/12/20 15:36	
Methylene Chloride	ug/L	<0.58	5.0	10/12/20 15:36	
Naphthalene	ug/L	<1.2	5.0	10/12/20 15:36	
Styrene	ug/L	<3.0	10.0	10/12/20 15:36	
Tetrachloroethene	ug/L	<0.33	1.1	10/12/20 15:36	
Tetrahydrofuran	ug/L	<2.3	20.0	10/12/20 15:36	
Toluene	ug/L	<0.27	1.0	10/12/20 15:36	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	10/12/20 15:36	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	10/12/20 15:36	
Trichloroethene	ug/L	<0.26	1.0	10/12/20 15:36	
Trichlorofluoromethane	ug/L	<0.21	1.0	10/12/20 15:36	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

METHOD BLANK: 2126860 Matrix: Water
Associated Lab Samples: 40216102001, 40216102002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Vinyl chloride	ug/L	<0.17	1.0	10/12/20 15:36	
Xylene (Total)	ug/L	<1.5	3.0	10/12/20 15:36	
4-Bromofluorobenzene (S)	%	94	70-130	10/12/20 15:36	
Dibromofluoromethane (S)	%	100	70-130	10/12/20 15:36	
Toluene-d8 (S)	%	98	70-130	10/12/20 15:36	

LABORATORY CONTROL SAMPLE: 2126861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	52.8	106	70-130	
1,1,2-Trichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethane	ug/L	50	49.6	99	69-163	
1,1-Dichloroethene	ug/L	50	49.4	99	77-123	
1,2-Dibromo-3-chloropropane	ug/L	50	41.6	83	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.5	97	70-130	
1,2-Dichlorobenzene	ug/L	50	50.6	101	70-130	
1,2-Dichloroethane	ug/L	50	50.5	101	78-142	
1,2-Dichloropropane	ug/L	50	49.4	99	86-134	
1,3-Dichlorobenzene	ug/L	50	51.2	102	70-130	
1,4-Dichlorobenzene	ug/L	50	50.1	100	70-130	
Benzene	ug/L	50	51.2	102	70-130	
Bromodichloromethane	ug/L	50	50.7	101	70-130	
Bromoform	ug/L	50	45.0	90	70-130	
Bromomethane	ug/L	50	39.4	79	39-129	
Carbon disulfide	ug/L	50	49.6	99	67-138	
Carbon tetrachloride	ug/L	50	54.0	108	70-132	
Chlorobenzene	ug/L	50	52.8	106	70-130	
Chloroethane	ug/L	50	47.9	96	66-140	
Chloroform	ug/L	50	40.3	81	75-132	
Chloromethane	ug/L	50	41.7	83	32-143	
cis-1,2-Dichloroethene	ug/L	50	36.3	73	70-130	
cis-1,3-Dichloropropene	ug/L	50	51.4	103	70-130	
Dibromochloromethane	ug/L	50	52.1	104	70-130	
Dichlorodifluoromethane	ug/L	50	35.0	70	10-141	
Ethylbenzene	ug/L	50	54.4	109	80-120	
Methyl-tert-butyl ether	ug/L	50	45.8	92	61-129	
Methylene Chloride	ug/L	50	49.2	98	70-130	
Styrene	ug/L	50	54.7	109	70-130	
Tetrachloroethene	ug/L	50	52.1	104	70-130	
Toluene	ug/L	50	51.6	103	80-120	
trans-1,2-Dichloroethene	ug/L	50	51.8	104	70-130	
trans-1,3-Dichloropropene	ug/L	50	43.6	87	69-130	
Trichloroethene	ug/L	50	52.8	106	70-130	
Trichlorofluoromethane	ug/L	50	51.0	102	75-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

LABORATORY CONTROL SAMPLE: 2126861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	46.9	94	51-140	
Xylene (Total)	ug/L	150	163	109	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127616 2127617

Parameter	Units	40216113009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	50.4	53.0	101	106	70-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	46.0	48.1	92	96	70-137	4	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	47.0	50.5	94	101	69-163	7	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	47.2	50.5	94	101	77-129	7	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	42.3	42.0	85	84	60-130	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	47.1	49.9	94	100	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	50.5	51.8	101	104	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	47.7	49.5	95	99	78-145	4	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	47.9	50.6	96	101	86-135	5	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	50.7	52.3	101	105	70-130	3	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	48.8	51.2	98	102	70-130	5	20	
Benzene	ug/L	<0.25	50	50	50.4	51.8	101	104	70-136	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	48.5	50.5	97	101	70-130	4	20	
Bromoform	ug/L	<4.0	50	50	43.3	45.7	87	91	69-130	5	20	
Bromomethane	ug/L	<0.97	50	50	38.8	40.3	78	81	39-138	4	20	
Carbon disulfide	ug/L	<0.45	50	50	47.5	49.1	95	98	63-141	3	20	
Carbon tetrachloride	ug/L	<1.1	50	50	51.2	53.9	102	108	70-142	5	20	
Chlorobenzene	ug/L	<0.71	50	50	49.8	52.8	100	106	70-130	6	20	
Chloroethane	ug/L	<1.3	50	50	45.7	48.1	91	96	61-149	5	20	
Chloroform	ug/L	<1.3	50	50	46.5	49.6	93	99	75-133	6	20	
Chloromethane	ug/L	<2.2	50	50	40.2	41.0	80	82	32-143	2	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	47.4	51.5	95	103	70-130	8	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	48.9	52.1	98	104	70-130	6	20	
Dibromochloromethane	ug/L	<2.6	50	50	50.3	52.2	101	104	70-130	4	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	33.6	33.9	67	68	10-141	1	20	
Ethylbenzene	ug/L	<0.32	50	50	50.9	53.6	102	107	80-120	5	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	45.3	47.6	91	95	61-136	5	20	
Methylene Chloride	ug/L	<0.58	50	50	46.7	48.5	93	97	68-137	4	20	
Styrene	ug/L	<3.0	50	50	49.7	51.1	99	102	70-130	3	20	
Tetrachloroethene	ug/L	<0.33	50	50	49.1	51.4	98	103	70-130	4	20	
Toluene	ug/L	<0.27	50	50	49.0	51.9	98	104	80-120	6	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	49.4	52.0	99	104	70-130	5	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	43.7	45.1	87	90	69-130	3	20	
Trichloroethene	ug/L	<0.26	50	50	50.0	53.0	100	106	70-130	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127616 2127617

Parameter	Units	40216113009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichlorofluoromethane	ug/L	<0.21	50	50	49.3	54.1	99	108	74-157	9	20	
Vinyl chloride	ug/L	<0.17	50	50	44.6	46.1	89	92	51-140	3	20	
Xylene (Total)	ug/L	<1.5	150	150	153	162	102	108	70-130	6	20	
4-Bromofluorobenzene (S)	%						99	99	70-130			
Dibromofluoromethane (S)	%						99	100	70-130			
Toluene-d8 (S)	%						97	98	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 367888
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40216187005

METHOD BLANK: 2126862 Matrix: Water
Associated Lab Samples: 40216187005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.24	1.0	10/14/20 07:15	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	10/14/20 07:15	
1,1-Dichloroethane	ug/L	<0.27	1.0	10/14/20 07:15	
1,1-Dichloroethene	ug/L	<0.24	1.0	10/14/20 07:15	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	10/14/20 07:15	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	10/14/20 07:15	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	10/14/20 07:15	
1,2-Dichloroethane	ug/L	<0.28	1.0	10/14/20 07:15	
1,2-Dichloropropane	ug/L	<0.28	1.0	10/14/20 07:15	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	10/14/20 07:15	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	10/14/20 07:15	
2-Butanone (MEK)	ug/L	<2.9	20.0	10/14/20 07:15	
Acetone	ug/L	<2.7	20.0	10/14/20 07:15	
Benzene	ug/L	<0.25	1.0	10/14/20 07:15	
Bromodichloromethane	ug/L	<0.36	1.2	10/14/20 07:15	
Bromoform	ug/L	<4.0	13.2	10/14/20 07:15	
Bromomethane	ug/L	<0.97	5.0	10/14/20 07:15	
Carbon disulfide	ug/L	<0.45	1.5	10/14/20 07:15	
Carbon tetrachloride	ug/L	<1.1	3.6	10/14/20 07:15	
Chlorobenzene	ug/L	<0.71	2.4	10/14/20 07:15	
Chloroethane	ug/L	<1.3	5.0	10/14/20 07:15	
Chloroform	ug/L	<1.3	5.0	10/14/20 07:15	
Chloromethane	ug/L	<2.2	7.3	10/14/20 07:15	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	10/14/20 07:15	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	10/14/20 07:15	
Dibromochloromethane	ug/L	<2.6	8.7	10/14/20 07:15	
Dibromomethane	ug/L	<0.94	3.1	10/14/20 07:15	
Dichlorodifluoromethane	ug/L	<0.50	5.0	10/14/20 07:15	
Ethylbenzene	ug/L	<0.32	1.1	10/14/20 07:15	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	10/14/20 07:15	
Methylene Chloride	ug/L	<0.58	5.0	10/14/20 07:15	
Naphthalene	ug/L	<1.2	5.0	10/14/20 07:15	
Styrene	ug/L	<3.0	10.0	10/14/20 07:15	
Tetrachloroethene	ug/L	<0.33	1.1	10/14/20 07:15	
Tetrahydrofuran	ug/L	<2.3	20.0	10/14/20 07:15	
Toluene	ug/L	<0.27	1.0	10/14/20 07:15	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	10/14/20 07:15	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	10/14/20 07:15	
Trichloroethene	ug/L	<0.26	1.0	10/14/20 07:15	
Trichlorofluoromethane	ug/L	<0.21	1.0	10/14/20 07:15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

METHOD BLANK: 2126862 Matrix: Water
Associated Lab Samples: 40216187005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Vinyl chloride	ug/L	<0.17	1.0	10/14/20 07:15	
Xylene (Total)	ug/L	<1.5	3.0	10/14/20 07:15	
4-Bromofluorobenzene (S)	%	96	70-130	10/14/20 07:15	
Dibromofluoromethane (S)	%	96	70-130	10/14/20 07:15	
Toluene-d8 (S)	%	99	70-130	10/14/20 07:15	

LABORATORY CONTROL SAMPLE: 2126863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.1	106	70-130	
1,1,2-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethane	ug/L	50	49.9	100	69-163	
1,1-Dichloroethene	ug/L	50	48.2	96	77-123	
1,2-Dibromo-3-chloropropane	ug/L	50	39.7	79	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.9	98	70-130	
1,2-Dichlorobenzene	ug/L	50	50.7	101	70-130	
1,2-Dichloroethane	ug/L	50	49.9	100	78-142	
1,2-Dichloropropane	ug/L	50	49.8	100	86-134	
1,3-Dichlorobenzene	ug/L	50	52.2	104	70-130	
1,4-Dichlorobenzene	ug/L	50	50.4	101	70-130	
Benzene	ug/L	50	51.7	103	70-130	
Bromodichloromethane	ug/L	50	50.3	101	70-130	
Bromoform	ug/L	50	44.5	89	70-130	
Bromomethane	ug/L	50	36.2	72	39-129	
Carbon disulfide	ug/L	50	47.3	95	67-138	
Carbon tetrachloride	ug/L	50	53.1	106	70-132	
Chlorobenzene	ug/L	50	53.0	106	70-130	
Chloroethane	ug/L	50	45.7	91	66-140	
Chloroform	ug/L	50	49.1	98	75-132	
Chloromethane	ug/L	50	38.5	77	32-143	
cis-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.3	105	70-130	
Dibromochloromethane	ug/L	50	51.2	102	70-130	
Dichlorodifluoromethane	ug/L	50	32.4	65	10-141	
Ethylbenzene	ug/L	50	54.9	110	80-120	
Methyl-tert-butyl ether	ug/L	50	46.7	93	61-129	
Methylene Chloride	ug/L	50	47.8	96	70-130	
Styrene	ug/L	50	54.6	109	70-130	
Tetrachloroethene	ug/L	50	51.3	103	70-130	
Toluene	ug/L	50	52.8	106	80-120	
trans-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	44.1	88	69-130	
Trichloroethene	ug/L	50	53.3	107	70-130	
Trichlorofluoromethane	ug/L	50	51.4	103	75-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

LABORATORY CONTROL SAMPLE: 2126863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	43.9	88	51-140	
Xylene (Total)	ug/L	150	164	109	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128895 2128896

Parameter	Units	40216187005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	52.8	65.4	106	131	70-130	21	20	M1,R1
1,1,2-Trichloroethane	ug/L	<0.55	50	50	47.5	49.3	95	99	70-137	4	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	48.8	69.6	98	139	69-163	35	20	R1
1,1-Dichloroethene	ug/L	<0.24	50	50	48.0	67.0	96	134	77-129	33	20	M1,R1
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	42.6	43.6	85	87	60-130	2	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	48.6	49.9	97	100	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	51.6	52.2	103	104	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	49.0	60.1	98	120	78-145	20	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	49.7	53.3	99	107	86-135	7	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	52.0	53.5	104	107	70-130	3	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	50.7	51.2	101	102	70-130	1	20	
Benzene	ug/L	<0.25	50	50	52.0	64.9	104	130	70-136	22	20	R1
Bromodichloromethane	ug/L	<0.36	50	50	49.7	53.0	99	106	70-130	7	20	
Bromoform	ug/L	<4.0	50	50	44.5	51.0	89	102	69-130	13	20	
Bromomethane	ug/L	<0.97	50	50	36.8	54.1	74	108	39-138	38	20	R1
Carbon disulfide	ug/L	<0.45	50	50	46.5	67.4	93	135	63-141	37	20	R1
Carbon tetrachloride	ug/L	<1.1	50	50	54.7	66.4	109	133	70-142	19	20	
Chlorobenzene	ug/L	<0.71	50	50	52.7	54.2	105	108	70-130	3	20	
Chloroethane	ug/L	<1.3	50	50	45.9	61.1	92	122	61-149	28	20	R1
Chloroform	ug/L	<1.3	50	50	49.0	61.2	98	122	75-133	22	20	R1
Chloromethane	ug/L	<2.2	50	50	37.8	52.8	76	106	32-143	33	20	R1
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	44.1	63.7	88	127	70-130	36	20	R1
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	51.6	54.5	103	109	70-130	5	20	
Dibromochloromethane	ug/L	<2.6	50	50	50.6	51.5	101	103	70-130	2	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	31.9	44.1	64	88	10-141	32	20	R1
Ethylbenzene	ug/L	<0.32	50	50	54.3	55.2	109	110	80-120	2	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	46.5	66.0	93	132	61-136	35	20	R1
Methylene Chloride	ug/L	<0.58	50	50	47.6	68.2	95	136	68-137	36	20	R1
Styrene	ug/L	<3.0	50	50	54.0	61.2	108	122	70-130	13	20	
Tetrachloroethene	ug/L	<0.33	50	50	50.4	47.6	101	95	70-130	6	20	
Toluene	ug/L	<0.27	50	50	51.5	53.2	103	106	80-120	3	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	49.4	70.7	99	141	70-130	35	20	M1,R1
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	44.0	44.5	88	89	69-130	1	20	
Trichloroethene	ug/L	<0.26	50	50	53.2	54.0	106	108	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128895 2128896

Parameter	Units	40216187005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichlorofluoromethane	ug/L	<0.21	50	50	49.3	70.7	99	141	74-157	36	20	R1
Vinyl chloride	ug/L	<0.17	50	50	42.6	59.9	85	120	51-140	34	20	R1
Xylene (Total)	ug/L	<1.5	150	150	163	172	108	114	70-130	5	20	
4-Bromofluorobenzene (S)	%						97	110	70-130			
Dibromofluoromethane (S)	%						99	115	70-130			
Toluene-d8 (S)	%						98	98	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 367984
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216318001, 40216318002

METHOD BLANK: 2127389 Matrix: Water
Associated Lab Samples: 40216318001, 40216318002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.24	1.0	10/13/20 14:22	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	10/13/20 14:22	
1,1-Dichloroethane	ug/L	<0.27	1.0	10/13/20 14:22	
1,1-Dichloroethene	ug/L	<0.24	1.0	10/13/20 14:22	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	10/13/20 14:22	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	10/13/20 14:22	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	10/13/20 14:22	
1,2-Dichloroethane	ug/L	<0.28	1.0	10/13/20 14:22	
1,2-Dichloropropane	ug/L	<0.28	1.0	10/13/20 14:22	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	10/13/20 14:22	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	10/13/20 14:22	
2-Butanone (MEK)	ug/L	<2.9	20.0	10/13/20 14:22	
Acetone	ug/L	<2.7	20.0	10/13/20 14:22	
Benzene	ug/L	<0.25	1.0	10/13/20 14:22	
Bromodichloromethane	ug/L	<0.36	1.2	10/13/20 14:22	
Bromoform	ug/L	<4.0	13.2	10/13/20 14:22	
Bromomethane	ug/L	<0.97	5.0	10/13/20 14:22	
Carbon disulfide	ug/L	<0.45	1.5	10/13/20 14:22	
Carbon tetrachloride	ug/L	<1.1	3.6	10/13/20 14:22	
Chlorobenzene	ug/L	<0.71	2.4	10/13/20 14:22	
Chloroethane	ug/L	<1.3	5.0	10/13/20 14:22	
Chloroform	ug/L	<1.3	5.0	10/13/20 14:22	
Chloromethane	ug/L	<2.2	7.3	10/13/20 14:22	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	10/13/20 14:22	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	10/13/20 14:22	
Dibromochloromethane	ug/L	<2.6	8.7	10/13/20 14:22	
Dibromomethane	ug/L	<0.94	3.1	10/13/20 14:22	
Dichlorodifluoromethane	ug/L	<0.50	5.0	10/13/20 14:22	
Ethylbenzene	ug/L	<0.32	1.1	10/13/20 14:22	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	10/13/20 14:22	
Methylene Chloride	ug/L	<0.58	5.0	10/13/20 14:22	
Naphthalene	ug/L	<1.2	5.0	10/13/20 14:22	
Styrene	ug/L	<3.0	10.0	10/13/20 14:22	
Tetrachloroethene	ug/L	<0.33	1.1	10/13/20 14:22	
Tetrahydrofuran	ug/L	<2.3	20.0	10/13/20 14:22	
Toluene	ug/L	<0.27	1.0	10/13/20 14:22	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	10/13/20 14:22	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	10/13/20 14:22	
Trichloroethene	ug/L	<0.26	1.0	10/13/20 14:22	
Trichlorofluoromethane	ug/L	<0.21	1.0	10/13/20 14:22	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

METHOD BLANK: 2127389 Matrix: Water
Associated Lab Samples: 40216318001, 40216318002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Vinyl chloride	ug/L	<0.17	1.0	10/13/20 14:22	
Xylene (Total)	ug/L	<1.5	3.0	10/13/20 14:22	
4-Bromofluorobenzene (S)	%	93	70-130	10/13/20 14:22	
Dibromofluoromethane (S)	%	98	70-130	10/13/20 14:22	
Toluene-d8 (S)	%	98	70-130	10/13/20 14:22	

LABORATORY CONTROL SAMPLE: 2127390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	56.6	113	70-130	
1,1,2-Trichloroethane	ug/L	50	51.8	104	70-130	
1,1-Dichloroethane	ug/L	50	53.4	107	69-163	
1,1-Dichloroethene	ug/L	50	52.1	104	77-123	
1,2-Dibromo-3-chloropropane	ug/L	50	45.0	90	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.5	105	70-130	
1,2-Dichlorobenzene	ug/L	50	54.5	109	70-130	
1,2-Dichloroethane	ug/L	50	52.9	106	78-142	
1,2-Dichloropropane	ug/L	50	52.7	105	86-134	
1,3-Dichlorobenzene	ug/L	50	56.1	112	70-130	
1,4-Dichlorobenzene	ug/L	50	54.5	109	70-130	
Benzene	ug/L	50	56.1	112	70-130	
Bromodichloromethane	ug/L	50	53.8	108	70-130	
Bromoform	ug/L	50	49.2	98	70-130	
Bromomethane	ug/L	50	37.9	76	39-129	
Carbon disulfide	ug/L	50	51.7	103	67-138	
Carbon tetrachloride	ug/L	50	58.3	117	70-132	
Chlorobenzene	ug/L	50	56.1	112	70-130	
Chloroethane	ug/L	50	50.7	101	66-140	
Chloroform	ug/L	50	52.5	105	75-132	
Chloromethane	ug/L	50	43.4	87	32-143	
cis-1,2-Dichloroethene	ug/L	50	43.7	87	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.9	110	70-130	
Dibromochloromethane	ug/L	50	56.4	113	70-130	
Dichlorodifluoromethane	ug/L	50	39.3	79	10-141	
Ethylbenzene	ug/L	50	58.9	118	80-120	
Methyl-tert-butyl ether	ug/L	50	49.9	100	61-129	
Methylene Chloride	ug/L	50	52.2	104	70-130	
Styrene	ug/L	50	58.9	118	70-130	
Tetrachloroethene	ug/L	50	54.8	110	70-130	
Toluene	ug/L	50	56.1	112	80-120	
trans-1,2-Dichloroethene	ug/L	50	54.8	110	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.5	95	69-130	
Trichloroethene	ug/L	50	56.1	112	70-130	
Trichlorofluoromethane	ug/L	50	56.1	112	75-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

LABORATORY CONTROL SAMPLE: 2127390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	48.8	98	51-140	
Xylene (Total)	ug/L	150	175	117	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128304 2128305

Parameter	Units	40216318001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	55.2	55.8	110	112	70-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	50.2	52.0	100	104	70-137	4	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	51.7	52.5	103	105	69-163	2	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	50.1	50.3	100	101	77-129	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	45.5	45.2	91	90	60-130	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	51.5	52.4	103	105	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	54.7	54.4	109	109	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	50.0	52.1	100	104	78-145	4	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	51.7	52.8	103	106	86-135	2	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	55.0	54.3	110	109	70-130	1	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	53.9	52.3	108	105	70-130	3	20	
Benzene	ug/L	<0.25	50	50	53.6	54.9	107	110	70-136	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	52.1	54.3	104	109	70-130	4	20	
Bromoform	ug/L	<4.0	50	50	47.3	48.4	95	97	69-130	2	20	
Bromomethane	ug/L	<0.97	50	50	38.6	38.1	77	76	39-138	1	20	
Carbon disulfide	ug/L	<0.45	50	50	50.1	50.8	100	102	63-141	1	20	
Carbon tetrachloride	ug/L	<1.1	50	50	55.8	57.6	112	115	70-142	3	20	
Chlorobenzene	ug/L	<0.71	50	50	54.6	55.9	109	112	70-130	2	20	
Chloroethane	ug/L	<1.3	50	50	47.0	48.1	94	96	61-149	2	20	
Chloroform	ug/L	<1.3	50	50	49.8	51.4	100	103	75-133	3	20	
Chloromethane	ug/L	<2.2	50	50	41.1	42.8	82	86	32-143	4	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	51.5	52.7	103	105	70-130	2	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	52.9	54.4	106	109	70-130	3	20	
Dibromochloromethane	ug/L	<2.6	50	50	53.8	55.3	108	111	70-130	3	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	38.5	38.7	77	77	10-141	0	20	
Ethylbenzene	ug/L	<0.32	50	50	56.1	57.6	112	115	80-120	3	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	47.2	49.6	94	99	61-136	5	20	
Methylene Chloride	ug/L	<0.58	50	50	49.4	50.6	99	101	68-137	2	20	
Styrene	ug/L	<3.0	50	50	56.7	57.5	113	115	70-130	1	20	
Tetrachloroethene	ug/L	<0.33	50	50	53.0	53.5	106	107	70-130	1	20	
Toluene	ug/L	<0.27	50	50	54.0	54.7	108	109	80-120	1	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	52.6	54.2	105	108	70-130	3	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	46.1	47.9	92	96	69-130	4	20	
Trichloroethene	ug/L	<0.26	50	50	54.6	56.5	109	113	70-130	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128304 2128305

Parameter	Units	40216318001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichlorofluoromethane	ug/L	<0.21	50	50	54.3	56.2	109	112	74-157	4	20	
Vinyl chloride	ug/L	<0.17	50	50	45.9	47.3	92	95	51-140	3	20	
Xylene (Total)	ug/L	<1.5	150	150	168	172	112	115	70-130	2	20	
4-Bromofluorobenzene (S)	%						100	100	70-130			
Dibromofluoromethane (S)	%						96	99	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368539 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216102003, 40216187001, 40216187002, 40216187003, 40216187004, 40216187006, 40216187007

METHOD BLANK: 2130617 Matrix: Water
Associated Lab Samples: 40216102003, 40216187001, 40216187002, 40216187003, 40216187004, 40216187006, 40216187007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.24	1.0	10/19/20 07:30	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	10/19/20 07:30	
1,1-Dichloroethane	ug/L	<0.27	1.0	10/19/20 07:30	
1,1-Dichloroethene	ug/L	<0.24	1.0	10/19/20 07:30	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	10/19/20 07:30	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	10/19/20 07:30	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	10/19/20 07:30	
1,2-Dichloroethane	ug/L	<0.28	1.0	10/19/20 07:30	
1,2-Dichloropropane	ug/L	<0.28	1.0	10/19/20 07:30	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	10/19/20 07:30	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	10/19/20 07:30	
2-Butanone (MEK)	ug/L	<2.9	20.0	10/19/20 07:30	
Acetone	ug/L	<2.7	20.0	10/19/20 07:30	
Benzene	ug/L	<0.25	1.0	10/19/20 07:30	
Bromodichloromethane	ug/L	<0.36	1.2	10/19/20 07:30	
Bromoform	ug/L	<4.0	13.2	10/19/20 07:30	
Bromomethane	ug/L	<0.97	5.0	10/19/20 07:30	
Carbon disulfide	ug/L	<0.45	1.5	10/19/20 07:30	
Carbon tetrachloride	ug/L	<1.1	3.6	10/19/20 07:30	
Chlorobenzene	ug/L	<0.71	2.4	10/19/20 07:30	
Chloroethane	ug/L	<1.3	5.0	10/19/20 07:30	
Chloroform	ug/L	<1.3	5.0	10/19/20 07:30	
Chloromethane	ug/L	<2.2	7.3	10/19/20 07:30	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	10/19/20 07:30	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	10/19/20 07:30	
Dibromochloromethane	ug/L	<2.6	8.7	10/19/20 07:30	
Dibromomethane	ug/L	<0.94	3.1	10/19/20 07:30	
Dichlorodifluoromethane	ug/L	<0.50	5.0	10/19/20 07:30	
Ethylbenzene	ug/L	<0.32	1.1	10/19/20 07:30	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	10/19/20 07:30	
Methylene Chloride	ug/L	<0.58	5.0	10/19/20 07:30	
Naphthalene	ug/L	<1.2	5.0	10/19/20 07:30	
Styrene	ug/L	<3.0	10.0	10/19/20 07:30	
Tetrachloroethene	ug/L	<0.33	1.1	10/19/20 07:30	
Tetrahydrofuran	ug/L	<2.3	20.0	10/19/20 07:30	
Toluene	ug/L	<0.27	1.0	10/19/20 07:30	
trans-1,2-Dichloroethene	ug/L	<0.46	1.5	10/19/20 07:30	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	10/19/20 07:30	
Trichloroethene	ug/L	<0.26	1.0	10/19/20 07:30	
Trichlorofluoromethane	ug/L	<0.21	1.0	10/19/20 07:30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

METHOD BLANK: 2130617 Matrix: Water
Associated Lab Samples: 40216102003, 40216187001, 40216187002, 40216187003, 40216187004, 40216187006, 40216187007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Vinyl chloride	ug/L	<0.17	1.0	10/19/20 07:30	
Xylene (Total)	ug/L	<1.5	3.0	10/19/20 07:30	
4-Bromofluorobenzene (S)	%	92	70-130	10/19/20 07:30	
Dibromofluoromethane (S)	%	101	70-130	10/19/20 07:30	
Toluene-d8 (S)	%	98	70-130	10/19/20 07:30	

LABORATORY CONTROL SAMPLE: 2130618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.3	111	70-130	
1,1,2-Trichloroethane	ug/L	50	52.6	105	70-130	
1,1-Dichloroethane	ug/L	50	54.5	109	69-163	
1,1-Dichloroethene	ug/L	50	51.4	103	77-123	
1,2-Dibromo-3-chloropropane	ug/L	50	53.8	108	63-130	
1,2-Dibromoethane (EDB)	ug/L	50	54.1	108	70-130	
1,2-Dichlorobenzene	ug/L	50	55.8	112	70-130	
1,2-Dichloroethane	ug/L	50	55.8	112	78-142	
1,2-Dichloropropane	ug/L	50	54.9	110	86-134	
1,3-Dichlorobenzene	ug/L	50	53.1	106	70-130	
1,4-Dichlorobenzene	ug/L	50	52.5	105	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Bromodichloromethane	ug/L	50	54.6	109	70-130	
Bromoform	ug/L	50	51.1	102	70-130	
Bromomethane	ug/L	50	36.8	74	39-129	
Carbon disulfide	ug/L	50	53.2	106	67-138	
Carbon tetrachloride	ug/L	50	57.3	115	70-132	
Chlorobenzene	ug/L	50	54.2	108	70-130	
Chloroethane	ug/L	50	50.0	100	66-140	
Chloroform	ug/L	50	55.0	110	75-132	
Chloromethane	ug/L	50	44.7	89	32-143	
cis-1,2-Dichloroethene	ug/L	50	52.8	106	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.8	110	70-130	
Dibromochloromethane	ug/L	50	53.5	107	70-130	
Dichlorodifluoromethane	ug/L	50	36.3	73	10-141	
Ethylbenzene	ug/L	50	55.0	110	80-120	
Methyl-tert-butyl ether	ug/L	50	52.1	104	61-129	
Methylene Chloride	ug/L	50	52.6	105	70-130	
Styrene	ug/L	50	54.4	109	70-130	
Tetrachloroethene	ug/L	50	53.0	106	70-130	
Toluene	ug/L	50	53.6	107	80-120	
trans-1,2-Dichloroethene	ug/L	50	54.5	109	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.5	103	69-130	
Trichloroethene	ug/L	50	56.8	114	70-130	
Trichlorofluoromethane	ug/L	50	55.7	111	75-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

LABORATORY CONTROL SAMPLE: 2130618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	48.8	98	51-140	
Xylene (Total)	ug/L	150	162	108	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2131478 2131479

Parameter	Units	40216187006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	53.6	57.1	107	114	70-130	6	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	54.4	55.0	109	110	70-137	1	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	52.7	56.4	105	113	69-163	7	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	47.8	52.3	96	105	77-129	9	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	56.4	58.0	113	116	60-130	3	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	54.4	55.4	109	111	70-130	2	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	53.5	56.0	107	112	70-130	5	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	55.7	58.6	111	117	78-145	5	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	64.5	54.3	129	109	86-135	17	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	52.3	54.3	105	109	70-130	4	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	51.6	53.5	103	107	70-130	4	20	
Benzene	ug/L	<0.25	50	50	53.0	56.5	106	113	70-136	6	20	
Bromodichloromethane	ug/L	<0.36	50	50	63.7	54.3	127	109	70-130	16	20	
Bromoform	ug/L	<4.0	50	50	49.8	50.2	100	100	69-130	1	20	
Bromomethane	ug/L	<0.97	50	50	38.6	43.1	77	86	39-138	11	20	
Carbon disulfide	ug/L	<0.45	50	50	49.9	55.6	100	111	63-141	11	20	
Carbon tetrachloride	ug/L	<1.1	50	50	54.7	58.9	109	118	70-142	7	20	
Chlorobenzene	ug/L	<0.71	50	50	52.3	53.6	105	107	70-130	2	20	
Chloroethane	ug/L	<1.3	50	50	47.5	51.6	95	103	61-149	8	20	
Chloroform	ug/L	<1.3	50	50	52.3	56.6	105	113	75-133	8	20	
Chloromethane	ug/L	<2.2	50	50	42.4	44.7	84	88	32-143	5	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	51.6	54.7	103	109	70-130	6	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	66.3	56.0	133	112	70-130	17	20	M1
Dibromochloromethane	ug/L	<2.6	50	50	53.6	54.4	107	109	70-130	1	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	32.1	36.4	64	73	10-141	13	20	
Ethylbenzene	ug/L	<0.32	50	50	53.1	54.6	106	109	80-120	3	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	51.9	56.4	104	113	61-136	8	20	
Methylene Chloride	ug/L	<0.58	50	50	51.7	54.8	103	110	68-137	6	20	
Styrene	ug/L	<3.0	50	50	53.4	53.9	107	108	70-130	1	20	
Tetrachloroethene	ug/L	<0.33	50	50	50.8	53.0	102	106	70-130	4	20	
Toluene	ug/L	<0.27	50	50	52.9	54.3	106	109	80-120	3	20	
trans-1,2-Dichloroethene	ug/L	<0.46	50	50	50.9	57.4	102	115	70-130	12	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	53.2	53.2	106	106	69-130	0	20	
Trichloroethene	ug/L	<0.26	50	50	54.5	56.1	109	112	70-130	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2131478 2131479

Parameter	Units	40216187006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichlorofluoromethane	ug/L	<0.21	50	50	51.8	55.5	104	111	74-157	7	20	
Vinyl chloride	ug/L	<0.17	50	50	45.4	51.1	91	102	51-140	12	20	
Xylene (Total)	ug/L	<1.5	150	150	158	163	105	109	70-130	3	20	
4-Bromofluorobenzene (S)	%						102	101	70-130			
Dibromofluoromethane (S)	%						102	106	70-130			
Toluene-d8 (S)	%						99	100	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368023
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions,Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216102001, 40216102002

METHOD BLANK: 2127576 Matrix: Water
Associated Lab Samples: 40216102001, 40216102002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	10/14/20 20:27	

LABORATORY CONTROL SAMPLE: 2127577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127578 2127579

Parameter	Units	40216102001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	10.4	20	20	32.5	32.5	111	111	90-110	0	15	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127580 2127581

Parameter	Units	40216160004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.6J	20	20	23.0	23.0	107	107	90-110	0	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368205 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions,Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216187001, 40216187002, 40216187003, 40216187004, 40216187005, 40216187006

METHOD BLANK: 2128545 Matrix: Water
Associated Lab Samples: 40216187001, 40216187002, 40216187003, 40216187004, 40216187005, 40216187006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	10/15/20 14:03	

LABORATORY CONTROL SAMPLE: 2128546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128547 2128548

Parameter	Units	40216187001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	17.8	100	100	119	111	101	93	90-110	7	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2128549 2128550

Parameter	Units	40216316003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.0	20	20	23.2	23.4	106	107	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368515
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions,Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216318001

METHOD BLANK: 2130453 Matrix: Water
Associated Lab Samples: 40216318001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	10/20/20 13:31	

LABORATORY CONTROL SAMPLE: 2130454

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130455 2130456

Parameter	Units	40216300001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.1	20	20	27.4	27.3	106	106	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130457 2130458

Parameter	Units	40216300017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.8	20	20	23.5	23.6	103	104	90-110	0	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 367920
QC Batch Method: EPA 310.2
Analysis Method: EPA 310.2
Analysis Description: 310.2 Alkalinity, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216102001, 40216102002

METHOD BLANK: 2127142 Matrix: Water
Associated Lab Samples: 40216102001, 40216102002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	24.8	10/12/20 12:27	

LABORATORY CONTROL SAMPLE: 2127143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	98.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127144 2127145

Parameter	Units	40215997005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	613	500	500	1120	1110	101	99	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2127146 2127147

Parameter	Units	40216107003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	378	200	200	570	573	96	97	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368554
QC Batch Method: EPA 310.2
Analysis Method: EPA 310.2
Analysis Description: 310.2 Alkalinity, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216187001, 40216187002

METHOD BLANK: 2130687 Matrix: Water
Associated Lab Samples: 40216187001, 40216187002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	24.8	10/19/20 11:05	

LABORATORY CONTROL SAMPLE: 2130688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	100	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130689 2130690

Parameter	Units	40216300007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	713	500	500	1100	1120	78	81	90-110	1	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130691 2130692

Parameter	Units	40216187002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	378	200	200	572	572	97	97	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368558
QC Batch Method: EPA 310.2
Analysis Method: EPA 310.2
Analysis Description: 310.2 Alkalinity, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216187003, 40216187004, 40216187005, 40216187006

METHOD BLANK: 2130719 Matrix: Water
Associated Lab Samples: 40216187003, 40216187004, 40216187005, 40216187006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	24.8	10/19/20 11:43	

LABORATORY CONTROL SAMPLE: 2130720

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	101	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130721 2130722

Parameter	Units	40216300021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	891	500	500	1380	1370	98	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130723 2130724

Parameter	Units	40216316007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	154	200	200	353	349	99	97	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

QC Batch: 368559
QC Batch Method: EPA 310.2
Analysis Method: EPA 310.2
Analysis Description: 310.2 Alkalinity, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40216318001

METHOD BLANK: 2130731 Matrix: Water
Associated Lab Samples: 40216318001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	24.8	10/19/20 12:18	

LABORATORY CONTROL SAMPLE: 2130732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	99.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130733 2130734

Parameter	Units	40216455002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	21.8J	100	100	121	121	99	99	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2130735 2130736

Parameter	Units	40216455012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3, Dissolved	mg/L	11.2J	100	100	113	112	102	101	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40216102001	**P-422B**	EPA 6010	368139		
40216102002	**MW-1B**	EPA 6010	368139		
40216187001	**P-401D**	EPA 6010	368147		
40216187002	**P-402E**	EPA 6010	368147		
40216187003	**P-423D**	EPA 6010	368147		
40216187004	**P-424D**	EPA 6010	368147		
40216187005	**P-424SS**	EPA 6010	368147		
40216187006	**P-426D**	EPA 6010	368147		
40216318001	**P-429SS**	EPA 6010	368139		
40216102001	**P-422B**	EPA 8260	367887		
40216102002	**MW-1B**	EPA 8260	367887		
40216102003	**TRIP BLANK**	EPA 8260	368539		
40216187001	**P-401D**	EPA 8260	368539		
40216187002	**P-402E**	EPA 8260	368539		
40216187003	**P-423D**	EPA 8260	368539		
40216187004	**P-424D**	EPA 8260	368539		
40216187005	**P-424SS**	EPA 8260	367888		
40216187006	**P-426D**	EPA 8260	368539		
40216187007	**TRIP BLANK**	EPA 8260	368539		
40216318001	**P-429SS**	EPA 8260	367984		
40216318002	**TRIP BLANK**	EPA 8260	367984		
40216102001	**P-422B**				
40216102002	**MW-1B**				
40216187001	**P-401D**				
40216187002	**P-402E**				
40216187003	**P-423D**				
40216187004	**P-424D**				
40216187005	**P-424SS**				
40216187006	**P-426D**				
40216318001	**P-429SS**				
40216102001	**P-422B**	EPA 300.0	368023		
40216102002	**MW-1B**	EPA 300.0	368023		
40216187001	**P-401D**	EPA 300.0	368205		
40216187002	**P-402E**	EPA 300.0	368205		
40216187003	**P-423D**	EPA 300.0	368205		
40216187004	**P-424D**	EPA 300.0	368205		
40216187005	**P-424SS**	EPA 300.0	368205		
40216187006	**P-426D**	EPA 300.0	368205		
40216318001	**P-429SS**	EPA 300.0	368515		
40216102001	**P-422B**	EPA 310.2	367920		
40216102002	**MW-1B**	EPA 310.2	367920		
40216187001	**P-401D**	EPA 310.2	368554		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LGRL INVESTIGATION WELLS
Pace Project No.: 40216102

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40216187002	**P-402E**	EPA 310.2	368554		
40216187003	**P-423D**	EPA 310.2	368558		
40216187004	**P-424D**	EPA 310.2	368558		
40216187005	**P-424SS**	EPA 310.2	368558		
40216187006	**P-426D**	EPA 310.2	368558		
40216318001	**P-429SS**	EPA 310.2	368559		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

4026102

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
ADS Glacier Ridge	Report To: Kari Radideau	Attention: Kari Radideau
N7296 Hwy V	Copy To: Frank Perugini - ESC, ESC Staff, Sherren Clark - SCS Eng	Company Name: ADS Glacier Ridge
Horicon, WI 53032		Address: N7296 Hwy V, Horicon, WI 53032
Email To: Kari Rabideau - ADS	Purchase Order No.: na	Pace Quote Reference: na
Phone: na Fax: na	Project Name: LGRL Investigation Wells	Pace Project Manager: Cindy Varga
Requested Due Date/TAT:	Project Number: na	Pace Profile #: 4172 line 36

REGULATORY AGENCY

__NPDES X GROUND WATER __DRINKING WATER

__UST __RCRA OTHER_____

SITE LOCATION: __GA __IL __IN __MI __NC __OH __SC X WI OTHER___

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Nitric	HCL	Unpreserved	Filtered (Y/N)	8260 NR 507 VOCs	diss chloride, alkalinity	diss 8010 - hard	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
													N	Y	Y			
1	P-422B	WT	G	—		10/7	1400	10.7	5	1	3	1		X	X	X		001
2	MW-1B	WTG		—		10/7	1420	12.5	5	1	3	1		X	X	X		002
3	① Trip Blanks																	003
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments: ① In shipment, lab added to COC 10/8/20 SRK

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Liz Carlson/ESC	10/7/20	1700			
Will Lo	10/8/20	0905	Sean Kipp Pace	10/8/20	0905

SAMPLE CONDITIONS

	Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	RUL	Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Liz Carlson

SIGNATURE of SAMPLER: Liz Carlson DATE Signed (MM / DD / YY): 10/7/2020

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: ADS Project # 40216102

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A Initial when completed: SRK Date/ Time:

Lab Lot# of pH paper: 10D41194 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN							
001										1		1					3													X		2.5 / 5 / 10
002										1		1					3										1			X		2.5 / 5 / 10
003																	2															2.5 / 5 / 10
004																																2.5 / 5 / 10
005																																2.5 / 5 / 10
006																																2.5 / 5 / 10
007																																2.5 / 5 / 10
008																																2.5 / 5 / 10
009																																2.5 / 5 / 10
010																																2.5 / 5 / 10
011																																2.5 / 5 / 10
012																																2.5 / 5 / 10
013																																2.5 / 5 / 10
014																																2.5 / 5 / 10
015																																2.5 / 5 / 10
016																																2.5 / 5 / 10
017																																2.5 / 5 / 10
018																									10/18/20							2.5 / 5 / 10
019																									SRK							2.5 / 5 / 10
020																																2.5 / 5 / 10

Exceptions to preservation check: VOA Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : ☒Yes ☐No ☐N/A *If yes look in headspace column

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO#: 40216102

40216102

Client Name: ADS

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco ☐ Client ☐ Pace Other:

Tracking #: 2603428-1, 2603662-1

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - N/A **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 10/8/20 /Initials: SRK

Labeled By Initials: SMW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD:	☐Yes ☒No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WJ		
Trip Blank Present:	☒Yes ☐No ☐N/A	13. In shipment, lab added to COC 10/8/20 SRK
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 449		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

4021618?

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
ADS Glacier Ridge	Report To: Kari Radideau	Attention: Kari Radideau
N7296 Hwy V	Copy To: Frank Perugini - ESC, ESC Staff, Sherren Clark - SCS Eng	Company Name: ADS Glacier Ridge
Horicon, WI 53032		Address: N7296 Hwy V, Horicon, WI 53032
Email To: Kari Rabideau - ADS	Purchase Order No.: na	Pace Quote Reference: na
Phone: na Fax: na	Project Name: LGRL Investigation Wells	Pace Project Manager: Cindy Varga
Requested Due Date/TAT:	Project Number: na	Pace Profile #: 4172 line 36

REGULATORY AGENCY

__NPDES X GROUND WATER __DRINKING WATER

__UST __RCRA OTHER____

SITE LOCATION: __GA __IL __IN __MI __NC __OH __SC X WI OTHER____

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Nitric	Preservatives: HCL	Preservatives: Unpreserved	Requested Analysis: 8260 NR 507 VOCs	Requested Analysis: diss chloride, alkalinity	Requested Analysis: diss 6010 - hard	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
1	P-401D	GW	G			10/8	1100	14.6	5	1	3	1	X	X	X		001
2	P-403F						1035	13.8	5	1	3	1	X	X	X		002
3	P-423D						1305	15.5	5	1	3	1	X	X	X		003
4	P-424D						1350	16.0	5	1	3	1	X	X	X		004
5	P-424SS						1555	13.0	5	1	3	1	X	X	X		005
6	P-426D	GW	G			10/8	1220	15.6	5	1	3	1	X	X	X		006
7	Trip Blank								2		2		X				007
8																	
9																	
10																	
11																	
12																	

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	10/8/20	1700			
Walter	10/9/20	0900		10/9/20	0900

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
ROI	(Y) N	(Y) N	(Y) N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Scott Freimark

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 10/8/20

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: ADS Glacier Project # 40216189

All containers needing preservation have been checked and noted below: ~~Yes~~ □No □N/A

Lab Lot# of pH paper: 1004194 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: MP Date/ Time:

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001										1		1					3													X		2.5 / 5 / 10
002										1		1					3													X		2.5 / 5 / 10
003										1		1					3													X		2.5 / 5 / 10
004										1		1					3													X		2.5 / 5 / 10
005										1		1					3													X		2.5 / 5 / 10
006										1		1					3													X		2.5 / 5 / 10
007																	2																2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																													10/9/20 MP				2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : □Yes ~~□No~~ □N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project # WO# : 40216187

40216187

Client Name: ADS Glacier

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco ☐ Client ☐ Pace Other:

Tracking #: 2604712-3

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - NA **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 10.1 /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 10/9/20 Initials:
Labeled By Initials:

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☒No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		(X2 - P-402E" 10/9/20
Trip Blank Present:	☒Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 449		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

4021618

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
ADS Glacier Ridge	Report To: Kari Radideau	Attention: Kari Radideau
N7296 Hwy V	Copy To: Frank Perugini - ESC, ESC Staff, Sherren Clark - SCS Eng	Company Name: ADS Glacier Ridge
Horicon, WI 53032		Address: N7296 Hwy V, Horicon, WI 53032
Email To: Kari Rabideau - ADS	Purchase Order No.: na	Pace Quote Reference: na
Phone: na Fax: na	Project Name: LGRL Investigation Wells	Pace Project Manager: Cindy Varga
Requested Due Date/TAT:	Project Number: na	Pace Profile #: 4172 line 36

REGULATORY AGENCY

__ NPDES _X_ GROUND WATER __ DRINKING WATER

__ UST __ RCRA OTHER____

SITE LOCATION: __GA __IL __IN __MI __NC __OH __SC _X_ WI OTHER____

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Nitric	Preservatives: HCL	Preservatives: Unpreserved	Filtered (Y/N)	Requested Analysis: 8260 NR 507 VOCs	Requested Analysis: diss chloride, alkalinity	Requested Analysis: diss 6010 - hard	Requested Analysis: Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
						N	Y	Y										
1	P-LGRL SS	WT	G			10/9	1330	15C	5	1	3	1		X	X	X		001
2	Trip Blank	—	—			—	—	—	2		2			X				002
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	10/9/20	1700			
Waco	10/10/20	0830	Pace	10/10/20	0830

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
1.6	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Scott Trudeau

SIGNATURE of SAMPLER: Scott Trudeau DATE Signed (MM/DD/YY): 10/9/20

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: ADS Glacier Project # 40216368

All containers needing preservation have been checked and noted below: ~~Yes~~ ☐No ☐N/A Initial when completed: NC Date/ Time:

Lab Lot# of pH paper: 10D4194 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001										1		1					3														4		2.5 / 5 / 10
002																	2																2.5 / 5 / 10
003																																	2.5 / 5 / 10
004																																	2.5 / 5 / 10
005																																	2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																													10/10/20 12				2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : ☐Yes ~~☐No~~ ☐N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40216318

40216318

Client Name: ADS Glacier

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☒ Waltco ☐ Client ☐ Pace Other:

Tracking #: 2607580-1

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - NA **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:

Date: 10/10/20 /Initials: AP

Labeled By Initials: SRK

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☒Yes ☐No ☐N/A	12.
Trip Blank Present:	☒Yes ☐No ☒N/A	13. 10/10/20 AP
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 449		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Attachment D

2020 Investigation Correspondence

September 22, 2020
File No. 25220008.02

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

Subject: Workplan for Additional Investigation
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 Advanced Disposal Services Glacier Ridge Landfill, LLC (Advanced), SCS Engineers (SCS) is submitting this workplan for 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. This workplan addresses recommendations #3 and #4 provided in the Wisconsin Department of Natural Resources (WDNR) 5-year review report for the site dated June 10, 2019. The proposed work is consistent with the responses to the review recommendations that SCS submitted to WDNR on behalf of Advanced on April 15, 2020.

SANDSTONE MONITORING WELL P-426SS

Installation of a sandstone monitoring well is proposed in response to recommendation #3 in the 5-year review letter. As discussed in the June 21, 2019 meeting with WDNR, we propose to expand the monitoring well network by installing a monitoring well in the sandstone aquifer in a nest with dolomite monitoring well P-426D. The existing bedrock monitoring wells and water supply well locations are shown on **Figure 1**. The additional sandstone well provides the opportunity to determine whether VOCs are present in the sandstone aquifer north-northeast of the source area, as well as allow the opportunity to evaluate the groundwater flow direction within the sandstone aquifer.

Consistent with existing sandstone monitoring wells P-424SS and P-429SS, proposed well P-426SS will be installed near the top of the sandstone unit, below the dolomite. Based on the ground elevation at the P-426D location, the anticipated well depth is approximately 425 feet. The well casing and screen will be Schedule 80 PVC, and the screen length is estimated to be 20 feet.

An 8-inch-diameter borehole will be drilled through the unconsolidated glacial sediments to the top of the shale, at an approximate depth of 60 feet below the ground surface, and a temporary 6-inch casing will be placed in the hole. A nominal 6-inch borehole will be advanced with air rotary methods through the shale and dolomite and approximately 20 feet into the underlying sandstone. Drilling residuals will either be disposed on the ground at the drilling site or transported to the Glacier Ridge Landfill for disposal.

The borehole for P-426D was logged using down-hole geophysical tools in February 2014 to a depth of 263 feet. Copies of the boring log and geophysical logs for P-426D are in Attachment A. Our experience with other boreholes completed for this investigation indicates that the lower portion of the dolomite does not yield appreciable quantities of water; therefore, we do not plan to perform additional geophysical logging in the borehole for P-426SS.

The open hole will be developed with air from the drilling rig prior to well installation. The well screen, filter pack, and filter pack seal will be installed in the sandstone and the remainder of the well annulus will be grouted with high solids bentonite slurry. The temporary casing will be withdrawn during grouting. Following grouting, the well will be developed with a submersible pump and allowed to rest at least 2 weeks prior to sampling.

In accordance with NR 141.31(1)(b), we are requesting approval of an exception to the NR 141 requirement regarding borehole diameter. The actual diameter of the bedrock borehole will be slightly less than 6 inches (about 5 5/8 inches), which is less than the requirement for a borehole diameter 4 inches larger than the 2-inch inside diameter of the PVC well casing. In prior installations, there has been no problem placing the grout seal using tremie methods in the annular space between the nominal 6-inch borehole and the 2-inch PCV casing. Also we are requesting approval of the installation of a well screen as long as 20 feet as a variance to the requirements of NR 141.09.

The proposed approach for installing and sampling P-426SS includes the following steps:

1. Install, survey, and develop the monitoring well as described above.

2. Collect initial samples approximately 2 to 4 weeks after installation and analyze for VOCs, alkalinity, chloride, and field parameters. Measure water levels in the other sandstone monitoring wells on the same day (P-424SS, P-429SS).

3. Collect additional samples as part of the routine semiannual sampling program for the VOC investigation wells, which includes water level measurements at all monitoring wells.

4. Submit monitoring well documentation, sampling results, and recommendations for next steps, if needed, within 60 days of receiving results for the second round of samples.

PW-J INVESTIGATION

Investigation of groundwater conditions at the PW-J location is proposed in response to recommendation #3 in the 5-year review letter. As discussed in the June 21, 2019 meeting with WDNR, Advanced proposes to complete downhole geophysical logging of PW-J, then install a bedrock monitoring well or well nest in the PW-J borehole and/or in a new borehole drilled adjacent to the existing well. The objective of the geophysical logging is to identify the primary flow zone(s) within the open interval that is contributing flow to the well during pumping and can be targeted for monitoring well installation.

Per the attached February 21, 1973 well construction report, PW-J is 250 feet deep with 150 feet of cement-grouted 6-inch steel casing. The well is open in “limerock” from 150 to 250 feet below the ground surface. It produced 15 gallons per minute at 5 feet of drawdown when pump-tested following completion of the well. The static water level at the time of installation was 70 feet below the ground surface.

The proposed approach for investigating the VOC detections in samples from PW-J includes:

1. Remove pump if necessary and complete downhole geophysical logging of PW-J. The proposed downhole logging approach includes logging borehole diameter (caliper), fluid temperature and conductivity, natural gamma radiation, and vertical flow (measured with a heat-pulse flow meter) under ambient and pumped conditions.

2. Submit logging results and recommended monitoring well construction approach to WDNR for concurrence. The anticipated approach is to install a single 2-inch monitoring well to intersect the primary flow zone identified in the borehole, similar to existing well P-423D, installed in the former PW-21R borehole; however, alternative approaches to sample multiple depths will be evaluated if warranted based on the logging results.

3. Install, survey, and develop the monitoring well(s).

4. Collect initial samples approximately 2 to 4 weeks after installation and analyze for VOCs, alkalinity, chloride, and field parameters. Measure water levels in the other dolomite monitoring wells on the same day (P-401D, P-402E, P-423D, P-424D, and P-426D).

5. Collect additional samples as part of the routine semiannual sampling program for the VOC investigation wells, which includes water level measurements at all monitoring wells.

6. Submit monitoring well documentation, sampling results, and recommendations for next steps, if needed, within 60 days of receiving results for the second round of samples.

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/lmh_ajr/SCC

cc: Jake Margelofsky, Advanced Disposal Services (2 copies)
Ann Bekta, WDNR

cc via email: Tim Curry, Advanced Disposal Services
Kari Rabideau, Advanced Disposal Services
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.)

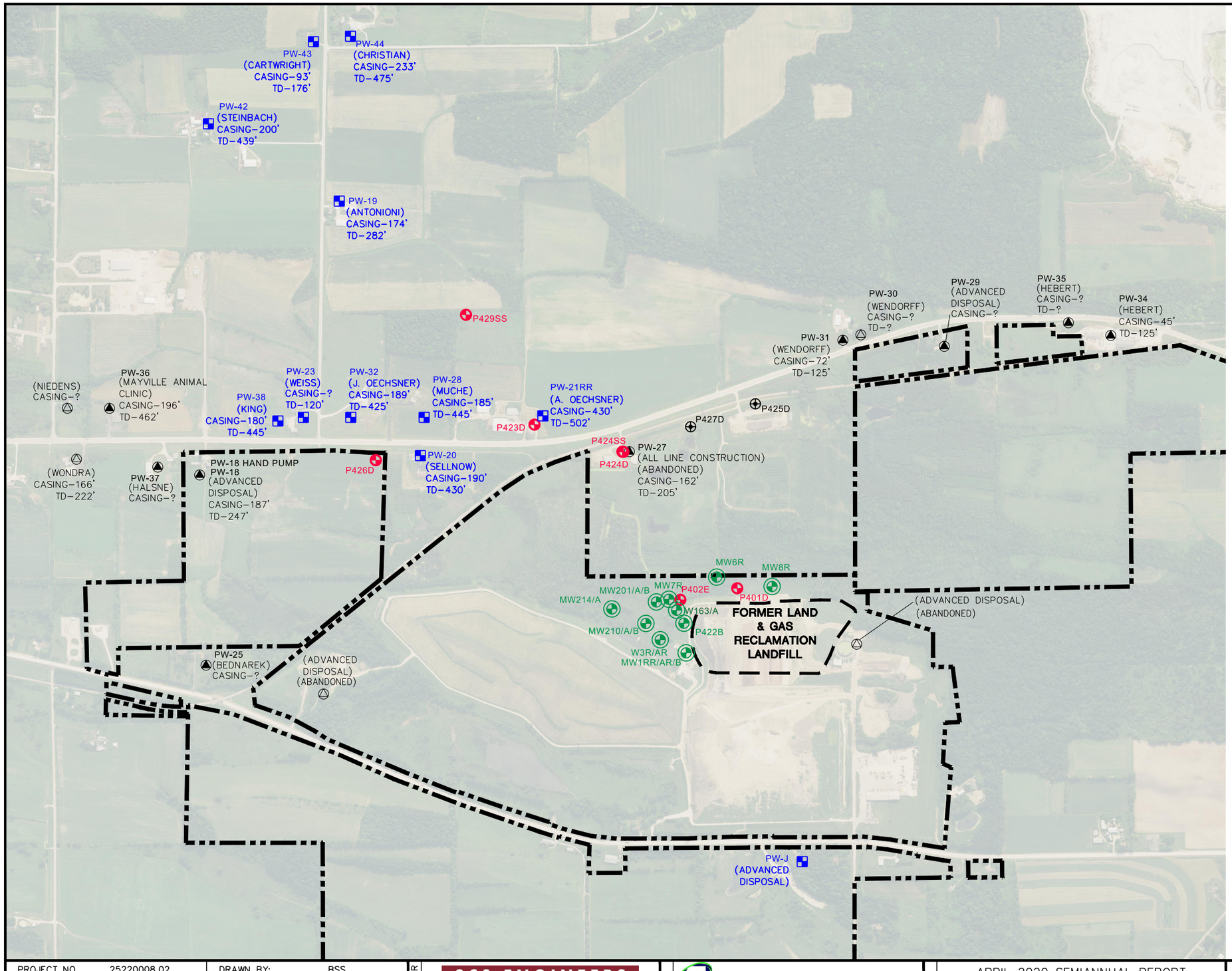
Nathan Kempke, City of Mayville
Paul Rosenfeldt, Edgarton, St. Peter, Petak & Rosenfeldt (for Mayville Engineering Corp.)
Frank Perugini, Environmental Sampling Corporation

Encl. Figure 1 – Monitoring Well and Private Well Locations
Attachment A: P-426D Boring Log and Geophysical Logs
Attachment B: PW-J Well Construction Report

I:\25220008.02\Deliverables\Workplan_Aug2020\200922_Bannister_LGRL Workplan.docx

Figure 1

Monitoring Well and Private Well Locations



N

1,000 0 1,000

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 JUNE 18, 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 IS MONITORED FOR GRL. OTHER GRL PRIVATE WELL SAMPLE LOCATIONS NOT SHOWN.

PROJECT NO.	25220008.02	DRAWN BY:	BSS
DRAWN:	06/19/2020	CHECKED BY:	SCC/EO
REVISED:	07/09/2020	APPROVED BY:	SCC 07/28/2020

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

CLIENT: Advanced Disposal
ADVANCED DISPOSAL SERVICES
GLACIER RIDGE LANDFILL, LLC.

SITE: APRIL 2020 SEMIANNUAL REPORT
LAND AND GAS RECLAMATION LANDFILL
DODGE COUNTY, WISCONSIN

MONITORING WELL AND PRIVATE WELL LOCATIONS

FIGURE 1

I:\25220008.02\Drawings\2020 April Semiannual Report\Well Locations.dwg, 7/28/2020 11:01:41 AM

Attachment A

P-426D Boring Log and Geophysical Logs

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Land and Gas Reclamation Landfill SCS#: 25211374.49	01118	P-426D

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Steffes Badger Well Drilling	12/27/2013	12/27/2013	rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet	953.50 Feet	6.0 in.

Local Grid Origin ☒ (estimated: ☐) or Boring Location ☐
State Plane 537,268 N, 23,819,380 E S/C/N
1/4 of 1/4 of Section , T N, R
Lat 43° 28' 14.0"
Long 88° 32' 48.00"
Local Grid Location
5012.8 Feet ☒ N ☐ S
6875.8 Feet ☒ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dodge	14	Town of Willamstown

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0–10	SILTY SAND, pale brown, fine to medium with subrounded gravel	SM									
S1			6							Dry				
			10–15	SILTY SAND, light brownish gray, fine to medium with subrounded gravel	SM									

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

Signature: [signature]

Firm: SCS Engineers
2830 Dairy Drive Madison, WI 53711
Tel: (608) 224-2830
Fax:

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
S2			16							Dry				
			17											
			18		SM									
			19											
			20	SILTY SAND, light brownish gray, fine										
			21											
			22											
			23											
S3			24							Dry				
			25		SM									
			26											
			27											
			28											
			29											
			30	SILTY SAND, light brownish gray, fine to medium with subrounded gravel										
			31											
			32											
			33											
			34											
S4			35		SM					Dry				
			36											
			37											
			38											
			39											
			40											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122. Page 3 of 11

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			41	SILTY SAND, light brownish gray, fine with subangular gravel										
			42											
			43											
			44											
S5			45		SM					M				
			46											
			47											
			48											
			49											
			50	SILTY SAND, fine with subrounded gravel										
			51											
			52											
			53											
			54											
S6			55		SM					M				
			56											
			57											
			58											
			59											
			60	SHALE, greenish gray										
			61											
			62											
			63											
			64											
S7			65							M				

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			66											
			67											
			68											
			69											
			70	SHALE, greenish gray										
			71											
			72											
			73											
			74											
S8			75							M				
			76											
			77											
			78											
			79											
			80	SHALE, greenish gray										
			81											
			82											
			83											
			84											
S9			85							W				
			86											
			87											
			88											
			89											
			90											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			90	SHALE, greenish gray										
			91											
			92											
			93											
			94											
S10			95							W				
			96											
			97											
			98											
			99											
			100	SHALE, greenish gray										
			101											
			102											
			103											
			104											
S11			105							W				
			106											
			107											
			108											
			109											
			110	SHALE, grayish brown										
			111											
			112											
			113											
			114											
			115											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample										Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S12			116							W				
			117											
			118											
			119											
			120	SHALE, gray										
			121											
			122											
			123											
			124											
S13			125							W				
			126											
			127											
			128											
			129											
			130	SHALE, greenish gray										
			131											
			132											
			133											
			134											
S14			135							W				
			136											
			137											
			138											
			139											
			140											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			140	SHALE, greenish gray										
			141											
			142											
			143											
			144											
S15			145							W				
			146											
			147											
			148											
			149											
			150	SHALE, greenish gray										
			151											
			152											
			153											
			154											
S16			155							W				
			156											
			157											
			158											
			159											
			160	SHALE, greenish gray										
			161											
			162											
			163											
			164											
			165											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122. Page 8 of 11

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S17			166											
			167											
			168											
			169											
			170	SHALE, greenish gray										
			171											
			172											
			173											
			174											
S18			175							W				
			176											
			177											
			178											
			179											
			180	DOLOMITE, dark greenish gray										
			181											
			182											
			183											
			184											
S19			185							W				
			186											
			187											
			188											
			189											
			190											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122. Page 9 of 11

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			190	DOLOMITE, greenish gray										
			191											
			192											
			193											
			194											
S20			195							M				
			196											
			197											
			198											
			199											
			200	DOLOMITE, greenish gray										
			201											
			202											
			203											
			204											
S21			205											
			206											
			207											
			208											
			209											
			210	DOLOMITE, greenish gray										
			211											
			212											
			213											
			214											
			215											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S22			216											
			217											
			218											
			219											
			220	DOLOMITE, greenish gray										
			221											
			222											
			223											
			224											
S23			225							W				
			226											
			227											
			228											
			229											
			230	DOLOMITE, greenish gray										
			231											
			232											
			233											
			234											
S24			235											
			236											
			237											
			238											
			239											
			240											

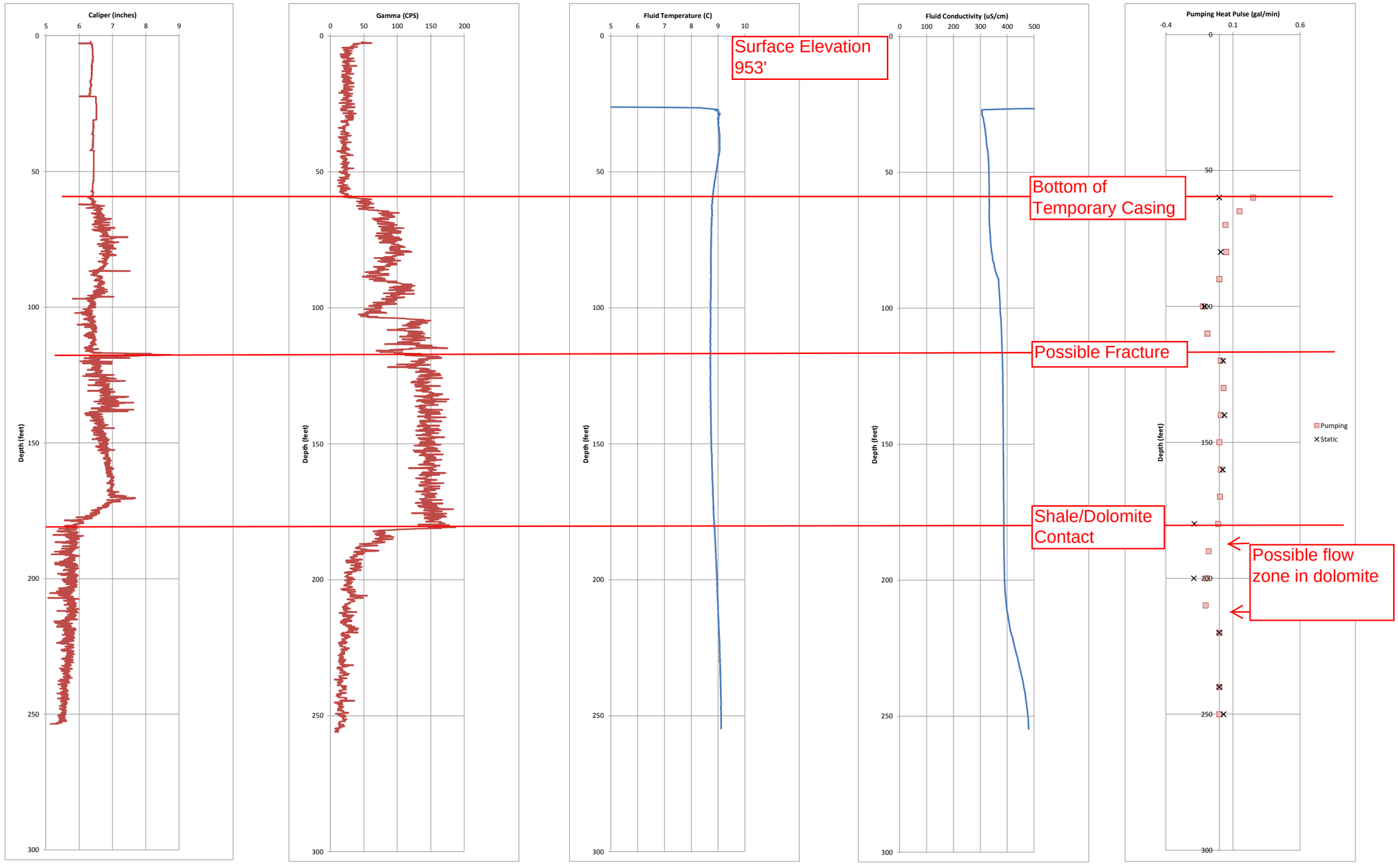
State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number P-426D Use only as an attachment to Form 4400-122. Page 11 of 11

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			241	DOLOMITE, greenish gray										
			242											
			243											
			244											
S25			245											
			246											
			247											
			248											
			249											
			250	DOLOMITE, greenish gray										
			251											
			252											
			253											
			254											
S26			255											
			256											
			257											
			258											
			259											
			260											
			261											
			262											
			263	End of boring @ 263'										

P426 Borehole Logging



Attachment B

PW-J Well Construction Report

MAR 0 1973

FEB - 8 1973

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

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

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

COUNTY: Dodge

CHECK ONE: ☑ Town ☐ Village ☐ City

NAME: Williamstown

2. LOCATION – ¼ Section: SE SE | Section: 34 | Township: 12N | Range: 16E

OR – Grid or street no. | Street name:

AND – If available subdivision name, lot & block no.

3. OWNER AT TIME OF DRILLING: Eugene Fischer

ADDRESS: R 2

POST OFFICE: Mayville 53050

4. Distance in feet from well to nearest: (Record answer in appropriate block)

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

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
	18	60	None	None	None	None		None	None

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: Farm

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
10	Surface	35	8	35	150
6"	150	250			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
8"	Plain end	Surface	150
280	Wall		
18	Gr. ft.		

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Hard Pan	Surface	20
Limestone bolders	20	35
Soft Blue Clay	35	90
Mixed layers soft	90	145
& Hard pan		
Limerock	145	250

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Backfill	Surface	7
Cement Grout	7	150

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

Well construction completed on: Feb. 21 19 73

11. MISCELLANEOUS DATA

Yield test: 27 Hrs. at 15 GPM

Depth from surface to normal water level: 70 ft.

Depth to water level when pumping: 75 ft.

Well is terminated: 10 inches ☑ above ☐ below final grade

Well disinfected upon completion: ☑ Yes ☐ No

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 pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: [signature] & Registered Well Driller

COMPLETE MAIL ADDRESS: R 1 Box 31 Mayville Wis 53050

Please do not write in space below

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

REV. 3–71

J

Clark, Sherren

From: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>
Sent: Friday, October 16, 2020 3:44 PM
To: Clark, Sherren
Cc: Jacob A Margelofsky; Kari Rabideau; Tim Curry (Tim.Curry@advanceddisposal.com); Lonn Walter (Lonn.Walter@advanceddisposal.com); Jay R Warzinski; Melissa Bachhuber; Mark Torresani (mark.torresani@cornerstoneeg.com); Environmental Sampling Corp (escstaff@yahoo.com); Melanie Gotto (GottoMelanieL@JohnDeere.com); Rios Monica T; Marek, George J.; lbenfield@foley.com; nkempke@mayvillecity.com; paulr@lawfdl.com; Bekta, Ann M - DNR; Oelkers, Eric
Subject: RE: Land and Gas Reclamation Landfill - Work Plan for Additional Investigation

Categories: Filed by Newforma

Sherren,

Thank you for submitting the September 22, 2020 *Workplan for Additional Investigation* for the former Land & Gas Reclamation Landfill (aka Hechimovich Sanitary Landfill). The plan describes your recommendations for additional groundwater investigation of chlorinated VOCs in the bedrock aquifers. Specifically, the plan proposes installing one additional sandstone piezometer (P-426SS) nested with existing dolomite piezometer P-426D, and also performing downhole geophysical logging at the former supply well PW-J location in order to support the design for a piezometer(s). Piezometer design and installation would be accomplished following analysis of the geophysical data. The new piezometers would then be sampled and become part of the broader groundwater monitoring program for the site.

We agree with your proposed approach and approve the plan. Please keep us informed of the field schedule and feel free to call or email if you have any questions.

Regards,
Trevor

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Trevor Bannister
Hydrogeologist – Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road, Fitchburg, Wisconsin 53711
Mobile Phone: (608) 347-0058
TrevorA.Bannister@wisconsin.gov

dnr.wi.gov

From: Clark, Sherren <SClark@scsengineers.com>
Sent: Tuesday, September 22, 2020 6:21 PM
To: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>
Cc: Jacob A Margelofsky <jacob.margelofsky@advanceddisposal.com>; Kari Rabideau <kari.rabideau@advanceddisposal.com>; Tim Curry (Tim.Curry@advanceddisposal.com) <Tim.Curry@advanceddisposal.com>; Lonn Walter (Lonn.Walter@advanceddisposal.com) <Lonn.Walter@advanceddisposal.com>; Jay R Warzinski <jay.warzinski@advanceddisposal.com>; Melissa Bachhuber <melissa.bachhuber@advanceddisposal.com>; Mark Torresani (mark.torresani@cornerstoneeg.com) <mark.torresani@cornerstoneeg.com>; Environmental Sampling Corp (escstaff@yahoo.com) <escstaff@yahoo.com>; Melanie Gotto (GottoMelanieL@JohnDeere.com) <GottoMelanieL@JohnDeere.com>; Rios Monica T <RiosMonicaT@JohnDeere.com>; Marek, George J. <George.Marek@quarles.com>; lbenfield@foley.com; nkempke@mayvillecity.com; paulr@lawfdl.com; Bekta, Ann M - DNR <Ann.Bekta@wisconsin.gov>; Oelkers, Eric <EOelkers@scsengineers.com>
Subject: Land and Gas Reclamation Landfill - Work Plan for Additional Investigation

Trevor,
Attached is the work plan for additional groundwater investigation at Land and Gas Reclamation Landfill. Please let us know if you have comments or questions.

Thanks,
Sherren

Sherren Clark
Project Director
SCS Engineers
2830 Dairy Drive
Madison, WI 53718
608-225-2974 (cell)
sclark@scsengineers.com

February 10, 2021
File No. 25221008.02

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

Subject: Additional Investigation and Workplan 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 to the September 22, 2020 workplan for 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. This workplan addressed recommendations #3 and #4 provided in the Wisconsin Department of Natural Resources (WDNR) 5-year review report for the site dated June 10, 2019. The proposed work is consistent with the responses to the review recommendations that SCS submitted to WDNR on behalf of Advanced on April 15, 2020.

PW-J LOGGING

SCS mobilized to the site on November 5, 2020, to perform geophysical logging of PW-J as proposed in the September 2020 workplan. The well location is shown on **Figure 1**. In preparation for logging, Antonioni Well and Pump pulled the pump from PW-J on October 29, 2020. SCS completed logging runs for caliper (well diameter), fluid temperature, fluid conductivity/resistivity, and heat pulse (borehole flow) under pumped conditions. The rented gamma logging tool arrived in damaged condition, so it was not possible to run the gamma log.

The geophysical logs are provided as **Attachment A** along with a copy of the original well construction report. The depth to water in the well from the top of the 6-inch steel casing was approximately 63.5 feet. The bottom of the casing was at approximately 150 feet below the ground surface, with 2.7 feet of casing above ground. The temperature, conductivity, and caliper logs suggested the presence of fracture zones at approximately 175 and 210 feet. The heat pulse flow meter readings measured during pumping at a flow rate of 0.5 gallons per minute suggested that both fracture zones were contributing water to the well. In addition, diffuse flow appeared to be entering the well between the bottom of the casing and the fracture zone at 175 feet. There did not appear to be significant quantities of water entering the well below a depth of about 215 feet.

PROPOSED MONITORING APPROACH

Based on the geophysical logging results, SCS is proposing the following approach to replace the existing PW-J water supply well with one (or more) 2-inch monitoring wells:

1. Backfill PW-J from the bottom to 220 feet below ground surface (bgs) with bentonite chips.
2. Install a standard 2-inch monitoring well (piezometer) in PW-J with a 10-foot screen from 205 to 215 feet bgs.
3. Develop the new well and sample at least twice.
4. Compare the new results to the historical data from PW-J. If the VOC concentrations are similar, then the new monitoring well will be considered representative of conditions in PW-J and no additional monitoring wells will be installed to replace PW-J.
5. If the VOC concentrations in samples from the new monitoring well are significantly less than the historical PW-J results, then consider drilling a second monitoring well to 180 feet and installing a 20-foot screen from 160 to 180 feet.

SCS evaluated the possibility of installing a multi-level monitoring well system in the PW-J borehole. Because of the expense of installing a multi-level well and the incompatibility of such a system with sampling equipment used for other wells at the site, our opinion is that installation of a multi-level well system would not be economical or practical.

SCS proposes to install the 213-foot-deep 2-inch monitoring well in PW-J during the mobilization for sandstone monitoring well P-426SS. The procedure for P-426SS will be as described in the September 2020 workplan. If WDNR is in agreement with this approach, SCS will work with Badger Well Drilling to schedule the work while the ground is frozen in early 2021 with subsequent sampling of both wells as described in the workplan.

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/jsn/SCC

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

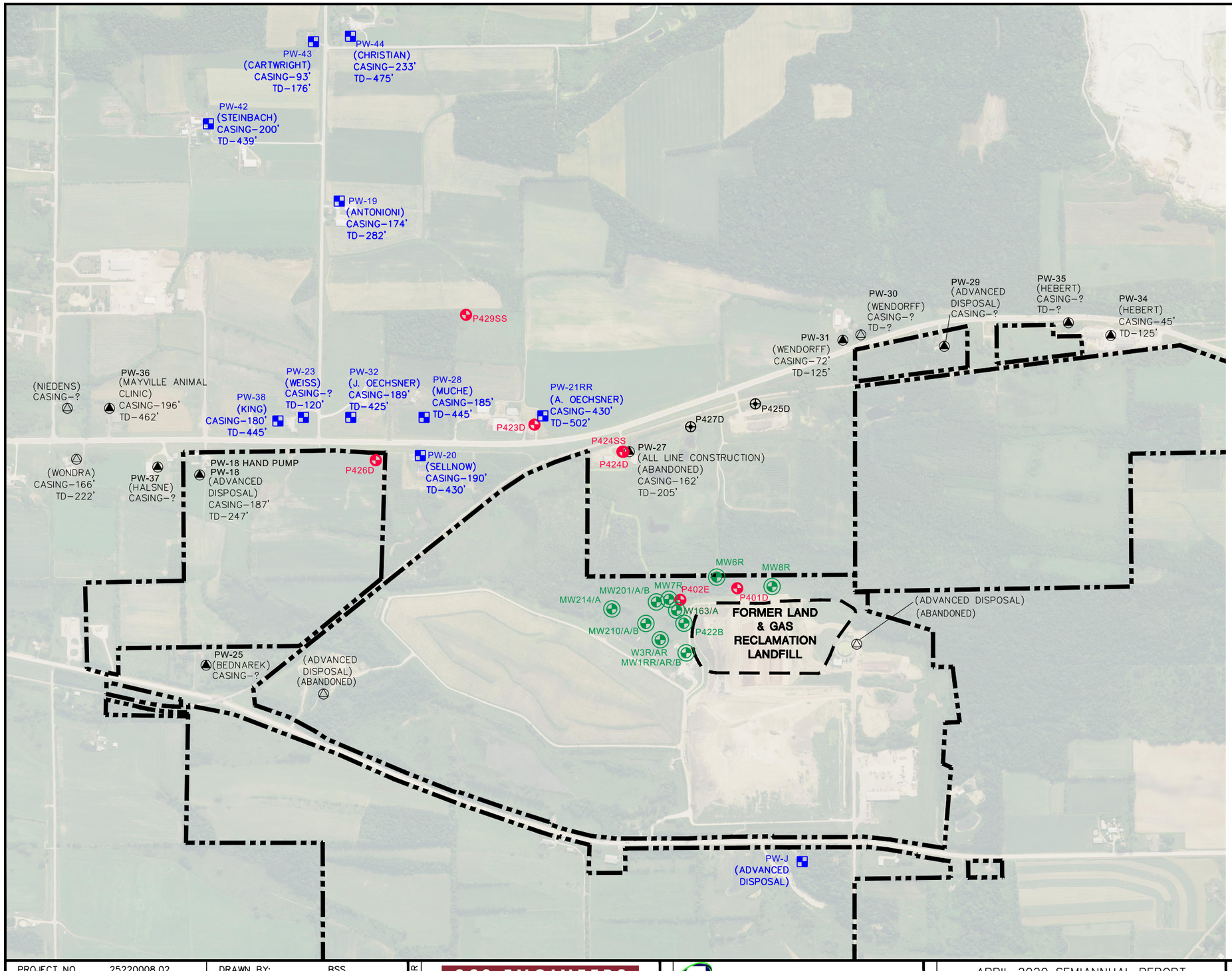
cc via email: Ann Bekta, WDNR
Tim Curry, GFL Environmental
Kari Rabideau, GFL Environmental
Mark Torresani, Tetra Tech
Melanie Gotto, Deere & Company World Headquarters
Monica Rios, Deere & Company World Headquarters
George Marek, Quarles & Brady, LLP (for Mercury Marine)
Linda Benfeld, ESG Holdings,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

Encl. Figure 1 – Monitoring Well and Private Well Locations
Attachment A – PW-J Geophysical Logs and Well Construction Report

I:\25221008.02\Deliverables\PWJ Update\210210_Bannister_PWJ Update.docx

Figure 1

Monitoring Well and Private Well Locations



N

1,000 0 1,000

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 JUNE 18, 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 IS MONITORED FOR GRL. OTHER GRL PRIVATE WELL SAMPLE LOCATIONS NOT SHOWN.

PROJECT NO.	25220008.02	DRAWN BY:	BSS
DRAWN:	06/19/2020	CHECKED BY:	SCC/EO
REVISED:	07/09/2020	APPROVED BY:	SCC 07/28/2020

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

CLIENT: Advanced Disposal
ADVANCED DISPOSAL SERVICES
GLACIER RIDGE LANDFILL, LLC.

SITE: APRIL 2020 SEMIANNUAL REPORT
LAND AND GAS RECLAMATION LANDFILL
DODGE COUNTY, WISCONSIN

MONITORING WELL AND PRIVATE WELL LOCATIONS

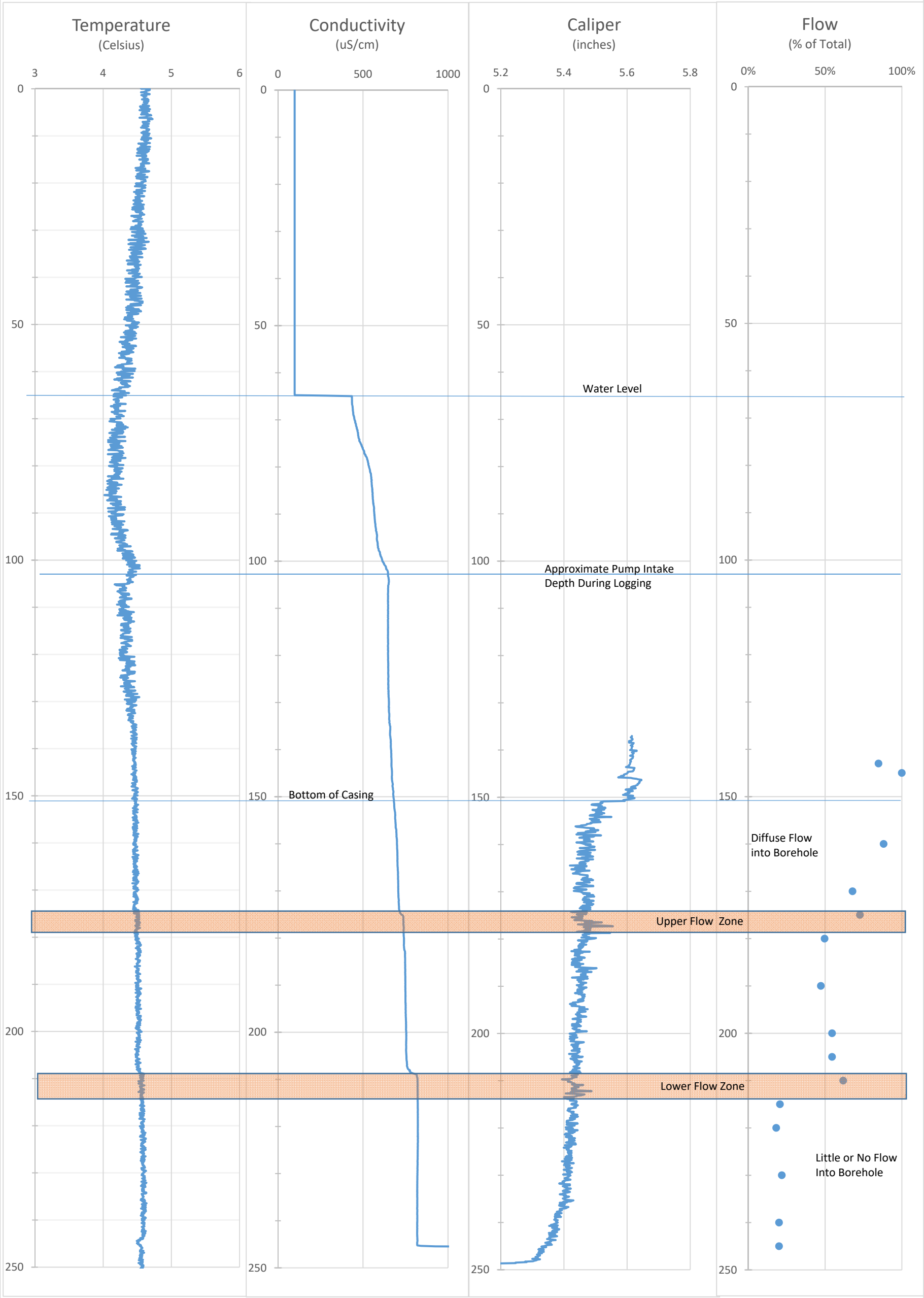
FIGURE 1

I:\25220008.02\Drawings\2020 April Semiannual Report\Well Locations.dwg, 7/28/2020 11:01:41 AM

Attachment A

PW-J Geophysical Logs and Well Construction Report

PW-J Borehole Geophysical Log
Land and Gas Reclamation Landfill
SCS Project 252200008.02



MAR 0 1973

FEB - 8 1973

WELL CONSTRUCTOR'S REPORT
FORM 3300–15

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

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

COUNTY: Dodge

CHECK ONE: ☑ Town ☐ Village ☐ City

NAME: Williamstown

2. LOCATION – ¼ Section: SE SE | Section: 34 | Township: 12N | Range: 16E

OR – Grid or street no. | Street name:

AND – If available subdivision name, lot & block no.

3. OWNER AT TIME OF DRILLING: Eugene Fischer

ADDRESS: R 2

POST OFFICE: Mayville 53050

4. Distance in feet from well to nearest: (Record answer in appropriate block)

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

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE
	18	60	None	None	None	None		None	None

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: Farm

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
10	Surface	35	8	35	150
6"	150	250			

7. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
8"	Plain end	Surface	150
280	Wall		
18	Gr. ft.		

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Hard Pan	Surface	20
Limestone bolders	20	35
Soft Blue Clay	35	90
Mixed layers soft	90	145
& Hard pan		
Limerock	145	250

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Backfill	Surface	7
Cement Grout	7	150

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

Well construction completed on: Feb. 21 19 73

11. MISCELLANEOUS DATA

Yield test: 27 Hrs. at 15 GPM

Depth from surface to normal water level: 70 ft.

Depth to water level when pumping: 75 ft.

Well is terminated: 10 inches ☑ above ☐ below final grade

Well disinfected upon completion: ☑ Yes ☐ No

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 pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: [signature] & Registered Well Driller

COMPLETE MAIL ADDRESS: R 1 Box 31 Mayville Wis 53050

Please do not write in space below

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

REV. 3–71

J

Clark, Sherren

From: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>
Sent: Tuesday, February 23, 2021 4:24 PM
To: Clark, Sherren
Cc: Kari Rabideau (kari.rabideau@gflenv.com); Timothy Curry (tim.curry@gflenv.com); Jacob A Margelofsky (jacob.margelofsky@gflenv.com); Lonn Walter (lonn.walter@gflenv.com); Environmental Sampling Corp (escstaff@yahoo.com); Melanie Gotto (GottoMelanieL@JohnDeere.com); 'Rios Monica T'; 'Marek, George J.'; 'lbenfield@foley.com'; 'nkempke@mayvillecity.com'; 'paulr@lawfdl.com'; Bekta, Ann M - DNR; Oelkers, Eric
Subject: RE: Land and Gas Reclamation Landfill - Additional Investigation and Workplan Update

Categories: Filed by Newforma

Sherren,

Thank you for submitting the February 10, 2021 *Additional Investigation and Workplan Update*. Following our discussion and a review of the plan, we agree with your proposed approach to both the PW-J and P-426SS well nests. Please proceed with the proposed work and keep us apprised of the field schedule for this work. Feel free to contact me with any questions.

Regards,
Trevor

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Trevor Bannister
Hydrogeologist, Regional Spill Coordinator – Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road, Fitchburg, Wisconsin 53711
Mobile Phone: (608) 347-0058
TrevorA.Bannister@wisconsin.gov

dnr.wi.gov

From: Clark, Sherren <SClark@scsengineers.com>
Sent: Wednesday, February 10, 2021 5:30 PM
To: Bannister, Trevor A - DNR <TrevorA.Bannister@wisconsin.gov>
Cc: Kari Rabideau (kari.rabideau@gflenv.com) <kari.rabideau@gflenv.com>; Timothy Curry (tim.curry@gflenv.com) <tim.curry@gflenv.com>; Jacob A Margelofsky (jacob.margelofsky@gflenv.com) <jacob.margelofsky@gflenv.com>; Lonn Walter (lonn.walter@gflenv.com) <lonn.walter@advanceddisposal.com>; Environmental Sampling Corp (escstaff@yahoo.com) <escstaff@yahoo.com>; Melanie Gotto (GottoMelanieL@JohnDeere.com) <GottoMelanieL@JohnDeere.com>; 'Rios Monica T' <RiosMonicaT@JohnDeere.com>; 'Marek, George J.' <George.Marek@quarles.com>; 'lbenfield@foley.com' <lbenfield@foley.com>; 'nkempke@mayvillecity.com'

<nkempke@mayvillecity.com>; 'paulr@lawfdl.com' <paulr@lawfdl.com>; Bekta, Ann M - DNR <Ann.Bekta@wisconsin.gov>; Oelkers, Eric <EOelkers@scsengineers.com>
Subject: Land and Gas Reclamation Landfill - Additional Investigation and Workplan Update

Trevor,
Attached is an update on additional investigation performed at Land and Gas Reclamation Landfill. The letter also includes recommended next steps. Please let us know if you have comments or questions.

Thanks,
Sherren

Sherren Clark
Project Director
SCS Engineers
2830 Dairy Drive
Madison, WI 53718
608-225-2974 (cell)
sclark@scsengineers.com