Wisconsin Public Service Corporation
Environmental Department
333 W. Everett St.
Milwaukee, WI 53203

January 31, 2023

Ms. Sally Hronek
Wisconsin Department of Natural Resources
1300 West Clairemont Avenue
Eau Claire, WI 54701-6127

submitted via email

RE: WISCONSIN PUBLIC SERVICE WESTON DISPOSAL SITE #3 ASH LANDFILL
LICENSE #2879 - FID# 737062150
NR 506.20(3) 2022 ANNUAL CCR REPORT

Dear Ms. Hronek:

This report is submitted as required per NR 506.20(3) and will be placed in the facility operating record. The report consists of the following attachments:

- 2022 fugitive dust control report [per NR 506.20(3)(a)]
- 2022 inspection report [per NR 506.20(3)(b)]
- 2022 groundwater monitoring and corrective action report [per NR 506.20(3)(c)]
- 2022 leachate pipe cleaning and inspection report [per NR 506.20(3)(d)]

Copies of the annual fugitive dust and inspection reports (listed above) are already available online at https://www.we-energies.com/environment/coal-combustion (the company website). A copy of the annual groundwater monitoring and corrective action report will be placed on the company website in early March 2023.

Please contact me at 414.221-2457 or eric.kovatch@wecenergygroup.com should you have any questions.

Sincerely,

Eric P. Kovatch
Facility Manager – Senior Environmental Consultant

cc: Aaron Kent (WDNR)

Attachments: Appendices A through D (reports listed above)

[File:\2023-01-31 WDS3 NR506 Annual Report for WDNR]

APPENDIX A

2022 FUGITIVE DUST CONTROL REPORT
[PER NR 506.20(3)(A)]

2022 ANNUAL FUGITIVE DUST CONTROL REPORT **December 19, 2022**
WESTON DISPOSAL SITE #3

1.0 INTRODUCTION

This annual fugitive dust control report has been prepared to meet the requirements of 40 CFR 257.80(c).

Weston Disposal Site #3 currently consists of two cells. Cell 2 began active operations during the 2nd Quarter of 2016. Cell 1 was opened during the 3rd quarter of 2021 and began receiving CCR. A final cover of approximately 2-1/2 acres was installed over a portion of Cell 2 in 2016.

2.0 FUGITIVE DUST CONTROL MEASURES

Fugitive dust control measures are described in Section 2.0 of the Fugitive Dust Control Plan, Weston Disposal Site #3, dated October 13, 2015. Effectiveness of the Fugitive Dust Control Plan is evaluated during the weekly and annual inspections. A review of the weekly and annual inspections contained in the operating record was completed during the preparation of this annual fugitive dust control report and confirms that the fugitive dust control measures implemented at Weston Disposal Site #3 are effective.

3.0 CITIZEN COMPLAINTS

The procedure for logging citizen complaints is described in Section 3.0 of the Fugitive Dust Control Plan, Weston Disposal Site #3, dated October 13, 2015. There were no citizen complaints associated with Weston Disposal Site #3 that were logged during the period covered by this annual report.

APPENDIX B

2022 INSPECTION REPORT
[PER NR 506.20(3)(B)]

Consulting
Engineers and
Scientists

December 19, 2022
Project 2103691

Mr. Eric Kovatch
WEC Energy Group – Business Services
333 West Everett Street, A231
Milwaukee, Wisconsin 53203

Re: 2022 Landfill Inspection Report for the
Weston Disposal Site No. 3
Wisconsin Public Service Corporation
Town of Knowlton, Marathon County, Wisconsin

Dear Mr. Kovatch:

GEI Consultants, Inc. (GEI) is pleased to provide this landfill inspection report for the Wisconsin Public Service Corporation (WPS) Weston Disposal Site No. 3 (WDS3). The inspection was completed to comply with *40 CFR 257 Subpart D – Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments* and specifically with *§ 257.84(b) Annual inspections by a qualified professional engineer.*

§ 257.84 Inspection Requirements for CCR Landfills

(b) *Annual inspections by a qualified professional engineer.*

(1) Existing and new CCR landfills and any lateral expansion of a CCR landfill must be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum, include:

(i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person and results of previous annual inspections); and

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

(2) *Inspection report.* The qualified professional engineer must prepare a report following each inspection that addresses the following:

(i) Any changes in geometry of the structure since the previous annual inspection;

(ii) The approximate volume of CCR contained in the unit at the time of the inspection;

(iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

Background

The landfill, located in the E 1/2 of the NW 1/4 and W 1/2 of the NE 1/4, Section 23, Township 26 North, Range 7 East, Town of Knowlton, Marathon County, Wisconsin, is permitted by the Wisconsin Department of Natural Resources (WDNR) under License No. 3067. Figure 1 - Site Location Figure, shows the location of the landfill relative to the Weston Power Plant. The landfill was permitted by the WDNR on December 11, 2014, with the issuance of a Conditional Plan of Operation Approval. The facility is licensed and approved as a 57.6-acre, 4,075,500 cubic yard (cy) landfill. Cells 1 and 2 have a constructed area of 15.1 acres and an operational capacity of 667,900 cy. Both cells were constructed 2015 along with the installation of a leachate force main, storage tank, and load-out system. The construction of Cells 1 and 2 was approved by WDNR on April 22, 2016. WPS placed Cell 2 into service on June 27, 2016 and Cell 1 on August 16, 2021. WPS has filled the cells episodically since being placed into service and has constructed permanent final cover over approximately 3.5 acres of the Cell 2 exterior slopes after reaching final waste grades.

GEI was retained to perform an annual inspection of the landfill in compliance with *§ 257.84(b) Annual inspections by a qualified professional engineer*. The inspection was performed on November 22, 2022. Copies of the site location figure and landfill inspection photo log are appended to this letter-report and constitute the entirety of the report.

Site Inspection

The landfill site inspection was performed by Mr. William Butler, P.E. on November 22, 2022. The inspection included observation of Cells 1 and 2, observation and inspection of the Cell 2 partial final cover and perimeter slopes, and storm water management features for the site. Photographs taken during the site inspection are attached to this report. The following are the observed conditions as of the date of the annual inspection:

(i) Cell 1 was placed into service on August 26, 2021, with the placement of the frost protection layer. As of November 22, 2022, approximately 57,200 cy of CCR have been disposed of in Cell 1. CCR placement consists of the 4-foot frost protection layer on the floor of the cell.

(ii) Cell 2 was placed into service on June 27, 2016. As of December 10, 2021, approximately 389,000 cy of CCR have been disposed of in Cell 2. CCR placement consists of the 4-foot frost protection layer on the floor of the cell and CCR placed to final waste grades. Permanent final cover has been constructed over approximately 3.5 acres of the perimeter slopes of Cell 2 in 2016 and 2020; the remainder of the cell has CCR placed in accordance with the waste filling and storm water management plans.

(iii) The perimeter slopes of Cells 1 and 2, and the final cover slopes of Cell 2 appear to be in excellent condition with no signs of instability, structural weakness, significant erosion, woody vegetation, or animal burrows.

Conclusion

On November 22, 2022, a GEI licensed professional engineer completed an annual inspection of the WPS Weston Disposal Site No. 3 in compliance with *§ 257.84(b) Annual inspections by a qualified professional engineer*. Cell 2 of the landfill is operational and at the time of the inspection had not received any additional CCR, however in early December 2022 the landfill

operator placed approximately 34,000 cy of CCR. Cell 1 is operational and did not receive any CCR during 2022. The perimeter slopes of Cell 2 appear to be in good condition with no significant erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness. At the time of the inspection the permanent final cover constructed is in excellent condition. The vegetation is well established with no erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness.

The inspection was completed by William Butler, P.E. I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of Chapter A-E 4, Wisconsin Administrative Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Chapter A-E 8, Wisconsin Administrative Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chapters NR 500 to 538, Wisconsin Administrative Code and 40 CFR 257.

If you have any questions regarding this report, please contact me at 920-455-8299.

Sincerely,

GEI CONSULTANTS, INC.

William Butler, P.E.
Senior Geotechnical Engineer

John M. Trast, P.E., D.GE
Vice President

Attachments:
Figure 1 - Site Location Figure
WPS3 Ash Landfill CCR Compliance – Annual Inspection
Landfill Inspection Photo Log

LWB:jxt
K:\WEC Energy Group\2103691_WEC Active CCR Landfills Engineering Assistance\05_In_Progress\WDS3\2022 Inspection\R2103691 WPS_WDS3 2021 CCR Landfill Inspection Rpt_12-19-2022.docx

WISCONSIN PUBLIC SERVICE
TOWN OF KNOWLTON, WISCONSIN

GEI Consultants

WESTON DISPOSAL SITE NO. 3
SITE LOCATION FIGURE

Project 1803049 | December 5, 2018 | Fig. 1

J:\Landfills\WPS_Legner\Dust Control\dwg\fig1

WDS3 ASH LANDFILL CCR COMPLIANCE - ANNUAL INSPECTION

INSPECTOR: William Butler, PE
INSPECTION DATE/TIME: 11/22/2022

WEATHER:

Temperature:	35° F	
Conditions:	Sunny	
Wind:	Mild	
Wind Direction:	W	
Precipitation:	Lt. Snow	during the night

LEACHATE COLLECTION SYSTEM:

Load-out Facility:

High level alarms:	No
Low level alarms:	No
Leak alarms	No
Tank Level :	6.0 ft
Tank Volume:	22350 gallons
Pump:	Available
Pad Condition:	Good

Sump:

Cell 1 Pump #1	Available	28.7 in	Primary LCS Sump
Cell 1 Pump #2	Available	29.2 in	Primary LCS Sump
Control Panel:	Available		
Cell 2 Pump #1	Available	21.3 in	Primary LCS Sump
Cell 2 Pump #2	Available	24.0 in	Primary LCS Sump
Control Panel:	Available		

Comments: Leachate volume in the tank is being managed by certified operators to generally keep the volume less than 30,000 gallons (operating capacity is 104,800 gallons). Leachate levels in the sumps are being maintained in compliance with the operating license requirements (no alarms) of less than 1-foot of head on the liner.

STABILITY/EROSION OF FINAL COVERS & WASTE SLOPES:

Final Covers: ☑
Waste Slopes: ☑

Comments : The Cell 2 final cover slopes appear stable with no observed instability, no significant erosion, no woody vegetation, no animal burrows, or concerns regarding the final cover slopes. Everything appeared to be in good condition with no observed instability or significant erosion.

Note: Check mark indicates slope appears stable and no significant erosion.

LANDFILL OPERATIONS:

Fugitive Dust Control:

Tracking Pads :	☑
Cattle Guards :	☑
Access Road Clean:	☑
Landfill Surfaces Vegetated:	☑
Airbourne Dust Visible:	No
Sign of Recent Dust Deposition:	No

Stormwater Management

Exterior Ditches:	☑
Interior Ditches:	☑
Catch Basin:	☑
Culverts:	☑

Comments: Cell 2 partial closures occurred in 2016 Southeast corner and 2020 East slope of the landfill. The remain uncovered area over Cell 2 was covered in 2022. In 2021 WEC opened Cell 1 of the landfill and placed the 4 feet frost protection layer. Leachate from Cells 1 and 2 is hauled from the on-site leachate collection tank to the Weston Power Plan for disposal.

Note: Check mark indicates that the features are acceptable.

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO: 1	DATE: November 22, 2022	LATITUDE: 44.7270139551537	LONGITUDE: -89.6428701756124
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Leachate collection tank and loadout facility.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 2	DATE: November 22, 2022	LATITUDE: 44.7260192449485	LONGITUDE: -89.6371589722821
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Storm water basin no.1 pond, taken on the north landfill berm, looking east.			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7259887084943	LONGITUDE: -89.6372823467994
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Photo shows the extent of the placement of the 4-feet frost protection layer in cell 1. Photo taken north landfill berm, looking south.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 3	DATE: November 22, 2022	LATITUDE: 44.7253545694234	LONGITUDE: -89.6357830654781
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: In the foreground, shown is the extent of placement of the 4-feet frost protection layer in cell 1. In the background, is the north slope of cell 2. The photo was taken looking south.			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO: 4	DATE: November 22, 2022	LATITUDE: 44.7251201077746	LONGITUDE: -89.6352223288036
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Construction equipment parked on the surface of the cell 1 frost protection layer.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 5	DATE: November 22, 2022	LATITUDE: 44.7250807341376	LONGITUDE: -89.6349439647108
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Leachate collection system control panel for cell ___. Panel located on east landfill berm.			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO: 6	DATE: November 22, 2022	LATITUDE: 44.7248623525963	LONGITUDE: -89.6349188504667
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Stormwater basin no. 2 Photo taken from the east landfill berm looking south.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7248439323228	LONGITUDE: -89.6349470482454
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Cell 2 leachate collection control panel east side of cell 2			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7250215430788	LONGITUDE: -89.6366688757954
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Looking south at the west slope cell 2			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 7	DATE: November 22, 2022	LATITUDE: 44.7249492376885	LONGITUDE: -89.6366926640687
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Shown is the north slope of cell 2. The cover was placed in 2022.			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO: 8	DATE: November 22, 2022	LATITUDE: 44.7249580390356	LONGITUDE: -89.6386231576116
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Looking east at the west slope for cell 2.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7232181095683	LONGITUDE: -89.6358991341884
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Future expansion area, taken from cell 2 crest looking west			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO: 9	DATE: November 22, 2022	LATITUDE: 44.7232676463016	LONGITUDE: -89.6357964522053
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Taken from the south edge of cell 2, looking north at the final cover crest.			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 10	DATE: November 22, 2022	LATITUDE: 44.7228513038638	LONGITUDE: -89.6349624394725
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Looking at the east slope and storm water control ditch for cell 2. Photo taken at the southeast corner of cell 2.			
PHOTO BY: BILL BUTLER			

Photographic Log

Project: WDS3 Landfill Inspection
Client: WEC Energy Group **GEI Proj. No.:** 2103691

PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7226215336951	LONGITUDE: -89.6361149704177
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Cell 2 perimeter leachate collection vault and clean out southwest corner			
PHOTO BY: BILL BUTLER			

PHOTOGRAPH NO: 11	DATE: November 22, 2022	LATITUDE: 44.7226219222856	LONGITUDE: -89.6367295015781
	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Looking east at the cell 2 south slope. Photo taken at the southwest corner of cell 2.			
PHOTO BY: BILL BUTLER			

APPENDIX C

2022 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT [PER NR 506.20(3)(C)]

Prepared for
Wisconsin Public Service Corporation

Date
January 31, 2023

Project No.
1940102327

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

WESTON DISPOSAL SITE NO. 3 LANDFILL

RAMBOLL Bright ideas. Sustainable change.

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL

Project name	**Weston Disposal Site No. 3 Landfill**
Project no.	**1940102327**
Recipient	**Wisconsin Public Service Corporation**
Document type	**Annual Groundwater Monitoring and Corrective Action Report**
Revision	**FINAL**
Date	**January 31, 2023**
Prepared by	**Andrew F. Hardwick**
Checked by	**Eric J. Tlachac, PE**
Approved by	**Nathaniel R. Keller, PG**

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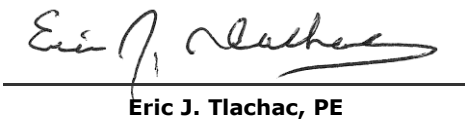
Andrew F. Hardwick
Geologist

Nathaniel R. Keller, PG
Senior Hydrogeologist



Eric J. Tlachac, PE
Senior Managing Engineer

CONTENTS

TABLES (IN TEXT)

TABLES (ATTACHED)

FIGURES (ATTACHED)

APPENDICES

ACRONYMS AND ABBREVIATIONS

§	Section
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
Ca	calcium
CCR	Coal Combustion Residuals
Cl	chloride
GMP	Groundwater Monitoring Plan
GWPS	groundwater protection standard
mg/L	milligrams per liter
NA	not applicable
No.	number
NRT/OBG	Natural Resource Technology, an OBG Company
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SO_4	sulfate
SSI	statistically significant increase
TBD	to be determined
TDS	total dissolved solids
WDS3	Weston Disposal Site No. 3 Landfill

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) Section (§) 257.90(e) for the Weston Disposal Site Number (No.) 3 (WDS3) Landfill located in the Town of Knowlton, Wisconsin.

Groundwater is being monitored at the WDS3 Landfill in accordance with the detection monitoring program requirements specified in 40 C.F.R. § 257.94.

No changes were made to the monitoring system in 2022 (no wells were installed or decommissioned).

In 2022, groundwater analytical data was evaluated for statistically significant increases (SSIs) over background concentrations for Appendix III constituents in groundwater monitoring wells at the WDS3 Landfill. The following constituents and wells had SSIs reported in 2022:

- Calcium (Ca) – LS-100, LS-105, and LS-107
- Chloride (Cl) – LS-107
- Sulfate (SO_4) – LS-100, LS-105, and LS-107
- Total Dissolved Solids (TDS) – LS-105 and LS-107

Alternate Source Demonstrations (ASDs) prepared in prior years for these parameters and monitoring locations provide justification that the SSIs observed during the Detection Monitoring Program were not due to a release from the CCR unit but were either from naturally occurring conditions (*e.g.,* natural variation in groundwater quality), a result of statistical procedures used to evaluate the results, or potential anthropogenic impacts in the area surrounding the WDS3 Landfill.

The WDS3 Landfill remains in the detection monitoring program in accordance with 40 C.F.R. § 257.94.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Wisconsin Public Service Corporation, to provide the information required by 40 C.F.R. § 257.90(e) for the Weston Disposal Site No. 3 (WDS3) Landfill located in the Town of Knowlton, Wisconsin.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and projects key activities for the upcoming year. At a minimum, the annual report must contain the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit.
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken.
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs.
4. A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at an SSI relative to background levels).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
6. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
    i. At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.
    ii. At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.
    iii. If it was determined that there was an SSI over background for one or more constituents listed in Appendix III of § 257 pursuant to § 257.94(e):
        A. Identify those constituents listed in Appendix III of § 257 and the names of the monitoring wells associated with such an increase.
        B. Provide the date when the assessment monitoring program was initiated for the CCR unit.

iv. If it was determined that there was a statistically significant level above the groundwater protection standard [GWPS] for one or more constituents listed in Appendix IV of § 257 pursuant to § 257.95(g) include all of the following:

   A. Identify those constituents listed in Appendix IV of § 257 and the names of the monitoring wells associated with such an increase.

   B. Provide the date when the assessment of corrective measures was initiated for the CCR unit.

   C. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.

   D. Provide the date when the assessment of corrective measures was completed for the CCR unit.

v. Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection.

vi. Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

This report provides the required information for the WDS3 Landfill for calendar year 2022.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

No changes have occurred to the monitoring program status in calendar year 2022 and the WDS3 Landfill remains in the detection monitoring program in accordance with 40 C.F.R. § 257.94.

3. KEY ACTIONS COMPLETED IN 2022

The detection monitoring program is summarized in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background (upgradient) and downgradient monitoring wells, is presented in **Figure 1**. No changes were made to the monitoring system in 2022. In general, one groundwater sample was collected from each background and compliance well during each monitoring event. All samples were collected and analyzed in accordance with the *Sampling and Analysis Plan, Weston Disposal Site No. 3 Landfill* (Natural Resource Technology, an OBG Company [NRT/OBG], 2017). Potentiometric surface maps for the fourth quarter of 2021 and both monitoring events in 2022 are included in **Figures 2 through 4**. Water level data, collected from background and downgradient monitoring wells, are included in **Table 1**. All monitoring data and analytical results obtained under 40 C.F.R. §§ 257.90 through 257.98 (as applicable) in the fourth quarter of 2021 and both monitoring events in 2022 are presented in **Table 2**. Laboratory reports for the fourth quarter of 2021 and both 2022 monitoring events are included in **Appendix A**.

Analytical data were evaluated in accordance with the *Statistical Analysis Plan, Weston Disposal Site No. 3 Landfill* (NRT/OBG, 2017) to determine any SSIs for Appendix III parameters relative to background concentrations. Statistical background values are provided in **Table 3**. A flow chart showing the statistical methodology for determining background values is included as **Appendix B**.

Statistical evaluation of analytical data, including SSI determinations, from the Detection Monitoring Program for October 26, 2021 (Detection Monitoring Round 9) and April 12, 2022 (Detection Monitoring Round 10) were completed in 2022 and within 90 days of receipt of the analytical data. SSIs over background concentrations for Appendix III constituents were identified during data evaluations of Round 9 and Round 10 groundwater sampling analytical data. Additional information regarding SSI parameters and well locations is provided in **Table A**.

The ASDs dated April 15, 2018 and July 7, 2021 for the Weston Disposal Site No. 3 Landfill provided a description, data, and pertinent information supporting an alternate source for the wells and parameters with SSIs in Detection Monitoring Rounds 9-10. Data resulting in SSIs above background are consistent with analytical results observed in previous detection monitoring rounds. As a result, no ASDs were prepared in 2022.

Table A. 2021-2022 Detection Monitoring Program Summary

Detection Round	Sampling Date	Analytical Data Receipt Date	Parameters Collected	SSI Wells (Parameters)	SSI(s) Determination Date	ASD Completion Date[1]
9	October 26, 2021	December 2, 2021	Appendix III	LS-100 (Ca, SO_4) LS-105 (Ca, SO_4, TDS) LS-107 (Ca, Cl, SO_4, TDS)	March 2, 2022	April 15, 2018 July 7, 2021
10	April 12, 2022	May 5, 2022	Appendix III	LS-100 (Ca, SO_4) LS-105 (Ca, SO_4, TDS) LS-107 (Ca, Cl, SO_4, TDS)	August 3, 2022	April 15, 2018 July 7, 2021
11	October 25, 2022	December 5, 2022	Appendix III	TBD	TBD Before March 5, 2023	TBD

Notes:

NA: Not applicable

TBD: To Be Determined

[1] The April 15, 2018 and July 7, 2021 ASD for Weston Disposal Site No. 3 provided a description, data, and pertinent information supporting an alternate source for the wells and parameters with SSIs in Detection Monitoring Rounds 9-10. Data resulting in SSIs above background are consistent with analytical results observed in previous detections monitoring rounds.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the Groundwater Monitoring Program during 2022. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2023

The following key activities are planned for 2023:

- Continuation of the detection monitoring program with semi-annual sampling scheduled for the second and fourth quarters of 2023.
- Complete evaluation of analytical data from the compliance wells using background data to determine whether an SSI of Appendix III parameters detected at concentrations greater than background concentrations has occurred.
- If an SSI is identified, potential alternate sources (*i.e.,* a source other than the CCR unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated.
  - If an alternate source is identified to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI determination and included in the 2023 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternate source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 C.F.R. §§ 257.94 through 257.98 as may apply in 2023 (*e.g.,* assessment monitoring) will be met, including associated recordkeeping/notifications required by 40 C.F.R. §§ 257.105 through 257.108.

6. REFERENCES

Natural Resource Technology, an OBG Company (NRT/OBG), 2017. *Sampling and Analysis Plan, Weston Disposal Site No. 3 Landfill, Town of Knowlton, Wisconsin, October 3, 2017.*

Natural Resource Technology, an OBG Company (NRT/OBG), 2017. *Statistical Analysis Plan, Weston Disposal Site No. 3 Landfill, Town of Knowlton, Wisconsin, October 17, 2017.*

TABLES

TABLE 1
GROUNDWATER ELEVATIONS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL
TOWN OF KNOWLTON, WI

Well ID	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Groundwater Elevation (ft NAVD88)
LS-101	Background (Upgradient)	44.72648	-89.63627	10/26/2021	1191.07
				04/12/2022	1196.87
				10/25/2022	1191.83
LS-100	Compliance (Downgradient)	44.72484	-89.63437	10/26/2021	1189.24
				04/12/2022	1192.25
				10/25/2022	1187.72
LS-105	Compliance (Downgradient)	44.72295	-89.63439	10/26/2021	1185.10
				04/12/2022	1186.37
				10/25/2022	1184.30
LS-106	Compliance (Downgradient)	44.72219	-89.63533	10/26/2021	1180.99
				04/12/2022	1181.12
				10/25/2022	1181.62
LS-107	Compliance (Downgradient)	44.72630	-89.63852	10/26/2021	1188.32
				04/12/2022	1188.79
				10/25/2022	1188.62
LS-52	Water Level Only	NA	NA	10/26/2021	1189.54
				04/12/2022	1191.17
				10/25/2022	1189.14

Notes:
ft = foot/feet
NAVD88 = North American Vertical Datum of 1988

Weston Disposal Site #3 CCR
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/01/2021 to 12/31/2022

Lab Methods:

Well Id	Date Sampled	Lab Id	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
LS-100	10/26/2021	AE56950	0.0352	15.700	1.600	<0.095	5.6	21.100
	4/12/2022	AE60080	0.0205	17.000	1.700	<0.095	5.6	36.500
	10/25/2022	AE63596	0.0204	17.100	2.300	<0.095	5.1	15.800
LS-101	10/26/2021	AE56951	<0.0173	5.420	2.500	<0.095	5.7	2.600
	4/12/2022	AE60081	0.0092	2.700	0.590	<0.095	5.7	2.100
	10/25/2022	AE63597	<0.0173	6.300	0.490	<0.095	5.4	2.700
LS-105	10/26/2021	AE56952	0.0396	23.100	2.100	<0.095	5.9	25.200
	4/12/2022	AE60082	0.0241	22.000	1.900	<0.095	5.9	20.900
	10/25/2022	AE63598	0.0411	23.200	1.800	<0.095	5.6	25.300
LS-106	10/26/2021	AE56953	0.0226	12.500	2.400	<0.095	5.9	4.800
	4/12/2022	AE60083	0.0370	4.240	0.990	<0.095	5.7	2.100
	10/25/2022	AE63599	0.0242	17.000	2.500	<0.095	5.6	2.200
LS-107	10/26/2021	AE56954	0.0224	26.400	5.700	<0.095	5.7	42.000
	4/12/2022	AE60084	0.0215	24.600	5.100	<0.095	5.6	42.000
	10/25/2022	AE63600	0.0312	36.200	10.400	<0.095	5.3	89.100

Notes:

Exceedance of Background

Weston Disposal Site #3 CCR
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/01/2021 to 12/31/2022

Lab Methods:

Well Id	Date Sampled	Lab Id	TDS, mg/L
LS-100	10/26/2021	AE56950	90.000
	4/12/2022	AE60080	94.000
	10/25/2022	AE63596	112.000
LS-101	10/26/2021	AE56951	40.000
	4/12/2022	AE60081	38.000
	10/25/2022	AE63597	58.000
LS-105	10/26/2021	AE56952	132.000
	4/12/2022	AE60082	118.000
	10/25/2022	AE63598	160.000
LS-106	10/26/2021	AE56953	70.000
	4/12/2022	AE60083	76.000
	10/25/2022	AE63599	122.000
LS-107	10/26/2021	AE56954	134.000
	4/12/2022	AE60084	132.000
	10/25/2022	AE63600	218.000

TABLE 3

STATISTICAL BACKGROUND VALUES

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

WESTON DISPOSAL SITE NO. 3 LANDFILL

TOWN OF KNOWLTON, WISCONSIN

Parameter	Statistical Background Value (LPL/UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	0.0430
Calcium (mg/L)	12.9
Chloride (mg/L)	4.26
Fluoride (mg/L)	DQR
pH (field) (SU)	4.9/8.8
Sulfate (mg/L)	13.3
Total Dissolved Solids (mg/L)	100

Notes:

40 C.F.R. = Title 40 of the Code of Federal Regulations

LPL = Lower Prediction Limit (applicable for pH only)

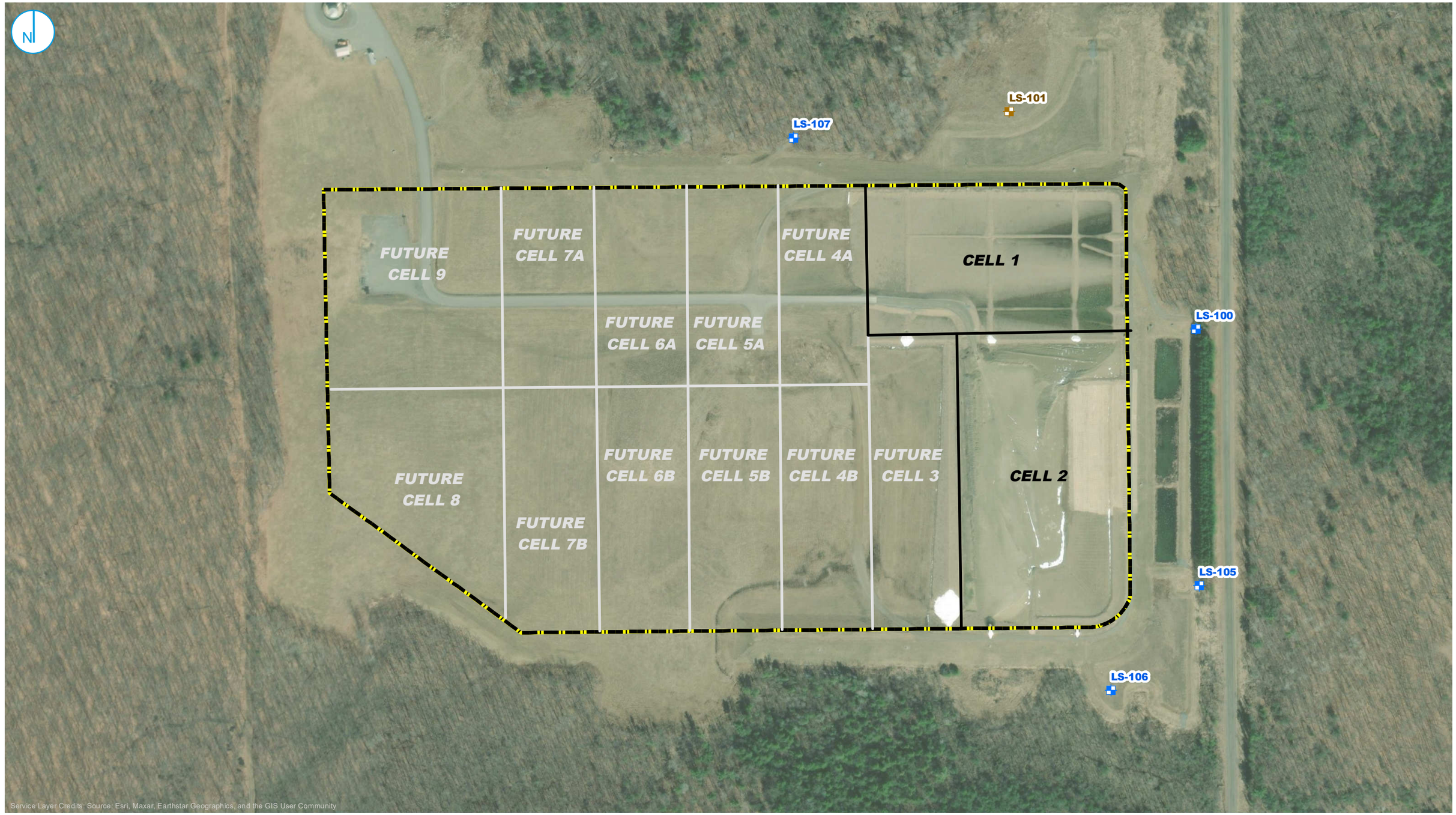
mg/L = milligrams per liter

DQR = Double quantification rule, background data set is non-detect. If parameter is detected in both the sample event and a resample it is considered an exceedance.

SU = Standard Units

UPL = Upper Prediction Limit

FIGURES



Y:\GIS\Projects\16\1660\Weston_Power_Plant\MXD\2022Annual_GWM_CAR\Figure 1_Monitoring Well Location Map.mxd

PROJECT: 71202 | DATED: 1/24/2023 | DESIGNER: galarnmc

CCR RULE DOWNGRADIENT MONITORING WELL LOCATION

CCR RULE UPGRADIENT MONITORING WELL LOCATION

WESTON DISPOSAL SITE NO. 3 LANDFILL

0 125 250 Feet

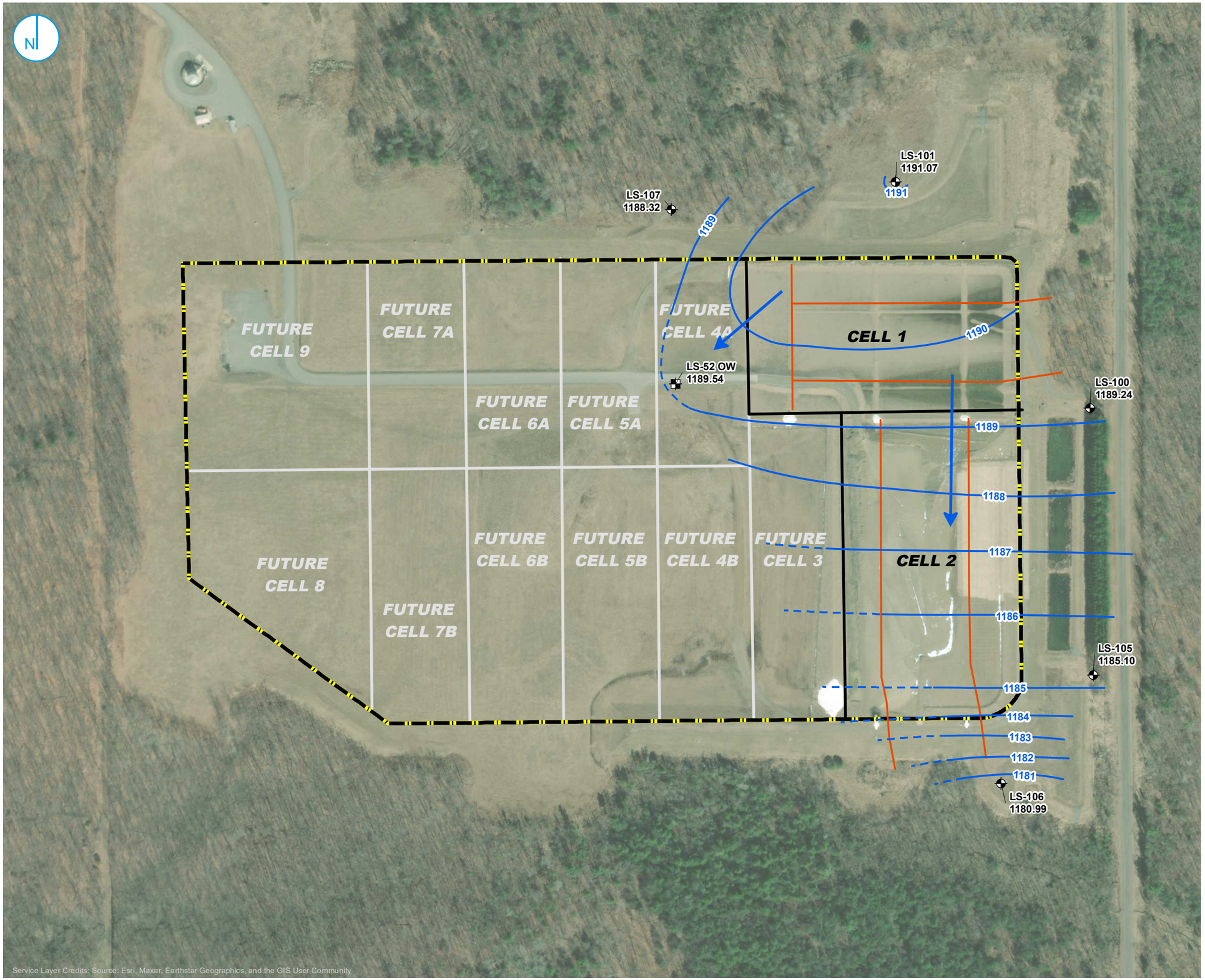
MONITORING WELL LOCATION MAP

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL
TOWN OF KNOWLTON, WISCONSIN

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL



WESTON DISPOSAL SITE NO. 3 LANDFILL

GROUNDWATER GRADIENT CONTROL SYSTEM

CCR RULE MONITORING WELL

MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD 88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

NOTES

1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

0 125 250 Feet

POTENTIOMETRIC SURFACE MAP OCTOBER 26, 2021

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL
TOWN OF KNOWLTON, WISCONSIN

FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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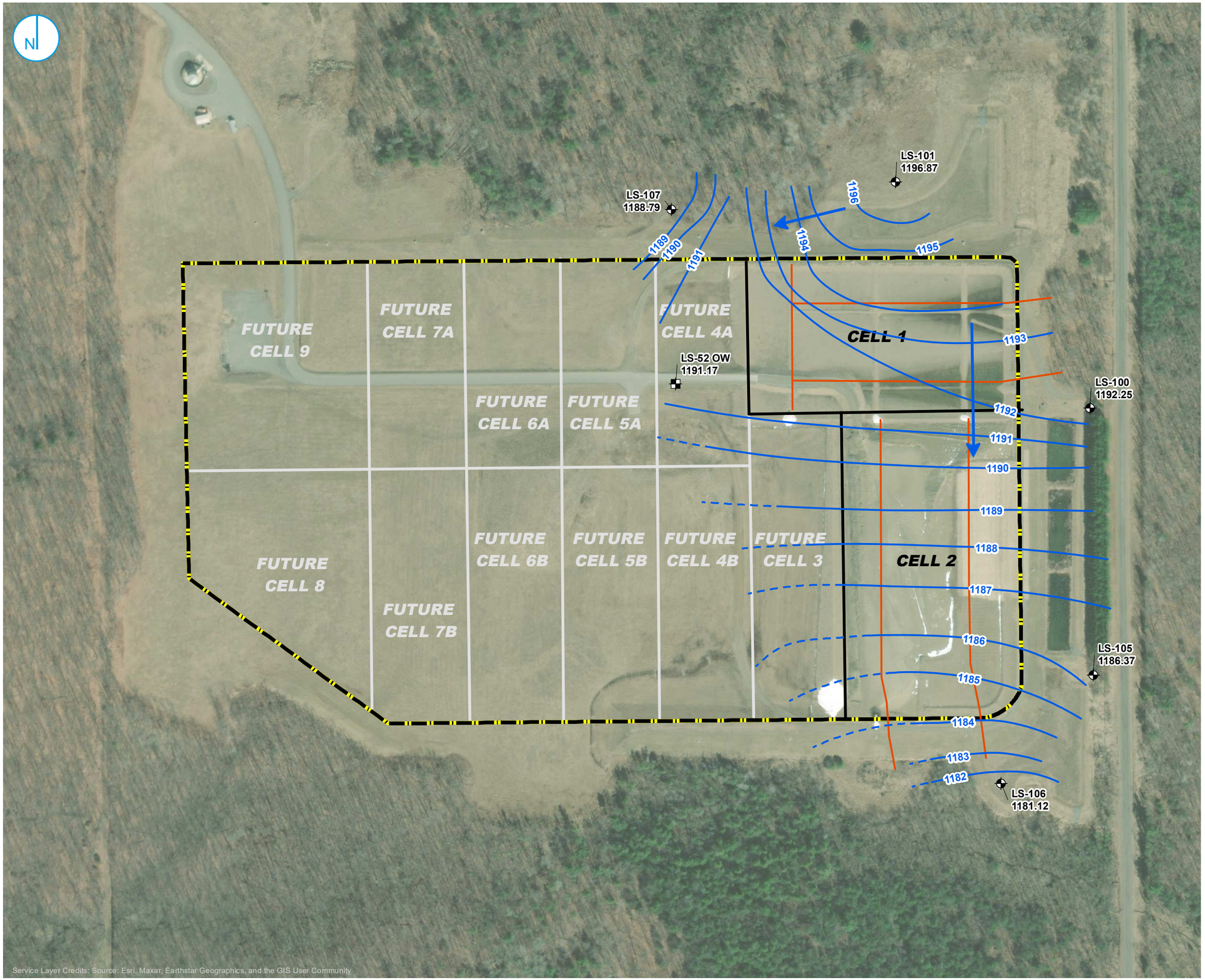
PROJECT: 169000XXXX | DATED: 1/25/2023 | DESIGNER: galammc



WESTON DISPOSAL SITE NO. 3 LANDFILL
GROUNDWATER GRADIENT CONTROL SYSTEM
CCR RULE MONITORING WELL
MONITORING WELL LOCATION
GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD 88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

NOTES
1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

0 125 250
Feet

POTENTIOMETRIC SURFACE MAP
APRIL 12, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL
TOWN OF KNOWLTON, WISCONSIN

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

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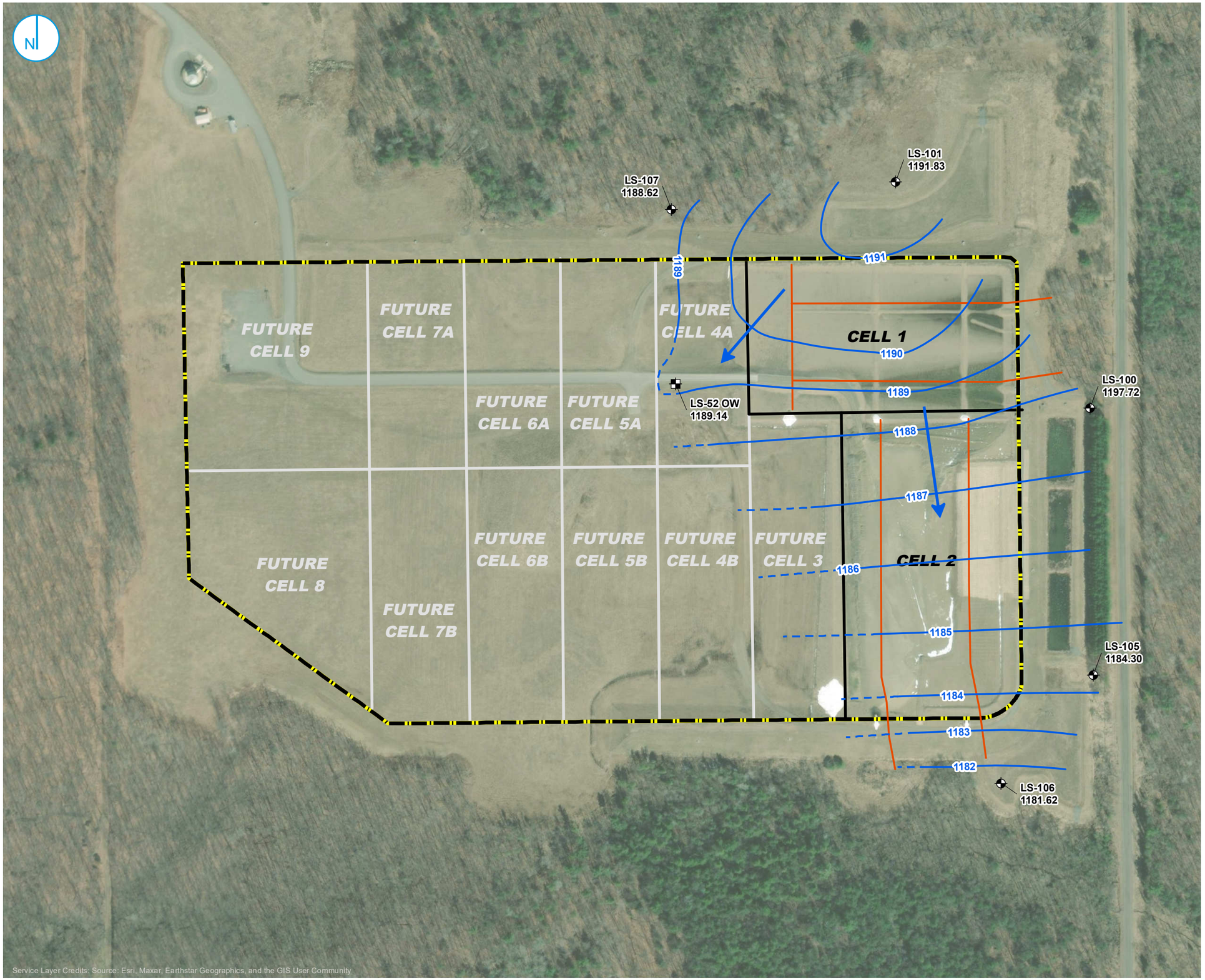
PROJECT: 169000XXXX | DATED: 1/25/2023 | DESIGNER: galammc



WESTON DISPOSAL SITE NO. 3 LANDFILL
GROUNDWATER GRADIENT CONTROL SYSTEM
CCR RULE MONITORING WELL
MONITORING WELL LOCATION
GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD 88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

NOTES

1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

0 125 250
Feet

POTENTIOMETRIC SURFACE MAP
OCTOBER 25, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON DISPOSAL SITE NO. 3 LANDFILL
TOWN OF KNOWLTON, WISCONSIN

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

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PROJECT: 169000XXXX | DATED: 1/25/2023 | DESIGNER: galarmmc

APPENDICES

APPENDIX A
LABORATORY REPORTS

To: Bob Meidl
PSB Annex A231

From: WEC Business Services
Laboratory Services PSBA-A070
WDNR Cert # 241329000

Report Date: Thursday, December 2, 2021

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **LS-100 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56950 Sample Collection Date/Time: 10/26/2021 11:19
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	9.80	0.05	feet		1.0		H2OD	10/26/21	C APPLEKAMP
Field Conductivity	116	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP
Field pH	5.6	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	15.0	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	35.2	17.3	ug/L	40.0	1.0	J	EPA 200.7	10/29/21	020
Total Calcium	15700	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	1.6	0.43	mg/L	2.0	1.0	J,X	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	21.1	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Dissolved Oxygen-Field	0.61	0.1	mg/l		1.0		FIELDDO	10/26/21	C APPLEKAMP
Turbidity	2.48	0.1	NTU'S		1.0	X	EPA 180.1	10/26/21	C APPLEKAMP
Redox Potential	264	1	mV		1.0		ASTM D1498-93	10/26/21	C APPLEKAMP
Total Dissolved Solids	90.0	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	19.0	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	1.5	0.43	mg/L	2.0	1.0	J,X	EPA 300.0	11/8/21	020
Dissolved Magnesium	2510	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	15100	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	2610	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1370	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	28.8	5.0	mg/l	10	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	28.8	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

Sample Description: **LS-101 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56951 Sample Collection Date/Time: 10/26/2021 10:16
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	14.34	0.05	feet		1.0		H2OD	10/26/21	C APPLEKAMP
Field Conductivity	53	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP
Field pH	5.7	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	11.8	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	Less Than	17.3	ug/L	40.0	1.0		EPA 200.7	10/29/21	020
Total Calcium	5420	114	ug/L	500	1.0		EPA 200.7	10/29/21	020

Report Date: Thursday, December 2, 2021

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **LS-101 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56951 Sample Collection Date/Time: 10/26/2021 10:16
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Chloride	2.5	0.43	mg/L	2.0	1.0	X	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	2.6	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Dissolved Oxygen-Field	5.92	0.1	mg/l		1.0		FIELDDO	10/26/21	C APPLEKAMP
Turbidity	9.33	0.1	NTU'S		1.0		EPA 180.1	10/26/21	C APPLEKAMP
Redox Potential	265	1	mV		1.0		ASTM D1498-93	10/26/21	C APPLEKAMP
Total Dissolved Solids	40.0	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	2.5	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	0.68	0.43	mg/L	2.0	1.0	J,X	EPA 300.0	11/8/21	020
Dissolved Magnesium	1120	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	5470	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	3440	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1510	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	22.8	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	22.8	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

Sample Description: **LS-105 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56952 Sample Collection Date/Time: 10/26/2021 12:00
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	5.18	0.05	feet		1.0		H2OD	10/26/21	C APPLEKAMP
Field Conductivity	207	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP
Field pH	5.9	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	14.7	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	39.6	17.3	ug/L	40.0	1.0	J	EPA 200.7	10/29/21	020
Total Calcium	23100	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	2.1	0.43	mg/L	2.0	1.0	X	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	25.2	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Dissolved Oxygen-Field	0.05	0.1	mg/l		1.0		FIELDDO	10/26/21	C APPLEKAMP
Turbidity	1.51	0.1	NTU'S		1.0	X	EPA 180.1	10/26/21	C APPLEKAMP
Redox Potential	11.5	1	mV		1.0		ASTM D1498-93	10/26/21	C APPLEKAMP
Total Dissolved Solids	132	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	26.4	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	2.2	0.44	mg/L	2.0	1.0	X	EPA 300.0	11/8/21	020
Dissolved Magnesium	5430	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	23100	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	4590	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1620	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	65.5	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020

Report Date: Thursday, December 2, 2021

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **LS-105 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56952 Sample Collection Date/Time: 10/26/2021 12:00
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Bicarbonate Ion	65.5	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

Sample Description: **LS-106 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56953 Sample Collection Date/Time: 10/26/2021 13:04
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	12.25	0.05	feet		1.0		H2OD	10/26/21	C APPLEKAMP
Field Conductivity	116	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP
Field pH	5.9	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	14.8	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	22.6	17.3	ug/L	40.0	1.0	J	EPA 200.7	10/29/21	020
Total Calcium	12500	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	2.4	0.43	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	4.8	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Dissolved Oxygen-Field	0.53	0.1	mg/l		1.0		FIELDDO	10/26/21	C APPLEKAMP
Turbidity	8.41	0.1	NTU'S		1.0		EPA 180.1	10/26/21	C APPLEKAMP
Redox Potential	125	1	mV		1.0		ASTM D1498-93	10/26/21	C APPLEKAMP
Total Dissolved Solids	70.0	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	4.8	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	2.4	0.43	mg/L	2.0	1.0	X	EPA 300.0	11/8/21	020
Dissolved Magnesium	3880	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	12200	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	4860	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1780	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	49.4	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	49.4	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

Sample Description: **LS-107 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56954 Sample Collection Date/Time: 10/26/2021 09:16
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	6.07	0.05	feet		1.0		H2OD	10/26/21	C APPLEKAMP
Field Conductivity	215	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP

Report Date: Thursday, December 2, 2021

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **LS-107 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56954 Sample Collection Date/Time: 10/26/2021 09:16
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field pH	5.7	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	12.7	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	22.4	17.3	ug/L	40.0	1.0	J	EPA 200.7	10/29/21	020
Total Calcium	26400	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	5.7	0.43	mg/L	2.0	1.0	X	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	42.0	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Dissolved Oxygen-Field	0.15	0.1	mg/l		1.0		FIELDDO	10/26/21	C APPLEKAMP
Turbidity	1.48	0.1	NTU'S		1.0	X	EPA 180.1	10/26/21	C APPLEKAMP
Redox Potential	276	1	mV		1.0		ASTM D1498-93	10/26/21	C APPLEKAMP
Total Dissolved Solids	134	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	41.4	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	5.7	0.43	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Magnesium	6200	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	27000	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	6170	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1780	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	48.4	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	48.4	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

Sample Description: **QA/QC1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56955 Sample Collection Date/Time: 10/26/2021 00:00
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	Less Than	17.3	ug/L	40.0	1.0		EPA 200.7	10/29/21	020
Total Calcium	5700	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	0.71	0.43	mg/L	2.0	1.0	J,X	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	2.7	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Total Dissolved Solids	62.0	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	2.7	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	0.69	0.43	mg/L	2.0	1.0	J,X	EPA 300.0	11/8/21	020
Dissolved Magnesium	1150	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	5630	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	3430	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	1580	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	23.4	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	23.4	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Report Date: Thursday, December 2, 2021

The following are the analytical results for samples received by Laboratory Services:

Sample Comments:

Sample Description: **EB1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE56956 Sample Collection Date/Time: 10/26/2021 16:45
Sample Received: 10/29/2021 Sample Collector: CODY APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Conductivity	2	0	umhos		1.0		FCOND25	10/26/21	C APPLEKAMP
Field pH	6.5	0.1	Units	0.1	1.0		FIELDPH	10/26/21	C APPLEKAMP
Field Temperature	8.6	0.1	Degrees C		1.0		TEMP	10/26/21	C APPLEKAMP
Total Boron	Less Than	17.3	ug/L	40.0	1.0		EPA 200.7	10/29/21	020
Total Calcium	Less Than	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Total Chloride	0.78	0.43	mg/L	2.0	1.0	J	EPA 300.0	11/9/21	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1.0		EPA 300.0	10/29/21	020
Total Sulfate	Less Than	0.44	mg/L	2.0	1.0		EPA 300.0	11/9/21	020
Turbidity	0.62	0.1	NTU'S		1.0		EPA 180.1	10/26/21	C APPLEKAMP
Total Dissolved Solids	Less Than	8.7	mg/L	20.0	1.0		Std Mtd 2540 C	10/28/21	020
Dissolved Sulfate	Less Than	0.44	mg/L	2.0	1.0		EPA 300.0	11/8/21	020
Dissolved Chloride	0.53	0.43	mg/L	2.0	1.0	J	EPA 300.0	11/8/21	020
Dissolved Magnesium	Less Than	182	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Dissolved Calcium	Less Than	114	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Sodium	Less Than	350	ug/L	500	1.0		EPA 200.7	10/29/21	020
Dissolved Potassium	Less Than	325	ug/L	1000	1.0		EPA 200.7	10/29/21	020
Total Filtered Alkalinity as CaCO3	Less Than	5.0	mg/l	10.0	1.0		Std Mtd 2320 B	11/4/21	020
Bicarbonate Ion	Less Than	5.0	mg/L	10.0	1.0		HCO3	11/4/21	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1.0		CO3	11/4/21	020

Sample Comments:

LOD and LOQ are adjusted for dilution factor.
'J' Flag, if present indicates an estimated concentration at or above the LOD and below the LOQ.

If there are any questions concerning this report, please contact: Patrick Ahrens at (414) 221-2835.

To: Bob Meidl
PSB Annex A231

From: WEC Business Services
Laboratory Services PSBA-A070
WDNR Cert # 241329000

Report Date: Thursday, May 5, 2022

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **LS-100 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60080 Sample Collection Date/Time: 04/12/2022 11:46
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	6.79	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	133	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.62	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	4.8	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	94.0	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/13/22	020
Total Boron	20.5	3.0	ug/L	10.0	1	X	EPA 200.7	4/15/22	020
Total Calcium	17000	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	1.7	0.43	mg/L	2.0	1	J	EPA 300.0	4/13/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/13/22	020
Total Sulfate	36.5	0.44	mg/L	2.0	1		EPA 300.0	4/13/22	020
Dissolved Oxygen-Field	9.66	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	2.29	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	274.5	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Alkalinity as CaCO3	21.1	5.2	mg/L	25.0	1	J	SM 2320 B-1997	4/22/22	020

Sample Comments:

Sample Description: **LS-101 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60081 Sample Collection Date/Time: 04/12/2022 10:50
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	8.54	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	31	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.66	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	5.2	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	38.0	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/13/22	020
Total Boron	9.2	3.0	ug/L	10.0	1	J, X	EPA 200.7	4/15/22	020
Total Calcium	2700	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	0.59	0.43	mg/L	2.0	1	J	EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	2.1	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Dissolved Oxygen-Field	12.94	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	6.86	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	267.5	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Alkalinity as CaCO3	9.4	5.2	mg/L	25.0	1	J	SM 2320 B-1997	4/22/22	020

Report Date: Thursday, May 5, 2022

The following are the analytical results for samples received by Laboratory Services:

Sample Comments:

Sample Description: **LS-105 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60082 Sample Collection Date/Time: 04/12/2022 12:26
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	3.91	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	205	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.87	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	5.8	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	118	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Total Boron	24.1	3.0	ug/L	10.0	1	X	EPA 200.7	4/15/22	020
Total Calcium	22000	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	1.9	0.43	mg/L	2.0	1	J	EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	20.9	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Dissolved Oxygen-Field	0.13	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	1.65	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	-8.6	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Alkalinity as CaCO3	73.7	10.4	mg/L	50.0	2		SM 2320 B-1997	4/22/22	020

Sample Comments:

Sample Description: **LS-106 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60083 Sample Collection Date/Time: 04/12/2022 13:48
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	12.12	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	48	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.73	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	5.4	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	76.0	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Total Boron	37.0	3.0	ug/L	10.0	1	X	EPA 200.7	4/15/22	020
Total Calcium	4240	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	0.99	0.43	mg/L	2.0	1	J	EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	2.1	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Dissolved Oxygen-Field	3.25	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	49.16	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	112.0	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Alkalinity as CaCO3	Less Than	5.2	mg/L	25.0	1		SM 2320 B-1997	4/22/22	020

Report Date: Thursday, May 5, 2022

The following are the analytical results for samples received by Laboratory Services:

Sample Comments:

Sample Description: **LS-107 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60084 Sample Collection Date/Time: 04/12/2022 10:13
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	5.60	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	213	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.57	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	5.7	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	132	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Total Boron	21.5	3.0	ug/L	10.0	1	X	EPA 200.7	4/15/22	020
Total Calcium	24600	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	5.1	0.43	mg/L	2.0	1		EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	42.0	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Dissolved Oxygen-Field	1.12	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	2.08	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	278.4	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Alkalinity as CaCO3	53.7	5.2	mg/L	25.0	1		SM 2320 B-1997	4/15/22	020

Sample Comments:

Sample Description: **QA/QC1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60085 Sample Collection Date/Time: 04/12/2022 00:00
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	34.0	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Total Boron	7.6	3.0	ug/L	10.0	1	J, X	EPA 200.7	4/15/22	020
Total Calcium	2610	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	0.65	0.43	mg/L	2.0	1	J	EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	2.1	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Total Alkalinity as CaCO3	9.6	5.2	mg/L	25.0	1	J	SM 2320 B-1997	4/15/22	020

Sample Comments:

Sample Description: **EB1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60086 Sample Collection Date/Time: 04/12/2022 17:20
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst

Report Date: Thursday, May 5, 2022

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **EB1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE60086 Sample Collection Date/Time: 04/12/2022 17:20
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	Less Than	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Total Boron	15.0	3.0	ug/L	10	1		EPA 200.7	4/15/22	020
Total Calcium	Less Than	76.2	ug/L	254	1		EPA 200.7	4/15/22	020
Total Chloride	Less Than	0.43	mg/L	2.0	1		EPA 300.0	4/15/22	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/15/22	020
Total Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	4/15/22	020
Total Alkalinity as CaCO3	Less Than	5.2	mg/L	25.0	1		SM 2320 B-1997	4/15/22	020

Sample Comments:

Sample Description: **LS-106 WDS#3 - Ash Landfill CCR Well - FILTERED**
Sample ID: AE60087 Sample Collection Date/Time: 04/12/2022 13:48
Sample Received: 04/14/2022 Sample Collector: C. APPLEKAMP

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	12.12	0.05	feet		1		H2OD	4/12/22	C. APPLEKAMP
Field Conductivity	48	0	umhos		1		FCOND25	4/12/22	C. APPLEKAMP
Field pH	5.73	0.1	Units	0.1	1		FIELDPH	4/12/22	C. APPLEKAMP
Field Temperature	5.4	0.1	Degrees		1		TEMP	4/12/22	C. APPLEKAMP
Total Dissolved Solids	32.0	8.7	mg/L	20.0	1		Std Mtd 2540 C	4/15/22	020
Dissolved Boron	9.5	3.0	ug/L	10.0	1	J	EPA 200.7	4/22/22	020
Dissolved Calcium	4280	76.2	ug/L	254	1		EPA 200.7	4/22/22	020
Dissolved Chloride	1.0	0.43	mg/L	2.0	1	J	EPA 300.0	4/21/22	020
Dissolved Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	4/21/22	020
Dissolved Sulfate	2.1	0.44	mg/L	2.0	1		EPA 300.0	4/21/22	020
Dissolved Oxygen-Field	3.25	0.1	mg/l		1		FIELDDO	4/12/22	C. APPLEKAMP
Turbidity	49.16	0.1	NTU'S		1		EPA 180.1	4/12/22	C. APPLEKAMP
Redox Potential	112.0	1	mV		1		ASTM D1498-93	4/12/22	C. APPLEKAMP
Total Filtered Alkalinity as CaCO3	16.7	5.2	mg/l	25.0	1	J	Std Mtd 2320 B	4/21/22	020

Sample Comments:

LOD and LOQ are adjusted for dilution factor.
'J' Flag, if present indicates an estimated concentration at or above the LOD and below the LOQ.

If there are any questions concerning this report, please contact: Patrick Ahrens at (414) 221-2835.

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

April 29, 2022

Patrick Ahrens
WEC Business Services, LLC.
PO BOX 19800
700 NORTH ADAMS
Green Bay, WI 543079004

RE: Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Dear Patrick Ahrens:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2022. 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,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

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

CERTIFICATIONS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

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: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243379001	**LS-100**	Water	04/12/22 11:46	04/13/22 15:25
40243379002	**LS-101**	Water	04/12/22 10:50	04/13/22 15:25
40243379003	**LS-105**	Water	04/12/22 12:26	04/13/22 15:25
40243379004	**LS-106**	Water	04/12/22 13:48	04/13/22 15:25
40243379005	**LS-107**	Water	04/12/22 10:13	04/13/22 15:25
40243379006	**QA/QC1**	Water	04/12/22 00:00	04/13/22 15:25
40243379007	**EB1**	Water	04/12/22 17:20	04/13/22 15:25
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	Water	04/12/22 13:48	04/13/22 15:25

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

SAMPLE ANALYTE COUNT

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40243379001	**LS-100**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379002	**LS-101**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379003	**LS-105**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379004	**LS-106**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379005	**LS-107**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379006	**QA/QC1**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379007	**EB1**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	EPA 200.8	KXS	2	PASI-G
		SM 2540C	SRK	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
		EPA 310.2	DAW	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Sample: LS-100 **Lab ID: 40243379001** Collected: 04/12/22 11:46 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron	**20.5**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 02:50	7440-42-8	
Calcium	**17000**	ug/L	254	76.2	1	04/15/22 06:11	04/27/22 02:50	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**94.0**	mg/L	20.0	8.7	1		04/14/22 14:39		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**1.7J**	mg/L	2.0	0.43	1		04/20/22 13:26	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/20/22 13:26	16984-48-8	
Sulfate	**36.5**	mg/L	2.0	0.44	1		04/20/22 13:26	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**21.1J**	mg/L	25.0	5.2	1		04/22/22 09:42		

Sample: LS-101 **Lab ID: 40243379002** Collected: 04/12/22 10:50 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron	**9.2J**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 03:05	7440-42-8	
Calcium	**2700**	ug/L	254	76.2	1	04/15/22 06:11	04/28/22 22:24	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**38.0**	mg/L	20.0	8.7	1		04/14/22 14:39		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**0.59J**	mg/L	2.0	0.43	1		04/20/22 13:41	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/20/22 13:41	16984-48-8	
Sulfate	**2.1**	mg/L	2.0	0.44	1		04/20/22 13:41	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**9.4J**	mg/L	25.0	5.2	1		04/22/22 09:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Sample: LS-105 **Lab ID: 40243379003** Collected: 04/12/22 12:26 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron	**24.1**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 03:12	7440-42-8	
Calcium	**22000**	ug/L	254	76.2	1	04/15/22 06:11	04/27/22 03:12	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**118**	mg/L	20.0	8.7	1		04/15/22 15:11		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**1.9J**	mg/L	2.0	0.43	1		04/20/22 13:55	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/20/22 13:55	16984-48-8	
Sulfate	**20.9**	mg/L	2.0	0.44	1		04/20/22 13:55	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**73.7**	mg/L	50.0	10.4	2		04/22/22 09:47		

Sample: LS-106 **Lab ID: 40243379004** Collected: 04/12/22 13:48 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron	**37.0**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 03:19	7440-42-8	
Calcium	**4240**	ug/L	254	76.2	1	04/15/22 06:11	04/27/22 03:19	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**76.0**	mg/L	20.0	8.7	1		04/15/22 15:11		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**0.99J**	mg/L	2.0	0.43	1		04/20/22 14:55	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/20/22 14:55	16984-48-8	
Sulfate	**2.1**	mg/L	2.0	0.44	1		04/20/22 14:55	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**<5.2**	mg/L	25.0	5.2	1		04/22/22 12:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Sample: LS-107 **Lab ID: 40243379005** Collected: 04/12/22 10:13 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
	Pace Analytical Services - Green Bay								
Boron	**21.5**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 03:42	7440-42-8	
Calcium	**24600**	ug/L	254	76.2	1	04/15/22 06:11	04/27/22 03:42	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Green Bay								
Total Dissolved Solids	**132**	mg/L	20.0	8.7	1		04/15/22 15:12		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**5.1**	mg/L	2.0	0.43	1		04/20/22 15:10	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/20/22 15:10	16984-48-8	
Sulfate	**42.0**	mg/L	2.0	0.44	1		04/20/22 15:10	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**53.7**	mg/L	25.0	5.2	1		04/22/22 09:51		

Sample: QA/QC1 **Lab ID: 40243379006** Collected: 04/12/22 00:00 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
	Pace Analytical Services - Green Bay								
Boron	**7.6J**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 03:49	7440-42-8	
Calcium	**2610**	ug/L	254	76.2	1	04/15/22 06:11	04/28/22 22:31	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Green Bay								
Total Dissolved Solids	**34.0**	mg/L	20.0	8.7	1		04/15/22 15:12		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**0.65J**	mg/L	2.0	0.43	1		04/25/22 13:59	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/25/22 13:59	16984-48-8	
Sulfate	**2.1**	mg/L	2.0	0.44	1		04/25/22 13:59	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**9.6J**	mg/L	25.0	5.2	1		04/22/22 09:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Sample: EB1 **Lab ID: 40243379007** Collected: 04/12/22 17:20 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron	**15.0**	ug/L	10.0	3.0	1	04/15/22 06:11	04/27/22 02:13	7440-42-8	
Calcium	**<76.2**	ug/L	254	76.2	1	04/15/22 06:11	04/27/22 02:13	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		04/15/22 15:12		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride	**<0.43**	mg/L	2.0	0.43	1		04/25/22 14:13	16887-00-6	
Fluoride	**<0.095**	mg/L	0.32	0.095	1		04/25/22 14:13	16984-48-8	
Sulfate	**<0.44**	mg/L	2.0	0.44	1		04/25/22 14:13	14808-79-8	
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**<5.2**	mg/L	25.0	5.2	1		04/22/22 09:53		

Sample: LS-106 (HIGH TURBIDITY DUP) **Lab ID: 40243379008** Collected: 04/12/22 13:48 Received: 04/13/22 15:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS, Dissolved	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Green Bay								
Boron, Dissolved	**9.5J**	ug/L	10.0	3.0	1	04/22/22 06:03	04/23/22 11:22	7440-42-8	
Calcium, Dissolved	**4280**	ug/L	254	76.2	1	04/22/22 06:03	04/23/22 11:22	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Green Bay								
Total Dissolved Solids	**32.0**	mg/L	20.0	8.7	1		04/15/22 15:12		
300.0 IC Anions, Dissolved	Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay								
Chloride, Dissolved	**1.0J**	mg/L	2.0	0.43	1		04/21/22 12:41	16887-00-6	
Fluoride, Dissolved	**<0.095**	mg/L	0.32	0.095	1		04/21/22 12:41	16984-48-8	
Sulfate, Dissolved	**2.1**	mg/L	2.0	0.44	1		04/21/22 12:41	14808-79-8	
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	**16.7J**	mg/L	25.0	5.2	1		04/21/22 13:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413245
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005, 40243379006, 40243379007

METHOD BLANK: 2379591 Matrix: Water
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005, 40243379006, 40243379007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	ug/L	<3.0	10.0	04/27/22 00:44	
Calcium	ug/L	<76.2	254	04/27/22 00:44	

LABORATORY CONTROL SAMPLE: 2379592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	250	235	94	85-115	
Calcium	ug/L	10000	10300	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2379593 2379594

Parameter	Units	40243384021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	650	250	250	934	877	113	91	75-125	6	20	
Calcium	ug/L	239000	10000	10000	263000	253000	242	141	75-125	4	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2379595 2379596

Parameter	Units	40243469003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	608	250	250	860	854	101	98	75-125	1	20	
Calcium	ug/L	11500	10000	10000	21500	21800	100	103	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413843
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379008

METHOD BLANK: 2382886 Matrix: Water
Associated Lab Samples: 40243379008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	<3.0	10.0	04/23/22 11:00	
Calcium, Dissolved	ug/L	77.4J	254	04/23/22 11:00	

LABORATORY CONTROL SAMPLE: 2382887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	250	234	94	85-115	
Calcium, Dissolved	ug/L	10000	9520	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2382888 2382889

Parameter	Units	40243379008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	9.5J	250	250	240	240	92	92	75-125	0	20	
Calcium, Dissolved	ug/L	4280	10000	10000	13900	13800	97	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413215
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379001, 40243379002

METHOD BLANK: 2379232 Matrix: Water
Associated Lab Samples: 40243379001, 40243379002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	04/14/22 14:35	

LABORATORY CONTROL SAMPLE: 2379233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	555	552	99	80-120	

SAMPLE DUPLICATE: 2379234

Parameter	Units	40243282002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	572	572	0	10	

SAMPLE DUPLICATE: 2379235

Parameter	Units	40243380001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	644	650	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413332 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379003, 40243379004, 40243379005, 40243379006, 40243379007, 40243379008

METHOD BLANK: 2380052 Matrix: Water
Associated Lab Samples: 40243379003, 40243379004, 40243379005, 40243379006, 40243379007, 40243379008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	04/15/22 15:10	

LABORATORY CONTROL SAMPLE: 2380053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	555	510	92	80-120	

SAMPLE DUPLICATE: 2380054

Parameter	Units	40243353001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	602	620	3	10	

SAMPLE DUPLICATE: 2380055

Parameter	Units	40243379003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	118	112	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413689
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: 40243379008

METHOD BLANK: 2381918 Matrix: Water
Associated Lab Samples: 40243379008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	04/21/22 12:11	
Fluoride	mg/L	<0.095	0.32	04/21/22 12:11	
Sulfate	mg/L	<0.44	2.0	04/21/22 12:11	

LABORATORY CONTROL SAMPLE: 2381919

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.1	100	90-110	
Fluoride	mg/L	2	2.0	102	90-110	
Sulfate	mg/L	20	20.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381920 2381921

Parameter	Units	40243384013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.9J	20	20	24.1	24.3	111	112	90-110	1	15	M0
Fluoride	mg/L	0.59	2	2	2.7	2.7	103	106	90-110	2	15	
Sulfate	mg/L	25.5	20	20	47.6	47.7	110	111	90-110	0	15	M0

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: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413592 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005

METHOD BLANK: 2381444 Matrix: Water
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	04/20/22 11:42	
Fluoride	mg/L	<0.095	0.32	04/20/22 11:42	
Sulfate	mg/L	<0.44	2.0	04/20/22 11:42	

LABORATORY CONTROL SAMPLE: 2381445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.4	97	90-110	
Fluoride	mg/L	2	1.9	97	90-110	
Sulfate	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381446 2381447

Parameter	Units	40243135008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	23.5	20	20	45.5	45.4	110	110	90-110	0	15	
Fluoride	mg/L	<0.48	10	10	11.6	11.4	116	114	90-110	2	15	M0
Sulfate	mg/L	23.5	20	20	46.0	45.9	112	112	90-110	0	15	M0

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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: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413946
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379006, 40243379007

METHOD BLANK: 2383815 Matrix: Water
Associated Lab Samples: 40243379006, 40243379007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	04/25/22 13:14	
Fluoride	mg/L	<0.095	0.32	04/25/22 13:14	
Sulfate	mg/L	<0.44	2.0	04/25/22 13:14	

LABORATORY CONTROL SAMPLE: 2383816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.4	102	90-110	
Fluoride	mg/L	2	1.8	90	90-110	
Sulfate	mg/L	20	20.4	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383817 2383818

Parameter	Units	40243469001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.7	20	20	30.8	30.8	111	111	90-110	0	15	M0
Fluoride	mg/L	<0.095	2	2	2.9	2.9	144	144	90-110	0	15	M0
Sulfate	mg/L	140	200	200	394	349	127	105	90-110	12	15	M0

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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: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413824 | Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 | Analysis Description: 310.2 Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005, 40243379006, 40243379007

METHOD BLANK: 2382564 Matrix: Water
Associated Lab Samples: 40243379001, 40243379002, 40243379003, 40243379004, 40243379005, 40243379006, 40243379007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.2	25.0	04/22/22 09:32	

LABORATORY CONTROL SAMPLE: 2382565

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	96.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2382566 2382567

Parameter	Units	40243379003 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	mg/L	73.7	200	200	277	278	102	102	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2382568 2382569

Parameter	Units	40243514015 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	mg/L	66.7	200	200	273	272	103	103	90-110	0	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: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

QC Batch: 413665
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: 40243379008

METHOD BLANK: 2381700 Matrix: Water
Associated Lab Samples: 40243379008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<5.2	25.0	04/21/22 12:50	

LABORATORY CONTROL SAMPLE: 2381701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	98.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381702 2381703

Parameter	Units	40243336002 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	90.5	200	200	288	285	99	97	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2381704 2381705

Parameter	Units	40243381001 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	72.8	100	100	184	192	111	119	90-110	4	20	M0

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q-6005-001031 WDS#3 CCR LANDFI
Pace Project No.: 40243379

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243379001	**LS-100**	EPA 200.8	413245	EPA 200.8	413411
40243379002	**LS-101**	EPA 200.8	413245	EPA 200.8	413411
40243379003	**LS-105**	EPA 200.8	413245	EPA 200.8	413411
40243379004	**LS-106**	EPA 200.8	413245	EPA 200.8	413411
40243379005	**LS-107**	EPA 200.8	413245	EPA 200.8	413411
40243379006	**QA/QC1**	EPA 200.8	413245	EPA 200.8	413411
40243379007	**EB1**	EPA 200.8	413245	EPA 200.8	413411
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	EPA 200.8	413843	EPA 200.8	413901
40243379001	**LS-100**	SM 2540C	413215		
40243379002	**LS-101**	SM 2540C	413215		
40243379003	**LS-105**	SM 2540C	413332		
40243379004	**LS-106**	SM 2540C	413332		
40243379005	**LS-107**	SM 2540C	413332		
40243379006	**QA/QC1**	SM 2540C	413332		
40243379007	**EB1**	SM 2540C	413332		
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	SM 2540C	413332		
40243379001	**LS-100**	EPA 300.0	413592		
40243379002	**LS-101**	EPA 300.0	413592		
40243379003	**LS-105**	EPA 300.0	413592		
40243379004	**LS-106**	EPA 300.0	413592		
40243379005	**LS-107**	EPA 300.0	413592		
40243379006	**QA/QC1**	EPA 300.0	413946		
40243379007	**EB1**	EPA 300.0	413946		
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	EPA 300.0	413689		
40243379001	**LS-100**	EPA 310.2	413824		
40243379002	**LS-101**	EPA 310.2	413824		
40243379003	**LS-105**	EPA 310.2	413824		
40243379004	**LS-106**	EPA 310.2	413824		
40243379005	**LS-107**	EPA 310.2	413824		
40243379006	**QA/QC1**	EPA 310.2	413824		
40243379007	**EB1**	EPA 310.2	413824		
40243379008	**LS-106 (HIGH TURBIDITY DUP)**	EPA 310.2	413665		

942480

402433579

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical™ www.pacelabs.com

Page: 1 of 2

Section A Required Client Information:

Company:	WI Public Service
Address:	333 W. Everett St.
	Milwaukee, WI 53203
Email To:	patrick.ahrens@wecenergygroup.com
Phone: 414-221-2835	Fax: 414-221-4357
Requested Due Date/TAT:	Normal TAT

Section B Required Project Information:

Report To:	Patrick Ahrens
Copy To:	
Purchase Order No.:	4700004930
Project Name:	WDS#3 CCR Landfill - April 2022 Samples
Project Number:	Q-6005-001031

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	We Energies
Address:	333 W. Everett St., Milwaukee, WI 532
Pace Quote Reference:	
Pace Project Manager:	Brian Basten
Pace Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER x DRINKING WATER

UST RCRA OTHER _____

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample 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 (see valid codes to left)	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: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TDS	ALKALINITY - unfiltered	CHLORIDE - unfiltered	SULFATE - unfiltered	FLOURIDE - unfiltered	BORON - unfiltered	CALCIUM - unfiltered	~~CALCIUM - filtered~~	~~CHLORIDE - filtered~~	~~MAGNESIUM - filtered~~	~~SODIUM - filtered~~	~~POTASSIUM - filtered~~	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	Y/N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	
1	LS-100	WT	G	—	—	4-12	1146		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	001
2	LS-101	WT	G	—	—		1050		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	002
3	LS-105	WT	G	—	—		1226		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	003
4	LS-106	WT	G	—	—		1348		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	004
5	LS-107	WT	G	—	—		1013		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	005
6	QA/QC1	WT	G	—	—		—		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	006
7	EB1	WT	G	—	—		1720		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x	007
8	LS-106(high turbidity dup)			—	—		1348		2	1	0	1							F	F	F	F	F	F	F						008
9																															
10																															
11																															
12																															

See comments

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
LS-106(HTD) is filtered only	/REL	04-13-22	1525	Pace	4/13/22	1525	3	Y	N	Y
Please analyze selenium with method EPA 200.8										
~~LS-106~~ Per Nate Keller (RAMBO)										
no additional filtered analysis										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Cody Applekamp		Temp in °C	Received on Ice (Y/N)
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY): 4-13-22	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)

Sample Preservation Receipt Form

Client Name: WPS

Project # 40243379

All containers needing preservation have been checked and noted below: ☑Yes ☐No ☐N/A 4/13/22 SN

Initial when completed: JCW Date/Time:

Lab Lot# of pH paper: ~~10D133~~ 10D3112 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	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	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	Glass								Plastic					Vials						Jars				General									
001										1		1																			X		2.5 / 5 / 10
002										1		1																			X		2.5 / 5 / 10
003										1		1																			X		2.5 / 5 / 10
004										1		1																			X		2.5 / 5 / 10
005										1		1																			X		2.5 / 5 / 10
006										1		1																			X		2.5 / 5 / 10
007										1		1																			X		2.5 / 5 / 10
008										1		1																			X		2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
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015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

4/13/22 SV

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	BP1U	1 liter plastic unpres	VG9A	40 mL clear ascorbic	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG5U	100 mL amber glass unpres			VG9D	40 mL clear vial DI	ZPLC	ziploc bag
AG2S	500 mL amber glass H2SO4					GN	
BG3U	250 mL clear glass unpres						

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40243379

40243379

Client Name: WPS

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

Tracking #: _____

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 - 105 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3 /Corr: 3

Person examining contents:
Date: 4/13/22 /Initials: SKW

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

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

Labeled By Initials: _____

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.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

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 login

Page 2 of 2

WDS #3 Field Sheet

4-12-2022 CMA (REL)

Project: WDS#3 Legner — License No: FID# 737054120 / ID# 03067

Depth to bottom	Sample Point	Water Level	Date & Time Sampled		Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Comments (odor, color, & Visual Clarity)
10.4	LS-102	2.42	4-12	1510	7.0	5.72	73	no	clear
30.5	LS-102P	1.52	"	1530	8.3	5.95	107	yes	cloudy
27	LS-10 OW	11.16	"	1550	8.1	7.58	373	yes	cloudy
21.3	LS-103	9.93	"	1410	6.8	5.85	99	yes	cloudy
41.9	LS-103P	10.06	"	1400	12.6	7.49	543	yes	cloudy
17.9	LS-101	6.45		1050	CCR Well - All readings are located on Groundwater Monitoring Field Form				
37.8	LS-101P	8.72	"	1640	8.7	6.72	64	270	brown cloudy
17.7	LS-104	7.56	"	1300	6.3	5.94	34	yes	cloudy
18.2	LS-54 OW	1.29	"	1205	7.1	6.06	44	yes	brown cloudy
36.4	LS-54P	0.91	"	1220	8.3	6.78	157	no	clear
25	LS-49R	3.42	"	1446	6.7	5.85	224	10.45	clear final low flow readings
16.4	LS-100	6.71		1146	CCR Well - All readings are located on Groundwater Monitoring Field Form				
36.5	LS-100P	8.79	"	1630	9.5	7.17	310	yes	Brown cloudy
10.7	LS-105	3.89		1226	CCR Well - All readings are located on Groundwater Monitoring Field Form				
15	LS-106	10.64		1348	CCR Well - All readings are located on Groundwater Monitoring Field Form				
15	LS-107	5.43		1013	CCR Well - All readings are located on Groundwater Monitoring Field Form				
30.6	LS-105P	3.88	"	1700	9.0	5.86	189	2.86	clear
13	LS-48R	2.17	"	1555	5.0	6.86	213	45.70	tan cloudy
35.7	LS-48P	1.14	↓	1605	7.8	7.84	249	82.82	brown cloudy
16.42	LS-55 OW	6.69	—	—	—	—	—	—	WATER LEVEL ONLY
37	LS-55P	5.79	—	—	—	—	—	—	WATER LEVEL ONLY
15.9	LS-51 OW	8.56	—	—	—	—	—	—	WATER LEVEL ONLY
15.6	LS-52 OW	8.13	—	—	—	—	—	—	WATER LEVEL ONLY
36	LS-52P	7.24	—	—	—	—	—	—	WATER LEVEL ONLY
21.8	LS-16 OW	8.90	—	—	—	—	—	—	WATER LEVEL ONLY
36.5	LS-16P	14.70	—	—	—	—	—	—	WATER LEVEL ONLY
18.9	LS-50 OW	6.64	—	—	—	—	—	—	WATER LEVEL ONLY
16.7	LS-24 OW	10.02	—	—	—	—	—	—	WATER LEVEL ONLY
36.4	LS-24P	12.12	—	—	—	—	—	—	WATER LEVEL ONLY
12.15	LS-40 OW	5.83	—	—	—	—	—	—	WATER LEVEL ONLY
37.3	LS-40P	10.22	—	—	—	—	—	—	WATER LEVEL ONLY
	EB-1	—	4-12						
	EB-2 (if needed)	—	—	1 Day of sampling, EB-2 not needed					
	SW-1	—	DRY	No sample					
	SW-2	—	4-12	1705	9.7	6.67	82	2.0	clear, taken from middle pond
	SW-3	—	DRY	No sample					
	Leachate Collection Tank	—	4-12-22	1740	9.6	7.33	2080	NO	clear

Depth to bottom	Sample Point	Water Level	Date & Time Sampled	Temperature (°C)	pH	Conductivity (uS/cm)	Turbidity (NTU)	Comments (odor, color, & Visual Clarity)

QC01 = LS-101 QC02 = LS-103P

Notes:
SW sample points = field conductivity, field pH, odor, color and turbidity (no sample submitted to lab)
Leachate Collection Tank is total (unfiltered)

Meter Calibration Notes: YSI ProDSS used for wells with NTU turbidity reading
Oakton pH, cond, temp "pen" used for all others
*both calibrated 4-11-2022

Field Notes on Back of Sheet and/or in field book

SW-02 was collected at middle pond

* LS-103 & 104 cracked PVC well caps, need replacements
  LS-52 & 107 pro top loose

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS 106 ✓
CCR only

PROJECT INFORMATION

Site: WDS #3 | Client: WPSC
Project Number: 5484-033 ~~Phase 4REL~~ | Task #: | Start Date: 4-12-2022 Time: 1249
Field Personnel: CMA | Finish Date: 4-12-2022 Time: 1348

WELL INFORMATION

Well ID: LS- 106
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

- [ ] Well Development
- [X] Low-Flow / Low-Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify below)

PURGE INFORMATION

Purge Method: [ ] Bailer [X] Pump
Bailer Type: n/a
Pump Type and Serial #: Bladder QED
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

12.5/2.5

~~12/3~~ per last round

25 psi

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	10.64	1245		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: [ ] Well Casing [ ] Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons 3 Well Volumes: Gallons
5 Well Volumes: Gallons 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? [ ] Yes [ ] No

Water Level Serial #: Herron Dipper T
Water Quality Probe Type and Serial # YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1249	0	11.57	0.93	4.3	6.23	40	6.55	480	126.8	red/brown turbid
adjusted flow purge	~~1259~~ 1303		12.02	1.38	4.9	5.94	42	5.31	151	107.9	brown cloudy
	1306	1.0	12.08	1.44	5.0	5.93	41	5.00	120	102.7	
	1309		12.08	1.44	5.0	5.90	40	4.89	349	111.3	heavy turbid brown
	1312				5.1	5.88	39	4.60	205	112.0	brown cloudy
	1315	2.0			5.2	5.87	40	4.43	94	107.4	brown cloudy
	1318		↓	↓	5.2	5.80	40	4.30	74	104.7	
	1321		12.12	1.48	5.2	5.85	40	4.23	180	105.2	heavy cloudy brown

* very hard to get recovery stabalized

readings every 3 min due to lower rate

NOTES

1348 sample time + high turbid DUP *

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

over

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS 106 ✓

PROJECT INFORMATION

Site: WDS #3 Client: WPSC

Project Number: 5484-033 Phase 4 REL Task #: Start Date: 4-12-2022 Time: 1249

Field Personnel: CMA Finish Date: 4-12-2022 Time: 1348

WELL INFORMATION

Well ID: LS 106

Casing ID: inches

EVENT TYPE

☐ Well Development ☒ Low-Flow / Low Stress Sampling

☐ Well Volume Approach Sampling ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
purge	1324	2.5	12.12	1.48	5.2	5.82	40	4.02	202	109.3	brown cloudy
	1327		12.12	1.48	5.2	5.81	41	3.98	155	110.6	↓
	1330	3.0	12.12	1.48	5.3	5.80	42	3.82	95	111.8	light cloudy
	1333				5.4	5.78	43	3.71	64	110.8	↓
	1336				5.3	5.77	44	3.61	59.10	110.7	
	1339				5.3	5.76	45	3.58	52.78	110.8	
	1342	4.0			5.4	5.75	46	3.42	49.61	111.2	
	1345				5.4	5.74	47	3.36	46.89	111.6	
Sample	1348				5.4	5.73	48	3.25	49.16	112.0	↓

NOTES (continued)

1348 Sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

PROJECT INFORMATION

Site: WDS #3 | Client: WPSC

Project Number: 5484-033 Phase 4REL | Task #: | Start Date: 4-12-2022 Time: 0956

Field Personnel: CMA | Finish Date: 4-12-2022 Time: 1013

WELL INFORMATION

Well ID: LS- 107

Casing ID: Inches

Screen Interval:

Borehole Diameter: Inches

Filter Pack Interval:

EVENT TYPE

- [ ] Well Development
- [X] Low-Flow / Low-Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify below)

PURGE INFORMATION

Purge Method: [ ] Bailer [X] Pump

Bailer Type: n/a

Pump Type and Serial #: Bladder QED

Tube/Pump Intake Depth:

Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	5.43	0952		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: [ ] Well Casing [ ] Borehole

Volume Per Foot:

Standing Water Column: feet

1 Well Volume: Gallons | 3 Well Volumes: Gallons

5 Well Volumes: Gallons | 10 Well Volumes: Gallons

Total Volumes Produced: Gallons

Well Purged Dry? [ ] Yes [ ] No

Water Level Serial #: Herron Dipper T

Water Quality Probe Type and Serial # YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	0956	0	5.60	0.17	5.7	6.00	222	2.28	13.02	245.8	clear
purge	1005	1		0.17	5.7	5.55	219	1.20	2.46	276.8	clear
	1007				5.7	5.55	218	1.17	2.27	277.6	
	1009				5.7	5.56	216	1.14	2.14	278.3	
~~sample~~	1011	2			5.7	5.57	215	1.13	2.15	278.4	
sample	1013				5.7	5.57	213	1.12	2.08	278.4	

NOTES

1013 sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

LS-107 CCR only

10 refill

5 sample @ 25 psi

✓

~~sample~~ 1-250ml unpreserved
1-250ml HNO3

CCR wells unless turbidity > 10 NTU

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS 101 ✓
CCR + MR
+ 500
QC-01

PROJECT INFORMATION

Site: WDS #3 | Client: WPSC
Project Number: 5484-033 Phase 4REL | Task #: | Start Date: 4-12-2022 | Time: 1028
Field Personnel: CMA | Finish Date: 4-12-2022 | Time: 1650

WELL INFORMATION

Well ID: LS- 101
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

- [ ] Well Development
- [X] Low-Flow / Low-Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify below)

PURGE INFORMATION

Purge Method: [ ] Bailer [X] Pump
Bailer Type: n/a
Pump Type and Serial #: Bladder QED
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	8.45	1024		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: [ ] Well Casing [ ] Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons | 3 Well Volumes: Gallons
5 Well Volumes: Gallons | 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? [ ] Yes [ ] No

12.5 refill
2.5 sample
@ 25 psi

Water Level Serial #: Herron Dipper T
Water Quality Probe Type and Serial #: YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	~~1028~~		8.45	~~0.00~~	5.9	6.01	32	12.57	8.47	247.0	clear
purge	1038	0.5	8.54	0.09	5.2	5.68	30	12.92	5.99	263.6	↓
	1041		8.54	↓	5.2	5.68	31	12.93	7.25	265.4	↓
	1044		↓	↓	5.2	5.66	31	12.95	6.58	266.7	↓
	1047		↓	↓	5.2	5.66	31	12.95	6.90	267.4	↓
Sample	1050	1.0	↓	↓	5.2	5.66	31	12.94	6.86	267.5	↓

← readings every 3 min like last time due to slower recharge + refill speed

NOTES

1050 Sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS-100
CCR & NR 500

PROJECT INFORMATION

Site: WDS #3
Client: WPSC
Project Number: 5484-033 Phase 4REL
Task #:
Start Date: 4-12-2022 Time: 1121
Field Personnel: CMA
Finish Date: 4-12-2022 Time: 1146

WELL INFORMATION

Well ID: LS- 100
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

- [ ] Well Development
- [x] Low-Flow / Low-Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify below)

PURGE INFORMATION

Purge Method: [ ] Bailer [x] Pump
Bailer Type: n/a
Pump Type and Serial #: Bladder QED
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

10/5

25 psi

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	6.71	1114		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: [ ] Well Casing [ ] Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons 3 Well Volumes: Gallons
5 Well Volumes: Gallons 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? [ ] Yes [ ] No

Water Level Serial #: Herron Dipper T
Water Quality Probe Type and Serial # YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1121		6.74	–	5.5	5.60	136	8.80	6.23	270.0	clear
purge	1134	1.0	6.79	0.08	4.7	5.63	128	9.97	2.24	272.8	
	1136		6.79		4.7	5.62	130	9.85	2.27	273.2	
	1138				4.7	5.63	131	9.81	2.26	273.5	
	1140	2.0			4.8	5.62	132	9.77	2.42	273.9	
	1142				4.8	5.62	133	9.70	2.35	274.3	
	1144				4.8	5.62	134	9.67	2.28	274.4	
Sample	1146	3.0			4.8	5.62	133	9.66	2.29	274.5	

place call

NOTES

1146 sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS 105 ✓
CCR + state
10/5
25 psi

PROJECT INFORMATION

Site: WDS #3 | Client: WPSC
Project Number: 5484-033 Phase 4REL | Task #: | Start Date: 4-12-2022 Time: 1208
Field Personnel: CMA | Finish Date: 4-12-2022 Time: 1276

WELL INFORMATION

Well ID: LS- 105
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

- ☐ Well Development
- ☒ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ☒ Pump
Bailer Type: n/a
Pump Type and Serial #: Bladder QED
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	3.89	1204		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ☐ Well Casing ☐ Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons | 3 Well Volumes: Gallons
5 Well Volumes: Gallons | 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? ☐ Yes ☐ No

Water Level Serial #: Herron Dipper T
Water Quality Probe Type and Serial #: YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1208	0	3.89	-	6.4	5.72	197	4.08	10.09	84.4	clear
purge	1218	1.0	3.98	0.02	5.8	5.87	204	0.20	1.93	-1.9	
	1220		3.91	0.02	5.8	5.87	204	0.17	1.69	-4.6	
	1222	2.0	↓	↓	5.8	5.87	204	0.15	1.68	-6.6	
	1224				5.8	5.87	205	0.14	1.63	-7.8	
Sample	1226	2.5	↓	↓	5.8	5.87	205	0.13	1.65	-8.6	

NOTES

1226 Sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER MONITORING FIELD FORM

LS 49 R ✓
NR 500 only

PROJECT INFORMATION

Site: WDS #3 | Client: WPSC
Project Number: 5484-033 Phase 4REL | Task #: | Start Date: 4-12-2022 Time: 1413
Field Personnel: CMA | Finish Date: 4-12-2022 Time: 1446

WELL INFORMATION

Well ID: LS- 49R
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

- ☐ Well Development
- ☒ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ☒ Pump
Bailer Type: n/a
Pump Type and Serial #: Bladder QED
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

13 refill
2 sample
last event
at
25 psi

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	3.42	1413		
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ☐ Well Casing ☐ Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons | 3 Well Volumes: Gallons
5 Well Volumes: Gallons | 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? ☐ Yes ☐ No

Water Level Serial #: Herron Dipper T
Water Quality Probe Type and Serial #: YSI Pro DSS

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1418	–	3.51	0.09	7.3	5.79	203	2.25	7.69	131.6	clear
purge	1428		3.70	0.28	7.0	5.82	230	0.38	47	170.3	cloudy
	1431		3.82	0.40	6.8	5.84	230	0.24	20.31	176.5	↓
	1434		↓	↓	6.8	5.85	229	0.20	14.07	178.7	↓
	1437		↓	↓	6.9	5.85	228	0.18	12.04	178.0	clear
	1440		3.84	0.42	6.8	5.85	227	0.16	13.92	173.5	↓
	1443		↓	↓	6.8	5.84	225	0.14	11.43	168.0	↓
Sample	1446		3.88	0.46	6.7	5.85	224	0.15	10.45	164.7	↓

3 min due to slow rate

NOTES

1446 Sample time

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

942448

State

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.

Page: 1 of 4

Section A Required Client Information:

Company:	WEC Energy Group
Address:	333 W. Everett Street
	Milwaukee, WI 53203
Email To:	patrick.ahrens@wecenergygroup.com
Phone:	414-221-2835
Fax:	(414) 221-4357
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Patrick Ahrens
Copy To:	
Purchase Order No.:	4700004930
Project Name:	Weston Disposal Site #3
Project Number:	Licence #03067, FID#737054120

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	WEC Energy Group
Address:	
Pace Quote Reference:	
Pace Project Manager:	Brian Baesten
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample 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

Requested Analysis Filtered (Y/N): Alkalinity Y, Sulfate Y, Boron Y, Molybdenum Y, Calcium Y

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Alkalinity - Filtered	Sulfate - Filtered	Boron - Filtered	Molybdenum - Filtered	Calcium - Filtered	Magnesium - Filtered	Hardness - Calcualted	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	LS-102	GW	G	–	–	4-12	1510		2	1		1						X	X	X	X	X	X	X	N	
2	LS-102P	GW	G	–	–	|	1530		2	1		1						X	X	X	X	X	X	X		
3	LS-10	GW	G	–	–	|	1550		2	1		1						X	X	X	X	X	X	X		
4	LS-103	GW	G	–	–	|	1410		2	1		1						X	X	X	X	X	X	X		
5	LS-103P	GW	G	–	–	|	1400		2	1		1						X	X	X	X	X	X	X		
6	LS-101	GW	G	–	–	|	1050		2	1		1						X	X	X	X	X	X	X		
7	LS-101P	GW	G	–	–	|	1640		2	1		1						X	X	X	X	X	X	X		
8	LS-104	GW	G	–	–	|	1300		2	1		1						X	X	X	X	X	X	X		
9	LS-54	GW	G	–	–	|	1205		2	1		1						X	X	X	X	X	X	X		
10	LS-54P	GW	G	–	–	|	1220		2	1		1						X	X	X	X	X	X	X		
11	LS-49R	GW	G	–	–	|	1446		2	1		1						X	X	X	X	X	X	X		
12	LS-100	GW	G	–	–	|	1146		2	1		1						X	X	X	X	X	X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please use method EPA 200.7	[signature] REL	4-13-22	1525	[signature] pace	4/13/22	1525	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cody Appelkamp

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 4-13-22

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

CHAIN-OF-CUSTODY / Analytical Request Document

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State

Page: 2 of 4

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	WEC Energy Group	Report To:	Patrick Ahrens	Attention:	Accounts Payable
Address:	333 W. Everett Street	Copy To:		Company Name:	WEC Energy Group
	Milwaukee, WI 53203			Address:	
Email To:	patrick.ahrens@wecenergygroup.com	Purchase Order No.:	4700004930	Pace Quote Reference:	
Phone:	414-221-2835 Fax: (414) 221-4357	Project Name:	Weston Disposal Site #3	Pace Project Manager:	Brian Baesten
Requested Due Date/TAT:		Project Number:	Licence #03067, FID#737054120	Pace Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER _____

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample 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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	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: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Alkalinity - Filtered	Sulfate - Filtered	Boron - Filtered	Molybdenum - Filtered	Calcium - Filtered	Magnesium - Filtered	Hardness - Calcualted	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	LS-100P	GW	G	[illegible]	—	4-12	1630		2	1		1							X	X	X	X	X	X	X	N	
2	LS-105	GW	G	(illegible)	—		1226		2	1		1							X	X	X	X	X	X	X		State EMS / CMA
3	~~LS-106~~	GW	G	—	—		~~1340~~		~~2~~	~~1~~		~~1~~							~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		> not on
4	~~LS-107~~	GW	G	—	—		~~1613~~		~~2~~	~~1~~		~~1~~							~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
5	LS-105P	GW	G	—	—		1700		2	1		1							X	X	X	X	X	X	X		
6	LS-48R	GW	G	—	—		1555		2	1		1							X	X	X	X	X	X	X		
7	LS-48P	GW	G	—	—		1605		2	1		1							X	X	X	X	X	X	X		
8	QA/QC1	GW	G	—	—		—		2	1		1							X	X	X	X	X	X	X		
9	QA/QC2	GW	G	—	—		—		2	1		1							X	X	X	X	X	X	X		
10	EB1	GW	G	—	—		1520		2	1		1							X	X	X	X	X	X	X		
11	~~EB2~~ NO SAMPLE	GW	G	—	—		—		2	1		1							X	X	X	X	X	X	X		
12				—	—																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please use method EPA 200.7	REL	4-13-22	1525	pace	4/13/22	1525	3

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cody Apfelbeck

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 4-13-22

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

CHAIN-OF-CUSTODY / Analytical Request Document

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Static

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	WEC Energy Group	Report To:	Patrick Ahrens	Attention:	Accounts Payable
Address:	333 W. Everett Street	Copy To:		Company Name:	WEC Energy Group
	Milwaukee, WI 53203			Address:	
Email To:	patrick.ahrens@wecenergygroup.com	Purchase Order No.:	4700004930	Pace Quote Reference:	
Phone:	414-221-2835 Fax: (414) 221-4357	Project Name:	Weston Disposal Site #3	Pace Project Manager:	Brian Baesten
Requested Due Date/TAT:		Project Number:	Licence #03067, FID#737054120	Pace Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER _____

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample 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 (see valid codes to left)	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: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TSS	BOD	COD	Alkalinity - Total	Chloride - Total	Sulfate - Total	Boron - Total	Molybdenum - Total	Cadmium - Total	Lead - Total	Manganese - Total	Selenium - Total	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	
1	LHT	GW	G	—	—	~~10/14/20~~ 3-12	~~1650~~ 1748		5	3	1	1							X	X	X	X	X	X	X	X	X	X	X	N	
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please use mrthod EPA 200.7	REL	4-13-22	1525	pace	4/13/22	1525	3

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cody Appleyard

SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YY): 4-13-22

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

CHAIN-OF-CUSTODY / Analytical Request Document

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State

Page: 4 of 4

Section A Required Client Information:

Company:	WEC Energy Group
Address:	333 W. Everett Street
	Milwaukee, WI 53203
Email To:	patrick.ahrens@wecenergygroup.com
Phone: 414-221-2835	Fax: (414) 221-4357
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Patrick Ahrens
Copy To:	
Purchase Order No.:	4700004930
Project Name:	Weston Disposal Site #3
Project Number:	Licence #03067, FID#737054120

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	WEC Energy Group
Address:	
Pace Quote Reference:	
Pace Project Manager:	Brian Baesten
Pace Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER _____

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample 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 (see valid codes to left)	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: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Mercury - Total	Iron - Total	Calcium - Total	Magnesium - Total	Hardness - Calculated	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	
1	LHT	GW	G	—	—	3-12	1740		5	3	1	1							X	X	X	X	X	N	
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please use method EPA 200.7	John Cudy REL	4-13-22	1525	pace	4/13/22	1525	3

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cudy Apte Kamp

SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YY): 4-13-22

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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CCR

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Page: 1 of 2

Section A Required Client Information:

Company:	WI Public Service
Address:	333 W. Everett St.
	Milwaukee, WI 53203
Email To:	patrick.ahrens@wecenergygroup.com
Phone: 414-221-2835	Fax: 414-221-4357
Requested Due Date/TAT:	Normal TAT

Section B Required Project Information:

Report To:	Patrick Ahrens
Copy To:	
Purchase Order No.:	4700004930
Project Name:	WDS#3 CCR Landfill - April 2022 Samples
Project Number:	Q-6005-001031

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	We Energies
Address:	333 W. Everett St., Milwaukee, WI 532
Pace Quote Reference:	
Pace Project Manager:	Brian Basten
Pace Profile #:	

REGULATORY AGENCY

NPDES | GROUND WATER x | DRINKING WATER

UST | RCRA | OTHER ____

Site Location STATE: WI

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample 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 (see valid codes to left)	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: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TDS	ALKALINITY - unfiltered	CHLORIDE - unfiltered	SULFATE - unfiltered	FLOURIDE - unfiltered	BORON - unfiltered	CALCIUM - unfiltered	~~CALCIUM - filtered~~	CHLORIDE - filtered	MAGNESIUM - filtered	SODIUM - filtered	POTASSIUM - filtered	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N	Y	Y	Y	Y	Y		See comments
1	LS-100	WT	G	—	—	4-12	1146		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
2	LS-101	WT	G	—	—	"	1050		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
3	LS-105	WT	G	—	—	"	1226		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
4	LS-106	WT	G	—	—	"	1348		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
5	LS-107	WT	G	—	—	"	1013		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
6	QA/QC1	WT	G	—	—	"	—		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
7	EB1	WT	G	—	—	"	1720		6	4	0	2							x	x	x	x	x	x	x	x	x	x	x	x		
8	LS-106 (high turbidity dup)			—	—	"	1348		2	1	0	1							F	F	F	F	F	F	F							
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
LS-106(HTD) is filtered	[signature] /REL	04-13-22	1525	[signature] Pace	4/13/22	1525	3
Please analyze selenium with method EPA 200.8							
~~LS-106~~ Per Nate Keller (RAMBL)							
no additional filtered analysis							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cody Applekamp

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 4-13-22

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

To: ERIC KOVATCH
PSB Annex A231

From: WEC Business Services
Laboratory Services PSBA-A070
WDNR Cert # 241329000

Report Date: Monday, December 5, 2022

The following are the analytical results for samples received by Laboratory Services on 11/10/2022 :

Sample Description: **LS-100 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE63596 Serial/Impact ID:
Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 12:54

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	20.4	17.3	ug/L	J	EPA 200.7	10/28/22	020
Total Calcium	17100	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	2.3	0.43	mg/L		EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	15.8	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	112	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	Less Than	0.0034	mg/L		EPA 200.7	10/28/22	020
Total Manganese	0.0047	0.0015	mg/L	J	EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	19	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	3.22	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.49	0.325	mg/L		EPA 200.7	10/28/22	020
Dissolved Sodium	4.99	0.350	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	42.8	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	42.8	5	mg/L		HCO3	11/1/22	020
Nitrate as N	2.8	0.044	mg/L	M0	EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L		EPA 300.0	10/27/22	020
Dissolved Chloride	2.2	0.43	mg/L	M0	EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L	M0	EPA 300.0	11/9/22	020
Dissolved Sulfate	15.9	0.44	mg/L		EPA 300.0	11/9/22	020
Field Water Level	11.39	0.05	feet		H2OD	10/25/22	CWA
Field Temperature	12	0.1	Degrees C		TEMP	10/25/22	CWA
Field pH	5.1	0.1	Units		FIELDPH	10/25/22	CWA
Field Conductivity	146	0	umhos		FCOND25	10/25/22	CWA
Dissolved Oxygen-Field	2.65	0.1	mg/l		FIELDDO	10/25/22	CWA
Turbidity	2.14	0.1	NTU'S		EPA 180.1	10/25/22	CWA
Redox Potential	242	1	mV		ASTM D1498-93	10/25/22	CWA

Sample Description: **LS-101 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE63597 Serial/Impact ID:
Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 11:50

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	Less Than	17.3	ug/L		EPA 200.7	10/28/22	020
Total Calcium	6300	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	0.49	0.43	mg/L	J	EPA 300.0	10/27/22	020

Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	2.7	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	58.0	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	0.0046	0.0034	mg/L	J	EPA 200.7	10/28/22	020
Total Manganese	0.0020	0.0015	mg/L	B	EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	7.03	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	1.1	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.39	0.325	mg/L		EPA 200.7	10/28/22	020
Dissolved Sodium	3.07	0.325	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	26.2	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	26.2	5	mg/L		HCO3	11/1/22	020
Nitrate as N	0.44	0.044	mg/L		EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L		EPA 300.0	10/27/22	020
Dissolved Chloride	0.70	0.43	mg/L	J	EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	2.9	0.44	mg/L		EPA 300.0	11/9/22	020
Field Water Level	14.40	0.05	feet		H2OD	10/25/22	CWA
Field Temperature	11	0.1	Degrees C		TEMP	10/25/22	CWA
Field pH	5.4	0.1	Units		FIELDPH	10/25/22	CWA
Field Conductivity	64	0	umhos		FCOND25	10/25/22	CWA
Dissolved Oxygen-Field	6.48	0.1	mg/l		FIELDDO	10/25/22	CWA
Turbidity	2.78	0.1	NTU'S		EPA 180.1	10/25/22	CWA
Redox Potential	224	1	mV		ASTM D1498-93	10/25/22	CWA

Sample Description: **LS-105 Weston Disposal Site #3 - Ash Landfill CCR Well**

Sample ID: AE63598 Serial/Impact ID:

Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 14:14

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	41.1	17.3	ug/L		EPA 200.7	10/28/22	020
Total Calcium	23200	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	1.8	0.43	mg/L	J	EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	25.3	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	160	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	0.0034	0.0034	mg/L	J	EPA 200.7	10/28/22	020
Total Manganese	1.26	0.0015	mg/L		EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	24.8	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	5.81	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.33	0.325	mg/L		EPA 200.7	10/28/22	020
Dissolved Sodium	4.12	0.350	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	75.8	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	75.8	5	mg/L		HCO3	11/1/22	020
Nitrate as N	Less Than	0.044	mg/L		EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L		EPA 300.0	10/27/22	020
Dissolved Chloride	1.8	0.43	mg/L	J	EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	25.3	0.44	mg/L		EPA 300.0	11/9/22	020
Field Water Level	6.02	0.05	feet		H2OD	10/25/22	CWA
Field Temperature	12	0.1	Degrees C		TEMP	10/25/22	CWA
Field pH	5.6	0.1	Units		FIELDPH	10/25/22	CWA
Field Conductivity	230	0	umhos		FCOND25	10/25/22	CWA
Dissolved Oxygen-Field	0.11	0.1	mg/l		FIELDDO	10/25/22	CWA

Turbidity	4.45	0.1	NTU'S		EPA 180.1	10/25/22	CWA
Redox Potential	7.5	1	mV		ASTM D1498-93	10/25/22	CWA

Sample Description: **LS-106 Weston Disposal Site #3 - Ash Landfill CCR Well**

Sample ID: AE63599 Serial/Impact ID:

Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 15:15

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	24.2	17.3	ug/L	J	EPA 200.7	10/28/22	020
Total Calcium	17000	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	2.5	0.43	mg/L		EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	2.2	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	122	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	0.0068	0.0034	mg/L	J	EPA 200.7	10/28/22	020
Total Manganese	1.35	0.0015	mg/L		EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	18.2	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	6.66	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.45	0.325	mg/L		EPA 200.7	10/28/22	020
Dissolved Sodium	4.40	0.350	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	75.5	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	75.5	5	mg/L		HCO3	11/1/22	020
Nitrate as N	Less Than	0.044	mg/L		EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L		EPA 300.0	10/27/22	020
Dissolved Chloride	2.5	0.43	mg/L		EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	2.2	0.44	mg/L		EPA 300.0	11/9/22	020
Field Water Level	12.38	0.05	feet		H2OD	10/25/22	CWA
Field Temperature	13	0.1	Degrees C		TEMP	10/25/22	CWA
Field pH	5.6	0.1	Units		FIELDPH	10/25/22	CWA
Field Conductivity	160	0	umhos		FCOND25	10/25/22	CWA
Dissolved Oxygen-Field	0.13	0.1	mg/l		FIELDDO	10/25/22	CWA
Turbidity	19.10	0.1	NTU'S		EPA 180.1	10/25/22	CWA
Redox Potential	56.7	1	mV		ASTM D1498-93	10/25/22	CWA

Sample Description: **LS-107 Weston Disposal Site #3 - Ash Landfill CCR Well**

Sample ID: AE63600 Serial/Impact ID:

Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 10:47

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	31.2	17.3	ug/L	J	EPA 200.7	10/28/22	020
Total Calcium	36200	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	10.4	0.43	mg/L		EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	89.1	2.2	mg/L		EPA 300.0	10/28/22	020
Total Dissolved Solids	218	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	0.0042	0.0034	mg/L	J	EPA 200.7	10/28/22	020
Total Manganese	0.0066	0.0015	mg/L	B	EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	38.2	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	8.56	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.85	0.325	mg/L		EPA 200.7	10/28/22	020

Dissolved Sodium	6.67	0.350	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	40.7	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	40.7	5	mg/L		HCO3	11/1/22	020
Nitrate as N	1.5	0.044	mg/L	H1	EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L	H1	EPA 300.0	10/27/22	020
Dissolved Chloride	10.4	0.43	mg/L		EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	94.4	2.2	mg/L		EPA 300.0	11/9/22	020
Field Water Level	5.85	0.05	feet		H2OD	10/25/22	CWA
Field Temperature	12	0.1	Degrees C		TEMP	10/25/22	CWA
Field pH	5.3	0.1	Units		FIELDPH	10/25/22	CWA
Field Conductivity	316	0	umhos		FCOND25	10/25/22	CWA
Dissolved Oxygen-Field	0.51	0.1	mg/l		FIELDDO	10/25/22	CWA
Turbidity	2.19	0.1	NTU'S		EPA 180.1	10/25/22	CWA
Redox Potential	215.6	1	mV		ASTM D1498-93	10/25/22	CWA

Sample Description: **QAQC1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE63601 Serial/Impact ID:
Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 00:00

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	18.6	17.3	ug/L	J	EPA 200.7	10/28/22	020
Total Calcium	16900	114	ug/L		EPA 200.7	10/28/22	020
Total Chloride	2.2	0.43	mg/L		EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	16.1	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	102	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Total Copper	0.0042	0.0034	mg/L	J	EPA 200.7	10/28/22	020
Total Manganese	0.0046	0.0015	mg/L	J, B	EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L		EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L		EPA 200.7	10/28/22	020
Dissolved Calcium	18.3	0.114	mg/L		EPA 200.7	10/28/22	020
Dissolved Magnesium	2.92	0.182	mg/L		EPA 200.7	10/28/22	020
Dissolved Potassium	1.42	0.325	mg/L		EPA 200.7	10/28/22	020
Dissolved Sodium	4.81	0.350	mg/L		EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	42.9	5	mg/L		SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/1/22	020
Bicarbonate Ion	42.9	5	mg/L		HCO3	11/1/22	020
Nitrate as N	2.8	0.044	mg/L	H1	EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L	H1	EPA 300.0	10/27/22	020
Dissolved Chloride	2.3	0.43	mg/L		EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	16.1	0.44	mg/L		EPA 300.0	11/9/22	020

Sample Description: **EB1 Weston Disposal Site #3 - Ash Landfill CCR Well**
Sample ID: AE63602 Serial/Impact ID:
Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 18:00

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	19.0	17.3	ug/L	J	EPA 200.7	10/28/22	020
Total Calcium	Less Than	114	ug/L	500	EPA 200.7	10/28/22	020
Total Chloride	Less Than	0.43	mg/L		EPA 300.0	10/27/22	020
Total Fluoride	Less Than	0.095	mg/L		EPA 300.0	10/27/22	020
Total Sulfate	Less Than	0.44	mg/L		EPA 300.0	10/27/22	020
Total Dissolved Solids	Less Than	8.7	mg/L		Std Mtd 2540 C	10/27/22	020

Total Copper	Less Than	0.0034	mg/L	EPA 200.7	10/28/22	020
Total Manganese	Less Than	0.0015	mg/L	EPA 200.7	10/28/22	020
Total Silver	Less Than	0.0032	mg/L	EPA 200.7	10/28/22	020
Total Zinc	Less Than	0.0116	mg/L	EPA 200.7	10/28/22	020
Dissolved Calcium	Less Than	0.114	mg/L	EPA 200.7	10/28/22	020
Dissolved Magnesium	Less Than	0.182	mg/L	EPA 200.7	10/28/22	020
Dissolved Potassium	Less Than	0.325	mg/L	EPA 200.7	10/28/22	020
Dissolved Sodium	Less Than	0.350	mg/L	EPA 200.7	10/28/22	020
Total Alkalinity as CaCO3	Less Than	5	mg/L	SM 2320 B-1997	11/1/22	020
Carbonate Ion	Less Than	5	mg/L	CO3	11/1/22	020
Bicarbonate Ion	Less Than	5	mg/L	HCO3	11/1/22	020
Nitrate as N	Less Than	0.044	mg/L	EPA 353.2	10/27/22	020
Nitrite as N	Less Than	0.021	mg/L	EPA 300.0	10/27/22	020
Dissolved Chloride	Less Than	0.43	mg/L	EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L	EPA 300.0	11/9/22	020
Dissolved Sulfate	Less Than	0.44	mg/L	EPA 300.0	11/9/22	020

Sample Description: **LS-106 DUP Weston Disposal Site #3 - Ash Landfill CCR Well**

Sample ID: AE63603 Serial/Impact ID:

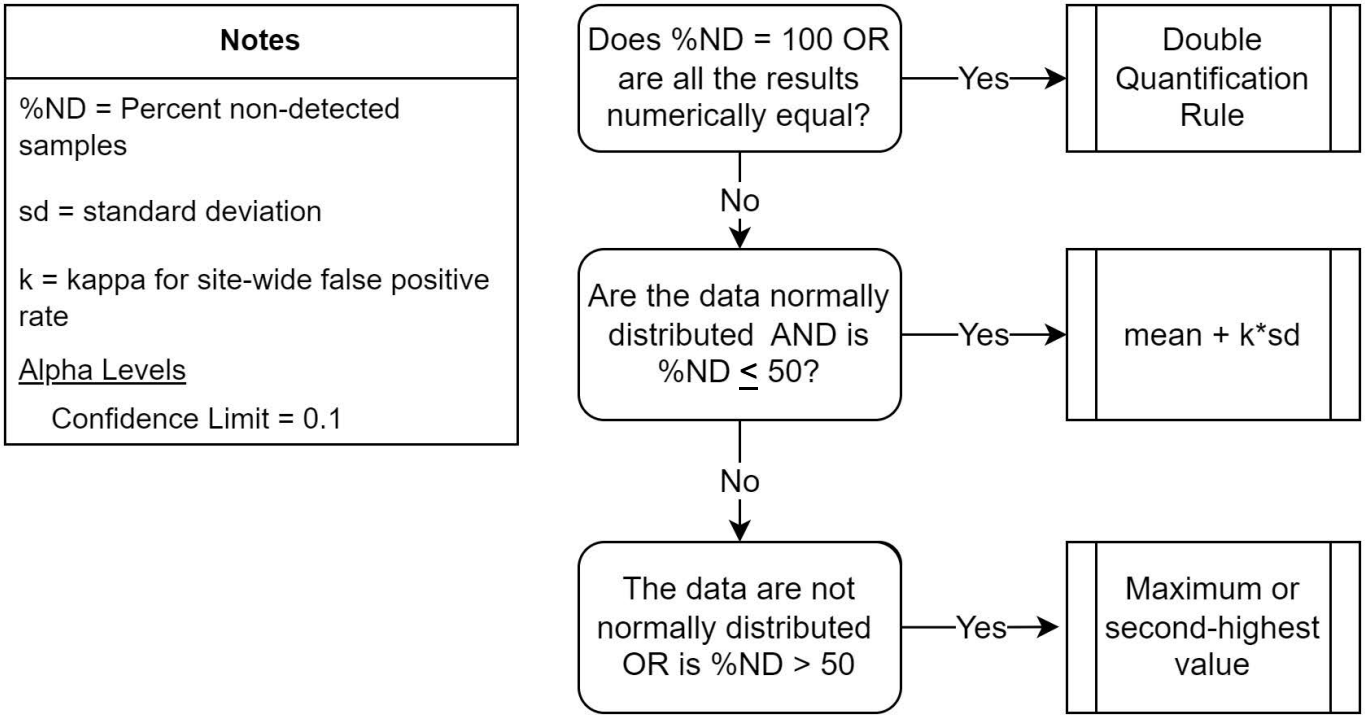
Sample Collector: C APPLEKAMP Sample Collection Date: 10/25/22 Collection Time: 15:15

Parameter	Result	LOD	Units	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	114	8.7	mg/L		Std Mtd 2540 C	10/27/22	020
Dissolved Calcium	18.6	0.114	mg/L		EPA 200.7	11/3/22	020
Dissolved Magnesium	6.93	0.182	mg/L		EPA 200.7	11/3/22	020
Dissolved Potassium	1.78	0.325	mg/L		EPA 200.7	11/3/22	020
Dissolved Sodium	4.86	0.350	mg/L		EPA 200.7	11/3/22	020
Total Alkalinity as CaCO3	77.7	5	mg/L		SM 2320 B-1997	11/2/22	020
Carbonate Ion	Less Than	5	mg/L		CO3	11/2/22	020
Bicarbonate Ion	77.7	5	mg/L		HCO3	11/2/22	020
Dissolved Chloride	2.6	0.43	mg/L		EPA 300.0	11/9/22	020
Dissolved Fluoride	Less Than	0.095	mg/L		EPA 300.0	11/9/22	020
Dissolved Sulfate	2.4	0.44	mg/L		EPA 300.0	11/9/22	020

If there are any questions concerning this report, please contact Laboratory Services at (414) 221-4595.

Sample Comments:

APPENDIX B
STATISTICAL METHODOLOGY FOR DETERMINATION OF BACKGROUND VALUES



When data are not normally distributed or %ND > 50, the maximum value is used if the background sample size is < 60. Where the background sample size is ≥ 60, the achievable per-constituent false positive rates for the maximum and second-highest background values will be compared, and the background value with the achievable per-constituent false positive rate that is closest to, but does not exceed, the target per-constituent false positive rate of 0.015% is used.

APPENDIX D

2022 LEACHATE PIPE CLEANING AND INSPECTION REPORT [PER NR 506.20(3)(D)]

Wisconsin Public Service

Leachate Line Inspection & Jetting

Location: Weston Disposal Site #3

Inspection for: Riverview Construction

Great Lakes TV SEAL INC.

3600 KEWAUNEE RD. GREEN BAY, WI 54311 · 920-863-3663 · WWW.GREATLAKESTVSEAL.COM

The National Association of Sewer Service Companies (NASSCO©) has developed the Pipeline Assessment Certification Program (PACP©) to provide standardization and consistency in the way we evaluate sewer pipe condition to assure that all pipe system data is collected and coded consistently and reliably. The goal of PACP is to create a comprehensive and reliable reservoir of data to describe the sewer pipe that can be used in prioritization, planning, and renovation of wastewater collection systems.

As a member of NASSCO, Great Lakes TV Seal, Inc. is pleased to provide you with an explanation of Pipeline Assessment Certification Program (PACP©). Please see Appendix.

CCTV Surveys List for Riverview Construction

Number of surveys in this list is 10 **as of** Tuesday, January 3, 2023 **Unit of measure:** ft

Setup	Date	Street	Start MH	Finish MH	Dir	Size inch	Pre Clean	Media Number	Scheduled Length	Surveyed Length
1	10/14/2022	Weston Disposal Site #3	C105	SOUTH	D	6	J	22402		344.9
2	10/14/2022	Weston Disposal Site #3	C106	SOUTH	D	6	J	22402		334.9
3	10/14/2022	Weston Disposal Site #3	C107	SOUTH	D	6	J	22402		134.2
4	10/14/2022	Weston Disposal Site #3	C104	SOUTH	D	6	J	22402		499.6
5	10/14/2022	Weston Disposal Site #3	C103	SOUTH	D	6	J	22402		415.7
6	10/14/2022	Weston Disposal Site #3	C102	WEST	D	6	J	22402		598.5
7	12/27/2022	Weston Disposal Site #3	C102	WEST	D	6	J	22402		597.9
8	12/27/2022	Weston Disposal Site #3	C101	WEST	D	6	J	22402		602.0
9	12/27/2022	Weston Disposal Site #3	C201	NORTH	U	6	J	22402		420.0
10	12/27/2022	Weston Disposal Site #3	C202	NORTH	D	6	J	22402		428.5
								Total Scheduled Length	0.0	
								Total Length Surveyed		4,376.2

CCTV Defects by Inspection Report

Printed on 01/03/2023

Client	Riverview Construction	**Work Order**	
Project	WES22402	**Project Start**	10/14/2022
Location		**Start Tape** 22402	**UOM** Ft **Setups** 10
Database	Q:\2022 PIPELOGIX\DATA\RIVERVIEWWESTON22402.MDB		

Setup	Manholes		Surveyed length	Structural conditions							O and M Conditions									Misc	
	From Manhole	To Manhole		Break in pipe	Collapse	Cracks	Fracture	Deformation	Defective Joints	Defective Lining	Defective Taps	Roots	Grease	Encrustation & Scale	Settled Deposits	Infiltration	Obstruction	Line Deviations	Water Level +20%	Survey Abandoned	Camera Underwater
1	C105 SOUTH		344.9															1		1	
2	C106 SOUTH		334.9															2		1	
3	C107 SOUTH		134.2															2		1	
4	C104 SOUTH		499.6															1		1	
5	C103 SOUTH		415.7														1	1		1	
6	C102 WEST		598.5															2		1	37
7	C102 WEST		597.9						2			5						2	12	1	45
8	C101 WEST		602.0															1		1	
9	C201 NORTH		420.0															1		1	2
10	C202 NORTH		428.5																		
		Totals	4376.2	0	0	0	0	0	2	0	0	5	0	0	0	0	1	15	12	10	117

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Tabular Report of PSR C105 X for Riverview Construction

Setup 1	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/10/14	**Time** 10:08	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C105	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down SOUTH	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** Ft	**Total length** Ft	**Length Surveyed** 344.9 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Snow		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C105
0.0			MWL	Water Level			0					
36.3			LU	Alignment Up			25					
344.9			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

344.9 Ft **Total Length Surveyed**

Notes

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100
Overall	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100

*Note: At 344.9' camera cannot continue due to weld at joint

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Tabular Report of PSR C106 X for Riverview Construction

Setup	2	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS	
Drainage		**Survey Customer** Riverview Construction			
P/O #		**Date** 2022/10/14	**Time** 11:38	**Street** Weston Disposal Site #3	
City	Knownlton	**Further location details**			
Up	C106	**Rim to invert**	**Grade to invert**	**Rim to grade**	Ft
Down	SOUTH	**Rim to invert**	**Grade to invert**	**Rim to grade**	Ft
Use	Processes	**Direction** Down	**Flow control**	**Media No** 22402	
Shape	Circular	**Height** 6 **Width**	ins **Preclean** J	**Date Cleaned**	
Material	Other	**Joint length** 40.0 Ft	**Total length** Ft	**Length Surveyed** 334.9	Ft
Lining		**Year laid**	**Year rehabilitated**	**Weather** Snow	
Purpose	Routine Assessment	**Cat**		**Pressure**	
Additional info			Structural O & M Constructional Miscellaneous		
Location	Yard				
Project	WES22402		**Work Order**		
Northing		**Easting**	**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C106
0.0			MWL	Water Level			0					
36.3			LU	Alignment Up			25					
334.9			LL	Alignment Left			50					
334.9			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

334.9 Ft **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200
Overall	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200

Notes

*Note: At 334.9' camera cannot continue due to bend in line

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Tabular Report of PSR C107 X for Riverview Construction

Setup 3	**Surveyor** Bill Krohn		**Certificate #** U609-1885	**System Owner** WPS	
Drainage		**Survey Customer** Riverview Construction			
P/O #	**Date** 2022/10/14	**Time** 12:22	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C107	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down SOUTH	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0 Ft	**Total length** Ft	**Length Surveyed** 134.2 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Snow		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video		CD	Code		In1	In2	%	Jnt	Fr	To	Im	Ref	Remarks
0.0				ST	Start of Survey									
0.0				AEP	End of Pipe									C107
0.0				MWL	Water Level			0						
36.2				LU	Alignment Up			25						
134.2				LL	Alignment Left			50						
134.2				MSA	Abandoned Survey									CAMERA CANNOT CONTINUE*

134.2 Ft **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200
Overall	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200

Notes

*Note: At 134.2' camera cannot continue due to bend in line

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Tabular Report of PSR C104 X for Riverview Construction

Setup 4	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/10/14	**Time** 12:51	**Street** Weston Disposal Site #3		
City KnownIton	**Further location details**				
Up C104	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down SOUTH	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0 Ft	**Total length** Ft	**Length Surveyed** 499.6 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Snow		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C104
0.0			MWL	Water Level			0					
30.9			LU	Alignment Up			25					
499.6			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

499.6 Ft **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100
Overall	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100

Notes

*Note: At 499.6' camera cannot continue due to weld at joint

Tabular Report of PSR C103 X for Riverview Construction

Setup 5	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/10/14	**Time** 14:10	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C103	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down SOUTH	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0Ft	**Total length** Ft	**Length Surveyed** 415.7 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Snow		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video		CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0				ST	Start of Survey								
0.0				AEP	End of Pipe								C103
0.0				MWL	Water Level			0					
33.8				LU	Alignment Up			25					
415.7				OBJ	Obstacle In Joint			5	J	06		0001	UNKNOWN OBSTRUCTION
415.7				MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

415.7 Ft **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 6	**Pipe Ratings Index** 3	**Quick Rating** 4121
Overall	**Pipe Rating** 6	**Pipe Ratings Index** 3	**Quick Rating** 4121

Notes

*Note: At 415.7' camera cannot continue due to unknown obstruction lodged in joint

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CCTV pictures of C103 X **for** Riverview Construction

Work Order		**Surveyed On** 2022/10/14	**Setup** 5
Street Name	Weston Disposal Site #3		**Video** 22402
City Name	Knownlton	**Weather** Snow	
Location	Yard		
From Manhole	C103	**To Manhole** SOUTH	**Direction** Downstream

Date: 2022/10/14 **Distance:** 415.7 Ft **Obs:** Obstacle In Joint

Comments: UNKNOWN OBSTRUCTION

Tabular Report of PSR C102 X for Riverview Construction

Setup 6	**Surveyor** Bill Krohn		**Certificate #** U609-1885	**System Owner** WPS	
Drainage		**Survey Customer** Riverview Construction			
P/O #	**Date** 2022/10/14	**Time** 15:04	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C102	**Rim to invert**		**Grade to invert**	**Rim to grade**	**Ft**
Down WEST	**Rim to invert**		**Grade to invert**	**Rim to grade**	**Ft**
Use Processes	**Direction** Down	**Flow control**		**Media No** 22402	
Shape Circular	**Height** 6	**Width**	**ins** **Preclean** J	**Date Cleaned**	
Material Other	**Joint length** 40.0 **Ft**	**Total length**	**Ft**	**Length Surveyed** 598.5	**Ft**
Lining	**Year laid**	**Year rehabilitated**		**Weather** Snow	
Purpose Routine Assessment	**Cat**			**Pressure**	
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C102
0.0			MWL	Water Level			0					
41.5			LU	Alignment Up			25					
42.6		S01	MCU	Camera Underwater								
58.0			TF	Tap Factory	6.000				09			
59.9			TF	Tap Factory	6.000				03			
223.4		F01	MCU	Camera Underwater								
598.5			LR	Alignment Right			50					
598.5			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

598.5 **Ft** **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 152	**Pipe Ratings Index** 4	**Quick Rating** 4F00
Overall	**Pipe Rating** 152	**Pipe Ratings Index** 4	**Quick Rating** 4F00

Notes

*Note: At 598.5' camera cannot continue due to elbow
Riverview Construction requested line to be retelevised / See setup 7

CD column indicates continuous defects:
S indicates start of defect
F indicates finish of defect

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Tabular Report of PSR C102 A for Riverview Construction

Setup 7	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/12/27	**Time** 9:43	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C102	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down WEST	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0Ft	**Total length** Ft	**Length Surveyed** 597.9 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Dry		
Purpose Routine Assessment	**Cat**	**Pressure**			
Additional info Retelevise per Riverview Construction			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**	**Elevation**			
Coordinate System		**GPS Accuracy**			

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C102
0.0			MWL	Water Level			0					
2.0			MGO	General Observation								FROST ON PIPE
41.0			LU	Alignment Up			25					
41.5		S01	MCU	Camera Underwater								
57.1			TF	Tap Factory	6.000				09			
59.0			TF	Tap Factory	6.000				03			
203.6		F01	MCU	Camera Underwater								
597.9			LR	Alignment Right			50					
597.9			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

597.9 Ft **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 136	**Pipe Ratings Index** 4	**Quick Rating** 4E00
Overall	**Pipe Rating** 136	**Pipe Ratings Index** 4	**Quick Rating** 4E00

Notes

*Note: At 597.9' camera cannot continue due to elbow

CD column indicates continuous defects:
S indicates start of defect
F indicates finish of defect

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Tabular Report of PSR C101 A for Riverview Construction

Setup 8	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/12/27	**Time** 11:16	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C101	**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**	
Down WEST	**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**	
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width**	**ins** **Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0 **Ft**	**Total length** **Ft**	**Length Surveyed** 602.0 **Ft**		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Dry		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C101
0.0			MWL	Water Level			0					
1.5			MGO	General Observation								FROST ON PIPE
41.0		S01	MCU	Camera Underwater								
42.2			LU	Alignment Up			25					
51.6			JSM	Joint Separated Medium								SEPARATED 1.5"
51.6			MGO	General Observation							0001	POSSIBLE ROLLED GASKET
51.6			MGO	General Observation								ROOTS IN LINE
52.5			TF	Tap Factory	6.000				09			
53.6			JSM	Joint Separated Medium								SEPARATED 1.5"
59.1			TF	Tap Factory	6.000				03			
265.8		F01	MCU	Camera Underwater								
306.3			RMB	Roots Medium Barrel			5		07		0002	AT DRAIN HOLE
307.1		S02	RMB	Roots Medium Barrel			5		05	07		AT DRAIN HOLES
312.5		F02	RMB	Roots Medium Barrel			5		05	07		AT DRAIN HOLES
319.1		S03	RFB	Roots Fine Barrel					05	07		AT DRAIN HOLES
332.3			RMB	Roots Medium Barrel			10		05			
334.5		F03	RFB	Roots Fine Barrel					05	07		AT DRAIN HOLES
348.2		S04	MWLS	Water Level Sag			25					
360.8			RMB	Roots Medium Barrel			5		05	05		AT DRAIN HOLE
401.1		S05	RFB	Roots Fine Barrel					05	07		AT DRAIN HOLES
407.2		F04	MWLS	Water Level Sag			25					
412.4		F05	RFB	Roots Fine Barrel					05	07		AT DRAIN HOLES
602.0			LR	Alignment Right			50					
602.0			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

602.0 **Ft** **Total Length Surveyed**

Tabular Report of PSR C101 A for Riverview Construction

Setup 8	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/12/27	**Time** 11:16	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up C101	**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**	
Down WEST	**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**	
Use Processes	**Direction** Down	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6	**Width** ins	**Preclean** J	**Date Cleaned**	
Material Other	**Joint length** 40.0 **Ft**	**Total length** Ft	**Length Surveyed** 602.0	**Ft**	
Lining	**Year laid**	**Year rehabilitated**	**Weather** Dry		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Scores

Structural:	**Pipe Rating** 26	**Pipe Ratings Index** 1.9	**Quick Rating** 2A12
O&M:	**Pipe Rating** 214	**Pipe Ratings Index** 3.8	**Quick Rating** 4I25
Overall	**Pipe Rating** 240	**Pipe Ratings Index** 5.7	**Quick Rating** 4I2B

Notes

*Note: At 602.0' camera cannot continue due to elbow

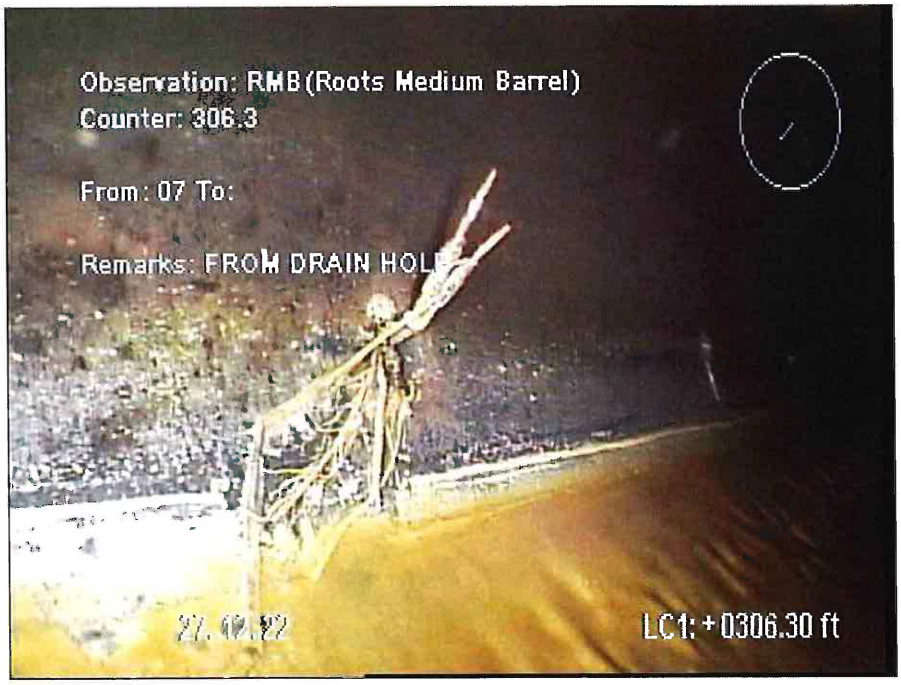
CD column indicates continuous defects:
S indicates start of defect
F indicates finish of defect

CCTV pictures of C101 A **for** Riverview Construction

Work Order		**Surveyed On** 2022/12/27	**Setup** 8
Street Name	Weston Disposal Site #3		**Video** 22402
City Name	Knownlton	**Weather** Dry	
Location	Yard		
From Manhole	C101	**To Manhole** WEST	**Direction** Downstream

Date: 2022/12/27 **Distance:** 51.6 Ft **Obs:** General Observation

Comments: POSSIBLE ROLLED GASKET



Date: 2022/12/27 **Distance:** 306.3 Ft **Obs:** Roots Medium Barrel

Comments: AT DRAIN HOLE

Tabular Report of PSR NORTH A for Riverview Construction

Setup 9	**Surveyor** Bill Krohn	**Certificate #** U609-1885	**System Owner** WPS		
Drainage	**Survey Customer** Riverview Construction				
P/O #	**Date** 2022/12/27	**Time** 12:36	**Street** Weston Disposal Site #3		
City Knownlton	**Further location details**				
Up NORTH	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Down C201	**Rim to invert**	**Grade to invert**	**Rim to grade** Ft		
Use Processes	**Direction** Up	**Flow control**	**Media No** 22402		
Shape Circular	**Height** 6 **Width** ins	**Preclean** J	**Date Cleaned**		
Material Other	**Joint length** 40.0 Ft	**Total length** Ft	**Length Surveyed** 420.0 Ft		
Lining	**Year laid**	**Year rehabilitated**	**Weather** Dry		
Purpose Routine Assessment	**Cat**		**Pressure**		
Additional info			Structural O & M Constructional Miscellaneous		
Location Yard					
Project WES22402			**Work Order**		
Northing	**Easting**		**Elevation**		
Coordinate System			**GPS Accuracy**		

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C201
0.0			MWL	Water Level			0					
73.8			LU	Alignment Up			25					
87.6			TF	Tap Factory	6.000				03			
89.5			TF	Tap Factory	6.000				09			
420.0			MGO	General Observation							0001	WELD AT JOINT
420.0			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

420.0 **Ft** **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100
Overall	**Pipe Rating** 4	**Pipe Ratings Index** 4	**Quick Rating** 4100

Notes

*Note: At 420.0' camera cannot continue due to weld at joint / Approximately 374' not televised

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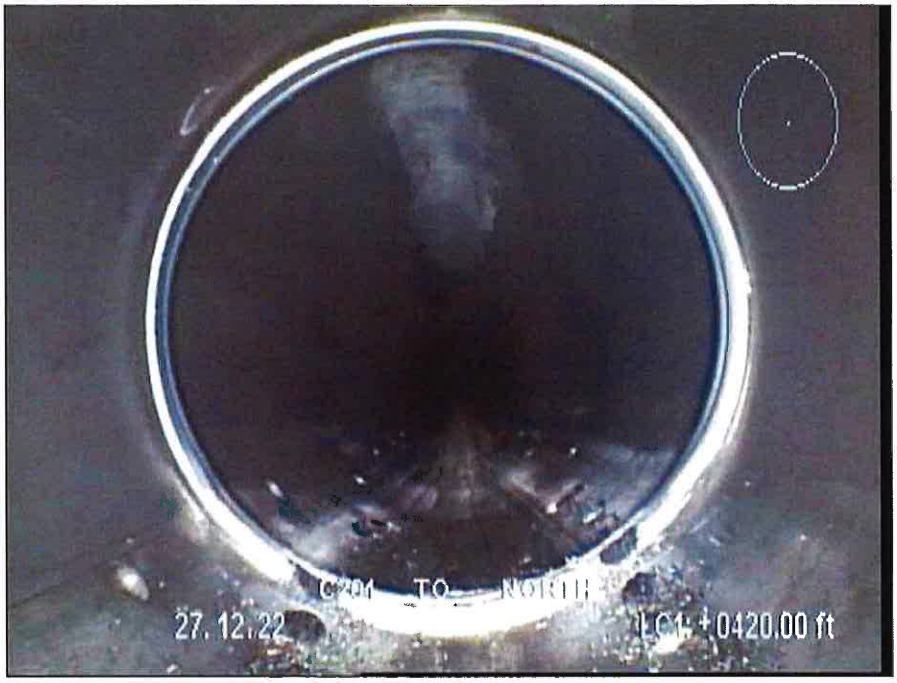
CCTV pictures of NORTH A **for** Riverview Construction

Work Order		**Surveyed On** 2022/12/27	**Setup** 9
Street Name	Weston Disposal Site #3		**Video** 22402
City Name	Knownlton	**Weather** Dry	
Location	Yard		
From Manhole	C201	**To Manhole** NORTH	**Direction** Upstream



Date: 2022/12/27 **Distance:** 420.0 Ft **Obs:** General Observation

Comments: WELD AT JOINT

Tabular Report of PSR C202 A for Riverview Construction

Setup 10	**Surveyor** Bill Krohn		**Certificate #** U609-1885	**System Owner** WPS	
Drainage		**Survey Customer** Riverview Construction			
P/O #		**Date** 2022/12/27	**Time** 14:02	**Street** Weston Disposal Site #3	
City Knownlton		**Further location details**			
Up C202		**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**
Down NORTH		**Rim to invert**	**Grade to invert**	**Rim to grade**	**Ft**
Use Processes		**Direction** Down	**Flow control**	**Media No** 22402	
Shape Circular		**Height** 6 **Width**	**ins** **Preclean** J	**Date Cleaned**	
Material Other		**Joint length** 40.0 **Ft**	**Total length** **Ft**	**Length Surveyed** 428.5 **Ft**	
Lining		**Year laid**	**Year rehabilitated**	**Weather** Dry	
Purpose Routine Assessment		**Cat**		**Pressure**	
Additional info				Structural O & M Constructional Miscellaneous	
Location Yard					
Project WES22402				**Work Order**	
Northing		**Easting**		**Elevation**	
Coordinate System				**GPS Accuracy**	

Count	Video	CD	Code		In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AEP	End of Pipe								C202
0.0			MWL	Water Level			0					
87.7		S01	MCU	Camera Underwater								
88.7			LU	Alignment Up			25					
89.5			TF	Tap Factory	6.000				03			
91.7			TF	Tap Factory	6.000				09			
95.0		F01	MCU	Camera Underwater								
428.5			MSA	Abandoned Survey								CAMERA CANNOT CONTINUE*

428.5 **Ft** **Total Length Surveyed**

Scores

Structural:	**Pipe Rating** 0	**Pipe Ratings Index** 0	**Quick Rating** 0000
O&M:	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200
Overall	**Pipe Rating** 8	**Pipe Ratings Index** 4	**Quick Rating** 4200

Notes

*Note: At 428.5' camera cannot continue due to weld at joint / Approximately 272' not televised

CD column indicates continuous defects:
S indicates start of defect
F indicates finish of defect

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LEACHATE

LINE

JETTING

Great Lakes TV SEAL INC.

3600 Kewaunee Rd. Green Bay, WI 54311
920-863-3663

CLEANING REPORT

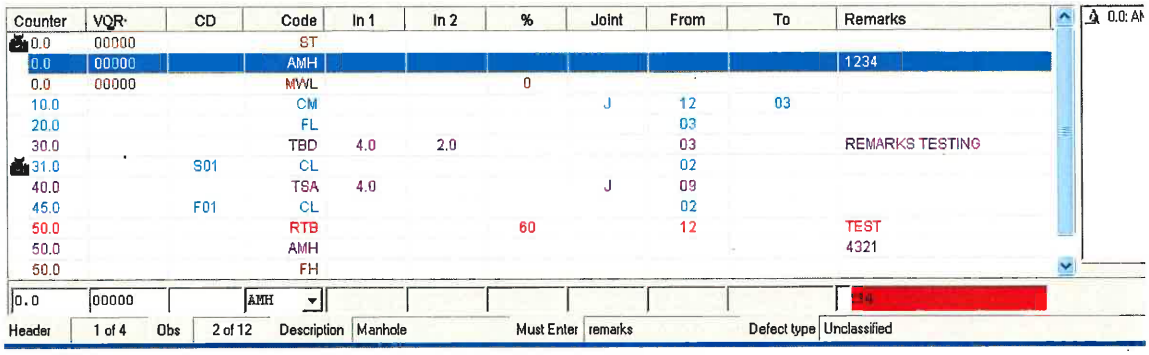
DATE: 10/3/2022
OWNER: Wisconsin Public Service
LOCATION: Weston disposal Site #3
CONTRACTOR: Riverview Construction
LEACHATE: ☑ STORM: ☐

SECTION	PIPE SIZE (inch)	PIPE LENGTH (feet)	DISTANCE JETTED (feet)	Easement Machine used? Y	Easement Machine used? N	REMARKS
C202	6	1,192	600		X	Hose advances very slowly
C105	6		398		X	Hose stops
C201	6	1,188	500		X	Hose advances very slowly
C101	6		622		X	Hose stops
C102	6		600		X	Hose advances slowly
C103	6		400		X	Hose stops
C104	6		400		X	Hose stops
C106	6		570		X	Hose advances slowly
C107	6		500		X	Hose advances slowly

APPENDIX

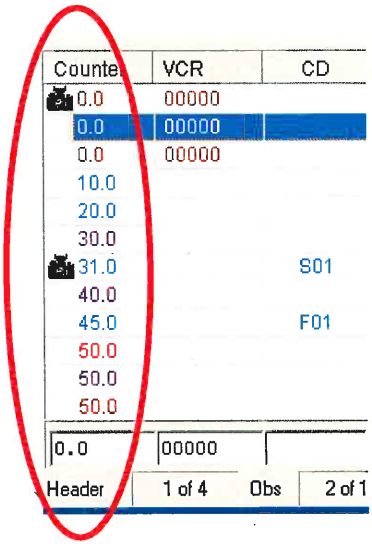
Understanding PipeLogix's PACP Observation Information

Example of a common Observation Screen in PipeLogix program



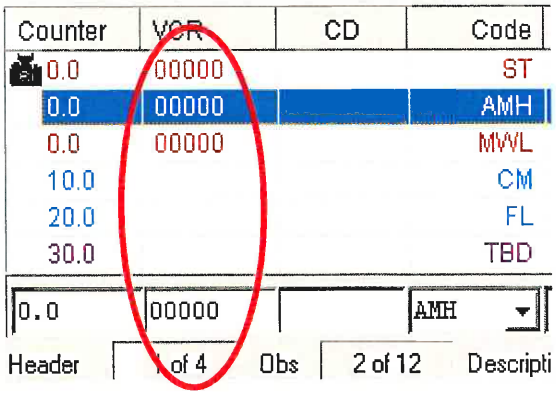
The Counter Column

The **Counter column** displays the distance from the Manhole wall to the Observation/ Defect in tenths of a foot.



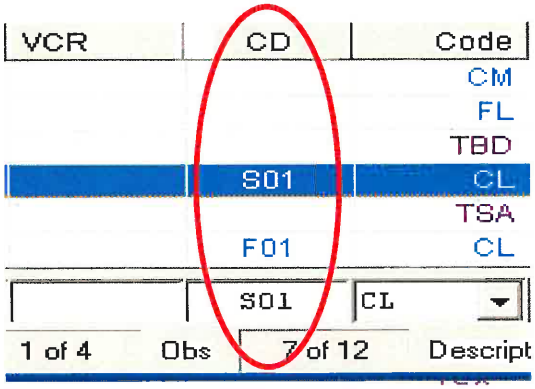
The Video Column

The **Video column** is used if you wish to have Video counter information in the survey.



The CD Column or Continuous Defect Column

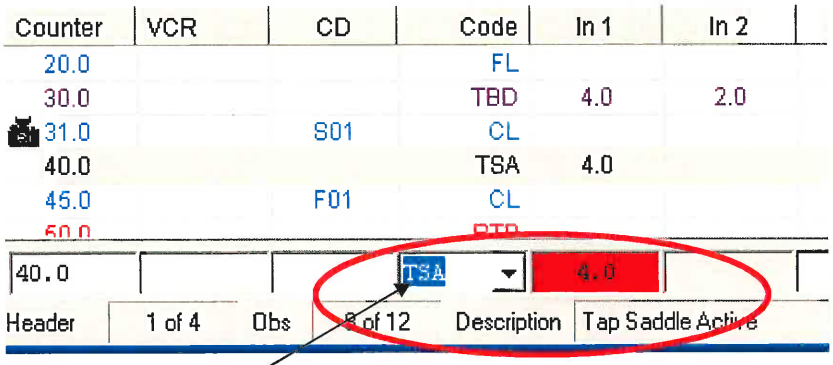
The **CD column** is used to describe Defects that are at least 3 feet in length or defects that occur at regular intervals along the sewer (3 out of 4 joints).



This is an important distinction when scoring a pipe's condition in that the larger/longer the defect the worse the pipe is going to score.

The Code Column

The **Code column** is used to enter in defect/observation Codes into the database.



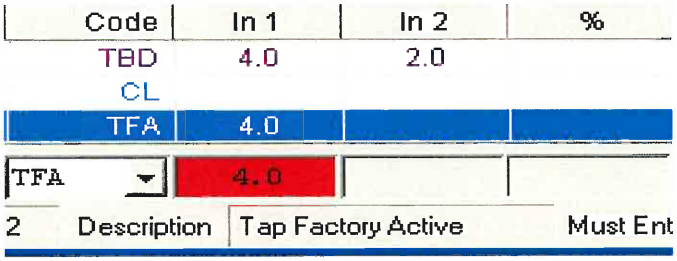
PipeLogix combines the code Group/Descriptor and the Modifier into one column.

An example of this is the TSA code: the Group is T =tap Descriptor is S=saddle and Modifier A=active.

The In 1 Column

The **In 1 column** is mainly used with codes that require dimensions to be indicated.

The most common of these are codes dealing with taps.



As in the example above, TFA code required the operator to enter in the **In 1** column the size of the tap in inches (This is true for all Tap codes).

The other codes that use the **In 1 column** are:

V=Vermin code is used to count the number of vermin

MJL=Miscellaneous Joint Length Change is used to indicate the change in length joint in feet

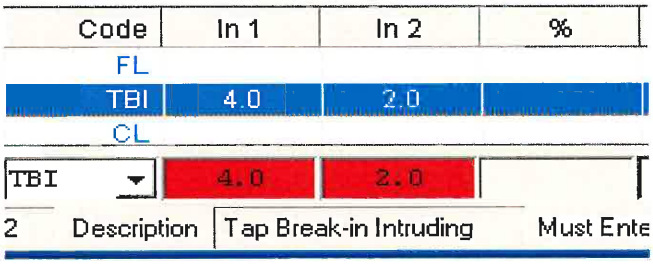
MSC=Miscellaneous Size/Shape Change is used to indicate the change in pipe size in inches

ATC=Access Tee Connection is used to indicate the change in size of a Tee connection in inches

DI= Dropped Invert is used to indicate the amount of drop in the invert in inches

The In 2 Column

The **In 2 column** is the least used column. It is only used with an intrusive junction/ connection code or the dimension of a sewer when it is non-circular.



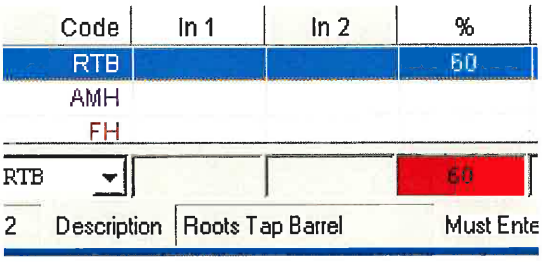
In the example above **TBI (Tap Break-in Intruding)** code is requiring the operator to enter in the **In 2 column** the amount of the intrusion by inch.

The other codes that require the use of the **In 2** column are:

TSI = Tap Saddle Intruding which requires the amount of intrusion by inch

The % or Value Column

The **% column** is used mainly to indicate the amount of blockage in the pipe.

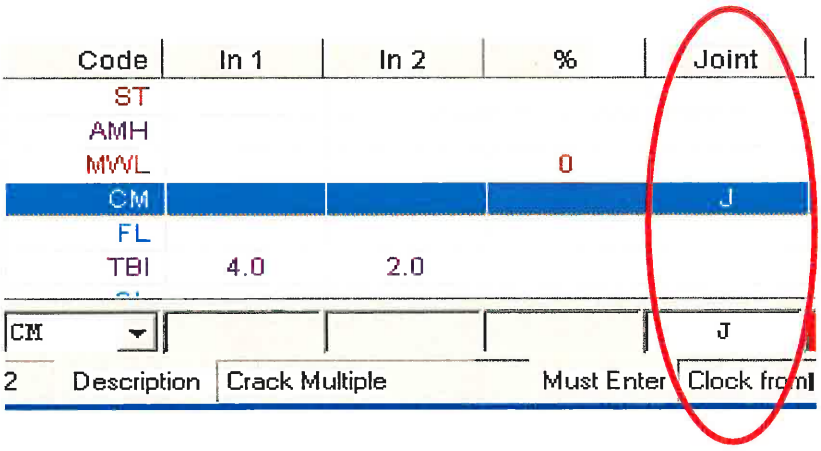


In the example above **RTB= Root Tap Barrel** is requiring the operator to enter in the percentage of the pipe that is being blocked.

The other codes that use the **%** or **Value Column** are:
XP = Collapse Pipe indicates the amount of collapse
XB = Collapses Brick Sewer indicates the amount of collapse
DA (all) = Deposits Attached Codes indicate the amount of blockage in the pipe
DS (all) = Deposits Settled Codes indicate the amount of blockage in the pipe
IS (all) = Intruding Sealing Material Codes indicate the amount of blockage in the pipe
L (all) = Line Codes indicate the amount of direction change in the pipe
O (all) =Obstacles/Obstruction Codes indicate the amount of blockage in the pipe
RT (all) =Roots Tap Codes indicate the amount of blockage in the pipe
RM (all) = Roots Medium indicate the amount of blockage in the pipe
RB (all) =Roots Ball indicate the amount the blockage in the pipe

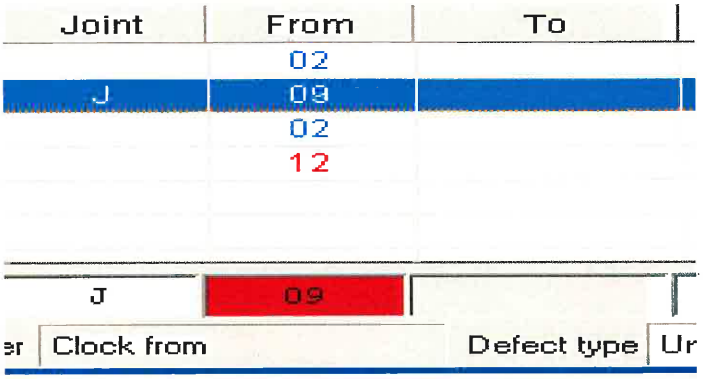
The J or Joint Column

The **J column** is used when a defect/observation is located within 3 feet of a Joint.



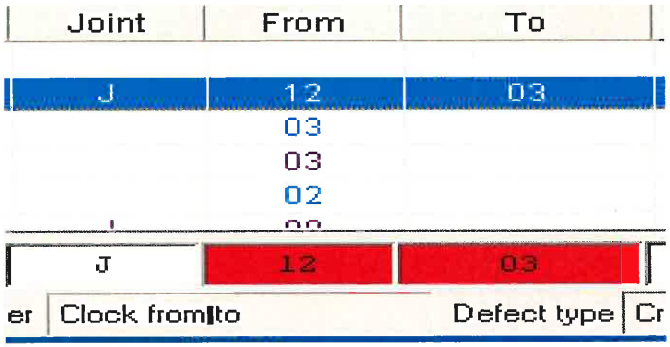
The From or At Column

The **From column** is used to enter the clock position of a defect. Most defects/observations will have a **From** or **At** clock position.



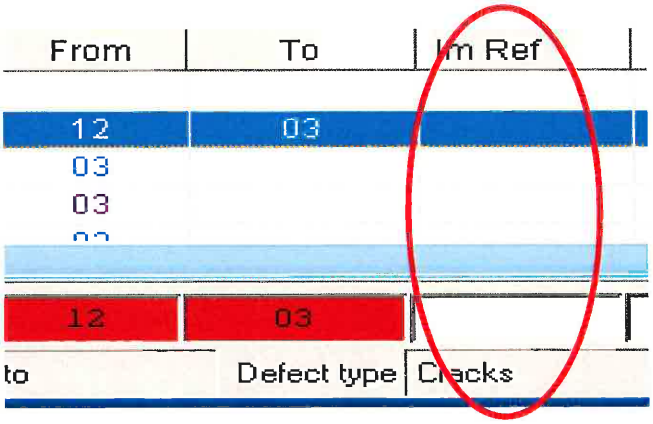
The To Column

The **To column** is used if two clock references are required, the second clock reference being the ending position.



The Im Ref Column

The **Im Ref column** is used when taking pictures of Defects/Observations to indicate that a picture has been taken.



The Remarks Column

The **Remarks column** is used to record details regarding the observation/defects that are not described by codes in other columns.