

**Annual Groundwater Monitoring and Corrective
Action Report**

Indiana Michigan Power Company
Rockport Plant
Landfill CCR Management Unit
Rockport, Indiana

January 31, 2023

Prepared by:
American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43215



An **AEP** Company

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Abbreviations:

ASD - Alternate Source Demonstration

CCR – Coal Combustion Residual

GWPS - Groundwater protection standards

SSI - Statistically Significant Increase

SSL - Statistically Significant Level

I. Overview

This *Annual Groundwater Monitoring and Corrective Action Report* (Report) has been prepared to report the status of activities for the preceding year at the CCR landfill at Indiana Michigan Power Company's (I&M) Rockport Plant. The Indiana Michigan Power Company is wholly-owned subsidiary of American Electric Power Company (AEP). The USEPA's CCR rules require that the Annual Groundwater Monitoring and Corrective Action Report covering the previous year's groundwater monitoring activities be posted to the operating record no later than January 31, 2023.

In general, the following activities were completed:

- At the start of the current annual reporting period, the landfill was operating under the detection monitoring program.
- At the end of the current annual reporting period, the landfill was operating under the detection monitoring program.
- Data and statistical analysis not available for the previous reporting period indicates that during the November 2021 semi-annual sampling event:
 - The following Appendix III parameters exceeded background concentrations:
 - Chloride at wells MW-1I and MW-2D
 - A successful Alternative Source Demonstration was completed for the November 2021 sampling event, and the landfill remained in detection monitoring for the first semi-annual sampling event for 2022.
- The background data was re-established on January 17, 2022.
- During the May 2022 sampling event:
 - The following Appendix III parameters exceeded background:
 - Chloride at wells MW-1I, MW-2D, and MW-2I
 - TDS at well MW-2D
 - A successful Alternative Source Demonstration was completed for the Appendix III exceedances, and the Landfill remained in detection monitoring for the second semi-annual sampling event of 2022.
- The November 2022 semi-annual sampling event data are still undergoing statistical analysis.

The major components of this annual report, to the extent applicable at this time, are presented in sections that follow:

- A map/aerial photograph showing the landfill unit, all groundwater monitoring wells and monitoring well identification numbers (Attached as **Appendix 1**);
- All of the monitoring data collected, including the rate and direction of groundwater flow, plus a summary showing the number of samples collected per monitoring well, the dates the samples were collected, and whether the sample was collected as part of background, detection monitoring, or assessment monitoring programs (Attached as **Appendix 1**);
- Statistical comparison of monitoring data to determine if there have been significant increase over background concentrations (Attached as **Appendix 2**, where applicable);
- A discussion of whether any alternate source demonstrations were performed, and the conclusions (Attached as **Appendix 3**, where applicable);
- A summary of any transition between monitoring programs, or an alternate monitoring frequency, for example the date and circumstances for transitioning from detection monitoring to assessment monitoring, in addition to identifying the constituents detected at a statistically significant increase over background concentrations (Notices Attached as **Appendix 4**, where applicable);
- Identification of any monitoring wells that were installed, or decommissioned during the preceding year, along with a statement as to why that happened (Attached as **Appendix 5**, where applicable); and
- Other information required to be included in the annual report such as alternate source demonstration or assessment of corrective measures, if applicable

In addition, this report summarizes key actions completed, and where applicable, describes any problems encountered and actions taken to resolve those problems. The report includes a projection of key activities for the upcoming year.

II. Groundwater Monitoring Well Locations and Identification Numbers

The CCR landfill monitoring wells are listed as follows (S=shallow, I=Intermediate, D=Deep):

- Five Upgradient/Off Gradient Wells: MW-6S; MW-8(S,I); MW-11S; MW-14S.
- Sixteen Downgradient Wells: MW-17(S,I); MW-15(S,I); MW-16(S,I,D); MW-1(S,I,D); MW-21(S,I,D); and MW-2(S,I,D).

A figure that depicts the PE-certified groundwater monitoring network, the monitoring well locations, and their corresponding identification numbers is provided in **Appendix 1**.

III. Monitoring Wells Installed or Decommissioned

There were no CCR monitoring wells installed or decommissioned in 2022. The network design, as summarized in the *Groundwater Monitoring Network Design Report (Amec Foster Wheeler, 2017)* and as posted at the CCR web site for Rockport Plant's Landfill, did not change. That design

report, viewable on the AEP CCR web site, discusses the facility location, the hydrogeological setting, the hydrostratigraphic units, the uppermost aquifer, downgradient monitoring well locations and the upgradient monitoring well locations.

IV. Groundwater Quality Data and Static Water Elevation Data, With Flow Rates and Flow Directions

Appendix 1 contains tables showing the groundwater quality data collected during the establishment of background quality, detection and assessment monitoring. Static water elevation data from each monitoring event also are shown in **Appendix 1**, along with the groundwater velocity calculations, groundwater flow direction and potentiometric maps developed after each sampling event.

V. Groundwater Quality Data Statistical Analysis

Appendix 2 contains the statistical analysis reports.

- Data and statistical analysis not available for the previous reporting period indicates that during the November 2021 semi-annual sampling event:
 - The following Appendix III parameters exceeded background concentrations:
 - Chloride at wells MW-1I and MW-2D
 - A successful Alternative Source Demonstration was completed for the November 2021 sampling event, and the landfill remained in detection monitoring for the first semi-annual sampling event for 2022.
- During the May 2022 sampling event:
 - The following Appendix III parameters exceeded background:
 - Chloride at wells MW-1I, MW-2D, and MW-2I
 - TDS at well MW-2D
 - A successful Alternative Source Demonstration was completed for the Appendix III exceedances, and the Landfill remained in detection monitoring for the second semi-annual sampling event of 2022.
- The November 2022 semi-annual sampling event data are still undergoing statistical analysis.

VI. Alternate Source Demonstrations

November 2021 Samples

An alternate source demonstration (ASD) by Wood Environment & Infrastructure Solutions Inc. relative to the Appendix III SSIs resulting from the November 2021 sampling event was

undertaken and completed by report dated July 20, 2022. The demonstration concluded that the groundwater quality and Appendix III indicator parameter SSIs identified in the statistical evaluation were not the result of a release of leachate from the landfill, but were due to natural groundwater variation. The successful ASD is included in **Appendix 3**.

Because the ASD for the November 2021 samples was successful, the landfill remained in detection monitoring for the first semiannual samples of 2022 collected in May.

May 2022 Samples

The first semiannual detection monitoring samples of 2022 were collected in May with verification samples collected in July. As discussed above, there were SSIs for Appendix III parameters. An ASD by Wood Environment & Infrastructure Solutions Inc. relative to the Appendix III SSIs was undertaken and completed by report dated October 28, 2022. The demonstration concluded that the groundwater quality and Appendix III indicator parameter SSIs identified in the statistical evaluation were not the result of a release of leachate from the landfill, but were due to natural groundwater variation and impacts from historical oil and gas operations in the vicinity. The successful ASD is included in **Appendix 3**.

Because the ASD for the May 2022 samples was successful, the landfill remained in detection monitoring for the second semiannual samples of 2022 taken in November.

VII. Discussion About Transition Between Monitoring Requirements or Alternate Monitoring Frequency

Because an ASD was successful for the Appendix III SSIs resulting from the statistical analyses of results from both the November 2021 and May 2022 sampling events, the landfill remained in detection monitoring for the November 2022 sampling event. Completion of resampling and statistical analyses of results for the November 2022 sampling event will be completed in early 2023.

If there are no SSIs of Appendix III parameters resulting from statistical analyses of the November 2022 sampling results, the landfill will remain in detection monitoring. If SSIs for the Appendix III indicator parameters are identified, an ASD will be investigated. If the ASD is successful, the landfill will remain in detection monitoring. If an ASD is not successful, then the landfill will proceed with assessment monitoring as required by 40 CFR 257.95.

Regarding defining an alternate monitoring frequency, the groundwater velocity and monitoring well production is high enough at this facility that no modification of the twice-per-year detection monitoring effort is needed.

VIII. Other Information Required

The landfill is currently in detection monitoring. As required by the CCR detection monitoring rules in 40 CFR 257.94, sampling all CCR wells for the Appendix III parameters was completed in 2022.

IX. Description of Any Problems Encountered in 2020 and Actions Taken

No significant problems were encountered. The low flow sampling effort went smoothly and the schedule was met to support the annual groundwater report preparation covering the 2022 groundwater monitoring activities.

X. A Projection of Key Activities for the Upcoming Year

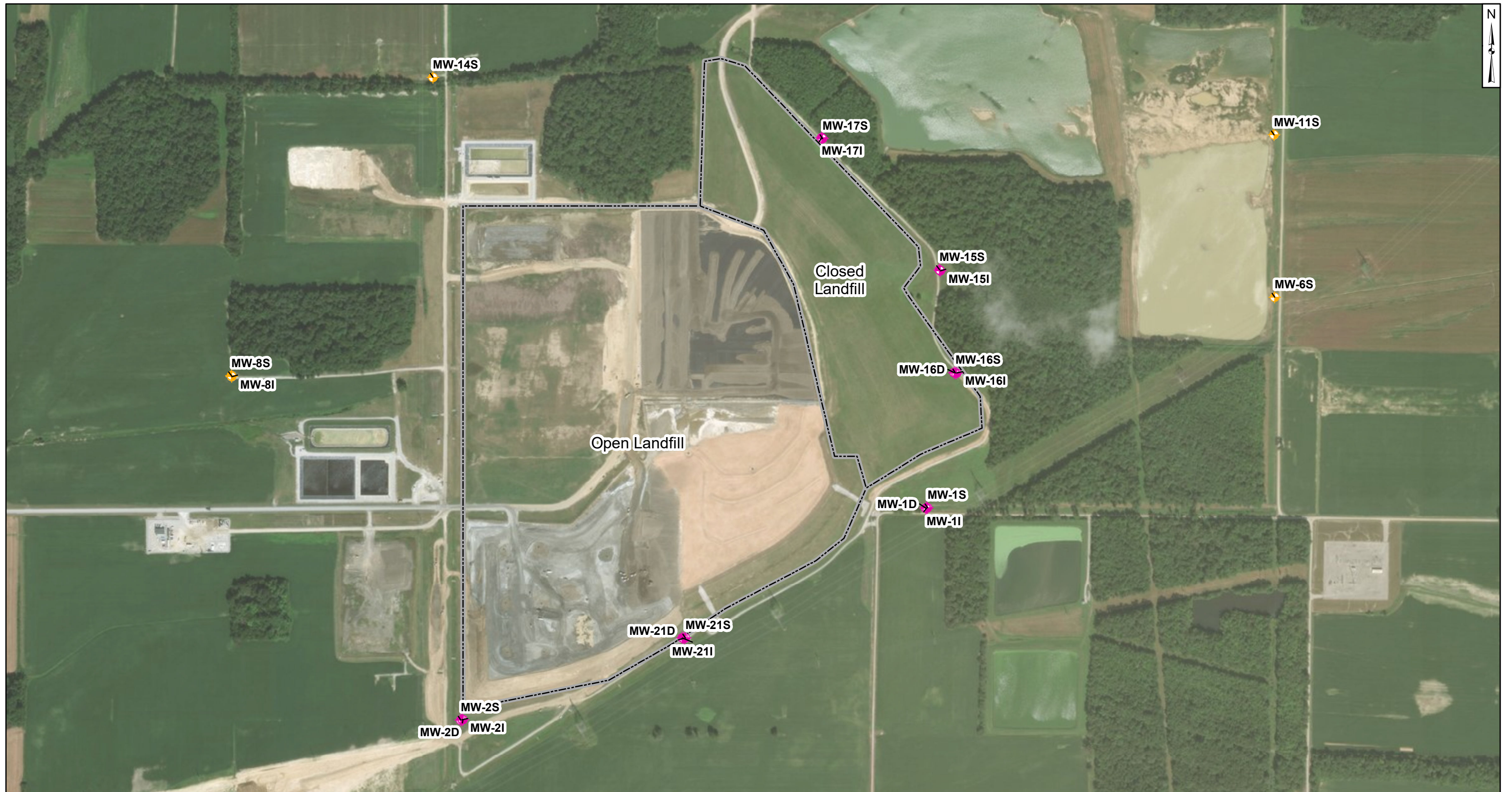
Key activities for 2023 include:

- Completion of resampling and statistical analyses of results from the November 2022 sampling event.
- Detection monitoring on a twice per year schedule (May and November) for 2023.
- Evaluation of the semiannual detection monitoring results from a statistical analysis viewpoint, looking for any statistically significant increases, or decreases when pH is considered.
- Alternate source demonstrations or assessment monitoring activities as necessary or required.
- Responding to any new data received in light of what the CCR rule requires.
- Preparation of the annual groundwater report.

APPENDIX 1 – Groundwater Data Tables and Figures

Figures and Tables follow, showing the groundwater monitoring network, data collected and the rate and direction of groundwater flow. The dates that the samples were collected and it also is shown whether the data were collected under background, detection, or assessment monitoring.

Groundwater Monitoring Network Figure

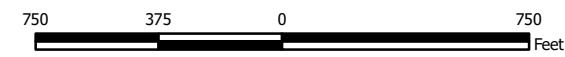


Monitoring Well Network

- ◆ Compliance Sampling Location
- ◆ Background Sampling Location
- Landfill Areas

Notes

- Monitoring well coordinates provided by AEP.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.



**Site Layout
CCR Landfills**

AEP-Rockport Power Plant



Figure

1

Columbus, Ohio

2018/01/26

Groundwater Data Tables

Table 1 - Groundwater Data Summary: MW-001D

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/8/2016	Background	0.017	63.6	27.3	496	0.28	7.6	40.2	331
7/19/2016	Background	0.015	57.9	29.8	471	0.30	7.1	40.6	329
9/20/2016	Background	0.016	65.2	29.8	464	0.28	7.4	32.3	288
11/16/2016	Background	0.018	69.3	39.3	842	0.29	7.5	33.6	339
1/11/2017	Background	0.006	63.4	40.6	400	0.26	7.4	36.4	323
3/8/2017	Background	0.055	70.0	40.3	558	0.26	7.3	37.0	330
5/9/2017	Background	0.046	67.8	40.9	394	0.28	7.3	39.5	342
7/18/2017	Background	0.019	63.9	39.3	525	0.24	8.1	39.6	338
10/4/2017	Detection	0.002 J1	65.7	10.3	448	0.85	7.3	10.4	339
1/3/2018	Detection	--	--	--	539	0.31	7.7	--	--
6/7/2018	Detection	0.103	70.9	43.1	508	0.3	8.2	39.5	345
8/16/2018	Detection	0.020	--	43.8	568	--	7.4	--	--
11/14/2018	Detection	0.100	71.9	46.9	457	0.3	7.8	39.8	340
2/13/2019	Detection	< 0.02 U1	--	--	317	--	7.4	--	--
5/23/2019	Detection	0.02 J1	73.6	32.1	504	0.27	7.2	45.3	346
7/23/2019	Detection	--	--	--	510	--	7.3	39.2	--
11/22/2019	Detection	0.04 J1	72.5	49.1	609	0.27	7.3	41.2	398
2/17/2020	Detection	--	--	--	817	--	7.4	--	257
5/19/2020	Detection	0.04 J1	59.9	23.8	454	0.30	7.1	23.3	261
11/11/2020	Detection	0.04 J1	80.3	56.2	664	0.30	7.1	37.7	397
2/3/2021	Detection	--	56.8	--	467	--	7.5	--	264
5/26/2021	Detection	0.033 J1	77.2	44.0	747	0.26	7.7	38.6	410
8/5/2021	Detection	--	--	--	657	--	7.4	--	440
11/12/2021	Detection	0.042 J1	73.7	55.4	735	0.30	7.4	36.0	410
5/12/2022	Detection	< 0.009 U1	68.6	30.9	624	0.26	7.2	45.4	350
11/3/2022	Detection	0.043 J1	70.2	58.4	673	0.30	7.1	40.6	400

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-001D

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/8/2016	Background	0.05	1.29	255	0.01 J1	0.13	0.3	3.64	1.084	0.28	1.13	< 0.0002 U1	0.002 J1	3.44	0.07 J1	0.04 J1
7/19/2016	Background	0.03 J1	0.73	147	< 0.005 U1	0.07	1.5	0.373	0.195	0.30	1.37	0.017	< 0.002 U1	3.59	0.03 J1	0.02 J1
9/20/2016	Background	0.03 J1	1.07	160	0.007 J1	0.04	0.3	0.836	1.457	0.28	0.500	0.0005 J1	< 0.002 U1	3.60	0.07 J1	0.056
11/16/2016	Background	0.03 J1	0.65	147	< 0.005 U1	0.04	0.072	0.329	7.296	0.29	0.222	0.004	< 0.002 U1	3.24	0.03 J1	0.02 J1
1/11/2017	Background	0.03 J1	0.77	162	< 0.005 U1	0.15	0.439	0.577	0.649	0.26	0.807	0.007	< 0.002 U1	2.43	0.03 J1	0.05 J1
3/8/2017	Background	0.02 J1	0.58	139	< 0.005 U1	0.04	0.687	0.173	0.2384	0.26	1.92	0.007	< 0.002 U1	3.40	0.03 J1	0.03 J1
5/9/2017	Background	0.02 J1	0.75	142	0.006 J1	0.04	0.174	0.440	0.724	0.28	0.419	0.009	< 0.002 U1	3.05	0.06 J1	0.04 J1
7/18/2017	Background	0.02 J1	0.59	139	< 0.004 U1	0.05	0.131	0.212	0.946	0.24	0.355	0.002	< 0.002 U1	2.94	< 0.03 U1	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-001I

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.075	67.4	24.9	461	0.37	6.7	44.3	323
7/19/2016	Background	0.014	60.0	24.8	479	0.40	7.0	46.7	315
9/20/2016	Background	0.018	64.5	24.3	570	0.37	7.4	42.4	331
11/16/2016	Background	0.015	63.9	24.1	544	0.31	7.1	40.7	334
1/11/2017	Background	0.004 J1	60.9	24.4	370	0.33	7.6	41.4	316
3/8/2017	Background	0.045	66.9	24.1	500	0.35	7.4	41.2	300
5/9/2017	Background	0.049	65.7	26.5	443	0.38	7.2	43.8	323
7/18/2017	Background	0.047	64.8	26.5	402	0.34	6.9	43.3	330
10/4/2017	Detection	0.018	68.1	27.5	424	0.37	7.1	44.1	327
6/6/2018	Detection	0.11	66.4	28.6	480	0.42	7.5	42.0	321
8/16/2018	Detection	0.056	--	--	533	--	7.3	--	--
11/14/2018	Detection	0.05 J1	65.5	28.8	425	0.41	7.8	40.7	308
2/13/2019	Detection	--	--	30.1	443	--	7.5	--	--
4/1/2019	Detection	--	--	34.1	802	--	7.4	--	--
5/23/2019	Detection	0.02 J1	67.7	33.1	503	0.42	7.0	40.2	341
7/23/2019	Detection	--	--	30.6	493	--	7.2	--	--
9/11/2019	Detection	--	--	33.5	481	--	7.3	--	--
11/22/2019	Detection	< 0.02 U1	66.7	35.0	491	0.37	7.1	39.7	348
5/19/2020	Detection	0.02 J1	71.2	37.7	566	0.40	7.2	40.1	323
7/16/2020	Detection	--	--	35.4	575	0.39	7.4	--	340
11/11/2020	Detection	< 0.02 U1	65.9	36.3	590	0.43	7.3	39.0	322
2/3/2021	Detection	--	--	36.9	549	--	7.4	--	--
5/26/2021	Detection	0.017 J1	67.4	37.8	648	0.38	7.7	38.6	350
8/4/2021	Detection	--	--	38.2	566	--	7.3	--	--
11/12/2021	Detection	0.016 J1	68.2	42.5	598	0.40	7.5	39.0	340
2/15/2022	Detection	--	--	46.0	614	--	7.2	--	--
5/12/2022	Detection	< 0.009 U1	70.4	46.5	623	0.41	7.3	43.4	350
7/20/2022	Detection	--	--	47.2	650	--	7.5	--	--
11/3/2022	Detection	0.018 J1	67.3	52.4	568	0.42	6.9	43.2	360

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-001I

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.04 J1	0.86	85.5	< 0.005 U1	0.08	0.2	0.341	0.3903	0.37	0.851	0.005	< 0.002 U1	2.47	< 0.03 U1	0.03 J1
7/19/2016	Background	0.04 J1	0.78	86.1	< 0.005 U1	0.10	1.0	0.364	1.675	0.40	1.25	0.022	0.002 J1	2.85	0.04 J1	0.02 J1
9/20/2016	Background	0.01 J1	0.92	84.9	< 0.005 U1	0.02	0.2	0.401	1.696	0.37	0.156	0.007	< 0.002 U1	2.89	< 0.03 U1	0.02 J1
11/16/2016	Background	0.02 J1	0.80	93.4	< 0.005 U1	0.02 J1	0.051	0.381	1.312	0.31	0.059	0.005	< 0.002 U1	3.27	< 0.03 U1	0.03 J1
1/11/2017	Background	0.02 J1	0.82	90.5	0.005 J1	0.02 J1	0.390	0.424	0.621	0.33	0.099	0.005	< 0.002 U1	3.33	< 0.03 U1	0.104
3/8/2017	Background	0.03 J1	0.69	76.7	< 0.005 U1	0.05	0.686	0.054	0.15	0.35	0.427	0.006	< 0.002 U1	1.82	0.04 J1	0.03 J1
5/9/2017	Background	0.04 J1	0.89	85.0	< 0.004 U1	0.01 J1	0.155	0.558	0.63	0.38	0.068	0.008	< 0.002 U1	2.87	< 0.03 U1	0.02 J1
7/18/2017	Background	0.02 J1	0.86	94.3	< 0.004 U1	0.007 J1	0.112	0.569	2.533	0.34	0.137	0.0005 J1	< 0.002 U1	2.85	< 0.03 U1	0.02 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-001S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.037	70.7	29.6	687	0.59	8.1	33.7	392
7/19/2016	Background	0.015	62.9	31.1	612	0.65	7.2	35.5	392
9/20/2016	Background	0.022	68.0	31.4	703	0.60	7.1	32.4	411
11/16/2016	Background	0.020	74.4	31.9	657	0.54	7.3	30.7	398
1/11/2017	Background	0.005 J1	65.0	32.0	470	0.57	7.4	30.7	392
3/8/2017	Background	0.030	71.5	30.7	300	0.59	7.1	30.5	384
5/9/2017	Background	0.031	72.6	31.3	567	0.63	7.2	33.3	402
7/18/2017	Background	0.028	69.2	30.4	536	0.58	7.3	33.6	406
10/4/2017	Detection	0.044	67.6	33.1	635	0.57	7.1	34.6	396
1/3/2018	Detection	--	--	39.9	686	--	7.6	--	--
6/6/2018	Detection	0.046	71.8	34.9	590	0.61	7.5	34.2	386
8/16/2018	Detection	--	--	37.3	658	--	7.3	--	--
11/14/2018	Detection	0.04 J1	71.9	38.1	535	0.63	7.5	32.3	410
2/13/2019	Detection	--	--	40.4	530	--	7.5	--	--
4/1/2019	Detection	--	--	38.5	892	--	7.4	--	--
5/23/2019	Detection	< 0.02 U1	73.7	33.7	593	0.55	7.9	36.3	388
7/23/2019	Detection	--	--	30.0	618	--	7.4	--	--
11/22/2019	Detection	< 0.02 U1	69.8	30.6	612	0.57	6.9	35.9	444
2/18/2020	Detection	--	--	--	1,386	--	7.1	--	442
5/19/2020	Detection	0.02 J1	72.0	34.7	440	0.55	7.0	37.1	350
11/11/2020	Detection	< 0.02 U1	67.8	33.3	691	0.66	7.0	34.1	402
5/26/2021	Detection	0.019 J1	66.2	35.0	793	0.66	7.8	31.6	430
8/5/2021	Detection	--	--	--	699	--	7.3	--	430
11/12/2021	Detection	0.018 J1	65.8	32.9	687	0.65	7.56	31.0	380
5/12/2022	Detection	< 0.009 U1	65.9	35.0	658	0.62	7.38	36.8	380
11/3/2022	Detection	0.017 J1	66.3	50.7	593	0.41	6.85	43.2	340

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-001S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.03 J1	0.43	18.5	< 0.01 U1	0.02 J1	0.3	0.171	0.0665	0.59	0.204	0.004	< 0.002 U1	0.65	1.1	< 0.02 U1
7/19/2016	Background	0.20	0.69	21.9	0.160	0.22	0.7	0.398	0.819	0.65	0.572	0.024	< 0.002 U1	0.80	1.1	0.168
9/20/2016	Background	0.02 J1	0.38	17.2	< 0.005 U1	0.005 J1	0.3	0.014	0.244	0.60	0.01 J1	0.002	< 0.002 U1	0.68	0.9	< 0.01 U1
11/16/2016	Background	0.02 J1	0.38	17.9	< 0.005 U1	0.007 J1	0.207	0.01 J1	0.296	0.54	0.022	0.010	< 0.002 U1	0.74	0.9	< 0.01 U1
1/11/2017	Background	0.04 J1	0.43	17.7	< 0.005 U1	0.02	0.720	0.052	0.934	0.57	0.076	0.008	< 0.002 U1	0.59	1.0	< 0.01 U1
3/8/2017	Background	0.04 J1	0.76	36.5	0.023	0.09	1.38	1.21	0.0407	0.59	1.26	0.010	< 0.002 U1	0.97	1.1	0.03 J1
5/9/2017	Background	0.05 J1	0.50	22.3	0.01 J1	0.22	0.552	0.164	0.0324	0.63	0.526	0.009	< 0.002 U1	1.64	1.1	< 0.01 U1
7/18/2017	Background	0.02 J1	0.39	17.3	< 0.004 U1	0.01 J1	0.255	0.02 J1	0.309	0.58	0.033	0.0007 J1	< 0.002 U1	0.64	1.2	< 0.01 U1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

**Table 1 - Groundwater Data Summary: MW-002D
Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	< 0.002 U1	75.6	24.2	586	0.19	7.9	42.1	341
7/20/2016	Background	0.010	65.8	24.2	524	0.21	7.5	44.2	339
9/21/2016	Background	0.013	66.7	22.8	551	0.20	7.3	39.6	338
11/17/2016	Background	0.014	73.9	22.2	516	0.19	7.1	35.4	327
1/11/2017	Background	< 0.002 U1	64.2	22.3	386	0.19	7.4	38.3	318
3/8/2017	Background	0.030	74.2	21.7	568	0.20	7.4	37.6	318
5/9/2017	Background	0.027	70.8	23.1	388	0.21	7.3	40.5	343
7/19/2017	Background	0.073	64.7	23.0	516	0.18	8.5	40.5	340
10/4/2017	Detection	0.041	67.7	22.4	428	0.20	7.2	42.3	332
6/7/2018	Detection	0.076	78.6	43.1	460	0.22	7.6	39.8	361
8/16/2018	Detection	0.038	--	93	830	--	7.3	--	--
11/12/2018	Detection	0.07 J1	72.4	51.3	464	0.2	7.4	36.1	348
2/13/2019	Detection	--	--	40.9	391	--	7.3	--	--
4/1/2019	Detection	--	--	69.4	608	--	7.5	--	--
5/22/2019	Detection	< 0.02 U1	98.5	135	803	0.18	7.3	33.3	531
7/24/2019	Detection	--	114	156	834	--	6.3	--	540
9/11/2019	Detection	--	103	110	705	--	7.2	--	443
11/14/2019	Detection	0.02 J1	76.9	56.5	726	0.18	7.3	38.9	356
2/18/2020	Detection	--	--	76.3	1,377	--	7.1	--	--
5/18/2020	Detection	< 0.02 U1	88.7	93.6	617	0.21	7.8	36.2	399
7/15/2020	Detection	--	--	96.2	781	0.20	7.3	--	411
11/11/2020	Detection	< 0.02 U1	92.2	92.2	725	0.20	7.2	35.1	395
2/3/2021	Detection	--	--	74.2	674	--	7.3	--	400
5/27/2021	Detection	0.012 J1	88.5	82.9	664	0.21	9.5	37.6	440
8/5/2021	Detection	--	--	94.2	734	--	7.2	--	420
11/11/2021	Detection	0.011 J1	96.3	135	943	0.20	6.8	33.3	470
2/15/2022	Detection	--	--	159	951	--	7.2	--	--
5/12/2022	Detection	< 0.009 U1	114	184	1,050	0.20	7.3	39.1	580
7/20/2022	Detection	--	--	175	1,050	--	7.1	--	650
11/2/2022	Detection	0.012 J1	105	196	989	0.21	7.0	39.0	630

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-002D

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.03 J1	0.78	185	< 0.005 U1	0.12	0.2	0.473	0.0495	0.19	0.648	0.002	< 0.002 U1	2.11	< 0.03 U1	0.02 J1
7/20/2016	Background	0.06	0.82	195	0.006 J1	0.12	0.4	0.439	0.328	0.21	0.359	0.018	< 0.002 U1	2.16	< 0.03 U1	0.02 J1
9/21/2016	Background	0.02 J1	0.81	180	0.007 J1	0.07	0.3	0.425	0.451	0.20	0.247	0.002	< 0.002 U1	1.97	0.05 J1	0.03 J1
11/17/2016	Background	0.02 J1	0.61	172	< 0.005 U1	0.10	0.05 J1	0.212	2.243	0.19	0.021	0.007	< 0.002 U1	2.09	0.09 J1	0.01 J1
1/11/2017	Background	0.03 J1	0.62	157	< 0.005 U1	0.26	0.277	0.327	1.278	0.19	0.378	0.007	< 0.002 U1	1.80	0.08 J1	0.02 J1
3/8/2017	Background	0.03 J1	0.59	160	< 0.005 U1	0.09	0.562	0.252	1.295	0.20	0.045	0.008	< 0.002 U1	2.13	0.03 J1	0.02 J1
5/9/2017	Background	0.04 J1	0.65	159	< 0.004 U1	0.08	0.188	0.335	0.4554	0.21	0.144	0.011	< 0.002 U1	1.90	0.06 J1	0.02 J1
7/19/2017	Background	0.02 J1	0.62	169	< 0.004 U1	0.08	0.162	0.353	0.372	0.18	0.075	0.0006 J1	< 0.002 U1	1.89	0.04 J1	0.02 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-0021

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.019	74.0	28.6	581	0.30	7.9	42.9	332
7/20/2016	Background	0.009	67.5	29.7	542	0.33	7.1	45.7	363
9/21/2016	Background	0.025	66.8	28.0	513	0.31	7.5	41.1	330
11/17/2016	Background	0.013	73.9	25.8	495	0.36	7.3	36.9	326
1/11/2017	Background	< 0.002 U1	63.9	27.1	370	0.30	7.7	39.2	314
3/8/2017	Background	0.024	71.5	25.8	557	0.31	7.6	39.2	312
5/9/2017	Background	0.034	71	28.6	383	0.31	8.4	42.4	343
7/19/2017	Background	0.025	68.9	29.7	431	0.28	7.0	44.1	346
10/4/2017	Detection	0.030	72.5	29.8	553	0.28	7.2	45.5	343
1/4/2018	Detection	--	--	28.8	568	--	7.8	--	--
6/6/2018	Detection	0.052	72.7	31.8	802	0.32	7.6	43.2	356
8/16/2018	Detection	0.03	--	31.5	614	--	7.5	--	--
11/13/2018	Detection	0.05 J1	64.8	27.9	434	0.32	7.2	39	308
2/13/2019	Detection	< 0.02 U1	--	--	435	--	7.6	--	--
5/22/2019	Detection	< 0.02 U1	64.3	25.4	481	0.32	7.3	39.2	328
11/14/2019	Detection	< 0.02 U1	63.4	23.3	576	0.33	7.4	39.3	296
5/18/2020	Detection	< 0.02 U1	61.9	24.4	420	0.36	7.8	40.5	297
11/11/2020	Detection	< 0.02 U1	66.6	24.3	558	0.37	6.9	38.6	296
2/3/2021	Detection	--	--	--	491	--	7.4	--	--
5/27/2021	Detection	0.013 J1	70.9	29.2	510	0.35	9.7	40.8	350
8/4/2021	Detection	--	--	--	581	--	7.3	--	--
11/11/2021	Detection	0.013 J1	72.1	31.7	647	0.32	7.0	37.2	340
5/12/2022	Detection	< 0.009 U1	78.0	51.3	700	0.30	7.5	41.1	380
7/19/2022	Detection	--	--	58.8	669	--	6.9	--	--
11/2/2022	Detection	0.013 J1	79.8	57.2	641	0.31	7.1	40.3	390

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-0021

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.06	0.64	78.5	< 0.005 U1	0.03	0.2	0.606	0.398	0.30	0.208	0.005	< 0.002 U1	4.91	0.7	0.051
7/20/2016	Background	0.06	0.68	84.0	0.006 J1	0.05	0.6	0.760	0.962	0.33	0.454	0.021	< 0.002 U1	5.00	0.7	0.04 J1
9/21/2016	Background	0.07	0.55	67.1	< 0.005 U1	0.05	0.1	0.415	0.508	0.31	0.178	0.002	< 0.002 U1	4.21	0.6	0.04 J1
11/17/2016	Background	0.13	0.61	60.1	< 0.005 U1	0.07	0.143	0.260	0.425	0.36	0.231	0.006	< 0.002 U1	3.14	0.4	0.02 J1
1/11/2017	Background	0.10	0.65	59.4	< 0.005 U1	0.16	0.154	0.280	0.845	0.30	0.383	0.007	< 0.002 U1	2.07	0.2	0.03 J1
3/8/2017	Background	0.10	0.74	58.4	0.01 J1	0.22	1.01	0.581	0.435	0.31	0.588	0.005	< 0.002 U1	2.06	0.2	0.03 J1
5/9/2017	Background	0.15	0.90	59.3	0.022	0.09	0.829	1.28	0.491	0.31	1.39	0.007	< 0.002 U1	2.17	0.4	< 0.01 U1
7/19/2017	Background	0.11	0.76	62.9	0.020	0.05	0.567	0.995	0.536	0.28	1.19	< 0.0002 U1	< 0.002 U1	2.07	0.2	0.064

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-002S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	< 0.002 U1	59.4	21.5	423	0.26	6.4	26.0	298
7/20/2016	Background	0.015	51.6	21.8	465	0.29	7.7	27.6	265
9/21/2016	Background	0.014	57.4	23.8	440	0.26	7.6	26.2	301
11/17/2016	Background	0.018	62.4	21.8	459	0.26	7.3	24.1	316
1/11/2017	Background	0.004 J1	51.6	21.2	341	0.25	7.7	25.9	284
3/8/2017	Background	0.069	57.9	21.0	522	0.26	7.7	26.6	285
5/9/2017	Background	0.084	59	20.8	354	0.26	7.1	30.3	321
7/19/2017	Background	0.052	53.3	19.6	409	0.23	7.5	33.8	308
10/4/2017	Detection	0.045	60.7	21.2	509	0.25	7.2	30.0	323
6/6/2018	Detection	0.073	57	25.3	470	0.29	7.6	28.9	329
11/13/2018	Detection	0.06 J1	54.7	24.8	425	0.28	7.5	24.7	272
2/13/2019	Detection	--	--	26.5	451	--	7.8	--	--
4/1/2019	Detection	--	--	26.1	491	--	7.7	--	--
5/22/2019	Detection	< 0.02 U1	51.3	26.4	500	0.30	7.7	26.2	352
7/23/2019	Detection	--	--	26.8	486	0.30	7.5	--	339
9/11/2019	Detection	--	--	26.6	473	--	7.3	--	--
11/14/2019	Detection	0.03 J1	59.2	27.3	657	0.28	7.5	27.8	336
2/18/2020	Detection	--	--	--	1,070	--	7.4	--	--
5/18/2020	Detection	0.02 J1	53.7	28.9	462	0.34	7.4	24.9	344
7/15/2020	Detection	--	--	28.7	584	0.33	7.6	--	347
11/11/2020	Detection	0.03 J1	58.4	27.0	588	0.34	7.4	25.7	336
2/4/2021	Detection	--	--	--	562	0.36	7.6	--	--
5/27/2021	Detection	0.043 J1	59.8	24.8	500	0.35	9.5	30.8	370
8/4/2021	Detection	--	--	--	579	0.35	7.3	--	--
11/11/2021	Detection	0.028 J1	55.2 M1, P3	23.0	588	0.33	7.0	27.1	330
5/12/2022	Detection	< 0.009 U1	42.8 M1, P3	16.8	482	0.39	7.6	17.9	280
11/2/2022	Detection	0.021 J1	43.0	13.8	420	0.43	6.8	17.7	270

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

M1: The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.

P3: The precision on the matrix spike duplicate (MSD) was above acceptance limits.

Table 1 - Groundwater Data Summary: MW-002S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	< 0.02 U1	0.97	16.0	< 0.01 U1	0.01 J1	0.4	0.177	< 1.2 U1	0.26	0.158	0.0004 J1	< 0.002 U1	2.03	0.3	< 0.02 U1
7/20/2016	Background	0.02 J1	1.09	14.0	< 0.005 U1	0.01 J1	0.6	0.090	0.66	0.29	0.105	0.018	< 0.002 U1	2.39	0.3	< 0.01 U1
9/21/2016	Background	0.04 J1	0.94	12.4	< 0.005 U1	0.02 J1	0.3	0.017	0.172	0.26	0.101	0.005	< 0.002 U1	2.07	0.2	< 0.01 U1
11/17/2016	Background	0.02 J1	0.94	12.4	< 0.005 U1	0.02	0.337	0.019	0.371	0.26	0.022	0.008	< 0.002 U1	1.91	0.3	< 0.01 U1
1/11/2017	Background	0.02 J1	0.92	11.0	< 0.005 U1	0.09	0.329	0.014	0.654	0.25	0.063	0.009	< 0.002 U1	2.14	0.4	0.074
3/8/2017	Background	0.02 J1	0.95	12.3	< 0.005 U1	0.009 J1	0.670	0.051	0.5205	0.26	0.042	0.0007 J1	< 0.002 U1	1.92	0.3	< 0.01 U1
5/9/2017	Background	0.04 J1	0.95	12.3	< 0.004 U1	0.01 J1	0.370	0.064	0.434	0.26	0.047	0.002	< 0.002 U1	1.75	0.2	< 0.01 U1
7/19/2017	Background	0.12	0.96	13.6	< 0.004 U1	0.03	0.410	0.121	0.6927	0.23	0.243	0.005	< 0.002 U1	1.81	0.3	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-006S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/8/2016	Background	0.012	46.1	8.44	435	0.73	7.9	18.8	294
7/18/2016	Background	0.014	46.3	8.35	401	0.79	7.5	18.3	290
9/20/2016	Background	0.012	44.4	6.04	430	0.73	7.4	10.9	266
11/16/2016	Background	0.028	50.8	7.04	741	0.69	8.1	14.3	279
1/10/2017	Background	0.006	47.8	7.03	360	0.65	7.9	14.0	287
3/8/2017	Background	0.032	53.2	3.32	300	0.25	7.9	6.9	296
5/8/2017	Background	0.051	50.3	8.68	441	0.69	7.6	17.5	305
7/18/2017	Background	0.078	47.0	4.88	292	0.57	7.7	9.6	274
10/3/2017	Detection	0.094	44.8	3.28	347	0.71	7.3	7.5	261
6/5/2018	Detection	0.09	45.2	2.38	330	0.89	7.5	3.8	225
8/15/2018	Detection	0.101	52.8	11.9	483	0.81	7.7	15.6	277
9/26/2018	Detection	0.08 J1	44.1	6.83	--	0.84	--	9.8	261
11/1/2018	Detection	0.04 J1	42.3	3.52	430	0.86	7.3	4.9	225
11/14/2018	Detection	--	--	--	221	--	7.9	--	--
11/15/2018	Detection	0.04 J1	38.8	3.91	--	0.88	--	5.2	196
5/23/2019	Detection	0.02 J1	52.5	9.64	473	0.95	7.4	16.8	315
11/14/2019	Detection	< 0.02 U1	47.8	5.36	452	0.90	7.3	12.0	277
5/19/2020	Detection	< 0.02 U1	43.1	1.49	373	1.02	7.7	1.6	214
11/12/2020	Detection	< 0.02 U1	43.0	2.07	366	1.11	7.1	4.4	225
5/25/2021	Detection	0.017 J1	43.4	1.29	354	1.21	8.0	0.83	210
11/12/2021	Detection	0.015 J1	46.8 M1, P3	2.03	450	1.15	7.4	2.91	240
5/13/2022	Detection	< 0.009 U1	46.3 M1, P3	2.54	506	1.09	7.3	6.24	270
11/3/2022	Detection	0.016 J1	47.8	2.88	411	1.11	7.8	6.01	280

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

M1: The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.

P3: The precision on the matrix spike duplicate (MSD) was above acceptance limits.

Table 1 - Groundwater Data Summary: MW-006S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/8/2016	Background	0.02 J1	0.28	13.9	< 0.005 U1	0.006 J1	0.4	0.097	0.156	0.73	0.396	< 0.0002 U1	0.002 J1	5.99	0.4	< 0.01 U1
7/18/2016	Background	0.03 J1	0.26	13.6	0.005 J1	0.25	0.4	0.052	0.101	0.79	0.074	0.015	< 0.002 U1	3.28	0.3	0.01 J1
9/20/2016	Background	0.03 J1	0.26	13.6	< 0.005 U1	0.02	0.3	0.019	0.8651	0.73	0.034	0.004	< 0.002 U1	3.34	0.2	< 0.01 U1
11/16/2016	Background	0.03 J1	0.26	14.1	< 0.005 U1	0.02 J1	0.200	0.027	0.202	0.69	0.050	0.006	< 0.002 U1	2.80	0.3	< 0.01 U1
1/10/2017	Background	0.03 J1	0.28	14.8	< 0.005 U1	0.008 J1	0.599	0.045	0.5825	0.65	0.032	0.014	< 0.002 U1	2.93	0.4	0.01 J1
3/8/2017	Background	0.03 J1	0.26	15.8	< 0.005 U1	0.05	1.37	0.049	0.297	0.25	0.113	0.009	< 0.002 U1	3.29	0.7	< 0.01 U1
5/8/2017	Background	0.03 J1	0.28	15.4	< 0.004 U1	0.009 J1	0.583	0.061	0.12	0.69	0.083	0.011	< 0.002 U1	2.73	0.8	< 0.01 U1
7/18/2017	Background	0.02 J1	0.27	14.3	< 0.004 U1	0.04	0.291	0.026	0.954	0.57	0.056	< 0.0002 U1	< 0.002 U1	4.36	0.4	< 0.01 U1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-008I

Geosyntec Consultants, Inc.

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/7/2016	Background	0.017	72.0	21.7	598	0.35	7.2	87.5	370
7/19/2016	Background	0.016	67.9	22.0	580	0.34	7.2	86.3	358
9/21/2016	Background	0.017	67.4	21.5	455	0.29	7.4	79.2	376
11/17/2016	Background	0.028	77.5	21.3	968	0.29	7.6	77.5	387
1/10/2017	Background	0.006	79.5	20.9	420	0.25	7.6	80.0	371
3/6/2017	Background	0.083	74.7	20.7	80	0.28	7.4	80.3	391
5/9/2017	Background	0.045	71.9	21.2	507	0.28	7.2	81.9	376
7/18/2017	Background	0.026	72.2	20.9	485	0.25	7.3	83.4	379
10/4/2017	Detection	0.096	74.7	20.1	471	0.27	7.6	85.9	378
12/12/2017	Detection	--	--	19.3	390	0.29	7.9	87.1	--
6/4/2018	Detection	0.044	76.7	20.9	619	0.29	7.7	79.0	407
11/14/2018	Detection	0.06 J1	67.7	20.6	453	0.33	7.2	68.2	390
5/23/2019	Detection	0.03 J1	70.7	21.0	607	0.34	7.2	62.3	371
11/22/2019	Detection	0.02 J1	66.9	19.7	525	0.30	6.7	68.3	381
5/19/2020	Detection	0.02 J1	68.8	20.4	601	0.32	7.8	61.7	357
11/10/2020	Detection	< 0.02 U1	66.8	19.3	621	0.38	7.4	56.7	343
5/27/2021	Detection	0.020 J1	68.1	18.8	530	0.36	8.3	56.0	390
11/12/2021	Detection	0.020 J1	67.6	19.3	643	0.34	6.8	54.0	350
5/12/2022	Detection	0.009 J1	67.0	20.0	619	0.35	7.3	57.6	340
11/2/2022	Detection	0.022 J1	65.1	20.8	571	0.39	7.1	55.7	360

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-008I

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/7/2016	Background	0.12	5.86	61.4	< 0.005 U1	0.04	0.1	0.800	0.538	0.35	0.083	0.006	< 0.002 U1	2.85	6.2	0.063
7/19/2016	Background	0.27	11.5	70.1	0.119	0.28	0.5	0.961	1.2515	0.34	0.242	0.007	< 0.002 U1	3.00	7.5	0.166
9/21/2016	Background	0.07	2.08	57.0	< 0.005 U1	0.02 J1	0.1	0.643	0.678	0.29	0.02 J1	0.008	< 0.002 U1	2.34	2.7	0.03 J1
11/17/2016	Background	0.10	1.39	58.4	< 0.005 U1	0.04	0.055	0.646	1.166	0.29	0.032	0.009	< 0.002 U1	2.47	3.0	0.03 J1
1/10/2017	Background	0.08	2.58	54.9	< 0.005 U1	0.02 J1	0.817	0.671	1.825	0.25	0.025	0.005	< 0.002 U1	2.31	2.3	0.04 J1
3/6/2017	Background	0.08	2.78	56.9	< 0.005 U1	0.04	0.511	0.656	1.015	0.28	0.032	0.010	< 0.002 U1	2.73	2.9	0.05 J1
5/9/2017	Background	0.08	2.09	57.8	< 0.004 U1	0.05	0.230	0.770	1.011	0.28	0.054	0.001	< 0.002 U1	2.29	4.5	0.03 J1
7/18/2017	Background	0.07	1.31	60.4	< 0.004 U1	0.02 J1	0.077	0.672	1.079	0.25	0.01 J1	< 0.0002 U1	< 0.002 U1	2.58	4.7	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-008S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/7/2016	Background	0.010	42.7	23.7	520	0.56	7.3	26.5	345
7/19/2016	Background	0.012	41.5	23.5	516	0.56	7.2	26.4	321
9/21/2016	Background	0.011	42.7	22.1	540	0.54	7.1	23.4	332
11/17/2016	Background	0.032	42.9	21.1	811	0.55	7.9	21.7	322
1/9/2017	Background	< 0.002 U1	45.8	20.8	450	0.47	7.6	22.1	300
3/7/2017	Background	0.043	44.8	21.4	260	0.52	7.6	21.7	320
5/9/2017	Background	0.028	42.9	22.8	444	0.52	7.4	21.8	319
7/18/2017	Background	0.022	44.4	22.7	410	0.47	7.4	22.3	319
10/4/2017	Detection	0.016	39.8	22.4	395	0.52	7.8	23.1	317
12/12/2017	Detection	--	--	22.5	460	0.56	7.7	24.9	--
6/5/2018	Detection	0.058	42.3	23.8	400	0.59	7.6	21.2	324
11/13/2018	Detection	0.04 J1	35.6	22.9	354	0.57	7.6	19.5	288
5/23/2019	Detection	< 0.02 U1	35.9	23.6	440	0.58	7.4	20.4	312
11/21/2019	Detection	< 0.02 U1	39.0	23.1	495	0.49	7.4	20.0	324
5/19/2020	Detection	< 0.02 U1	42.2	27.2	567	0.50	6.3	23.8	342
11/10/2020	Detection	< 0.02 U1	43.5	27.1	633	0.56	6.8	23.3	326
5/27/2021	Detection	0.014 J1	39.7	26.8	513	0.59	7.8	19.8	330
11/12/2021	Detection	0.015 J1	40.0	27.3	559	0.55	6.9	20.3	310
5/12/2022	Detection	< 0.009 U1	38.9	29.4	572	0.56	7.4	23.8	340
11/2/2022	Detection	0.015 J1	41.2	30.2	572	0.57	7.1	22.6	350

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-008S

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/7/2016	Background	0.02 J1	1.61	15.4	< 0.005 U1	0.07	0.3	0.400	0.204	0.56	0.207	0.004	< 0.002 U1	0.81	0.4	< 0.01 U1
7/19/2016	Background	0.30	1.78	13.1	0.232	0.31	0.6	0.453	0.577	0.56	0.364	0.025	< 0.002 U1	1.10	0.6	0.276
9/21/2016	Background	0.02 J1	1.33	12.2	< 0.005 U1	0.02 J1	0.4	0.125	1.291	0.54	0.066	0.001	< 0.002 U1	0.80	0.2	0.03 J1
11/17/2016	Background	0.03 J1	1.26	10.9	< 0.005 U1	0.05	0.156	0.113	0.490	0.55	0.065	0.002	< 0.002 U1	0.71	0.2	< 0.01 U1
1/9/2017	Background	0.02 J1	1.56	13.8	0.006 J1	0.01 J1	1.04	0.447	0.676	0.47	0.190	0.002	< 0.002 U1	0.77	0.2	0.01 J1
3/7/2017	Background	0.04 J1	1.53	14.5	0.009 J1	0.26	0.881	0.433	0.3161	0.52	0.278	0.006	< 0.002 U1	1.56	0.2	0.170
5/9/2017	Background	0.03 J1	2.09	16.9	0.01 J1	0.09	0.423	0.981	0.127	0.52	0.389	0.006	< 0.002 U1	0.75	0.3	< 0.01 U1
7/18/2017	Background	0.02 J1	1.19	10.9	< 0.004 U1	0.13	0.277	0.052	1.653	0.47	0.038	0.001	0.015	0.83	0.2	< 0.01 U1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-011S

Geosyntec Consultants, Inc.

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/8/2016	Background	0.062	41.6	1.82	285	0.74	7.9	10.9	212
7/18/2016	Background	0.062	38.8	1.83	272	0.76	7.3	10.6	201
9/20/2016	Background	0.077	45.1	1.62	330	0.73	7.3	5.3	196
11/16/2016	Background	0.053	37.3	1.54	433	0.92	8.4	4.1	182
1/10/2017	Background	0.029	40.4	2.12	200	0.96	8.1	7.6	179
3/7/2017	Background	0.057	42.8	4.63	70	1.00	7.9	13.7	197
5/9/2017	Background	0.047	41.2	9.87	307	0.86	7.8	16.4	239
7/18/2017	Background	0.067	44.2	8.19	386	0.75	7.7	15.6	224
10/3/2017	Detection	0.090	43.7	3.68	267	0.89	7.2	9.3	200
12/13/2017	Detection	--	--	2.40	260	0.82	8.3	8.0	--
6/5/2018	Detection	0.076	55.8	6.98	360	0.62	7.2	21.7	276
11/14/2018	Detection	0.11	56.4	1.79	309	0.72	7.6	5.9	238
5/23/2019	Detection	0.08 J1	54.3	1.62	440	0.82	7.7	14.7	279
11/15/2019	Detection	0.052	47.6	1.48	533	0.77	7.8	2.7	216
5/20/2020	Detection	0.04 J1	55.8	2.68	435	0.58	7.4	13.5	246
11/11/2020	Detection	0.04 J1	52.4	1.52	302	0.83	7.4	2.9	211
5/25/2021	Detection	0.038 J1	53.9	2.28	413	0.66	7.7	10.7	240
11/12/2021	Detection	0.038 J1	54.1	2.46	0	0.53	7.2	7.68	250
5/13/2022	Detection	0.030 J1	47.9	2.70	244	0.51	7.9	7.99	230
11/3/2022	Detection	0.037 J1	52.6	2.29	318	0.50	7.6	3.78	230

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-011S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/8/2016	Background	0.05 J1	0.47	10.4	< 0.005 U1	0.006 J1	0.4	0.113	0.422	0.74	0.046	< 0.0002 U1	< 0.002 U1	4.70	0.07 J1	< 0.01 U1
7/18/2016	Background	0.04 J1	0.53	9.79	< 0.005 U1	0.03	0.5	0.043	0.815	0.76	0.02 J1	0.024	< 0.002 U1	4.36	0.08 J1	0.01 J1
9/20/2016	Background	0.04 J1	0.42	11.3	< 0.005 U1	0.03	0.8	0.029	0.741	0.73	0.046	0.004	< 0.002 U1	3.37	0.1	0.01 J1
11/16/2016	Background	0.05 J1	0.45	7.91	< 0.005 U1	0.02	0.416	0.027	0.288	0.92	0.027	0.005	< 0.002 U1	4.71	0.07 J1	0.02 J1
1/10/2017	Background	0.04 J1	0.52	6.52	< 0.005 U1	0.01 J1	0.725	0.022	2.101	0.96	0.02 J1	0.003	< 0.002 U1	6.09	0.05 J1	0.01 J1
3/7/2017	Background	0.04 J1	0.52	7.09	< 0.005 U1	0.007 J1	1.25	0.027	0.1865	1.00	0.02 J1	0.013	0.002 J1	6.03	0.2	0.01 J1
5/9/2017	Background	0.04 J1	0.48	7.73	< 0.004 U1	0.03	0.567	0.030	0.1247	0.86	0.023	0.009	0.002 J1	4.86	0.2	0.01 J1
7/18/2017	Background	< 0.05 U1	0.50	8.16	< 0.02 U1	< 0.02 U1	0.568	0.02 J1	0.7935	0.75	0.06 J1	0.002	< 0.002 U1	4.69	0.3 J1	0.2 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-014S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/7/2016	Background	0.011	59.2	28.6	544	0.39	7.2	34.9	368
7/20/2016	Background	0.008	56.3	29.4	576	0.39	7.1	36.5	364
9/21/2016	Background	0.010	59.5	28.1	640	0.36	7.0	32.5	361
11/17/2016	Background	0.008	65.4	27.8	955	0.35	7.7	29.1	362
1/9/2017	Background	< 0.002 U1	65.7	27.2	530	0.33	7.5	30.7	344
3/7/2017	Background	0.031	63.4	26.8	80	0.36	7.4	29.9	354
5/9/2017	Background	0.017	59.8	29.4	441	0.37	7.0	32.3	376
7/18/2017	Background	0.030	65.6	29.6	496	0.33	7.3	33.1	377
10/4/2017	Detection	0.042	67.0	29.9	488	0.34	7.0	34.8	376
12/12/2017	Detection	--	--	30.0	490	0.34	7.6	35.5	--
6/5/2018	Detection	0.046	61.1	27.1	450	0.39	7.6	29.4	360
11/13/2018	Detection	0.04 J1	59.2	29.0	461	0.37	6.8	30.8	344
5/23/2019	Detection	< 0.02 U1	66.9	28.6	604	0.37	7.2	32.4	390
11/16/2019	Detection	< 0.02 U1	65.1	28.9	655	0.38	7.5	32.8	374
5/19/2020	Detection	< 0.02 U1	66.6	28.6	550	0.33	7.7	32.5	411
11/10/2020	Detection	< 0.02 U1	66.4	26.3	742	0.39	6.7	31.4	370
5/28/2021	Detection	0.012 J1	82.0	25.4	706	0.38	7.8	31.0	430
11/12/2021	Detection	0.012 J1	69.2	23.7	741	0.33	7.0	27.0	390
5/12/2022	Detection	< 0.009 U1	68.2	25.4	583	0.33	7.1	30.1	400
11/2/2022	Detection	0.010 J1	61.7	24.8	658	0.34	7.4	27.7	390

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-014S

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/7/2016	Background	0.06	2.33	29.7	0.02 J1	0.32	1.0	1.49	0.512	0.39	1.02	< 0.0002 U1	0.002 J1	12.7	1.4	0.01 J1
7/20/2016	Background	0.02 J1	1.54	31.0	0.008 J1	0.21	0.3	0.573	0.594	0.39	0.307	0.018	< 0.002 U1	1.51	1.4	< 0.01 U1
9/21/2016	Background	0.02 J1	1.29	27.8	0.005 J1	0.07	0.3	0.333	0.9	0.36	0.310	0.006	< 0.002 U1	1.43	1.2	< 0.01 U1
11/17/2016	Background	0.03 J1	0.75	26.3	< 0.005 U1	0.03	0.162	0.088	1.106	0.35	0.549	0.004	< 0.002 U1	1.26	1.2	0.02 J1
1/9/2017	Background	0.02 J1	0.91	27.0	< 0.005 U1	0.05	0.575	0.187	0.780	0.33	0.115	0.006	< 0.002 U1	1.62	1.1	0.054
3/7/2017	Background	0.02 J1	0.76	26.3	< 0.005 U1	0.01 J1	0.660	0.083	0.0525	0.36	0.061	0.005	< 0.002 U1	1.84	1.1	0.055
5/9/2017	Background	0.06	0.75	25.0	< 0.004 U1	0.08	0.301	0.065	0.0316	0.37	0.071	0.001	< 0.002 U1	1.35	1.2	0.01 J1
7/18/2017	Background	< 0.05 U1	0.70	27.0	< 0.02 U1	< 0.02 U1	0.258	0.03 J1	1.883	0.33	0.116	< 0.0002 U1	< 0.002 U1	1.67	1.3	0.07 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-015I

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/7/2016	Background	0.060	44.1	59.3	555	0.25	7.2	42.5	380
7/19/2016	Background	0.032	44.6	53.8	512	0.25	7.1	41.0	356
9/21/2016	Background	0.030	46.1	43.4	530	0.23	7.1	34.0	334
11/16/2016	Background	0.022	51.4	44.9	874	0.25	7.5	33.6	340
1/10/2017	Background	0.019	46.5	48.3	420	0.34	7.7	35.4	351
3/7/2017	Background	0.047	51.1	38.5	60	0.32	7.5	31.1	331
5/10/2017	Background	0.038	46.6	32.7	457	0.31	7.2	29.7	322
7/18/2017	Background	0.050	43.9	27.1	400	0.22	7.2	26.6	300
10/4/2017	Detection	0.080	44.6	23.7	368	0.23	7.3	27.3	287
12/12/2017	Detection	--	--	22.8	350	0.22	7.8	26.7	--
1/4/2018	Detection	0.04	--	--	474	--	7.8	--	--
6/6/2018	Detection	0.066	47.0	25.1	420	0.26	8.1	25.3	279
8/16/2018	Detection	--	--	--	527	--	7.4	--	--
11/13/2018	Detection	0.07 J1	39.9	23.7	412	0.25	7.6	25.3	248
5/23/2019	Detection	0.03 J1	47.8	18.0	414	0.26	7.3	20.9	260
11/15/2019	Detection	0.03 J1	45.2	16.9	495	0.27	7.4	17.6	248
5/19/2020	Detection	0.03 J1	49.2	19.0	435	0.25	7.5	17.8	253
11/10/2020	Detection	0.03 J1	44.2	12.8	381	0.47	7.5	11.7	213
2/2/2021	Detection	--	--	--	400	0.36	7.6	--	--
5/28/2021	Detection	0.028 J1	53.3	16.0	393	0.39	7.7	14.7	240
8/4/2021	Detection	--	--	--	400	0.38	7.4	--	--
11/11/2021	Detection	0.026 J1	44.4	14.0	402	0.47	8.0	11.3	220
5/12/2022	Detection	0.019 J1	44.2	19.8	444	0.35	7.5	16.0	250
11/2/2022	Detection	0.029 J1	43.8	16.4	327	0.39	7.3	12.2	230

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-015I

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/7/2016	Background	0.01 J1	25.2	118	< 0.005 U1	0.02 J1	0.2	1.24	0.863	0.25	0.026	0.005	< 0.002 U1	5.76	< 0.03 U1	0.04 J1
7/19/2016	Background	0.25	27.9	132	0.165	0.23	0.5	1.66	1.091	0.25	0.254	0.018	< 0.002 U1	6.74	0.2	0.273
9/21/2016	Background	0.01 J1	21.1	119	< 0.005 U1	0.009 J1	0.1	1.32	0.504	0.23	0.026	0.004	< 0.002 U1	5.75	< 0.03 U1	0.03 J1
11/16/2016	Background	0.04 J1	23.6	107	0.005 J1	0.06	0.132	1.03	1.747	0.25	0.213	0.004	< 0.002 U1	6.73	< 0.03 U1	0.04 J1
1/10/2017	Background	0.01 J1	20.2	91.2	< 0.005 U1	0.005 J1	0.350	1.00	0.869	0.34	0.01 J1	0.011	< 0.002 U1	7.63	< 0.03 U1	0.04 J1
3/7/2017	Background	0.02 J1	20.4	88.9	< 0.005 U1	0.03	0.700	0.903	0.865	0.32	0.065	0.006	< 0.002 U1	7.91	0.07 J1	0.112
5/10/2017	Background	0.02 J1	20.2	86.1	< 0.004 U1	0.03	0.134	1.02	0.189	0.31	0.090	0.002	< 0.002 U1	6.52	0.04 J1	0.03 J1
7/18/2017	Background	0.02 J1	23.6	94.8	< 0.004 U1	0.02	0.089	1.25	1.643	0.22	0.082	< 0.0002 U1	< 0.002 U1	5.58	< 0.03 U1	0.04 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-015S

Geosyntec Consultants, Inc.

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/7/2016	Background	0.011	46.9	21.2	512	0.65	7.2	30.3	338
7/19/2016	Background	0.012	43.6	18.7	574	0.65	7.1	27.7	319
9/21/2016	Background	0.008	46.6	18.9	510	0.63	7.2	25.1	329
11/16/2016	Background	< 0.002 U1	52.3	18.3	904	0.50	7.7	23.2	338
1/11/2017	Background	< 0.002 U1	63.6	21.9	470	0.36	7.2	28.3	374
3/7/2017	Background	0.084	62.9	16.1	60	0.42	7.2	23.4	342
5/10/2017	Background	0.077	45.7	14.1	419	0.65	7.3	21.0	294
7/19/2017	Background	0.073	44.4	11.8	368	0.66	7.3	20.3	263
10/4/2017	Detection	0.095	48.3	13.3	393	0.62	7.4	23.2	300
6/5/2018	Detection	0.078	44.7	8.84	416	0.69	7.2	16.3	274
11/13/2018	Detection	0.04 J1	41.8	8.78	317	0.72	7.5	13.1	232
5/23/2019	Detection	< 0.02 U1	41.3	8.88	348	0.88	7.5	10.2	207
7/23/2019	Detection	--	--	--	362	0.87	5.7	--	--
9/11/2019	Detection	--	--	--	269	0.81	7.4	--	--
11/15/2019	Detection	< 0.02 U1	40.2	9.48	467	0.70	7.4	8.4	234
5/19/2020	Detection	< 0.02 U1	42.4	10.3	400	0.86	7.6	9.1	218
11/10/2020	Detection	< 0.02 U1	45.4	10.1	455	0.78	7.3	10.3	236
5/28/2021	Detection	0.014 J1	66.4	10.6	430	0.81	7.7	8.82	250
11/11/2021	Detection	0.012 J1	46.3	10.4	500	0.65	7.5	8.07	270
5/12/2022	Detection	< 0.009 U1	43.7	10.2	432	0.82	7.5	9.34	220
11/2/2022	Detection	0.014 J1	45.2	8.87	402	0.79	7.4	8.13	230

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-015S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/7/2016	Background	0.04 J1	0.32	4.71	0.007 J1	0.14	0.2	3.03	0.4175	0.65	0.286	0.007	< 0.002 U1	2.52	0.4	0.03 J1
7/19/2016	Background	0.04 J1	0.24	5.85	< 0.005 U1	0.25	1.7	1.17	< 0.71 U1	0.65	0.101	0.022	0.002 J1	2.89	0.7	< 0.01 U1
9/21/2016	Background	0.02 J1	0.21	3.21	< 0.005 U1	0.05	0.5	1.09	0.418	0.63	0.098	0.005	< 0.002 U1	2.54	0.5	0.02 J1
11/16/2016	Background	0.04 J1	0.18	3.27	< 0.005 U1	0.05	0.058	0.794	1.249	0.50	0.037	0.005	< 0.002 U1	1.57	0.3	0.02 J1
1/11/2017	Background	0.04 J1	0.26	6.05	< 0.005 U1	0.06	0.493	1.75	0.189	0.36	0.039	0.008	< 0.002 U1	0.78	0.3	0.03 J1
3/7/2017	Background	0.03 J1	0.21	4.98	< 0.005 U1	0.04	0.934	1.26	0.0973	0.42	0.024	0.008	< 0.002 U1	1.17	0.5	0.04 J1
5/10/2017	Background	0.04 J1	0.21	3.54	0.005 J1	0.05	0.198	1.20	0.241	0.65	0.062	0.003	< 0.002 U1	2.08	0.5	0.02 J1
7/19/2017	Background	0.02 J1	0.23	3.11	< 0.004 U1	0.05	0.096	1.25	0.0916	0.66	0.083	0.0009 J1	< 0.002 U1	2.87	0.2	0.02 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016D

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.033	84.3	68.7	519	0.20	6.8	36.4	350
7/19/2016	Background	0.013	68.7	69.6	582	0.22	7.3	37.4	321
9/20/2016	Background	0.012	70.5	67.6	538	0.22	7.3	33.4	342
11/17/2016	Background	0.014	77.9	63.6	613	0.17	7.3	33.2	356
1/11/2017	Background	0.004 J1	72.4	67.9	525	0.21	7.5	34.0	343
3/8/2017	Background	0.023	79.2	65.4	614	0.22	7.4	35.3	347
5/10/2017	Background	0.102	75.8	69.9	436	0.22	7.5	37.2	367
7/18/2017	Background	0.017	71.7	69.6	597	0.17	9.0	36.8	363
10/4/2017	Detection	0.059	80.4	81.5	516	0.22	7.6	40.0	383
1/4/2018	Detection	--	80.1	86	692	--	7.7	37.9	--
6/6/2018	Detection	0.033	90.2	108	690	0.22	7.3	38.6	434
8/16/2018	Detection	--	83.8	99.7	782	--	7.3	--	447
11/14/2018	Detection	0.07 J1	84.1	102	607	0.21	7.4	38.6	434
2/12/2019	Detection	--	--	109	510	--	7.4	--	439
4/1/2019	Detection	--	--	107	945	--	7.3	--	429
5/22/2019	Detection	0.03 J1	88.5	104	755	0.20	7.3	38.0	460
7/24/2019	Detection	--	95.6	106	731	--	7.0	--	457
9/11/2019	Detection	--	109	125	813	--	7.3	--	523
11/15/2019	Detection	0.03 J1	100	127	1,070	0.17	7.3	40.8	537
2/18/2020	Detection	--	--	133	1,869	--	7.2	38.9	579
5/19/2020	Detection	0.03 J1	108	135	799	0.17	7.7	40.1	558
7/15/2020	Detection	--	102	133	969	0.20	7.2	--	519
11/11/2020	Detection	0.04 J1	109	130	1,050	0.21	7.2	39.1	547
2/2/2021	Detection	--	106	117	953	--	7.4	--	573
5/28/2021	Detection	0.038 J1	122	110	886	0.23	9.6	40.6	580
8/5/2021	Detection	--	103	110	956	0.20	7.2	--	570
11/11/2021	Detection	0.038 J1	105	98.3	1,060	0.18	6.8	37.0	560
5/12/2022	Detection	0.026 J1	102	101	1,010	0.19	7.5	41.4	550
11/3/2022	Detection	0.035 J1	84.5	81.0	816	0.21	7.6	38.4	520

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016D

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.02 J1	0.48	240	< 0.005 U1	0.08	0.3	0.617	0.0514	0.20	0.078	0.001	< 0.002 U1	2.06	0.04 J1	0.03 J1
7/19/2016	Background	0.02 J1	0.40	246	< 0.005 U1	0.08	0.4	0.547	0.294	0.22	0.040	0.013	< 0.002 U1	2.31	0.04 J1	0.069
9/20/2016	Background	0.02 J1	0.31	221	< 0.005 U1	0.02 J1	0.1	0.418	1.348	0.22	0.021	0.003	< 0.002 U1	1.96	< 0.03 U1	0.02 J1
11/17/2016	Background	0.02 J1	0.32	217	< 0.005 U1	0.05	1.21	0.452	0.909	0.17	0.066	0.006	< 0.002 U1	1.98	< 0.03 U1	0.02 J1
1/11/2017	Background	0.01 J1	0.34	210	< 0.005 U1	0.02 J1	0.112	0.354	1.716	0.21	0.008 J1	0.013	< 0.002 U1	1.99	< 0.03 U1	0.02 J1
3/8/2017	Background	0.02 J1	0.31	224	< 0.005 U1	0.01 J1	0.188	0.401	0.811	0.22	0.022	0.007	< 0.002 U1	2.27	0.05 J1	0.04 J1
5/10/2017	Background	0.03 J1	0.33	212	< 0.004 U1	0.07	0.151	0.466	0.151	0.22	0.070	0.008	< 0.002 U1	1.90	< 0.03 U1	0.02 J1
7/18/2017	Background	0.03 J1	0.39	247	< 0.004 U1	0.10	0.141	0.571	0.514	0.17	0.103	0.0006 J1	< 0.002 U1	2.03	< 0.03 U1	0.02 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016I

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.031	110	80.4	957	0.1 J1	7.7	38.7	539
7/20/2016	Background	0.027	93.9	86.8	870	0.15	7.6	42.2	532
9/21/2016	Background	0.026	95.9	90.2	867	0.1 J1	7.4	36.8	544
11/17/2016	Background	0.024	96.2	59.1	702	0.1 J1	7.1	33.0	508
1/11/2017	Background	0.015	89.3	44.1	674	0.1 J1	7.4	34.0	481
3/8/2017	Background	0.100	101	39.3	779	0.16	7.3	35.4	460
5/19/2017	Background	0.032	86.7	39.4	569	0.15	7.0	35.4	455
7/18/2017	Background	0.044	91.3	50.2	665	0.08 J1	7.2	36.1	465
10/4/2017	Detection	0.050	84.0	70.8	644	0.1 J1	7.5	40.4	495
1/4/2018	Detection	--	71.9	71.2	821	--	7.7	--	487
6/6/2018	Detection	0.046	82.9	58.6	720	0.17	7.4	38.7	480
8/16/2018	Detection	--	61.6	61.1	797	--	7.2	--	456
11/14/2018	Detection	0.139	53.7	47.8	545	0.17	7.3	32.5	408
2/12/2019	Detection	0.02 J1	--	--	476	--	7.4	--	--
5/22/2019	Detection	0.03 J1	56.0	45.5	641	0.17	7.4	33.2	405
11/15/2019	Detection	0.02 J1	41.0	31.2	659	0.14	7.4	25.2	343
5/19/2020	Detection	0.02 J1	51.9	31.3	481	0.14	7.8	25.8	350
11/10/2020	Detection	0.02 J1	44.5	19.6	567	0.20	6.8	21.4	273
5/28/2021	Detection	0.019 J1	50.4	16.5	460	0.18	7.5	18.5	270
11/11/2021	Detection	0.019 J1	50.0	16.6	538	0.15	6.9	17.6	280
5/12/2022	Detection	< 0.009 U1	61.8	25.6	618	0.15	7.5	24.2	330
11/3/2022	Detection	0.019 J1	51.9	19.6	505	0.16	7.6	18.3	300

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016I

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.02 J1	0.71	267	< 0.005 U1	0.06	0.1	0.602	0.592	0.1 J1	0.023	0.005	< 0.002 U1	1.02	0.2	0.085
7/20/2016	Background	0.01 J1	0.75	267	< 0.005 U1	0.03	0.2	0.627	1.576	0.15	0.025	0.005	< 0.002 U1	1.02	0.2	0.060
9/21/2016	Background	0.01 J1	0.75	262	< 0.005 U1	0.03	0.1	0.576	1.225	0.1 J1	0.023	0.006	< 0.002 U1	1.03	0.1	0.074
11/17/2016	Background	0.05	0.67	234	< 0.005 U1	0.05	0.082	0.546	0.587	0.1 J1	0.053	0.013	< 0.002 U1	0.93	0.2	0.069
1/11/2017	Background	0.01 J1	0.72	220	< 0.005 U1	0.04	0.085	0.514	2.632	0.1 J1	0.01 J1	0.010	< 0.002 U1	1.00	0.1	0.071
3/8/2017	Background	0.02 J1	0.68	221	< 0.005 U1	0.03	0.422	0.580	0.581	0.16	0.034	0.013	< 0.002 U1	1.17	0.2	0.075
5/19/2017	Background	0.06	0.70	206	< 0.004 U1	0.08	0.204	0.707	0.938	0.15	0.153	0.010	< 0.002 U1	0.91	0.4	0.075
7/18/2017	Background	0.02 J1	0.73	238	< 0.004 U1	0.03	0.118	0.599	0.787	0.08 J1	0.065	0.003	< 0.002 U1	1.07	0.2	0.070

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.028	96.2	18.7	822	0.44	7.5	46.9	483
7/20/2016	Background	0.025	83.0	19.0	764	0.46	7.1	50.1	471
9/21/2016	Background	0.024	93.5	17.1	719	0.38	7.3	42.1	509
11/17/2016	Background	0.025	96.4	16.4	669	0.30	6.9	38.3	486
1/11/2017	Background	0.017	94.6	17.5	677	0.35	7.2	39.2	474
3/8/2017	Background	0.038	106	19.3	804	0.36	7.1	39.6	473
5/10/2017	Background	0.082	105	22.9	581	0.38	8.3	42.3	499
7/19/2017	Background	0.037	91.8	19.8	595	0.33	6.3	40.7	484
10/4/2017	Detection	0.061	108	19.3	647	0.41	7.3	45.0	503
1/4/2018	Detection	--	109	--	872	--	7.3	--	517
6/6/2018	Detection	0.109	108	17.3	770	0.42	7.2	40.8	520
8/16/2018	Detection	0.034	109	--	920	--	7.1	--	533
11/14/2018	Detection	0.107	104	16.2	720	0.39	7.0	40.3	548
2/12/2019	Detection	0.02 J1	--	--	570	--	7.1	--	517
5/22/2019	Detection	0.03 J1	99.2	18.0	774	0.38	7.1	34.5	493
11/15/2019	Detection	0.02 J1	92.2	20.7	961	0.32	7.0	35.2	497
5/19/2020	Detection	0.03 J1	104	26.7	675	0.34	7.5	34.9	470
7/15/2020	Detection	--	--	25.8	823	0.37	7.1	--	489
11/11/2020	Detection	0.02 J1	103	21.8	948	0.38	6.5	34.5	473
5/28/2021	Detection	0.021 J1	96.8	21.2	763	0.41	7.2	32.2	480
11/11/2021	Detection	0.019 J1	86.7	13.3	832	0.37	6.6	24.4	440
5/12/2022	Detection	< 0.009 U1	85.9	13.0	680	0.39	7.5	25.6	400
11/3/2022	Detection	0.018 J1	82.6	11.8	711	0.38	7.3	26.6	430

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-016S

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.03 J1	0.37	32.3	< 0.005 U1	0.03	0.2	0.073	0.163	0.44	0.074	0.007	< 0.002 U1	1.15	0.6	0.01 J1
7/20/2016	Background	0.03 J1	0.37	29.9	< 0.005 U1	0.03	0.5	0.025	1.047	0.46	0.057	0.031	< 0.002 U1	1.21	0.6	< 0.01 U1
9/21/2016	Background	0.25	0.38	29.5	< 0.005 U1	0.10	0.3	0.070	0.0255	0.38	0.182	0.005	< 0.002 U1	1.11	0.8	< 0.01 U1
11/17/2016	Background	0.02 J1	0.34	25.3	< 0.005 U1	0.006 J1	1.03	0.028	0.2943	0.30	< 0.004 U1	0.018	< 0.002 U1	1.19	0.4	< 0.01 U1
1/11/2017	Background	0.02 J1	0.42	25.1	< 0.005 U1	0.008 J1	0.081	0.014	1.993	0.35	0.039	0.013	< 0.002 U1	1.21	0.4	0.02 J1
3/8/2017	Background	0.02 J1	0.31	25.7	< 0.005 U1	0.004 J1	0.463	0.012	0.282	0.36	0.006 J1	0.013	< 0.002 U1	1.32	0.4	0.02 J1
5/10/2017	Background	0.02 J1	0.39	29.8	< 0.004 U1	0.01 J1	0.196	0.063	0.145	0.38	0.027	0.008	< 0.002 U1	1.14	0.3	0.01 J1
7/19/2017	Background	0.02 J1	0.33	25.6	< 0.004 U1	0.04	0.101	0.01 J1	2.8533	0.33	0.01 J1	0.010	< 0.002 U1	0.98	0.4	0.01 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-017I

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/8/2016	Background	0.058	73.7	195	839	0.57	7.6	43.1	609
7/20/2016	Background	0.056	83.1	209	913	0.56	7.2	49.3	569
9/20/2016	Background	0.051	88.9	214	1,000	0.52	7.1	48.1	620
11/16/2016	Background	0.041	80.0	164	607	0.56	7.8	44.1	540
1/10/2017	Background	0.034	72.3	159	670	0.56	7.5	43.2	513
3/7/2017	Background	0.079	81.4	158	60	0.58	7.5	44.9	549
5/9/2017	Background	0.083	69.6	151	768	0.61	7.2	43.5	528
7/19/2017	Background	0.052	64.4	145	678	0.63	7.3	44.7	509
10/4/2017	Detection	0.061	63.0	115	786	0.66	7.4	46.6	486
12/13/2017	Detection	--	--	86	530	0.76	7.5	44.8	--
1/4/2018	Detection	--	--	110	848	0.65	7.8	--	471
6/5/2018	Detection	0.081	51.2	80.2	652	0.87	7.4	41.0	418
8/16/2018	Detection	--	--	61.1	728	0.98	7.5	--	376
9/26/2018	Detection	--	--	--	--	1.03	--	--	--
11/13/2018	Detection	0.07 J1	36.5	50.1	450	1.00	7.6	29.6	328
2/12/2019	Detection	--	--	--	391	1.05	7.7	--	--
4/1/2019	Detection	--	--	--	786	1.08	7.6	--	--
5/23/2019	Detection	0.04 J1	45.1	60.2	570	1.07	7.5	32.8	352
7/23/2019	Detection	--	--	--	488	1.06	6.7	--	--
9/12/2019	Detection	--	--	--	363	1.08	7.6	--	--
11/15/2019	Detection	0.04 J1	43.9	41.2	654	0.95	7.4	23.2	309
5/19/2020	Detection	0.04 J1	40.3	32.8	487	1.07	7.9	20.7	273
7/15/2020	Detection	--	--	--	521	--	7.3	--	--
11/10/2020	Detection	0.04 J1	38.1	25.5	437	1.16	8.4	16.8	239
5/27/2021	Detection	0.043 J1	41.0	30.0	389	1.07	7.8	15.5	280
8/5/2021	Detection	0.038 J1	39.4	31.7	431	1.06	7.5	17.0	260
11/11/2021	Detection	0.039 J1	46.4	40.8	500	0.99	7.8	25.3	270
5/13/2022	Detection	0.030 J1	40.2	36.6	495	1.04	7.9	20.5	260
11/2/2022	Detection	0.037 J1	39.5	33.4	442	0.99	7.8	19.1	260

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-0171

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/8/2016	Background	0.07	7.14	168	0.020	0.12	0.6	1.24	1.925	0.57	1.19	< 0.0002 U1	0.003 J1	3.60	0.1	0.03 J1
7/20/2016	Background	0.05 J1	7.41	190	0.006 J1	0.13	2.1	0.778	1.167	0.56	0.284	0.004	< 0.002 U1	3.66	0.05 J1	0.02 J1
9/20/2016	Background	0.04 J1	6.45	198	< 0.005 U1	0.04	0.1	0.472	1.587	0.52	0.133	0.005	< 0.002 U1	3.08	0.05 J1	0.02 J1
11/16/2016	Background	0.03 J1	3.38	149	< 0.005 U1	0.04	0.059	0.370	0.762	0.56	0.049	0.006	< 0.002 U1	3.37	< 0.03 U1	0.056
1/10/2017	Background	0.02 J1	3.94	148	< 0.005 U1	0.008 J1	0.254	0.391	1.510	0.56	0.02 J1	0.009	< 0.002 U1	3.20	< 0.03 U1	0.02 J1
3/7/2017	Background	0.02 J1	4.61	159	< 0.005 U1	0.007 J1	0.776	0.406	1.023	0.58	0.026	0.008	< 0.002 U1	3.62	0.05 J1	0.02 J1
5/9/2017	Background	0.02 J1	3.61	133	< 0.004 U1	0.03	0.196	0.394	1.007	0.61	0.115	0.005	< 0.002 U1	3.26	0.03 J1	0.01 J1
7/19/2017	Background	0.02 J1	3.76	140	< 0.004 U1	0.02 J1	0.127	0.372	0.8141	0.63	0.02 J1	< 0.0002 U1	< 0.002 U1	3.42	< 0.03 U1	0.05 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-017S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/8/2016	Background	0.015	36.9	13.9	350	0.85	7.8	14.3	272
7/20/2016	Background	0.016	34.8	15.4	373	0.86	7.3	14.8	235
9/20/2016	Background	0.016	34.8	12.3	344	0.73	7.7	10.9	233
11/16/2016	Background	0.017	35.9	11.4	1,460	0.70	7.7	10.5	232
1/10/2017	Background	0.006	32.3	11.0	310	0.48	7.6	10.7	262
3/7/2017	Background	0.058	40.0	10.7	60	0.46	7.5	12.0	251
5/9/2017	Background	0.041	35.5	10.4	357	0.58	7.3	13.1	250
7/19/2017	Background	0.020	34.4	10.8	287	0.82	7.5	10.2	201
10/4/2017	Detection	0.033	34.1	10.5	351	0.89	7.4	10.7	214
6/5/2018	Detection	0.045	32.4	10.8	319	0.98	7.4	9.5	214
11/13/2018	Detection	0.05 J1	33.1	11.5	280	0.91	7.5	8.4	196
5/23/2019	Detection	0.03 J1	32.7	12.0	322	1.08	7.6	7.7	217
11/15/2019	Detection	0.02 J1	28.7	12.6	396	0.96	7.6	6.2	207
5/19/2020	Detection	0.02 J1	32.8	12.7	358	0.95	7.8	6.5	200
7/14/2020	Detection	--	--	--	385	--	6.8	--	--
11/10/2020	Detection	0.02 J1	33.9	12.9	403	0.90	7.5	8.2	211
5/27/2021	Detection	0.025 J1	35.9	11.0	389	0.95	7.6	5.92	210
11/11/2021	Detection	0.023 J1	35.2 M1, P3	9.41	420	0.81	7.7	4.62	230
5/13/2022	Detection	0.013 J1	34.4	10.2	404	0.82	7.9	5.24	230
11/2/2022	Detection	0.022 J1	33.5	13.5	373	0.81	7.6	5.22	210

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

M1: The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.

P3: The precision on the matrix spike duplicate (MSD) was above acceptance limits.

Table 1 - Groundwater Data Summary: MW-017S

**Rockport - LF
Phase II Constituents**

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/8/2016	Background	0.01 J1	0.24	2.12	< 0.005 U1	0.02	0.5	0.047	1.036	0.85	0.024	< 0.0002 U1	< 0.002 U1	3.98	0.07 J1	0.01 J1
7/20/2016	Background	0.03 J1	0.26	2.74	< 0.005 U1	0.08	0.2	0.105	0.0439	0.86	0.098	0.020	0.002 J1	4.20	0.06 J1	0.01 J1
9/20/2016	Background	0.02 J1	0.22	2.24	< 0.005 U1	0.01 J1	0.1	0.034	0.0759	0.73	0.025	0.003	< 0.002 U1	4.08	0.08 J1	0.01 J1
11/16/2016	Background	0.03 J1	0.20	2.40	< 0.005 U1	0.02	0.066	0.029	1.594	0.70	0.020	0.004	< 0.002 U1	3.39	0.1	0.053
1/10/2017	Background	0.03 J1	0.21	3.45	< 0.005 U1	0.02 J1	0.489	0.040	0.17	0.48	0.02 J1	0.003	< 0.002 U1	0.44	0.2	0.02 J1
3/7/2017	Background	0.04 J1	0.20	3.94	< 0.005 U1	0.09	0.776	0.076	0.47	0.46	0.079	0.008	0.002 J1	0.70	0.1	0.02 J1
5/9/2017	Background	0.04 J1	0.22	4.37	< 0.004 U1	0.02 J1	0.233	0.138	0.433	0.58	0.108	0.003	< 0.002 U1	1.14	0.1	< 0.01 U1
7/19/2017	Background	0.02 J1	0.22	2.25	< 0.004 U1	0.06	0.124	0.053	1.748	0.82	0.038	< 0.0002 U1	< 0.002 U1	4.38	0.08 J1	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

- -: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-021D

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.022	74.2	19.2	591	0.36	8.1	39.2	328
7/19/2016	Background	0.015	60.6	19.6	544	0.38	7.8	41.0	299
9/21/2016	Background	0.015	70.4	18.9	478	0.36	7.7	35.5	315
11/16/2016	Background	0.013	74.7	19.1	585	0.33	7.5	32.0	346
1/11/2017	Background	0.004 J1	67.3	19.4	441	0.36	7.2	34.4	332
3/8/2017	Background	0.024	76.2	18.9	600	0.33	7.6	35.1	304
5/9/2017	Background	0.062	71.5	19.9	493	0.35	7.4	37.1	339
7/19/2017	Background	0.015	70.9	19.5	531	0.30	8.5	36.5	332
10/4/2017	Detection	0.092	67.8	18.5	449	0.32	7.5	37.4	339
1/11/2018	Detection	0.088	--	--	564	--	7.0	--	--
6/6/2018	Detection	0.03	70.7	19.9	470	0.4	7.7	38.4	347
11/13/2018	Detection	0.04 J1	62.1	18.8	451	0.34	7.7	35.2	314
5/22/2019	Detection	< 0.02 U1	69.3	19.1	511	0.36	7.5	36.8	348
11/14/2019	Detection	< 0.02 U1	69.4	19.2	670	0.32	7.4	38.6	323
5/19/2020	Detection	0.02 J1	69.2	19.9	449	0.26	7.6	33.3	328
11/11/2020	Detection	< 0.02 U1	70.9	19.5	599	0.38	7.0	37.1	318
5/27/2021	Detection	0.014 J1	69.8	19.8	538	0.40	9.7	36.4	330
8/4/2021	Detection	--	--	--	567	--	7.5	--	--
11/11/2021	Detection	0.014 J1	69.7	19.5	555	0.38	7.8	34.2	330
5/12/2022	Detection	< 0.009 U1	72.1	21.0	593	0.38	7.6	40.0	330
7/20/2022	Detection	--	--	19.9	604	--	7.5	--	--
11/2/2022	Detection	0.013 J1	67.8	20.5	0	0.40	6.8	37.4	340

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-021D

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.08	1.07	241	< 0.005 U1	0.02	0.2	0.216	0.567	0.36	0.107	0.002	< 0.002 U1	6.31	0.2	0.03 J1
7/19/2016	Background	0.08	1.06	240	< 0.005 U1	0.03	0.3	0.210	1.428	0.38	0.075	0.025	< 0.002 U1	6.66	0.2	0.02 J1
9/21/2016	Background	0.06	0.95	226	< 0.005 U1	0.02 J1	0.1	0.195	0.834	0.36	0.066	0.005	< 0.002 U1	6.13	0.3	0.03 J1
11/16/2016	Background	0.06	0.86	206	< 0.005 U1	0.03	0.05 J1	0.171	1.078	0.33	0.056	0.007	< 0.002 U1	5.33	0.3	0.02 J1
1/11/2017	Background	0.07	0.99	220	0.01 J1	0.02	0.124	0.202	1.144	0.36	0.091	0.009	< 0.002 U1	6.09	0.2	0.04 J1
3/8/2017	Background	0.07	0.92	220	< 0.005 U1	0.02	0.433	0.182	0.938	0.33	0.092	0.005	< 0.002 U1	5.68	0.5	0.02 J1
5/9/2017	Background	0.08	0.97	216	< 0.004 U1	0.04	0.165	0.208	0.4495	0.35	0.118	0.013	< 0.002 U1	5.07	0.6	0.02 J1
7/19/2017	Background	0.12	1.04	226	< 0.004 U1	0.02	0.110	0.203	0.856	0.30	0.089	0.0005 J1	< 0.002 U1	5.29	0.5	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-021I

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.007	69.0	21.1	548	0.33	8.0	46.2	331
7/19/2016	Background	0.012	64.7	21.7	500	0.36	7.6	47.9	334
9/21/2016	Background	0.011	65.1	20.4	488	0.34	7.6	43.2	305
11/16/2016	Background	0.012	68.4	20.0	432	0.34	7.3	40.4	317
1/11/2017	Background	< 0.002 U1	59.5	19.9	397	0.30	7.4	41.0	292
3/8/2017	Background	0.028	66.5	19.6	520	0.32	7.5	39.6	275
5/9/2017	Background	0.027	62.9	21.0	361	0.34	8.6	42.4	306
7/19/2017	Background	0.080	60.1	20.4	422	0.30	7.4	43.6	322
10/4/2017	Detection	0.029	63.9	20.5	399	0.31	7.4	45.7	306
6/6/2018	Detection	0.034	66.5	20.6	430	0.38	7.5	44.6	317
11/13/2018	Detection	0.08 J1	61.5	20.2	402	0.36	7.7	43.4	294
5/21/2019	Detection	< 0.02 U1	62.4	18.1	403	0.36	7.3	36.0	278
5/22/2019	Detection	--	--	--	438	--	7.5	--	--
11/14/2019	Detection	< 0.02 U1	56.5	17.5	526	0.38	7.5	35.5	262
5/19/2020	Detection	< 0.02 U1	58.5	19.3	386	0.35	7.4	38.8	283
11/11/2020	Detection	< 0.02 U1	58.6	18.0	518	0.45	7.0	36.4	266
2/3/2021	Detection	--	--	--	452	0.46	7.5	--	--
5/27/2021	Detection	0.011 J1	57.1	17.9	413	0.48	9.7	35.4	290
8/4/2021	Detection	--	--	--	469	0.43	7.4	--	--
11/11/2021	Detection	0.011 J1	57.2	18.2	500	0.40	7.7	35.8	280
5/12/2022	Detection	< 0.009 U1	55.2	19.1	491	0.40	7.6	38.5	280
11/3/2022	Detection	0.013 J1	55.1	19.7	390	0.40	7.4	38.0	280

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-0211

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.02 J1	1.55	127	< 0.005 U1	0.02	0.1	0.514	0.349	0.33	0.02 J1	< 0.0002 U1	< 0.002 U1	4.92	< 0.03 U1	0.03 J1
7/19/2016	Background	0.02 J1	1.67	136	< 0.005 U1	0.02	0.2	0.558	1.406	0.36	0.021	0.019	< 0.002 U1	5.25	0.05 J1	0.03 J1
9/21/2016	Background	0.02 J1	1.55	121	< 0.005 U1	0.02	0.1	0.422	0.981	0.34	0.046	0.004	< 0.002 U1	4.46	0.03 J1	0.02 J1
11/16/2016	Background	0.02 J1	1.41	126	< 0.005 U1	0.04	0.386	0.524	0.6556	0.34	0.035	0.006	< 0.002 U1	4.40	0.09 J1	0.02 J1
1/11/2017	Background	0.02 J1	1.39	126	0.01 J1	0.02 J1	1.04	0.437	2.733	0.30	< 0.004 U1	0.005	< 0.002 U1	4.63	0.07 J1	0.04 J1
3/8/2017	Background	0.03 J1	1.08	123	< 0.005 U1	0.01 J1	0.349	0.437	0.882	0.32	0.01 J1	0.007	< 0.002 U1	4.31	0.07 J1	0.02 J1
5/9/2017	Background	0.05	1.19	116	< 0.004 U1	0.01 J1	0.125	0.412	0.591	0.34	0.022	0.008	< 0.002 U1	4.06	0.05 J1	0.03 J1
7/19/2017	Background	0.03 J1	1.38	123	< 0.004 U1	0.01 J1	0.143	0.517	1.225	0.30	0.033	0.004	< 0.002 U1	4.18	0.05 J1	0.03 J1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-021S

**Rockport - LF
Phase I Constituents**

Collection Date	Monitoring Program	Boron	Calcium	Chloride	Conductivity	Fluoride	pH	Sulfate	Total Dissolved Solids
		mg/L	mg/L	mg/L	µS/cm	mg/L	SU	mg/L	mg/L
6/9/2016	Background	0.002 J1	55.1	15.0	387	0.61	6.6	21.2	275
7/19/2016	Background	0.011	52.8	15.1	450	0.64	7.5	21.2	292
9/21/2016	Background	0.007	52.0	14.7	454	0.62	7.6	17.4	285
11/16/2016	Background	0.015	60.0	14.7	501	0.63	7.5	14.9	294
1/11/2017	Background	0.002 J1	54.4	14.4	410	0.54	7.3	15.9	287
3/8/2017	Background	0.018	59.0	14.8	540	0.58	7.6	16.5	298
5/9/2017	Background	0.033	56.0	15.7	344	0.60	8.9	17.6	296
7/19/2017	Background	0.034	55.9	15.9	398	0.54	7.2	18.8	304
10/4/2017	Detection	0.027	59.8	17.7	402	0.60	7.5	20.1	300
12/12/2017	Detection	--	--	18.0	390	0.6	8.0	21.1	--
6/6/2018	Detection	0.039	52.8	17.5	400	0.66	7.8	18.7	283
11/14/2018	Detection	0.06 J1	55	17.9	380	0.66	7.3	17	278
2/12/2019	Detection	< 0.02 U1	--	17.9	318	--	7.7	--	--
4/1/2019	Detection	--	--	17.5	404	--	7.8	--	--
5/21/2019	Detection	< 0.02 U1	52.5	16.0	424	0.65	7.6	14.1	258
11/14/2019	Detection	< 0.02 U1	50.4	17.4	530	0.73	7.5	15.8	241
2/18/2020	Detection	--	--	--	856	0.79	7.5	--	--
5/19/2020	Detection	< 0.02 U1	49.1	18.0	347	0.76	8.1	15.1	238
7/16/2020	Detection	--	--	16.1	416	0.77	7.9	--	228
11/11/2020	Detection	< 0.02 U1	50.9	18.1	499	0.83	7.6	16.4	259
2/3/2021	Detection	--	--	--	529	0.85	7.7	--	--
5/28/2021	Detection	0.011 J1	62.6	19.1	450	0.81	10.0	18.4	300
8/4/2021	Detection	--	--	--	519	0.78	7.5	--	--
11/11/2021	Detection	0.012 J1	57.1	19.3	585	0.74	7.8	20.0	320
5/12/2022	Detection	< 0.009 U1	55.6	19.5	545	0.67	7.6	23.1	320
11/2/2022	Detection	0.013 J1	54.9	20.2	500	0.77	7.2	23.6	330

Notes:

mg/L: milligrams per liter

µS/cm: microsiemens per centimeter

SU: standard unit

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag.

In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Table 1 - Groundwater Data Summary: MW-021S

Rockport - LF
Phase II Constituents

Collection Date	Monitoring Program	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pCi/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L
6/9/2016	Background	0.03 J1	0.53	18.5	< 0.005 U1	0.02	0.4	0.104	0.1599	0.61	0.095	0.003	< 0.002 U1	1.78	0.7	0.01 J1
7/19/2016	Background	0.02 J1	0.47	19.6	< 0.005 U1	0.02 J1	0.7	0.033	0.5728	0.64	0.042	0.013	< 0.002 U1	1.85	0.5	0.01 J1
9/21/2016	Background	0.02 J1	0.46	19.4	< 0.005 U1	0.006 J1	0.3	0.030	0.452	0.62	0.025	0.003	< 0.002 U1	1.74	0.2	< 0.01 U1
11/16/2016	Background	0.02 J1	0.43	19.1	< 0.005 U1	0.02	0.292	0.023	0.484	0.63	0.023	0.009	< 0.002 U1	1.63	0.2	< 0.01 U1
1/11/2017	Background	0.03 J1	0.47	19.3	0.006 J1	0.01 J1	0.401	0.022	2.067	0.54	0.024	0.007	< 0.002 U1	1.74	0.1	0.058
3/8/2017	Background	0.03 J1	0.49	21.9	< 0.005 U1	0.01 J1	0.536	0.053	0.0305	0.58	0.095	0.002	< 0.002 U1	2.00	0.1	< 0.01 U1
5/9/2017	Background	0.04 J1	0.47	17.7	< 0.004 U1	0.01 J1	0.300	0.027	0.2351	0.60	0.023	0.005	< 0.002 U1	1.62	0.1	< 0.01 U1
7/19/2017	Background	0.05 J1	0.42	21.9	< 0.004 U1	0.01 J1	0.272	0.006 J1	1.098	0.54	0.024	< 0.0002 U1	< 0.002 U1	2.31	0.2	< 0.01 U1

Notes:

µg/L: micrograms per liter

mg/L: milligrams per liter

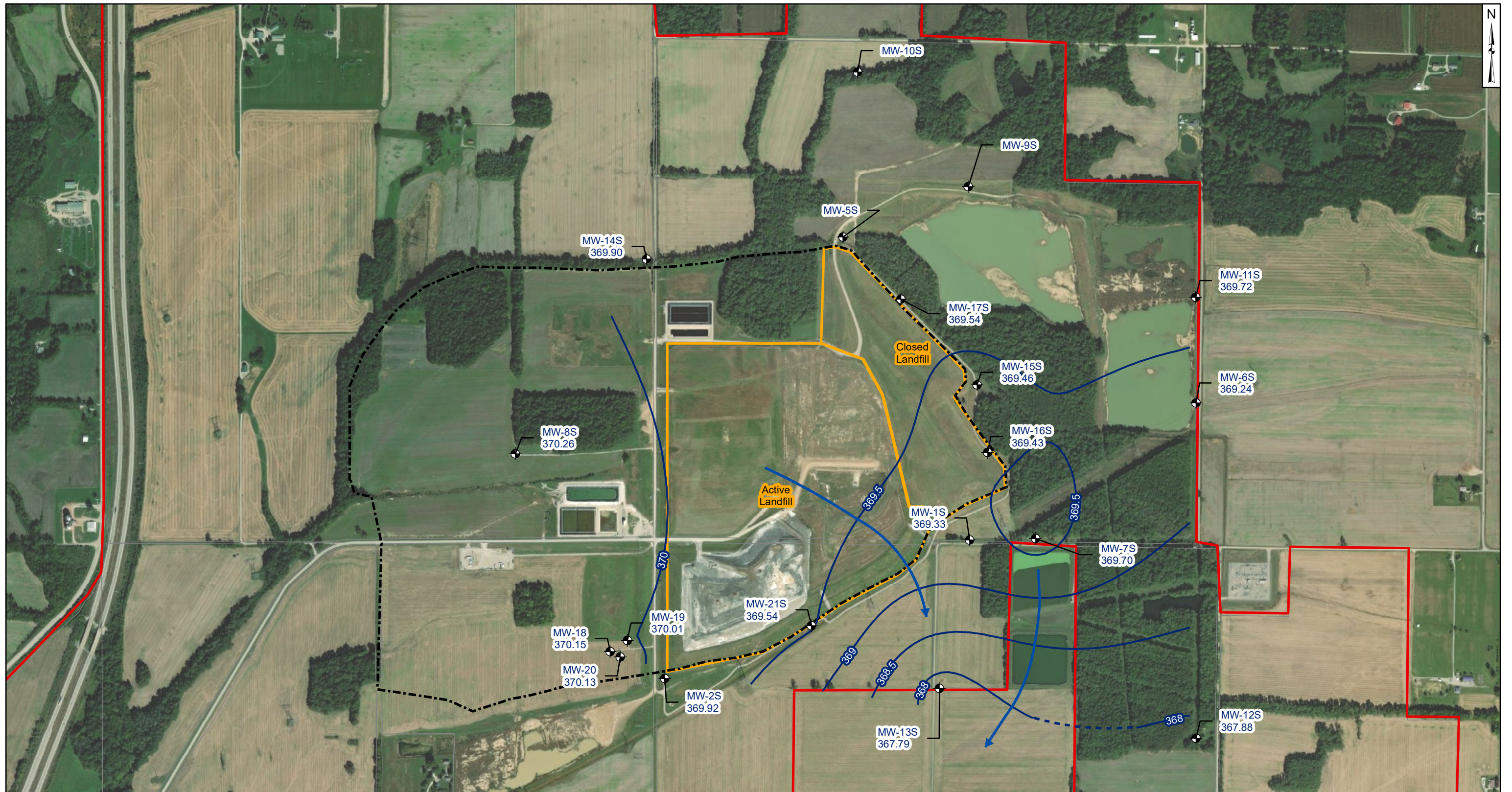
pCi/L: picocuries per liter

<: Non-detect value. Analytes which were not detected are shown as less than the method detection limit (MDL) followed by a 'U1' flag. In analytical data prior to 5/18/2021, U1 flags were reported as U in the analytical report.

--: Not analyzed

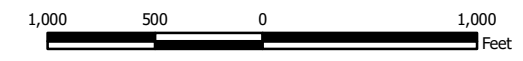
J1: Concentration estimated. Analyte was detected between the method detection limit and the reporting limit. In analytical data prior to 5/18/2021, J1 flags were reported as J in the analytical report.

Groundwater Flow Direction Maps

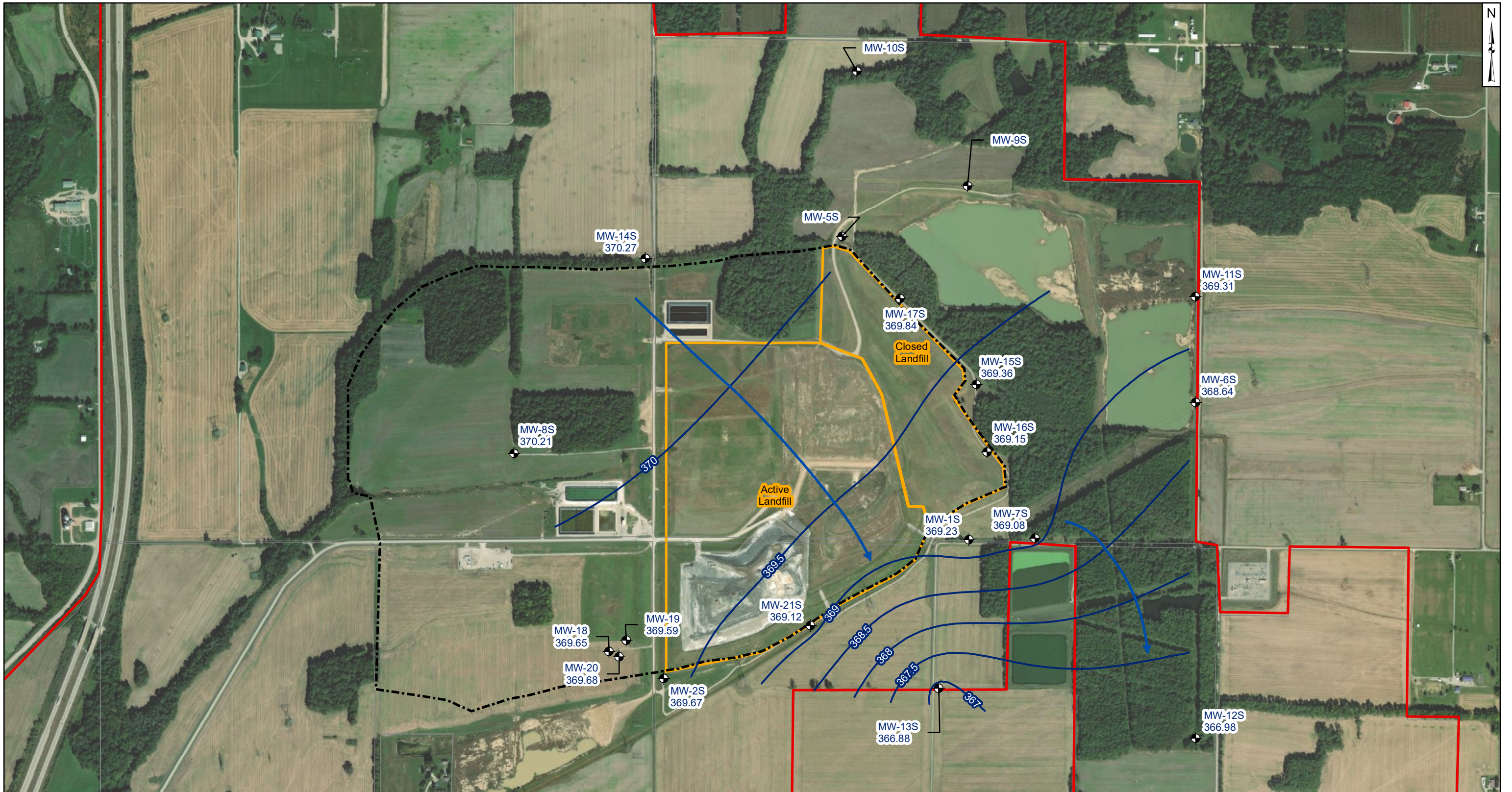


- Legend**
- ◆ Groundwater Monitoring Well
 - Groundwater Elevation Contour
 - ➔ Approximate Groundwater Flow Direction
 - - - Groundwater Elevation Contour (Inferred)
 - ⊠ 1984 Landfill Permit Boundary (Area 1)
 - ▭ Property Boundary
 - ▭ Landfill Area 1A (Active and Closed)

- Notes**
- Monitoring well coordinates and water level data (collected on May 9, 2022) provided by AEP.
 - MW-5S, MW-9S, and MW-10S were not used during contouring as they are not representative of the Site's features.
 - Site features based on information available in the Groundwater Monitoring Network Evaluation (Amec, 2016) provided by AEP.
 - Property and parcel boundaries taken from Spencer County Assessor.
 - The water level from the shallowest screen interval in each well cluster was used in groundwater contouring.
 - Groundwater elevation units are feet above mean sea level.

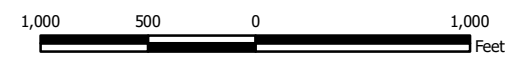


Potentiometric Surface Contours - Uppermost Aquifer May 2022	
AEP-Rockport Power Plant - CCR Landfill Rockport, Indiana	
Columbus, Ohio	2023/01/30
Figure X	



- Legend**
- ◆ Groundwater Monitoring Well
 - Groundwater Elevation Contour
 - ➔ Approximate Groundwater Flow Direction
 - - - Groundwater Elevation Contour (Inferred)
 - ⬜ 1984 Landfill Permit Boundary (Area 1)
 - ▭ Property Boundary
 - ▭ Landfill Area 1A (Active and Closed)

- Notes**
- Monitoring well coordinates and water level data (collected on October 31, 2022) provided by AEP.
 - MW-5S, MW-9S, and MW-10S were not used during contouring as they are not representative of the Site's features.
 - Site features based on information available in the Groundwater Monitoring Network Evaluation (Amec, 2016) provided by AEP.
 - Property and parcel boundaries taken from Spencer County Assessor.
 - The water level from the shallowest screen interval in each well cluster was used in groundwater contouring.
 - Groundwater elevation units are feet above mean sea level.



**Potentiometric Surface Contours - Uppermost Aquifer
October 2022**

AEP-Rockport Power Plant - CCR Landfill
Rockport, Indiana

Geosyntec
consultants

Columbus, Ohio

2023/01/30

Figure

X

Groundwater Flow Velocity Calculations

**Table 1: Residence Time Calculation Summary
Rockport - Landfill**

CCR Management Unit	Monitoring Well	Well Diameter (inches)	2022-02 ^[3]		2022-05		2022-07 ^[3]		2022-10	
			Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)
Landfill	MW-11S ^[1]	2.0	930	0.07	306	0.20	1,392	0.04	470	0.13
	MW-14S ^[1]	2.0	145	0.42	121	0.50	800	0.08	125	0.49
	MW-15I ^[2]	2.0	NC	NC	64	0.95	468	0.13	100	0.61
	MW-15S ^[2]	2.0	80	0.76	85	0.71	461	0.13	279	0.22
	MW-16D ^[2]	2.0	170	0.36	174	0.35	601	0.10	272	0.22
	MW-16I ^[2]	2.0	242	0.25	374	0.16	571	0.11	289	0.21
	MW-16S ^[2]	2.0	179	0.34	174	0.35	586	0.10	297	0.20
	MW-17I ^[2]	2.0	98	0.62	234	0.260	223	0.27	404	0.150
	MW-17S ^[2]	2.0	41	1.47	37	1.628	148	0.41	275	0.221
	MW-1D ^[2]	2.0	907	0.07	532	0.11	1,122	0.05	734	0.08
	MW-1I ^[2]	2.0	834	0.07	516	0.12	1,026	0.06	1,001	0.06
	MW-1S ^[2]	2.0	907	0.07	501	0.12	1,093	0.06	974	0.06
	MW-21D ^[2]	2.0	42	1.46	572	0.11	1,487	0.04	444	0.14
	MW-21I ^[2]	2.0	42	1.46	744	0.08	1,516	0.04	392	0.16
	MW-21S ^[2]	2.0	63	0.97	772	0.08	1,430	0.04	392	0.16
	MW-2D ^[2]	2.0	266	0.23	303	0.20	771	0.08	102	0.59
	MW-2I ^[2]	2.0	325	0.19	460	0.13	882	0.07	66	0.92
	MW-2S ^[2]	2.0	283	0.21	411	0.15	816	0.07	121	0.50
	MW-6S ^[1]	2.0	909	0.07	322	0.19	384	0.16	463	0.13
	MW-8I ^[1]	2.0	181	0.34	86	0.71	292	0.21	58	1.05
MW-8S ^[1]	2.0	200	0.30	125	0.49	345	0.18	173	0.35	

Notes:

[1] - Upgradient Well

[2] - Downgradient Well

[3] -Two-of-two verification sampling

**Table 1: Residence Time Calculation Summary
Rockport - Landfill**

APPENDIX 2 – Statistical Analyses

The memorandums summarizing the statistical evaluation follow.

STATISTICAL ANALYSIS SUMMARY-
Background Update Calculations
Landfill – Rockport Plant
Rockport, Indiana

Submitted to



1 Riverside Plaza
Columbus, Ohio 43215-2372

Submitted by



engineers | scientists | innovators

941 Chatham Lane
Suite 103
Columbus, Ohio 43221

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CHA8500

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LIST OF ATTACHMENTS

Attachment A	Certification by Qualified Professional Engineer
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LIST OF ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of Variance
CCR	Coal Combustion Residuals
CCV	Continuing Calibration Value
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
IAC	Indiana Administrative Code
LF	Landfill
LFB	Laboratory Fortified Blanks
LPL	Lower Prediction Limit
LRB	Laboratory Reagent Blanks
NELAP	National Environmental Laboratory Accreditation Program
PQL	Practical Quantitation Limit
QA	Quality Assurance
QC	Quality Control
SSI	Statistically Significant Increase
TDS	Total Dissolved Solids
UPL	Upper Prediction Limit
USEPA	United States Environmental Protection Agency

SECTION 1

EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency's (USEPA's) regulations regarding the disposal of coal combustion residuals (CCR) in landfills and surface impoundments (40 CFR 257 Subpart D, "CCR rule") and solid waste permit (74-02) requirements through Indiana Administrative Code (IAC) Title 329 Article 10 (329 IAC 10), groundwater monitoring was conducted at the Landfill (LF), an existing CCR unit at the Rockport Power Plant located in Rockport, Indiana. Recent groundwater monitoring results were incorporated into the LF background dataset as appropriate and the site-specific background values were re-established for use in future detection monitoring events.

Eight monitoring events were completed prior to July 2017 to establish background concentrations for Appendix III/Phase I and Appendix IV/Phase II parameters under the CCR rule. Prediction limits for Appendix III/Phase I parameters were previously updated in February 2020 using data until July 2019 (Geosyntec, 2020a). Conductivity was added to the list of Appendix III/Phase I parameters in the solid waste permit (74-02) in 2021. Conductivity prediction limits were established in May 2021 using data until September 2019. Intrawell tests using a one-of-two retesting procedure were selected and calculated for conductivity.

Since the last background update, four semiannual detection monitoring events were conducted between September 2019 and August 2021. Data from these four events, including both initial and verification results, were evaluated for inclusion in the background dataset. Groundwater data underwent several validation tests, including those for completeness, sample tracking accuracy, transcription errors, and consistent use of measurement units. No data quality issues were identified which would impact the usability of the data.

The detection monitoring data were submitted to Groundwater Stats Consulting, LLC for statistical analysis. The compliance data were reviewed for outliers, which were removed (when appropriate) prior to updating upper prediction limits (UPLs) for each Appendix III/Phase I parameter to represent background values. Oversight on the use of statistical calculations was provided by Dr. Jim Loftis, Civil and Environmental Engineering Professor Emeritus at Colorado State University and senior advisor to Groundwater Stats Consulting.

Certification of the selected statistical methods by a qualified professional engineer is documented in Attachment A.

SECTION 2

LANDFILL EVALUATION

2.1 Previous Background Calculations

Eight background monitoring events were completed from June 2016 through July 2017 to establish background concentrations for Appendix III/Phase I and Appendix IV/Phase II parameters under the CCR rule. The data were reviewed for outliers and trends prior to calculating upper prediction limits (UPLs) for each Appendix III/Phase I parameter. Lower prediction limits (LPLs) were also established for pH. Intrawell prediction limits were selected for boron, fluoride, pH, and sulfate with a one-of-three resampling procedure, and interwell prediction limits were selected for calcium, chloride, and TDS with a one-of-two resampling procedure. The statistical analyses to establish background levels were previously documented in the January 2018 *Statistical Analysis Summary* report (Geosyntec, 2018a). An ASD was certified in January 2019 which resulted in a revision to intrawell tests for calcium, chloride, and TDS due to impacts from historical off-site oil and gas production wells on groundwater quality (Geosyntec, 2019).

As recommended in the USEPA *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (Unified Guidance), background values should be updated every four to eight measurements (USEPA, 2009). Prediction limits for Appendix III/Phase I parameters were previously updated in February 2020 using data until July 2019 (Geosyntec, 2020a). While the February 2020 Statistical Analysis Summary included the results for September 2019 in Table 1, the referenced background update only used data until July 2019 (Geosyntec, 2020a). Intrawell tests using a one-of-two retesting procedure were selected and updated for boron, calcium, chloride, fluoride, pH, sulfate, and TDS. These prediction limits were used for detection monitoring events completed between November 2019 and August 2021.

In accordance with the solid waste permit for the Landfill (74-02), conductivity was added to the list of Appendix III/Phase I parameters in 2021. Conductivity prediction limits were established in May 2021 using data until September 2019. Intrawell tests using a one-of-two retesting procedure were selected for conductivity. These conductivity prediction limits were used for the first detection monitoring event of 2021, including both initial (May 2021) and verification (August 2021) results.

2.2 Data Validation & QA/QC

Four semiannual detection monitoring events have been conducted at the LF between November 2019 and August 2021. If the initial results for each detection monitoring event identified possible exceedances, verification sampling was completed on an individual well/parameter basis. Additionally, verification results collected in September 2019 for the first semiannual event of 2019 were not previously included in the background dataset. Thus, a minimum of four samples were collected from each compliance well. A summary of data collected during these detection monitoring events may be found in Table 1.

Chemical analysis was completed by an analytical laboratory certified by the National Environmental Laboratory Accreditation Program (NELAP). Quality assurance and quality control (QA/QC) samples completed by the analytical laboratory included the use of laboratory reagent blanks (LRBs), continuing calibration verification (CCV) samples, and laboratory fortified blanks (LFBs).

The analytical data were imported into a Microsoft Access database, where checks were completed to assess the accuracy of sample location identification and analyte identification. Where necessary, unit conversions were applied to standardize reported units across all sampling events. Exported data files were created for use with the Sanitas™ v.9.6.31 statistics software. The export was checked against the analytical data for transcription errors and completeness. No QA/QC issues were noted which would impact data usability.

2.3 Statistical Analysis

The data used to conduct the statistical analyses described below are summarized in Table 1. Statistical analyses for the LF were conducted in accordance with the October 2020 *Statistical Analysis Plan* (Geosyntec, 2020b). The complete statistical analysis results are included in Attachment B.

Time series plots of Appendix III/Phase I parameters are included in Attachment B and were used to evaluate concentrations over time and to provide an initial screening of suspected outliers and trends. Box plots were also compiled to provide visual representation of variations between wells and within individual wells (Attachment B).

2.3.1 **Outlier Evaluation**

Potential outliers were evaluated using Tukey's outlier test; i.e., data points were considered potential outliers if they met one of the following criteria:

$$x_i < \tilde{x}_{0.25} - 3 \times IQR \quad (1)$$

or

$$x_i > \tilde{x}_{0.75} + 3 \times IQR \quad (2)$$

where:

- x_i = individual data point
- $\tilde{x}_{0.25}$ = first quartile
- $\tilde{x}_{0.75}$ = third quartile
- IQR = the interquartile range = $\tilde{x}_{0.75} - \tilde{x}_{0.25}$

Data that were evaluated as potential outliers are summarized in Attachment B. Tukey's outlier test and visual inspection indicated several potential outliers. Next, the data were reviewed to

identify possible sources of errors or discrepancies, including data recording errors, unusual sampling conditions, laboratory quality, or inconsistent sample turbidity. After further review, 31 values were removed from the dataset.

No change was made to the six previously flagged outliers. Seven high conductivity measurements in November 2016, seven low conductivity measurements in March 2017, and seven high pH values in May 2021 were likely due to field measurement errors and were thus flagged as outliers. In addition, four high conductivity values from February 2020 were also flagged as outliers to construct limits that are conservative from a regulatory perspective.

While Tukey's test identified outliers for TDS at downgradient well MW-001D and upgradient well MW-014S, these values were not flagged as they were similar to other concentrations observed in the respective wells.

2.3.2 Establishment of Updated Background Levels

Intrawell tests compare compliance data from a single well to background data within the same well and are most appropriate when 1) upgradient wells exhibit spatial variation; 2) when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; or 3) when downgradient water quality is not impacted compared to upgradient water quality for the same parameter. Periodic updating of background statistical limits is necessary as natural systems continuously change due to physical changes to the environment. For intrawell analyses, data for all wells and constituents are re-evaluated when a minimum of four new data points are available. These four (or more) new data points are used to determine if earlier concentrations are representative of present-day groundwater quality. For interwell comparisons, newer data are evaluated during each event for new outliers, and prediction limits are constructed using all available data from upgradient wells.

For intrawell comparisons, Mann-Whitney (Wilcoxon rank-sum) tests were used to compare the medians of historical data (June 2016 - July 2019) to the new compliance samples (September 2019 – August 2021). Results were evaluated to determine if the medians of the two groups were similar at the 99% confidence level. Where no significant difference was found, the new compliance data were added to the background dataset. Where a statistically significant difference was found between the medians of the two groups, the data were reviewed to evaluate the cause of the difference and to determine if adding newer data to the background dataset, replacing the background dataset with the newer data, or continuing to use the existing background dataset was most appropriate. If the differences appeared to have been caused by a release from the LF, then the previous background dataset would have continued to be used.

The complete Mann-Whitney test results and a summary of the significant findings can be found in Attachment B.

Significant differences were found between the two groups for the following upgradient well/parameter pairs:

- An increase was found for chloride at MW-008I;
- An increase was found for fluoride at MW-006S;
- An increase was found for chloride at MW-008I;

During this background update, the datasets for all upgradient wells were updated because these data represent naturally occurring groundwater quality and are not impacted by a release.

Significant differences were found between the two groups for the following downgradient well/parameter pairs:

- An increase was found for calcium at MW-016D, and decreases were found for calcium at MW-016I and MW-021I;
- Increases were found for chloride at MW-001I, MW-002D, MW-002S, MW-016D, and MW-016S, and decreases were found for chloride at MW-015I, MW-016I, MW-017I, and MW-021I;
- Increases were found for conductivity at MW-001I, MW-002S, MW-016D, and MW-017S;
- Increases were found for fluoride at MW-002S, MW-021I, and MW-021S;
- An increase was found for sulfate at MW-016D, and decreases were found for sulfate at MW-001I, MW-015I, MW-015S, MW-016I, MW-016S, MW-017I, MW-017S, and MW-021I; and
- Increases were found for TDS at MW-002D and MW-016D, and decreases were found for TDS at MW-015I, MW-016I, and MW-017I.

The increases found for TDS at MW-002D and MW-016D were attributed to natural variability (Wood, 2020). For the increases in chloride concentrations at MW-001I, MW-002D and MW-016D, the higher concentrations were attributed to infiltration from stormwater holding ponds or flushing of salts from water holding ponds associated with historical oil and gas operations rather than a release from the landfill (Wood, 2022). Likewise, for the conductivity increases found at MW-001I, MW-002S, MW-016D, and MW-017S, the higher concentrations were likely associated with historical oil and gas production rather than a release from the landfill (Geosyntec, 2018b). For the abovementioned well/parameter pairs, a minimum of the eight most recent results, which are likely to be more representative of present-day groundwater quality, were used to establish prediction limits.

For the increases found for calcium at MW-016D, chloride at MW-002S and MW-016S, fluoride in MW-002S, MW-021I, and MW-021S, and sulfate in MW-016D, the magnitude of the increase was small. Thus, the background dataset was updated with the new data. Similarly, for decreases

found for calcium at MW-021I, chloride at MW-021I, and sulfate at MW-001I, MW-016S, MW-016I, MW-017S, and MW-021I, the magnitude of the decrease was small, and the background dataset was also updated with the new data.

For the decreases found for calcium at MW-016I, chloride at MW-015I, MW-016I, and MW-017I, sulfate at MW-015I, MW-015S, and MW-017I, and TDS at MW-015I, MW-016I, and MW-017I, the new data have stabilized at lower concentrations compared to historical data. Thus, the background datasets for these well/parameter pairs were truncated to include only the eight most recent samples to construct limits that are both representative of present-day conditions and conservative from a regulatory perspective. Although the Mann-Whitney test did not identify significant decreases for calcium at MW-017I, a similar pattern was observed, and the background dataset was similarly truncated to only the 8 most recent data.

2.3.3 Updated Prediction Limits

After the revised background set was established, a parametric or non-parametric analysis was selected based on the distribution of the data and the frequency of non-detect data. Estimated results less than the practical quantitation limit (PQL) – i.e., “J-flagged” data – were considered detections and the estimated results were used in the statistical analyses. Non-parametric analyses were selected for datasets with at least 50% non-detect data or datasets that could not be normalized. Parametric analyses were selected for datasets (either transformed or untransformed) that passed the Shapiro-Wilk / Shapiro-Francia test for normality. The Kaplan-Meier non-detect adjustment was applied to datasets with between 15% and 50% non-detect data. For datasets with fewer than 15% non-detect data, non-detect data were replaced with one half of the PQL. The selected analysis (i.e., parametric or non-parametric) and transformation (where applicable) for each background dataset are shown in Attachment B.

Except as noted in Section 2.3.2, intrawell UPLs were updated using all the historical data through August 2021 to represent background values. Intrawell LPLs were also generated for pH. The updated prediction limits are summarized in Table 2.

The intrawell UPLs and LPLs were calculated for a one-of-two retesting procedure; i.e., if at least one sample in a series of two does not exceed the UPL and the pH result is greater than or equal to the LPL, then it can be concluded that an SSI has not occurred. In practice, where the initial result does not exceed the UPL and the pH result is greater than or equal to the LPL, a second sample will not be collected. The retesting procedures allow achieving an acceptably high statistical power to detect changes at downgradient wells for constituents evaluated using intrawell prediction limits.

2.4 Conclusions

Four detection monitoring events were completed in accordance with the CCR Rule. Additional sampling events completed during the detection monitoring period were also included in the new dataset. The laboratory and field data from these events were reviewed prior to statistical analysis, with no QA/QC issues identified that impacted data usability. Mann-Whitney tests were

completed to evaluate whether data from the detection monitoring events could be added to the existing background dataset. Where appropriate, the background datasets were updated, and UPLs and LPLs were recalculated. Intrawell prediction limits using a one-of-two retesting procedure were updated for all Appendix III/Phase I parameters.

SECTION 3

REFERENCES

Geosyntec Consultants, 2018a. Statistical Analysis Summary. Landfill – Rockport Plant. January.

Geosyntec Consultants, 2018b. Alternative Source Demonstration Report – Rockport Plant Landfill. November.

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United States Environmental Protection Agency (USEPA). 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance. EPA 530/R-09-007. March.

Wood. 2020. Alternative Source Demonstration for Appendix III Constituents, CCR Landfill at American Electric Power Service Corporation Rockport Generating Station. June.

Wood. 2022. Alternative Source Demonstration for Appendix III Constituents, CCR Landfill at American Electric Power Service Corporation Rockport Generating Station. January.

TABLES

**Table 1: Groundwater Data Summary
Rockport - Landfill**

Parameter	Unit	MW-001D						
		11/22/2019	2/17/2020	5/19/2020	11/11/2020	2/3/2021	5/26/2021	8/5/2021
		2019-D2	2019-D2-R1	2020-D1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	0.04 J	-	0.04 J	0.04 J	-	0.033 J	-
Calcium	mg/L	72.5	-	59.9	80.3	56.8	77.2	-
Chloride	mg/L	49.1	-	23.8	56.2	-	44.0	-
Conductivity	µS/cm	609	817	454	664	467	747	657
Fluoride	mg/L	0.27	-	0.30	0.3	-	0.26	-
Sulfate	mg/L	41.2	-	23.3	37.7	-	38.6	-
Total Dissolved Solids	mg/L	398	257	261	397	264	410	440
pH	SU	7.3	7.4	7.1	7.1	7.5	7.7	7.4

Parameter	Unit	MW-001I							
		9/11/2019	11/22/2019	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/26/2021	8/4/2021
		2019-D1-R1	2019-D2	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	-	0.05 U	0.02 J	-	0.05 U	-	0.017 J	-
Calcium	mg/L	-	66.7	71.2	-	65.9	-	67.4	-
Chloride	mg/L	33.5	35.0	37.7	35.4	36.3	36.9	37.8	38.2
Conductivity	µS/cm	481	491	566	575	590	549	648	566
Fluoride	mg/L	-	0.37	0.40	0.39	0.43	-	0.38	-
Sulfate	mg/L	-	39.7	40.1	-	39	-	38.6	-
Total Dissolved Solids	mg/L	-	348	323	340	322	-	350	-
pH	SU	7.3	7.1	7.2	7.4	7.3	7.4	7.7	7.3

Parameter	Unit	MW-001S					
		11/22/2019	2/18/2020	5/19/2020	11/11/2020	5/26/2021	8/5/2021
		2019-D2	2019-D2-R1	2020-D1	2020-D2	2021-D1	2021-D1-R1
Boron	mg/L	0.05 U	-	0.02 J	0.05 U	0.019 J	-
Calcium	mg/L	69.8	-	72.0	67.8	66.2	-
Chloride	mg/L	30.6	-	34.7	33.3	35.0	-
Conductivity	µS/cm	612	1,386	440	691	793	699
Fluoride	mg/L	0.57	-	0.55	0.66	0.66	-
Sulfate	mg/L	35.9	-	37.1	34.1	31.6	-
Total Dissolved Solids	mg/L	444	442	350	402	430	430
pH	SU	6.9	7.1	7.0	7.0	7.8	7.3

Parameter	Unit	MW-002D								
		9/11/2019	11/14/2019	2/18/2020	5/18/2020	7/15/2020	11/11/2020	2/3/2021	5/27/2021	8/5/2021
		2019-D1-R1	2019-D2	2019-D2-R1	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	-	0.02 J	-	0.05 U	-	0.05 U	-	0.012 J	-
Calcium	mg/L	103	76.9	-	88.7	-	92.2	-	88.5	-
Chloride	mg/L	110	56.5	76.3	93.6	96.2	92.2	74.2	82.9	94.2
Conductivity	µS/cm	705	726	1,377	617	781	725	674	664	734
Fluoride	mg/L	-	0.18	-	0.21	0.20	0.2	-	0.21	-
Sulfate	mg/L	-	38.9	-	36.2	-	35.1	-	37.6	-
Total Dissolved Solids	mg/L	443	356	-	399	411	395	400	440	420
pH	SU	7.2	7.3	7.1	7.8	7.3	7.2	7.3	9.5	7.2

Notes:

mg/L: milligrams per liter

SU: standard unit

U: Parameter was not present in concentrations above the method detection limit and is reported as the reporting limit

J: Estimated value. Parameter was detected in concentrations below the reporting limit

--: Not Measured

D1: First semi-annual detection monitoring event of the year

D2: Second semi-annual detection monitoring event of the year

R1: First verification event associated with detection monitoring round

**Table 1: Groundwater Data Summary
Rockport - Landfill**

Parameter	Unit	MW-002I					
		11/14/2019	5/18/2020	11/11/2020	2/3/2021	5/27/2021	8/4/2021
		2019-D2	2020-D1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	0.05 U	0.05 U	0.05 U	-	0.013 J	-
Calcium	mg/L	63.4	61.9	66.6	-	70.9	-
Chloride	mg/L	23.3	24.4	24.3	-	29.2	-
Conductivity	µS/cm	576	420	558	491	510	581
Fluoride	mg/L	0.33	0.36	0.37	-	0.35	-
Sulfate	mg/L	39.3	40.5	38.6	-	40.8	-
Total Dissolved Solids	mg/L	296	297	296	-	350	-
pH	SU	7.4	7.8	6.9	7.4	9.7	7.3

Parameter	Unit	MW-002S								
		9/11/2019	11/14/2019	2/18/2020	5/18/2020	7/15/2020	11/11/2020	2/4/2021	5/27/2021	8/4/2021
		2019-D1-R1	2019-D2	2019-D2-R1	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	-	0.03 J	-	0.02 J	-	0.03 J	-	0.043 J	-
Calcium	mg/L	-	59.2	-	53.7	-	58.4	-	59.8	-
Chloride	mg/L	26.6	27.3	-	28.9	28.7	-	-	24.8	-
Conductivity	µS/cm	473	657	1,070	462	584	588	562	500	579
Fluoride	mg/L	-	0.28	-	0.34	0.33	0.34	0.36	0.35	0.35
Sulfate	mg/L	-	27.8	-	24.9	-	25.7	-	30.8	-
Total Dissolved Solids	mg/L	-	336	-	344	347	336	-	370	-
pH	SU	7.3	7.5	7.4	7.4	7.6	7.4	7.6	9.5	7.3

Parameter	Unit	MW-006S				MW-008I			
		11/14/2019	5/19/2020	11/12/2020	5/25/2021	11/22/2019	5/19/2020	11/10/2020	5/27/2021
		2019-D2	2020-D1	2020-D2	2021-D1	2019-D2	2020-D1	2020-D2	2021-D1
Boron	mg/L	0.05 U	0.05 U	0.05 U	0.017 J	0.02 J	0.02 J	0.05 U	0.020 J
Calcium	mg/L	47.8	43.1	43	43.4	66.9	68.8	66.8	68.1
Chloride	mg/L	5.36	1.49	2.07	1.29	19.7	20.4	19.3	18.8
Conductivity	µS/cm	452	373	366	354	525	601	621	530
Fluoride	mg/L	0.90	1.02	1.11	1.21	0.30	0.32	0.38	0.36
Sulfate	mg/L	12.0	1.6	4.4	0.83	68.3	61.7	56.7	56.0
Total Dissolved Solids	mg/L	277	214	225	210	381	357	343	390
pH	SU	7.3	7.7	7.1	8.0	6.7	7.8	7.4	8.3

Parameter	Unit	MW-008S				MW-011S			
		11/21/2019	5/19/2020	11/10/2020	5/27/2021	11/15/2019	5/20/2020	11/11/2020	5/25/2021
		2019-D2	2020-D1	2020-D2	2021-D1	2019-D2	2020-D1	2020-D2	2021-D1
Boron	mg/L	0.05 U	0.05 U	0.05 U	0.014 J	0.052	0.04 J	0.04 J	0.038 J
Calcium	mg/L	39.0	42.2	43.5	39.7	47.6	55.8	52.4	53.9
Chloride	mg/L	23.1	27.2	27.1	26.8	1.48	2.68	1.52	2.28
Conductivity	µS/cm	495	567	633	513	533	435	302	413
Fluoride	mg/L	0.49	0.50	0.56	0.59	0.77	0.58	0.83	0.66
Sulfate	mg/L	20.0	23.8	23.3	19.8	2.7	13.5	2.9	10.7
Total Dissolved Solids	mg/L	324	342	326	330	216	246	211	240
pH	SU	7.4	6.3	6.8	7.8	7.8	7.4	7.4	7.7

Notes:

mg/L: milligrams per liter

SU: standard unit

U: Parameter was not present in concentrations above the method detection limit and is reported as the reporting limit

J: Estimated value. Parameter was detected in concentrations below the reporting limit

--: Not Measured

D1: First semi-annual detection monitoring event of the year

D2: Second semi-annual detection monitoring event of the year

R1: First verification event associated with detection monitoring round

**Table 1: Groundwater Data Summary
Rockport - Landfill**

Parameter	Unit	MW-014S				MW-015I						
		11/16/2019	5/19/2020	11/10/2020	5/28/2021	11/15/2019	5/19/2020	11/10/2020	2/2/2021	2/3/2021	5/28/2021	8/4/2021
		2019-D2	2020-D1	2020-D2	2021-D1	2019-D2	2020-D1	2020-D2	2020-D2-R1	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	0.05 U	0.05 U	0.05 U	0.012 J	0.03 J	0.03 J	0.03 J	-	-	0.028 J	-
Calcium	mg/L	65.1	66.6	66.4	82.0	45.2	49.2	44.2	-	-	53.3	-
Chloride	mg/L	28.9	28.6	26.3	25.4	16.9	19.0	12.8	-	-	16.0	-
Conductivity	µS/cm	655	550	742	706	495	435	381	400	-	393	400
Fluoride	mg/L	0.38	0.33	0.39	0.38	0.27	0.25	0.47	-	0.36	0.39	0.38
Sulfate	mg/L	32.8	32.5	31.4	31.0	17.6	17.8	11.7	-	-	14.7	-
Total Dissolved Solids	mg/L	374	411	370	430	248	253	213	-	-	240	-
pH	SU	7.5	7.7	6.7	7.8	7.4	7.5	7.5	7.6	-	7.7	7.4

Parameter	Unit	MW-015S				
		9/11/2019	11/15/2019	5/19/2020	11/10/2020	5/28/2021
		2019-D1-R1	2019-D2	2020-D1	2020-D2	2021-D1
Boron	mg/L	-	0.05 U	0.05 U	0.05 U	0.014 J
Calcium	mg/L	-	40.2	42.4	45.4	66.4
Chloride	mg/L	-	9.48	10.3	10.1	10.6
Conductivity	µS/cm	269	467	400	455	430
Fluoride	mg/L	0.81	0.70	0.86	0.78	0.81
Sulfate	mg/L	-	8.4	9.1	10.3	8.82
Total Dissolved Solids	mg/L	-	234	218	236	250
pH	SU	7.4	7.4	7.6	7.3	7.7

Parameter	Unit	MW-016D								
		9/11/2019	11/15/2019	2/18/2020	5/19/2020	7/15/2020	11/11/2020	2/2/2021	5/28/2021	8/5/2021
		2019-D1-R1	2019-D2	2019-D2-R1	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	-	0.03 J	-	0.03 J	-	0.04 J	-	0.038 J	-
Calcium	mg/L	109	100	-	108	102	109	106	122	103
Chloride	mg/L	125	127	133	135	133	130	117	110	110
Conductivity	µS/cm	813	1,070	1,869	799	969	1,050	953	886	956
Fluoride	mg/L	-	0.17	-	0.17	0.20	0.21	-	0.23	0.2
Sulfate	mg/L	-	40.8	38.9	40.1	-	39.1	-	40.6	-
Total Dissolved Solids	mg/L	523	537	579	558	519	547	573	580	570
pH	SU	7.3	7.3	7.2	7.7	7.2	7.2	7.4	9.6	7.2

Parameter	Unit	MW-016I				MW-016S				
		11/15/2019	5/19/2020	11/10/2020	5/28/2021	11/15/2019	5/19/2020	7/15/2020	11/11/2020	5/28/2021
		2019-D2	2020-D1	2020-D2	2021-D1	2019-D2	2020-D1	2020-D1-R1	2020-D2	2021-D1
Boron	mg/L	0.02 J	0.02 J	0.02 J	0.019 J	0.02 J	0.03 J	-	0.02 J	0.021 J
Calcium	mg/L	41.0	51.9	44.5	50.4	92.2	104	-	103	96.8
Chloride	mg/L	31.2	31.3	19.6	16.5	20.7	26.7	25.8	21.8	21.2
Conductivity	µS/cm	659	481	567	460	961	675	823	948	763
Fluoride	mg/L	0.14	0.14	0.2	0.18	0.32	0.34	0.37	0.38	0.41
Sulfate	mg/L	25.2	25.8	21.4	18.5	35.2	34.9	-	34.5	32.2
Total Dissolved Solids	mg/L	343	350	273	270	497	470	489	473	480
pH	SU	7.4	7.8	6.8	7.5	7.0	7.5	7.1	6.5	7.2

Notes:

mg/L: milligrams per liter

SU: standard unit

U: Parameter was not present in concentrations above the method detection limit and is reported as the reporting limit

J: Estimated value. Parameter was detected in concentrations below the reporting limit

--: Not Measured

D1: First semi-annual detection monitoring event of the year

D2: Second semi-annual detection monitoring event of the year

R1: First verification event associated with detection monitoring round

**Table 1: Groundwater Data Summary
Rockport - Landfill**

Parameter	Unit	MW-017I							
		9/11/2019	9/12/2019	11/15/2019	5/19/2020	7/15/2020	11/10/2020	5/27/2021	8/5/2021
		2019-D1-R1	2019-D1-R1	2019-D2	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1
Boron	mg/L	-	-	0.04 J	0.04 J	-	0.04 J	0.043 J	0.038 J
Calcium	mg/L	-	-	43.9	40.3	-	38.1	41.0	39.4
Chloride	mg/L	-	-	41.2	32.8	-	25.5	30.0	31.7
Conductivity	µS/cm		363	654	487	521	437	389	431
Fluoride	mg/L	1.08	-	0.95	1.07	-	1.16	1.07	1.06
Sulfate	mg/L	-	-	23.2	20.7	-	16.8	15.5	17
Total Dissolved Solids	mg/L	-	-	309	273	-	239	280	260
pH	SU	-	7.6	7.4	7.9	7.3	8.4	7.8	7.5

Parameter	Unit	MW-017S					MW-021D				
		11/15/2019	5/19/2020	7/14/2020	11/10/2020	5/27/2021	11/14/2019	5/19/2020	11/11/2020	5/27/2021	8/4/2021
		2019-D2	2020-D1	2020-D1-R1	2020-D2	2021-D1	2019-D2	2020-D1	2020-D2	2021-D1	2021-D1-R1
Boron	mg/L	0.02 J	0.02 J	-	0.02 J	0.025 J	0.05 U	0.02 J	0.05 U	0.014 J	-
Calcium	mg/L	28.7	32.8	-	33.9	35.9	69.4	69.2	70.9	69.8	-
Chloride	mg/L	12.6	12.7	-	12.9	11.0	19.2	19.9	19.5	19.8	-
Conductivity	µS/cm	396	358	385	403	389	670	449	599	538	567
Fluoride	mg/L	0.96	0.95	-	0.9	0.95	0.32	0.26	0.38	0.40	-
Sulfate	mg/L	6.2	6.5	-	8.2	5.92	38.6	33.3	37.1	36.4	-
Total Dissolved Solids	mg/L	207	200	-	211	210	323	328	318	330	-
pH	SU	7.6	7.8	6.8	7.5	7.6	7.4	7.6	7.0	9.7	7.5

Parameter	Unit	MW-021I					
		11/14/2019	5/19/2020	11/11/2020	2/3/2021	5/27/2021	8/4/2021
		2019-D2	2020-D1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	0.05 U	0.05 U	0.05 U	-	0.011 J	-
Calcium	mg/L	56.5	58.5	58.6	-	57.1	-
Chloride	mg/L	17.5	19.3	18	-	17.9	-
Conductivity	µS/cm	526	386	518	452	413	469
Fluoride	mg/L	0.38	0.35	0.45	0.46	0.48	0.43
Sulfate	mg/L	35.5	38.8	36.4	-	35.4	-
Total Dissolved Solids	mg/L	262	283	266	-	290	-
pH	SU	7.5	7.4	7.0	7.5	9.7	7.4

Parameter	Unit	MW-021S							
		11/14/2019	2/18/2020	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/28/2021	8/4/2021
		2019-D2	2019-D2-R1	2020-D1	2020-D1-R1	2020-D2	2020-D2-R1	2021-D1	2021-D1-R1
Boron	mg/L	0.05 U	-	0.05 U	-	0.05 U	-	0.011 J	-
Calcium	mg/L	50.4	-	49.1	-	50.9	-	62.6	-
Chloride	mg/L	17.4	-	18.0	16.1	18.1	-	19.1	-
Conductivity	µS/cm	530	856	347	416	499	529	450	519
Fluoride	mg/L	0.73	0.79	0.76	0.77	0.83	0.85	0.81	0.78
Sulfate	mg/L	15.8	-	15.1	-	16.4	-	18.4	-
Total Dissolved Solids	mg/L	241	-	238	228	259	-	300	-
pH	SU	7.5	7.5	8.1	7.9	7.6	7.7	10.3	7.5

Notes:

mg/L: milligrams per liter

SU: standard unit

U: Parameter was not present in concentrations above the method detection limit and is reported as the reporting limit

J: Estimated value. Parameter was detected in concentrations below the reporting limit

--: Not Measured

D1: First semi-annual detection monitoring event of the year

D2: Second semi-annual detection monitoring event of the year

R1: First verification event associated with detection monitoring round

**Table 2: Background Level Summary
Rockport Plant - Landfill**

Analyte	Unit	Description	MW-001D	MW-001I	MW-001S	MW-002D	MW-002I	MW-002S	MW-015I	MW-015S
Boron	mg/L	Intrawell Background Value (UPL)	0.129	0.123	0.0588	0.100	0.0662	0.102	0.0875	0.150
Calcium	mg/L	Intrawell Background Value (UPL)	84.4	72.9	78.1	117	78.9	65.9	55.4	66.4
Chloride	mg/L	Intrawell Background Value (UPL)	65.5	42.1	42.0	132	34.0	31.5	34.2	26.0
Conductivity	uS/cm	Intrawell Background Value (UPL)	857	747	913	936	753	786	585	623
Fluoride	mg/L	Intrawell Background Value (UPL)	0.333	0.465	0.700	0.229	0.393	0.391	0.475	1.05
pH	SU	Intrawell Background Value (UPL)	8.1	7.9	8.1	8.5	8.4	8.0	8.1	7.8
		Intrawell Background Value (LPL)	6.7	6.7	6.6	6.3	6.6	6.7	6.9	6.9
Sulfate	mg/L	Intrawell Background Value (UPL)	48.1	47.5	38.9	46.3	47.9	34.4	39.3	30.4
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	461	361	461	506	384	392	335	419

Analyte	Unit	Description	MW-016D	MW-016I	MW-016S	MW-017I	MW-017S	MW-021D	MW-021I	MW-021S
Boron	mg/L	Intrawell Background Value (UPL)	0.0990	0.148	0.147	0.0953	0.0649	0.111	0.0835	0.0616
Calcium	mg/L	Intrawell Background Value (UPL)	126	101	119	58.5	40.7	80.2	72.9	64.9
Chloride	mg/L	Intrawell Background Value (UPL)	161	98.4	27.7	90.8	15.5	20.5	23.1	20.2
Conductivity	uS/cm	Intrawell Background Value (UPL)	1,290	1,040	1,040	1,060	514	697	585	589
Fluoride	mg/L	Intrawell Background Value (UPL)	0.245	0.233	0.487	1.16	1.29	0.443	0.505	0.918
pH	SU	Intrawell Background Value (UPL)	7.8	8.0	8.1	8.3	8.1	8.5	8.6	8.9
		Intrawell Background Value (LPL)	6.8	6.8	6.2	6.8	6.9	6.6	7.0	6.6
Sulfate	mg/L	Intrawell Background Value (UPL)	43.6	50.7	52.5	56.7	17.1	42.4	51.7	23.5
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	632	648	551	469	286	366	357	339

Notes

UPL: Upper prediction limit

LPL: Lower prediction limit

ATTACHMENT A

Certification by Qualified Professional Engineer

Certification by Qualified Professional Engineer

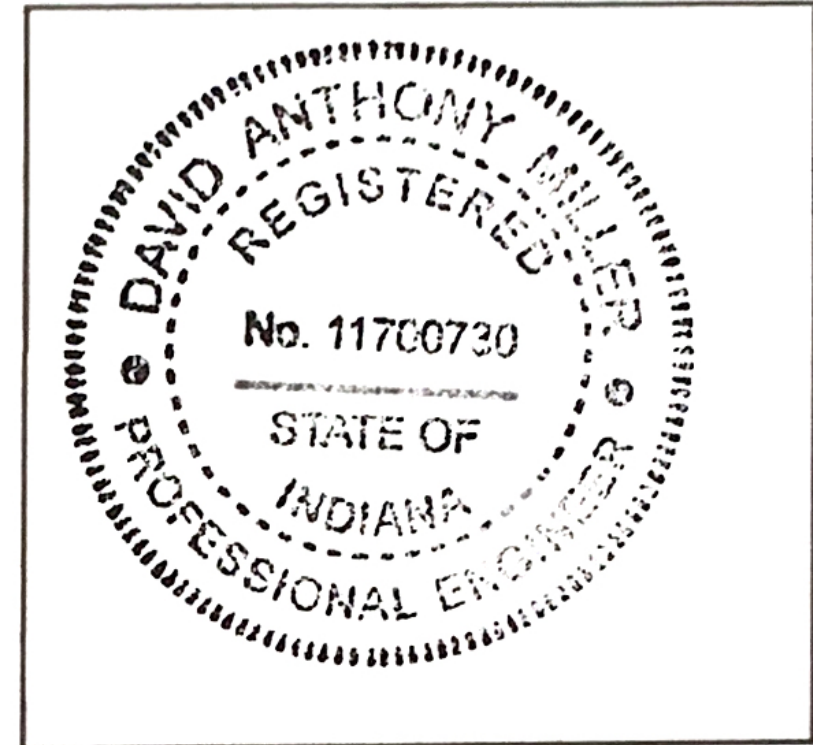
I certify that the selected and above described statistical method is appropriate for evaluating the groundwater monitoring data for the Rockport LF CCR management area and that the requirements of 40 CFR 257.93(f) and 329 IAC 10 have been met.

DAVID ANTHONY MILLER

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature



11700730

License Number

INDIANA

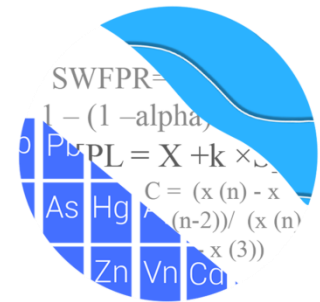
Licensing State

01.17.21

Date

ATTACHMENT B
Statistical Analysis Output

GROUNDWATER STATS CONSULTING



January 12, 2022

Geosyntec Consultants
Attn: Ms. Allison Kreinberg
941 Chatham Lane, Suite #103
Columbus, OH 43221

RE: Rockport Landfill Background Update - 2021

Dear Ms. Kreinberg,

Groundwater Stats Consulting (GSC), formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the background update for statistical limits with groundwater data through 2021 for American Electric Power's Rockport Landfill. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at Rockport Landfill for the CCR program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells. The monitoring well network, as provided by Geosyntec Consultants, consists of the following:

- **Upgradient wells:** MW-008I, MW-008S, MW-014S, MW-011S, MW-06S
- **Downgradient wells:** MW-001D, MW-001I, MW-001S, MW-002D, MW-002I, MW-002S, MW-015I, MW-015S, MW-016D, MW-016I, MW-016S, MW-021D, MW-021I, MW-021S, MW-017I, and MW-017S

Data were provided electronically to Groundwater Stats Consulting, and the statistical analysis was performed according to the groundwater data screening that was performed in December 2017 by GSC and approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance.

The background update performed during this analysis was reviewed by Dr. Jim Loftis, Civil & Environmental Engineering professor emeritus at Colorado State University and senior advisor to Groundwater Stats Consulting.

Note that the Indiana Department of Environmental Management (IDEM) modified the permit (74-02) at Rockport Landfill for the CCR program to include the analysis of conductivity with the Appendix III parameters and boron with the Appendix IV parameters. Throughout this document, these parameters will be referred to collectively as Appendix III/Phase I and Appendix IV/Phase II parameters.

The following CCR Detection Monitoring constituents were evaluated:

- Phase I: Boron, calcium, chloride, conductivity, fluoride, pH, sulfate, and TDS

Time series plots for Phase I parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, box plots are included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

Data at all wells were screened during the December 2017 analysis for all constituents, except conductivity which was screened in May 2021, for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for parameters in this analysis based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous update to demonstrate that the selected statistical methods for Phase I parameters comply with the USEPA Unified Guidance recommendations as discussed below.

Summary of Statistical Method:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, conductivity fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits will be necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents are re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. In some cases, the earlier portion of data are deselected prior to construction of limits in order to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Historical Summary – December 2017 Background Screening

Outlier Evaluation

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for boron, calcium, chloride, fluoride, sulfate, pH, and TDS were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits. A discussion of flagged outliers was included with screening.

Seasonality

No seasonal patterns were observed on the time series plots for any of the detected data at the time of the screening; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the

resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Tests

While trends may be visual, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend thus reducing variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses were submitted with the background screening report and showed several statistically significant decreasing and increasing trends. All of these trends were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to the data sets during the 2017 screening. All data were re-evaluated during this 2021 analysis and further discussion is provided in the Mann-Whitney evaluation section when records required adjustments.

Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified variation among upgradient well data for boron, calcium, chloride, fluoride, pH, TDS, and sulfate. Therefore, all data were further evaluated for the

appropriateness of intrawell testing to accommodate the groundwater quality. A summary table of the ANOVA results was included with the previous screening.

As a result of the screening, initially intrawell prediction limits were recommended for boron, fluoride, pH, and sulfate, and interwell prediction limits were recommended for calcium, chloride, and TDS. However, further studies were conducted by Geosyntec Consultants and demonstrated that intrawell methods are appropriate for all parameters due to natural variation in groundwater quality unrelated to practices at the landfill.

All available data through July 2017 at each well were used to establish intrawell background limits based on a 1-of-3 resample plan. Currently however, background data sets have sufficient samples to utilize a 1-of-2 resample plan, which will be used for all future comparisons. Measurements in all wells will be compared to corresponding intrawell background limits during each subsequent semi-annual sampling event.

Background Update Summary – Conducted in October 2021

Outlier Analysis

Data were re-evaluated during this analysis for all well/constituent pairs using Tukey's outlier test and visual screening for historical samples through August 2021 (Figure C). In some cases, wells had samples reported only through May 2021. The previous background update for boron, calcium, chloride, fluoride, pH, sulfate, and TDS was performed in July 2019. The initial screening for conductivity was performed in May 2021 on data at all wells through September 2019. As a result, this constituent was screened in this analysis separately from other constituents.

No changes were made to previously flagged outliers identified during earlier screenings. Additional values, however, were flagged in the more recent data. Tukey's outlier test identified high values for pH during the May 2021 sample event in wells MW-0021, MW-002S, MW-016D, MW-016S, MW-021D, MW-021I, and MW-021S. These values were flagged as outliers in order to reduce variation and construct statistical limits that are conservative from a regulatory perspective. While Tukey's test identified potential outliers for TDS in downgradient well MW-001D and upgradient well MW-014S, these values were not flagged as they appeared to be representative of remaining concentrations within their respective wells.

Tukey's outlier test noted high values for conductivity at wells MW-002S, MW-015I, MW-015S, and MW-017S, and low values at MW-015I and MW-017S. These values were accordingly flagged as outliers. Additionally, extreme values of conductivity during the

11/2016 and 3/2017 sample events at some wells, reportedly, resulted from field sampling issues; therefore, these values were flagged as outliers. Although not identified by Tukey's test, high values for conductivity were flagged as outliers for wells MW-001S, MW-002D, MW-016D, and MW-021S during the February 2020 sample event to reduce variation and construct statistical limits that are conservative (i.e., lower) from a regulatory perspective.

As mentioned above, any flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages. An updated summary of Tukey's test results and flagged outliers follows this letter (Figure C).

Seasonality

Although no seasonal effects were suspected or apparent during the 2017 background screening, sulfate in upgradient well MW-011S exhibits apparent seasonal influences. Therefore, data are deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release. This procedure includes subtracting the seasonal mean from each value within a given season, and adding the overall mean to each observation.

Mann-Whitney Evaluation

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through July 2019 (and in some cases through September 2019 for conductivity) to compliance samples at each well through the most recent sample event to evaluate whether the groups are significantly different at the 99% confidence level. When no statistically significant differences are present, background data may be updated with compliance data (Figure D). Statistically significant differences (either an increase or decrease in median concentrations) were found between the two groups for the following well/constituent pairs:

Increase

- Calcium: MW-016D
- Chloride: MW-001I, MW-002D, MW-002S, MW-016D, and MW-016S
- Conductivity: MW-001I, MW-002S, MW-016D, and MW-017S
- Fluoride: MW-006S (upgradient), MW-002S, MW-021I, and MW-021S
- Sulfate: MW-016D
- TDS: MW-002D and MW-016D

Decrease

- Calcium: MW-016I and MW-021I
- Chloride: MW-008I (upgradient), MW-015I, MW-016I, MW-021I, and MW-017I
- Sulfate: MW-008I (upgradient), MW-001I, MW-015I, MW-015S, MW-016I, MW-016S, MW-021I, MW-017I, and MW-017S
- TDS: MW-015I, MW-016I, and MW-017I

Typically, when the test concludes that the medians of the two groups are statistically significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data unless it can be reasonably justified that the change in concentrations reflects a naturally occurring shift unrelated to practices at the site. In studies such as the current one, in which at least one of the segments being compared is of short duration, the comparison is complicated by the fact that normal short-term variation may be mistaken for long-term change in medians.

Several downgradient well/constituent pairs had slight increases in median concentrations when the newer measurements were compared to the historical records. Therefore, background data sets for the following well/constituent pairs were updated for construction of intrawell prediction limits to better reflect present-day groundwater quality: chloride in wells MW-002D and MW-016D; conductivity in wells MW-001I, MW-002S, and MW-017S; fluoride in wells MW-002S, MW-021I, and MW-021S; and sulfate in well MW-016D.

Although statistically significant increases in medians were identified for calcium in well MW-016D, chloride in well MW-001I, and TDS in wells MW-002D and MW-016D, an alternate source demonstration provided by Geosyntec Consultants showed that increases in concentrations at these wells are reflective of natural variation in groundwater quality rather than a result of practices at the facility. Additionally, the increases in conductivity concentrations for wells MW-001I, MW-002S, MW-016D, and MW-017S were, reportedly, attributed to historical oil and gas production and not a result of practices at the landfill. Therefore, a minimum of the most recent 8 measurements were used to establish updated prediction limits and earlier measurements that are not representative of present-day groundwater quality conditions were deselected.

Chloride and sulfate at upgradient well MW-008I were determined by the Mann-Whitney test to have statistically significant lower medians in more recent measurements compared to the median of historical data. However, because one or more of the reported concentrations in more recent data were similar to those reported historically, these records were updated with compliance data to better reflect present-day groundwater concentrations upgradient of the facility.

Similarly, downgradient well/constituent pairs with slight statistically significant decreases in medians were also updated with more recent data through August 2021. Some of these cases, such as calcium at well MW-016I; chloride at wells MW-015I, MW-016I, and MW-017I; sulfate at wells MW-015I, MW-015S, MW-016I, and MW-017I; and TDS at wells MW-015I, MW-015S, MW-016I, and MW-017I show somewhat stable data at lower concentrations than historical levels. Although not identified by the Mann-Whitney test, more recent data for calcium at well MW-017I also exhibited stable data at lower concentrations than historical levels. Therefore, these well/constituent pairs will use the 8 most recent samples, rather than the complete historical records, for construction of statistical limits. During the next background update, if concentrations continue to decrease, prediction limits will be updated to use a moving window approach where a minimum of the 8 most recent stable concentrations are used in the construction of statistical limits.

A full list of well/constituent pairs with truncated records follows this letter in the Date Range Table. Table entries with "overall" date ranges indicate that background data sets were not updated with data through August 2021.

Background data sets for all other well/constituent pairs were updated with data through August 2021 for construction of intrawell prediction limits. A summary of the Mann-Whitney results follows this letter, and the test results are included with the Mann-Whitney test section at the end of this report. All records will be re-evaluated for updating statistical limits when a minimum of 4 samples are available.

Intrawell Prediction Limits

Intrawell prediction limits using reported data through August 2021, except for the cases mentioned earlier, combined with a 1-of-2 resample plan, were constructed and a summary of the updated limits follows this letter (Figure E). As mentioned above, due to observed seasonal patterns for sulfate in upgradient well MW-011S, a prediction limit was constructed using deseasonalized data at this well and is included at the end of Figure E.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for the Rockport Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

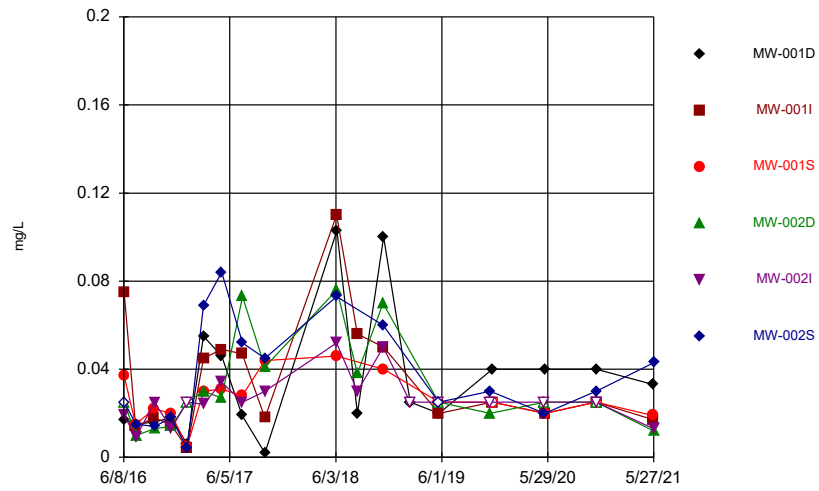


Andrew T. Collins
Project Manager



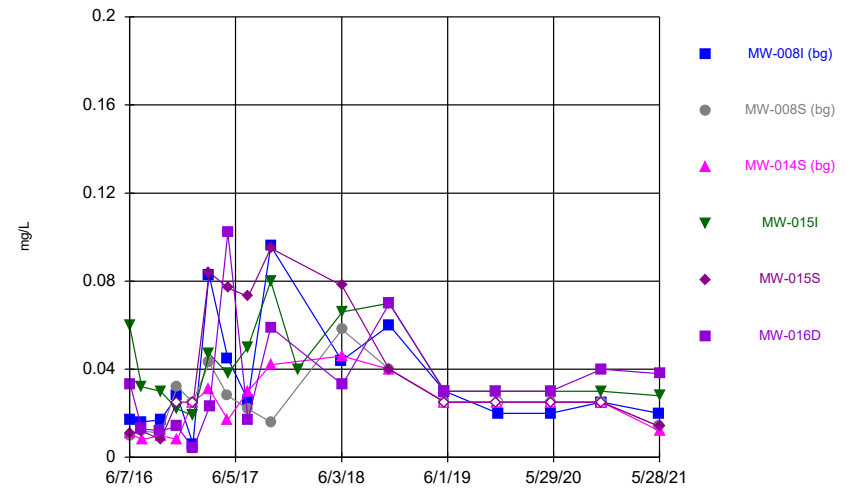
Kristina Rayner
Groundwater Statistician

Time Series



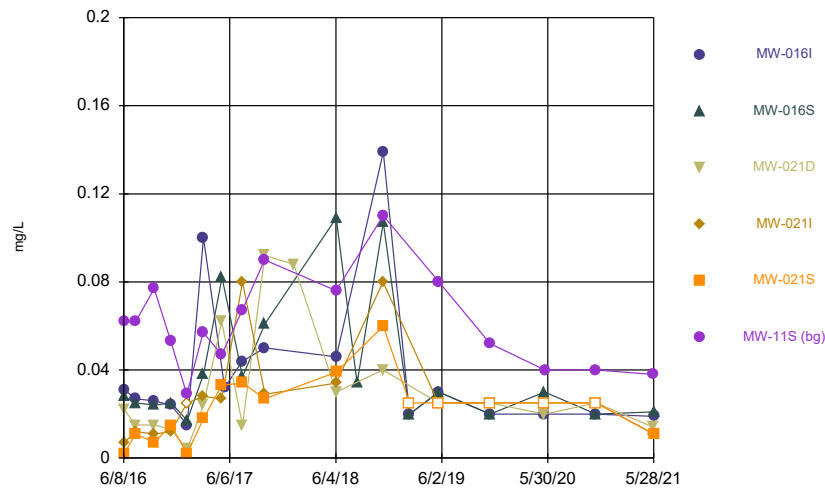
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Time Series



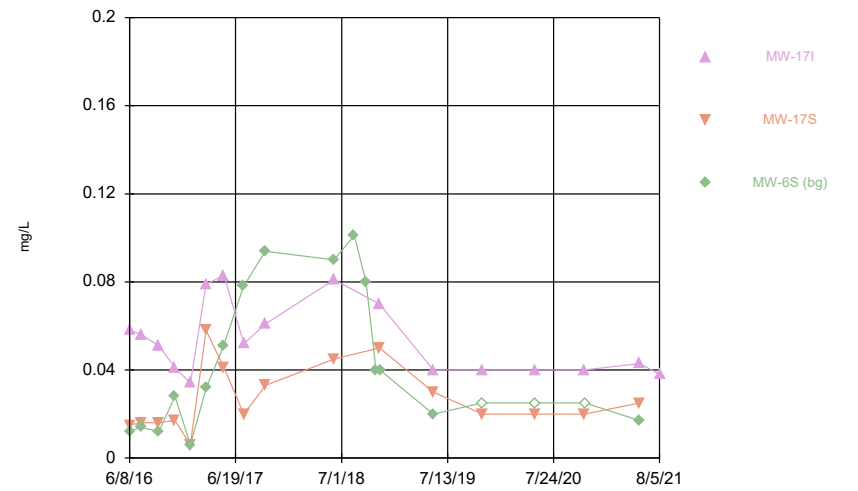
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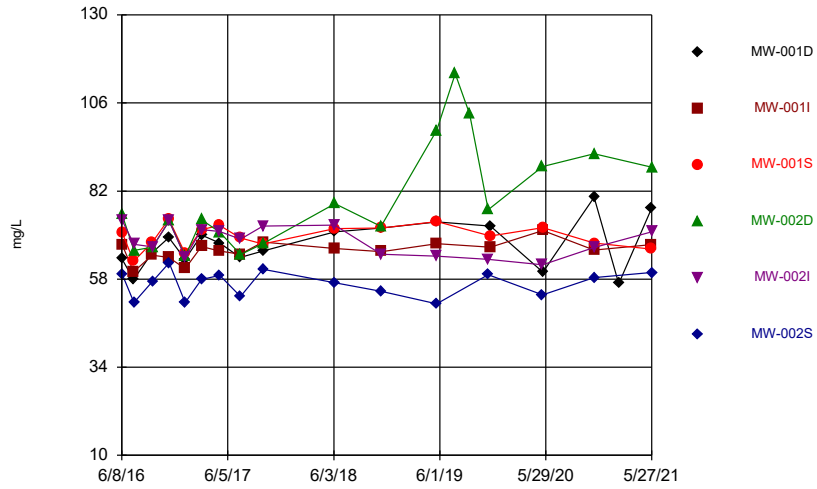
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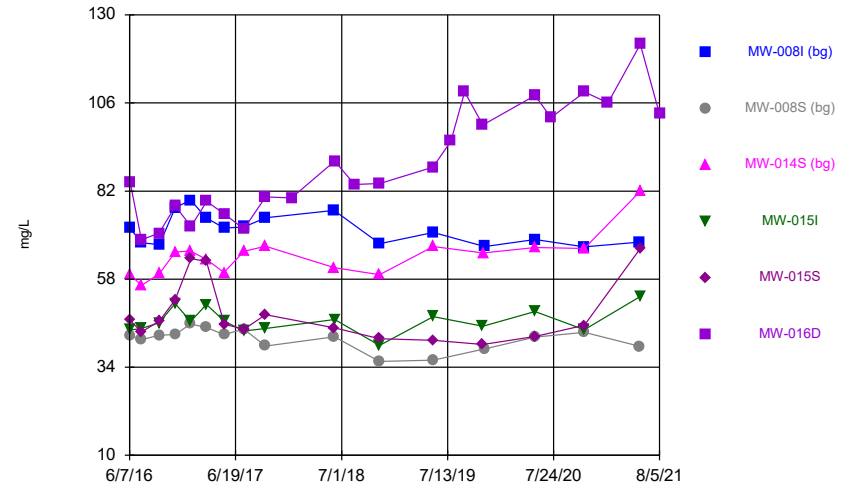
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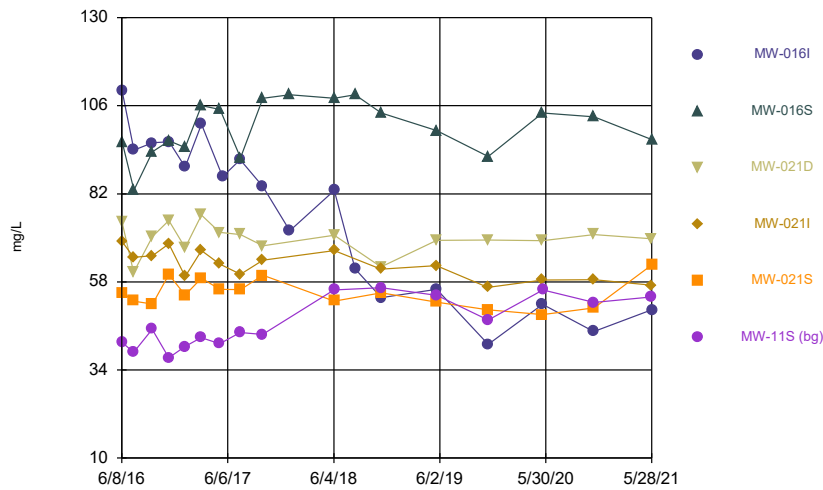
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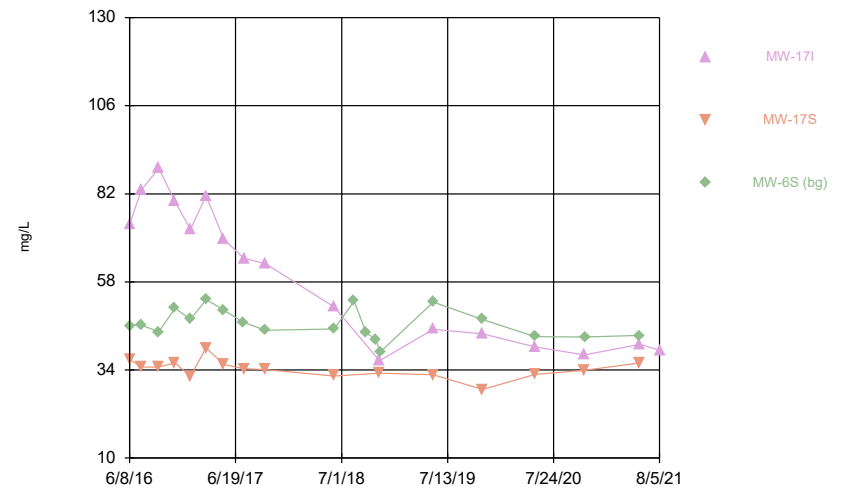
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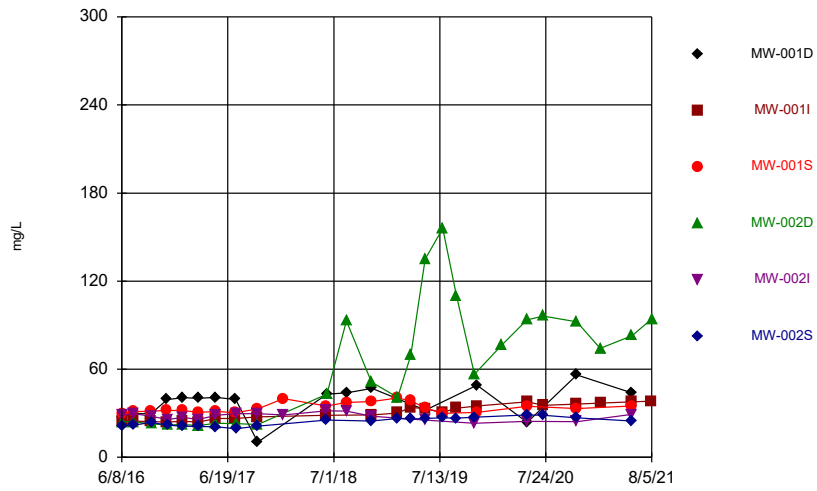
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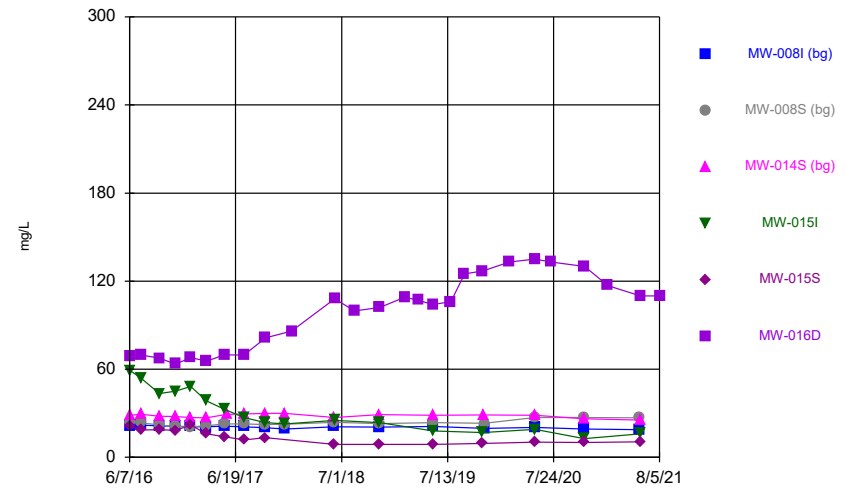
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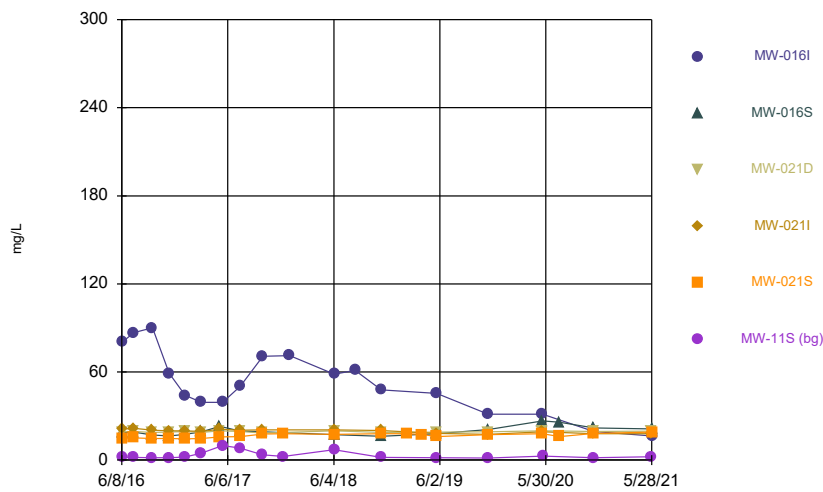
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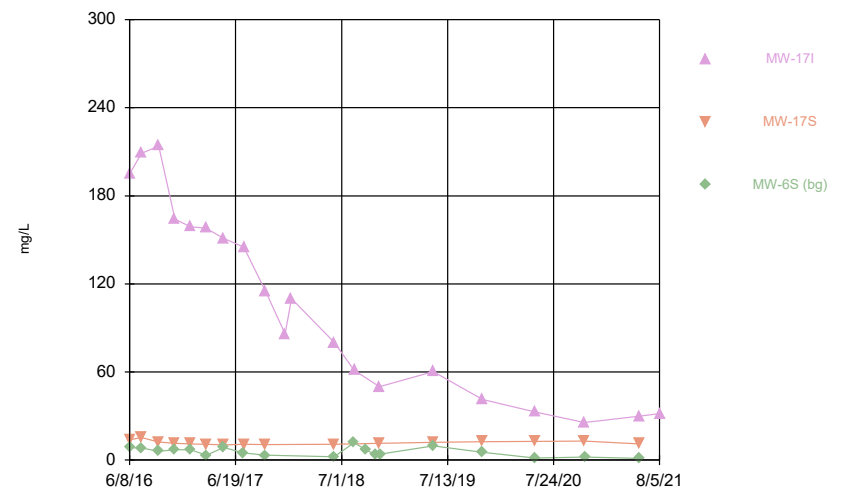
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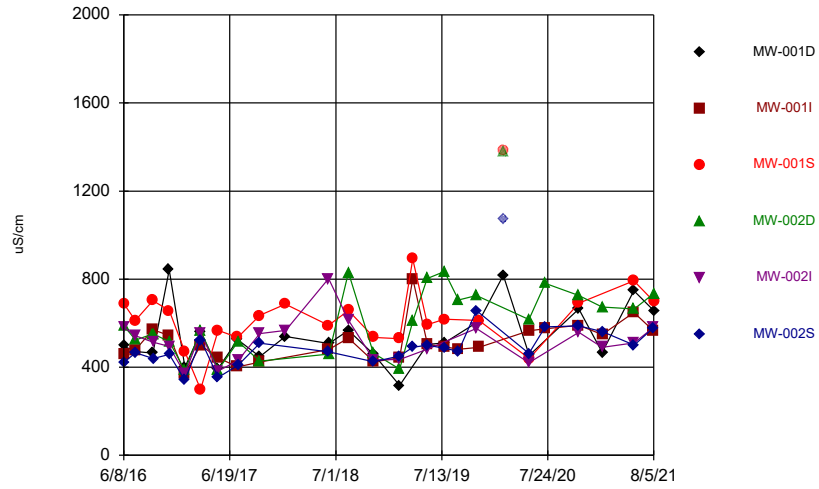
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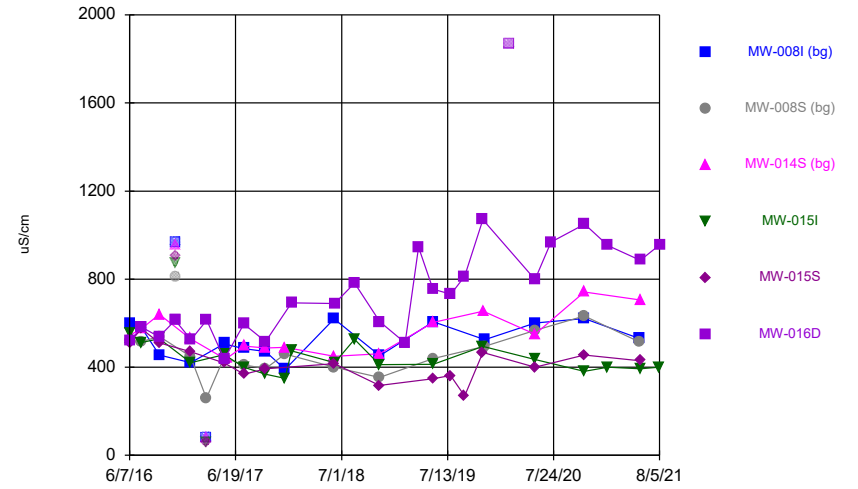
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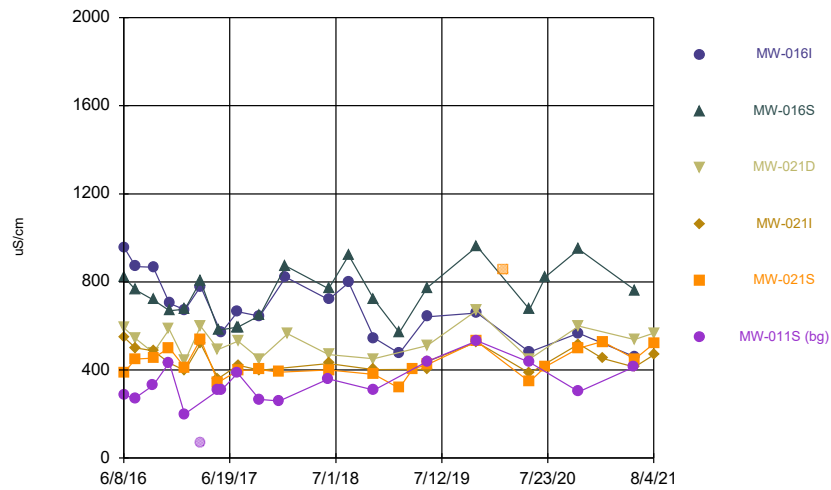
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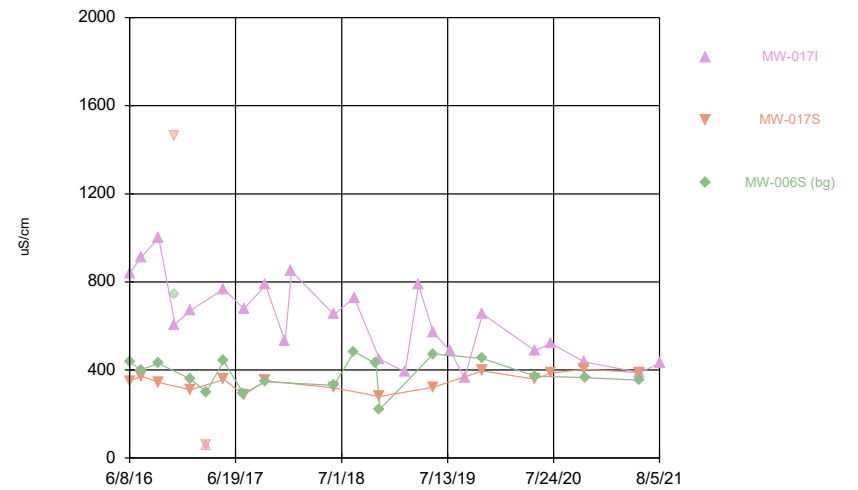
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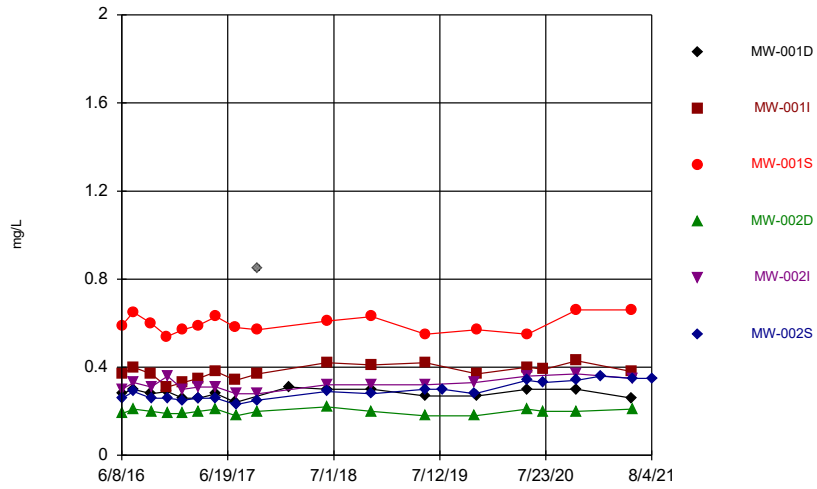
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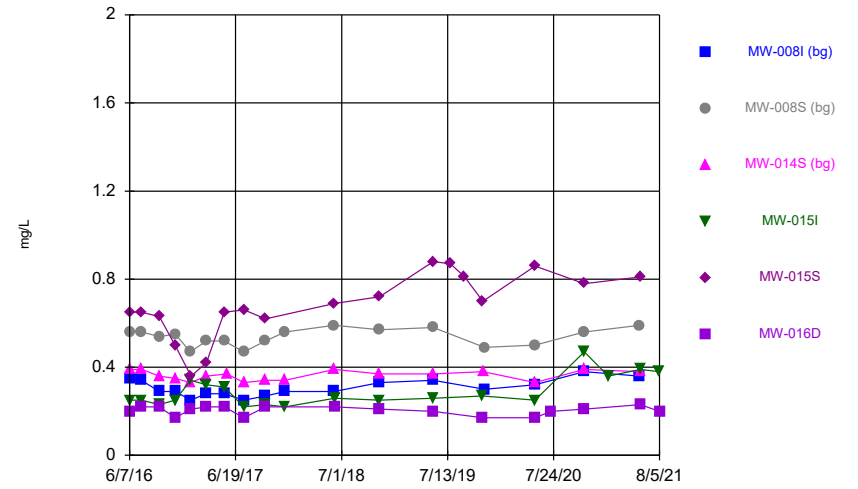
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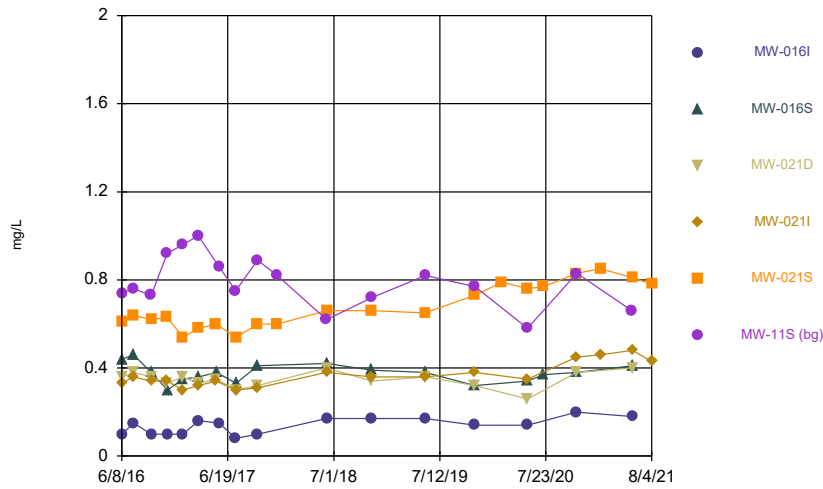
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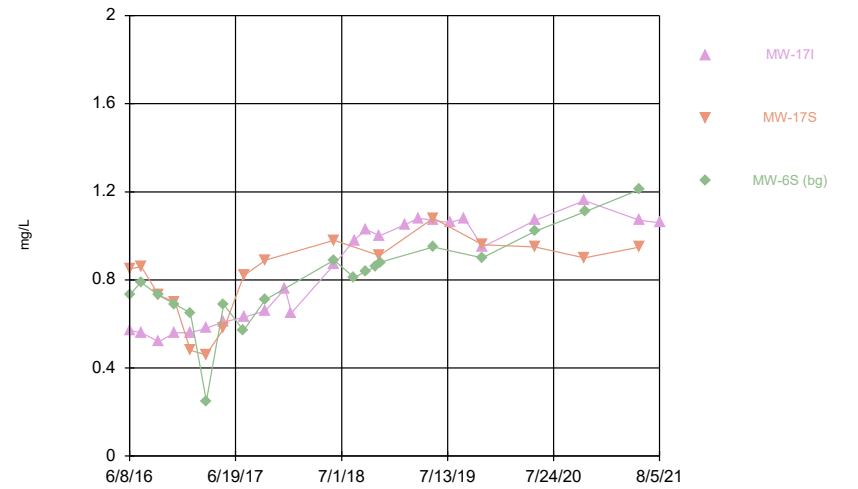
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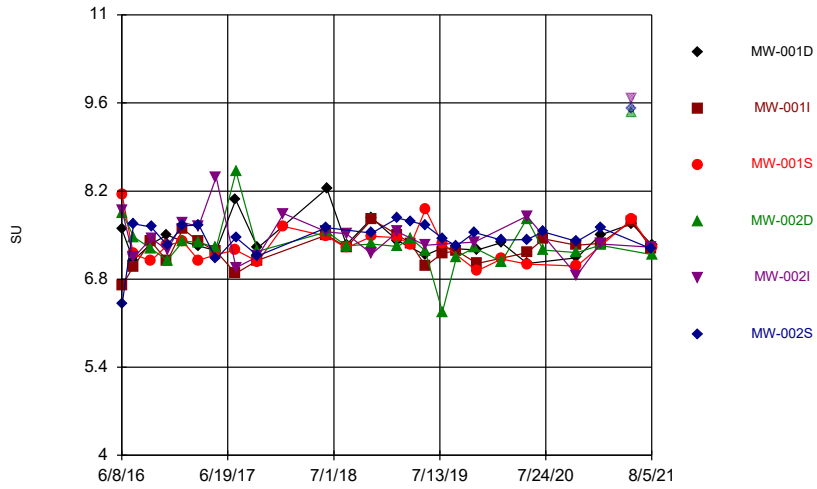
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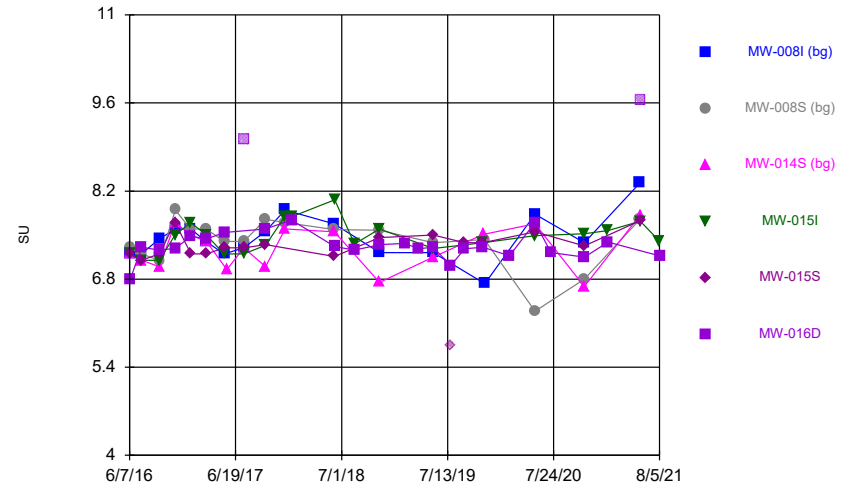
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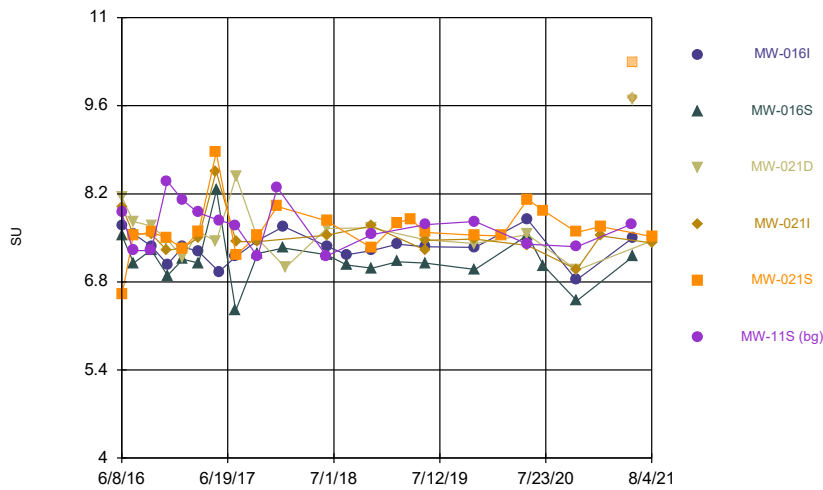
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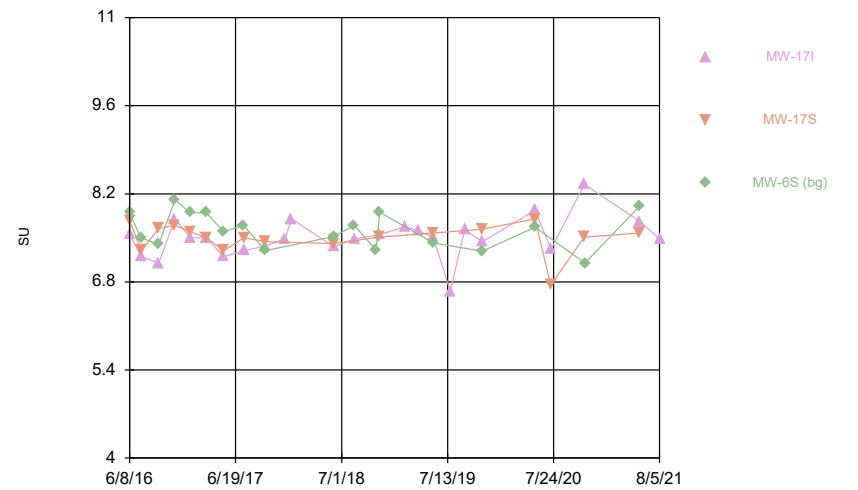
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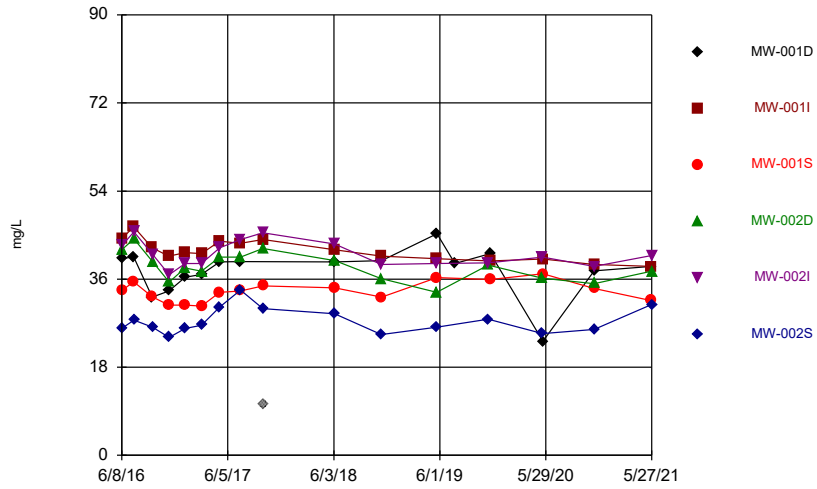
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Time Series



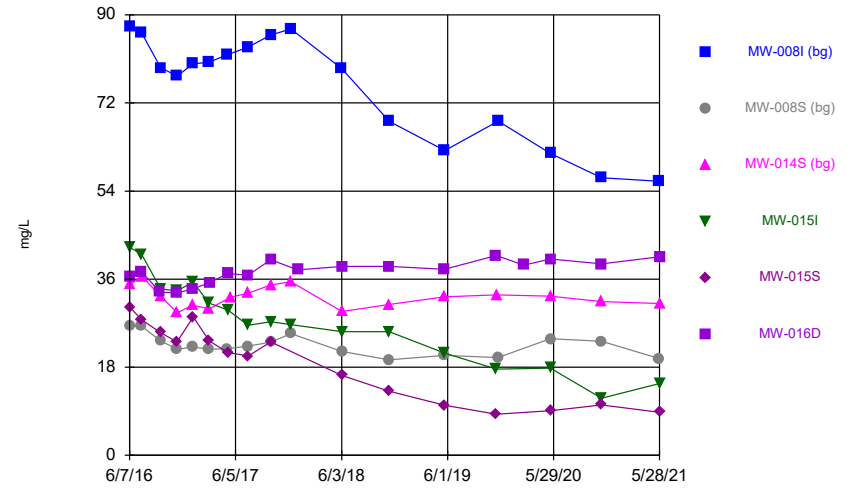
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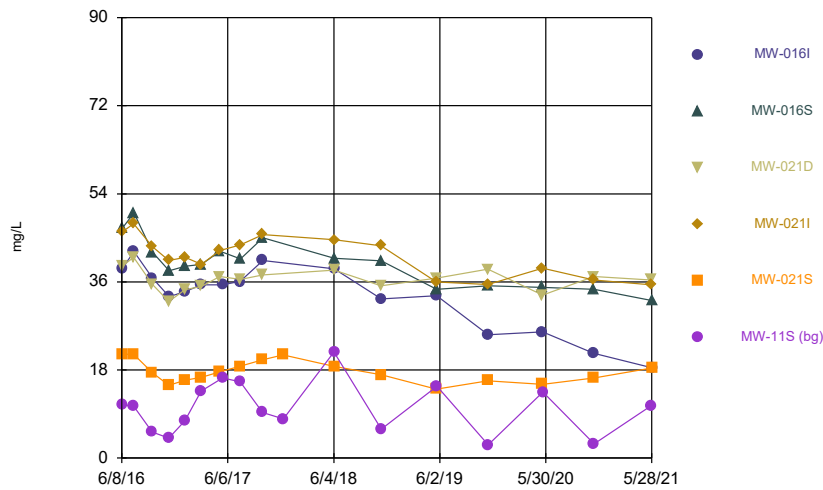
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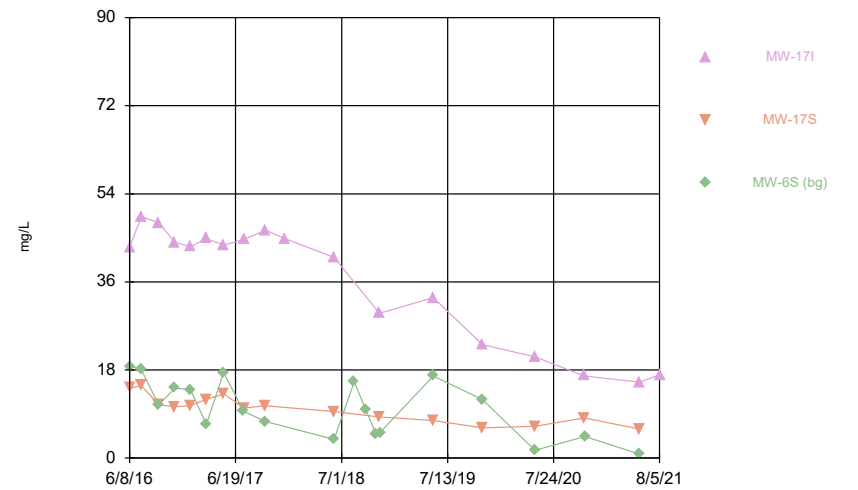
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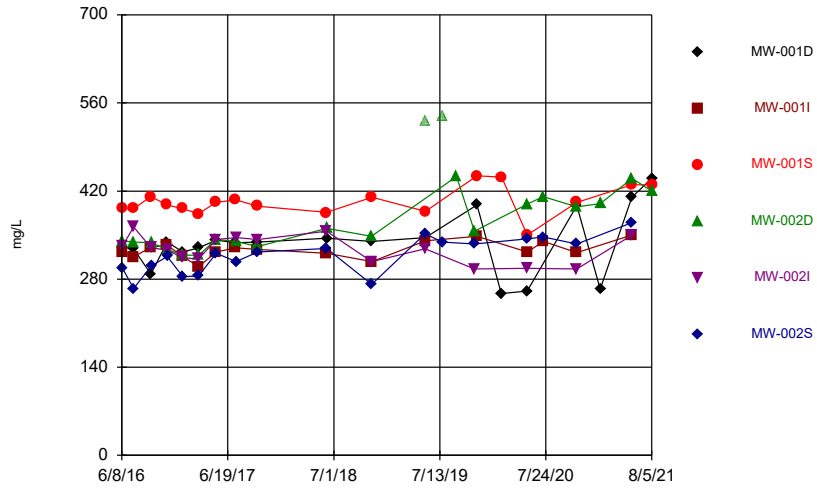
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Time Series



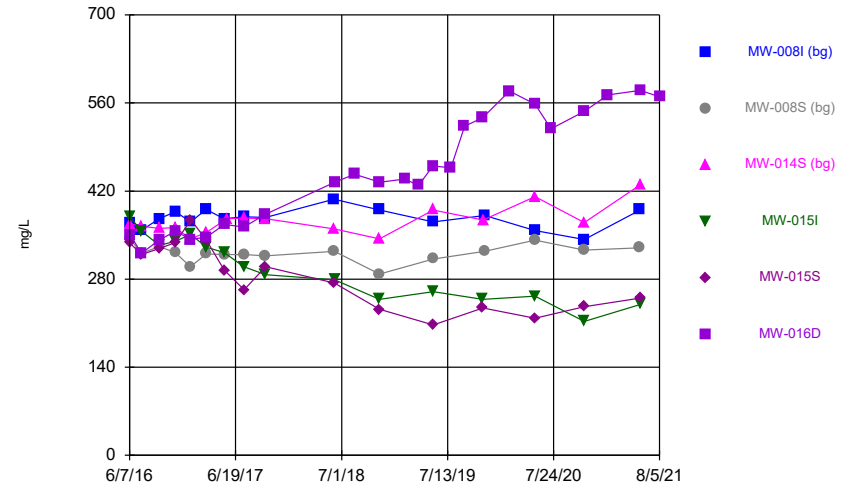
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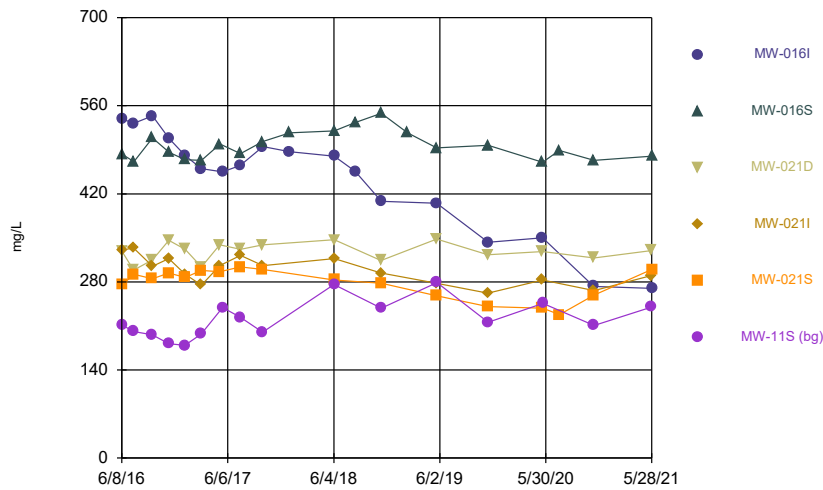
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Time Series



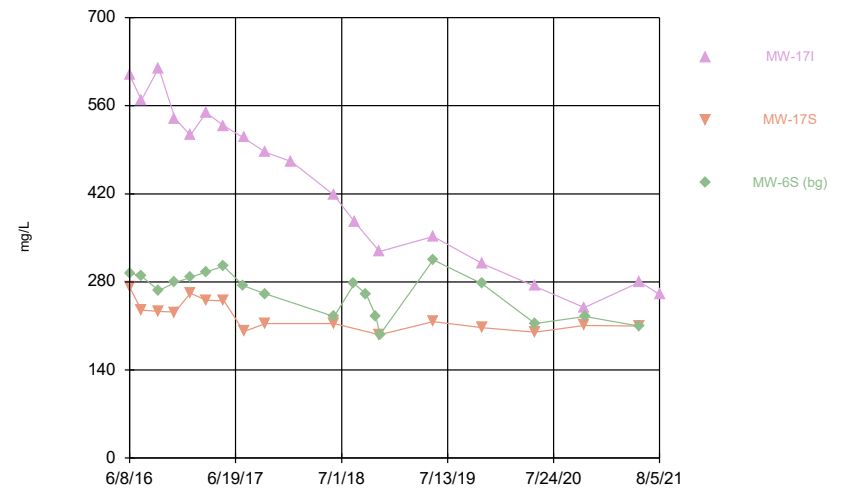
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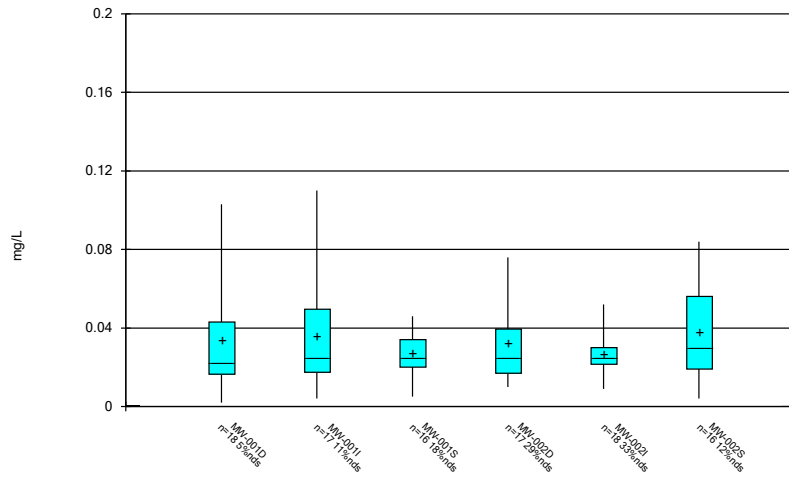
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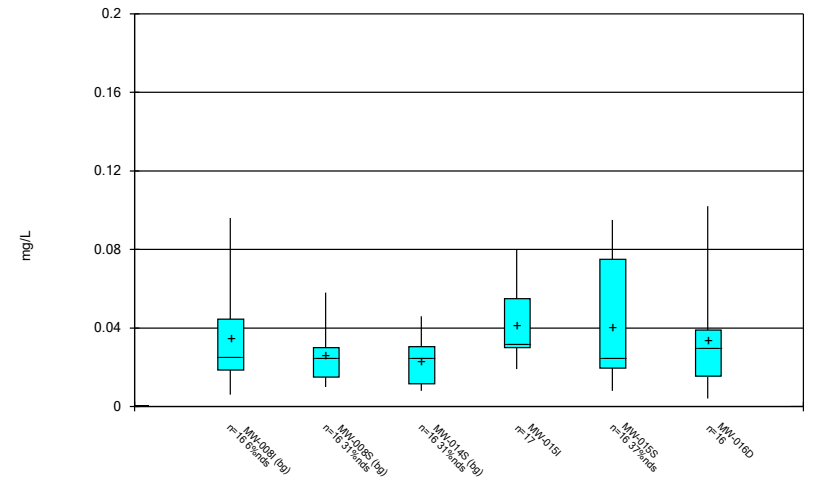
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Box & Whiskers Plot



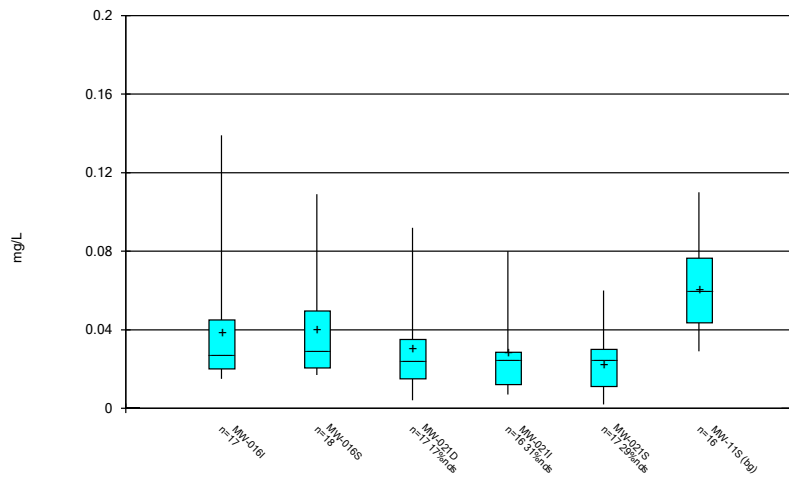
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Box & Whiskers Plot



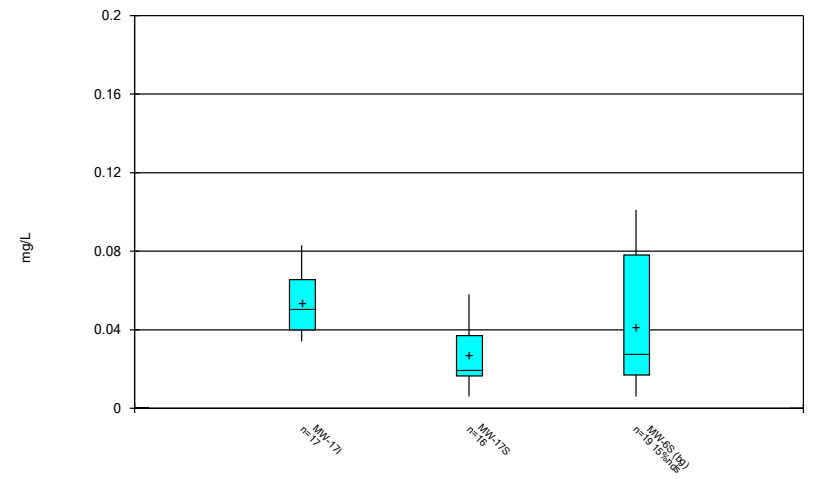
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Box & Whiskers Plot



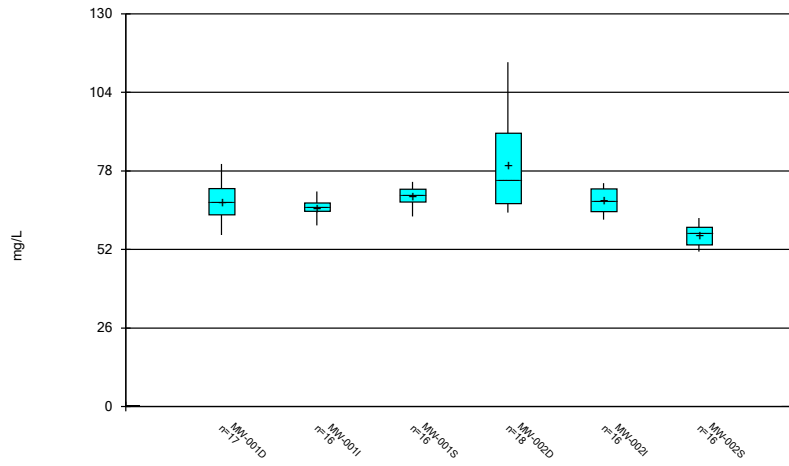
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Box & Whiskers Plot



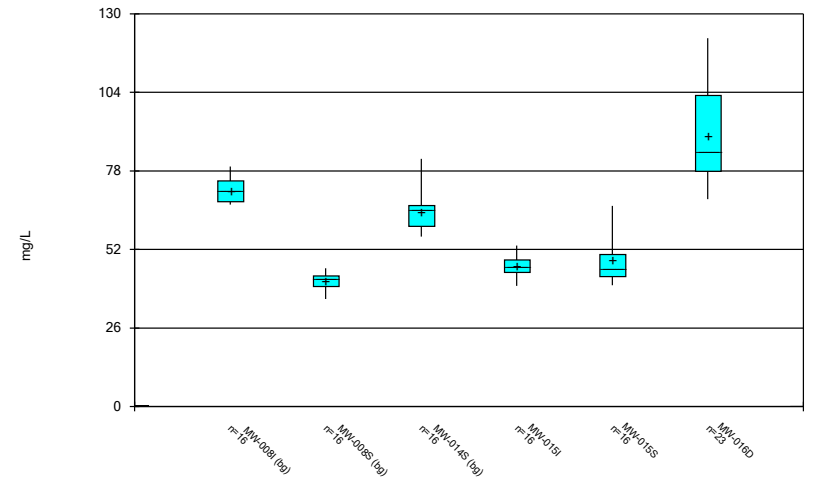
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Box & Whiskers Plot



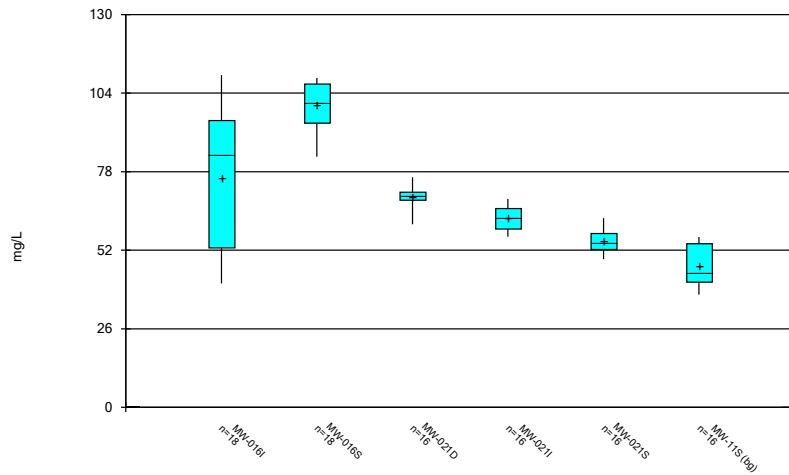
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Box & Whiskers Plot



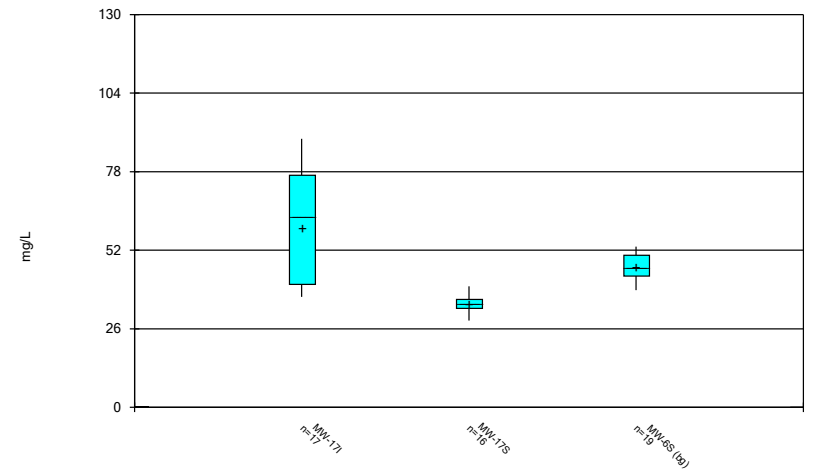
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Box & Whiskers Plot



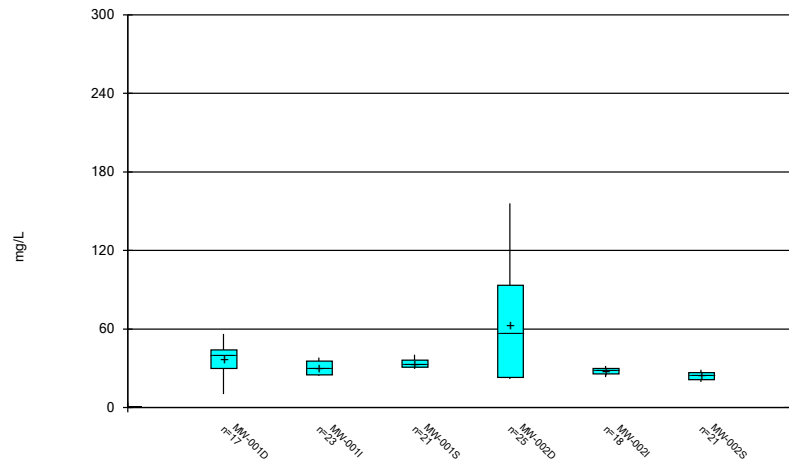
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Box & Whiskers Plot



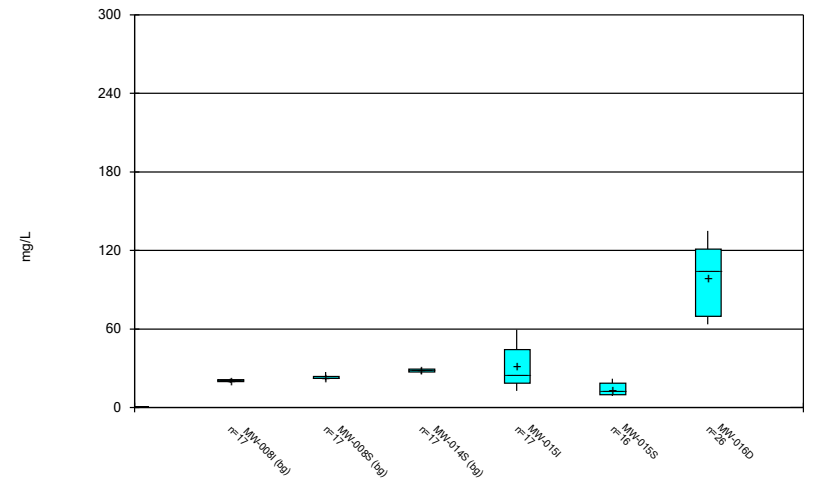
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Box & Whiskers Plot



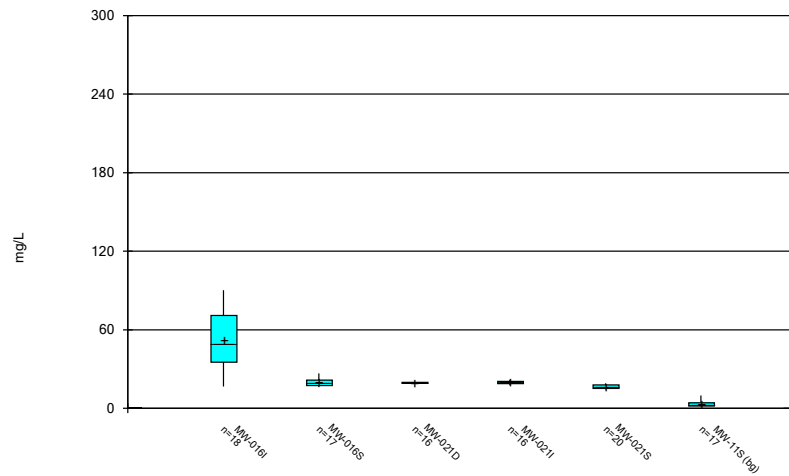
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Box & Whiskers Plot



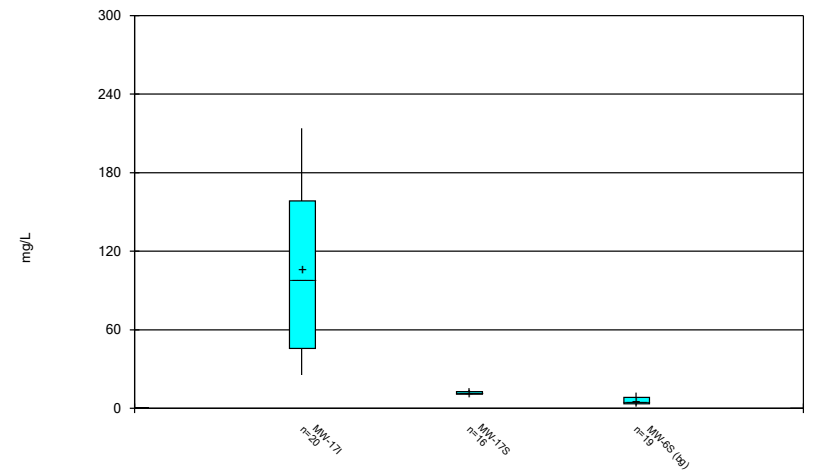
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Box & Whiskers Plot



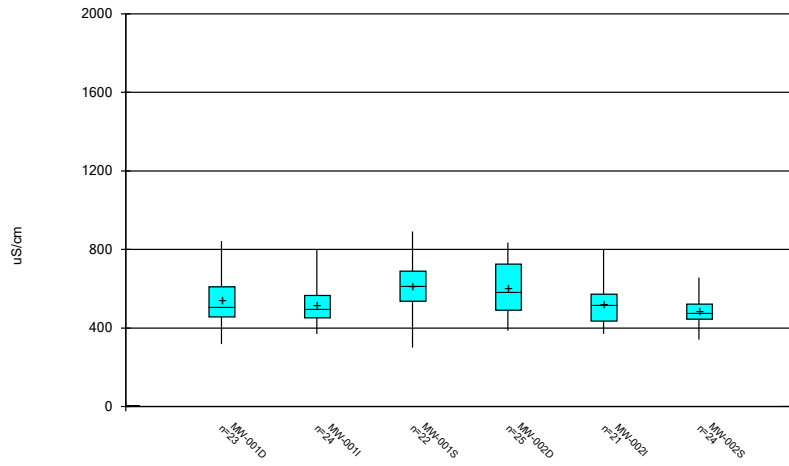
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Box & Whiskers Plot



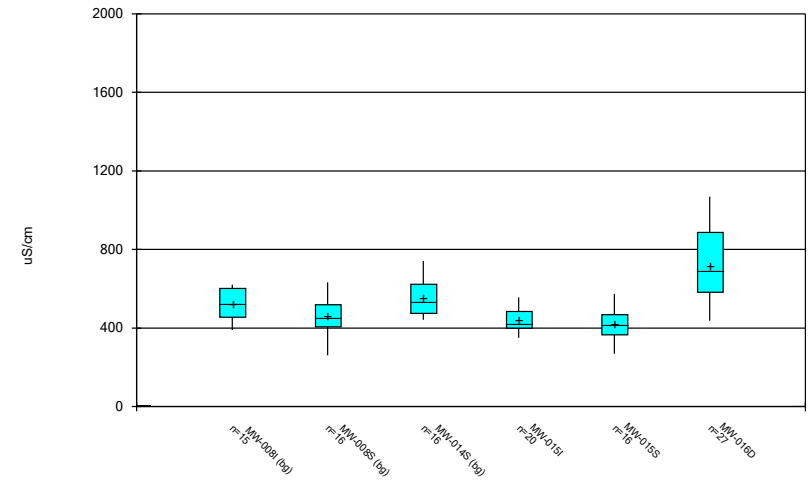
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Box & Whiskers Plot



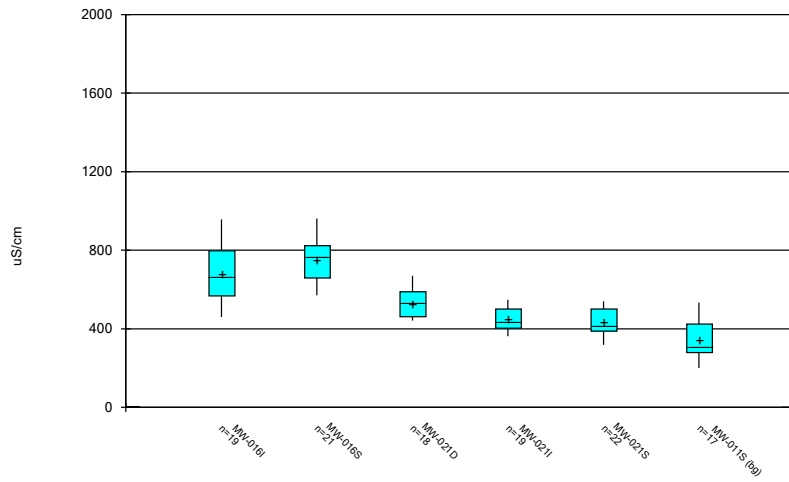
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Box & Whiskers Plot



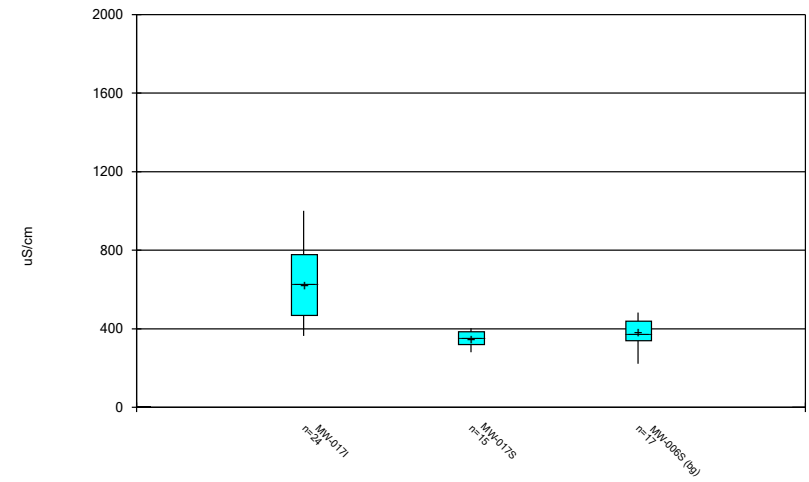
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Box & Whiskers Plot



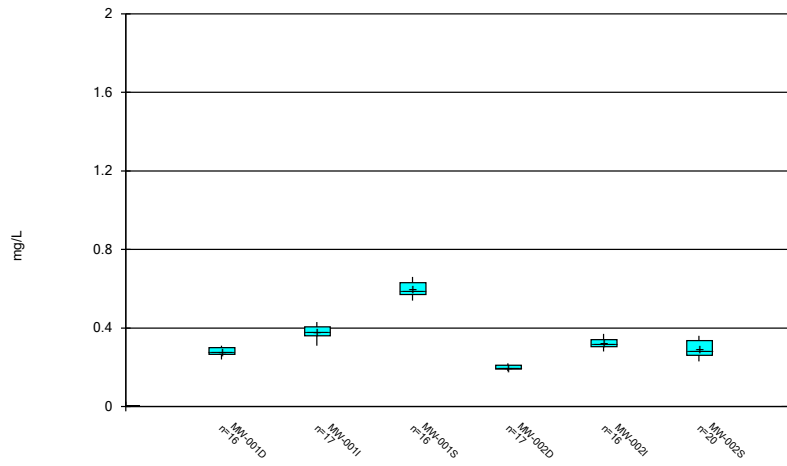
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Box & Whiskers Plot



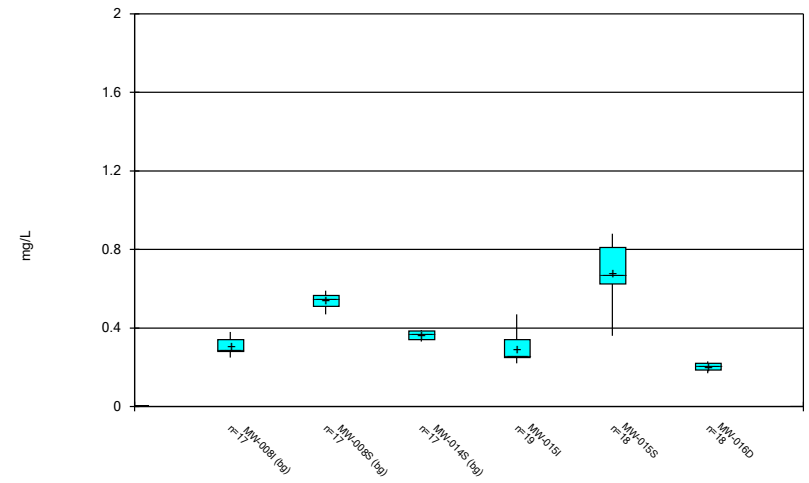
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Box & Whiskers Plot



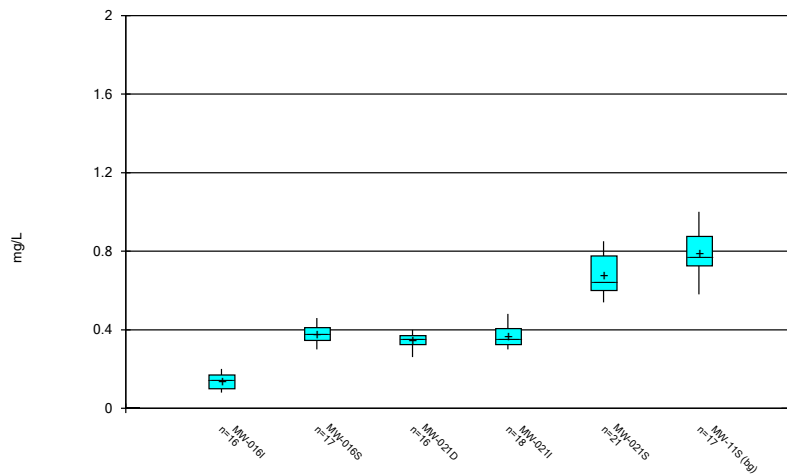
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Box & Whiskers Plot



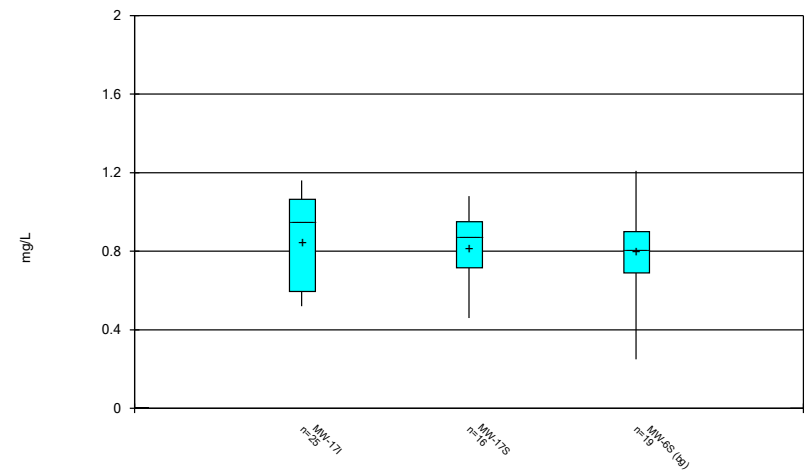
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Box & Whiskers Plot



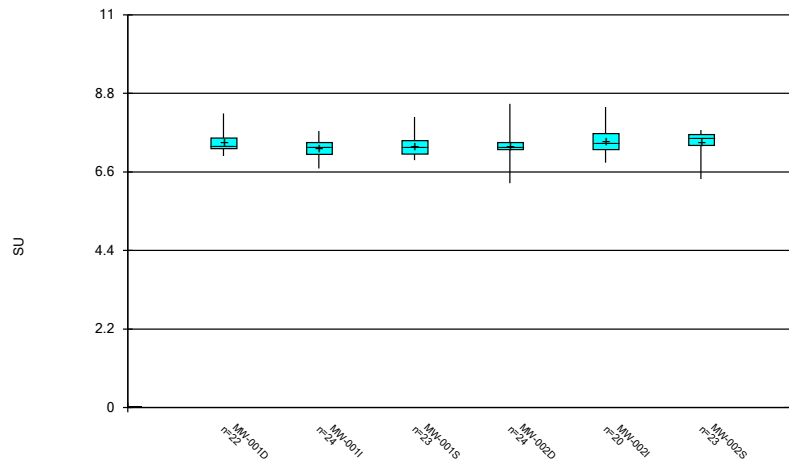
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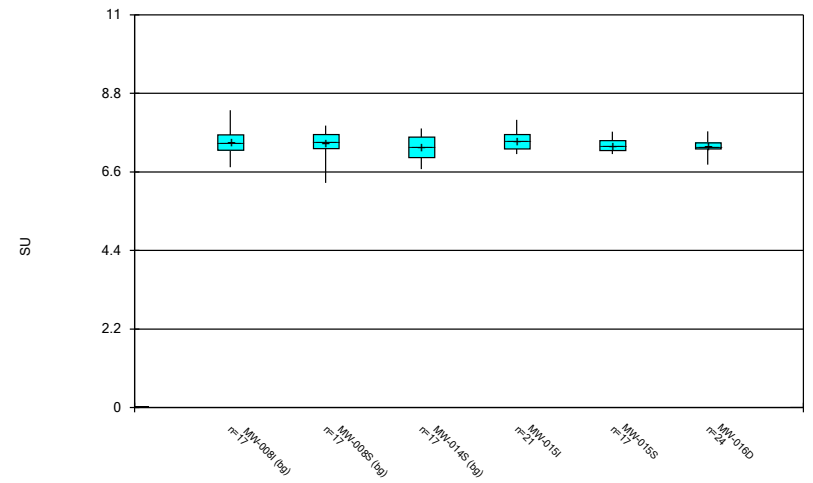
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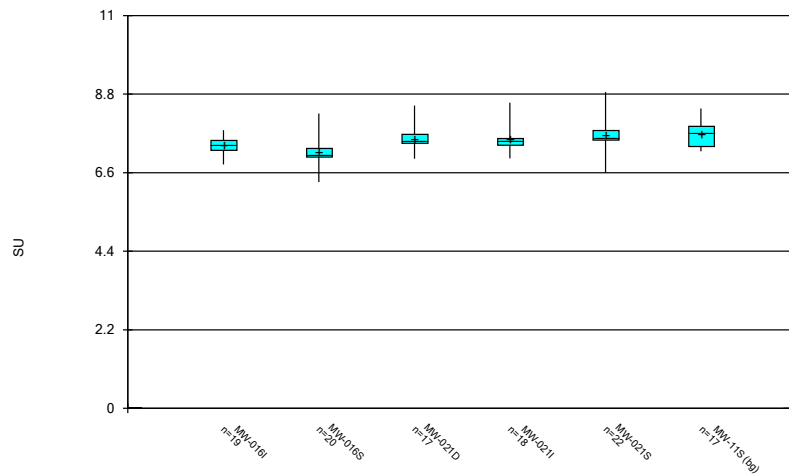
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



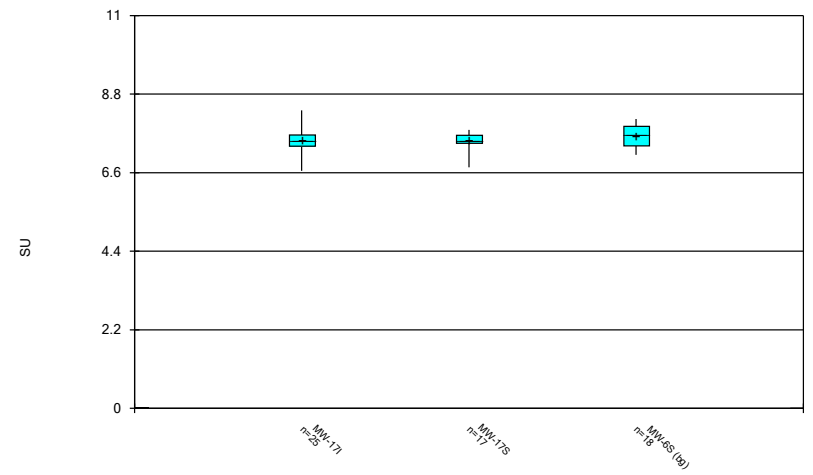
Constituent: pH, field Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



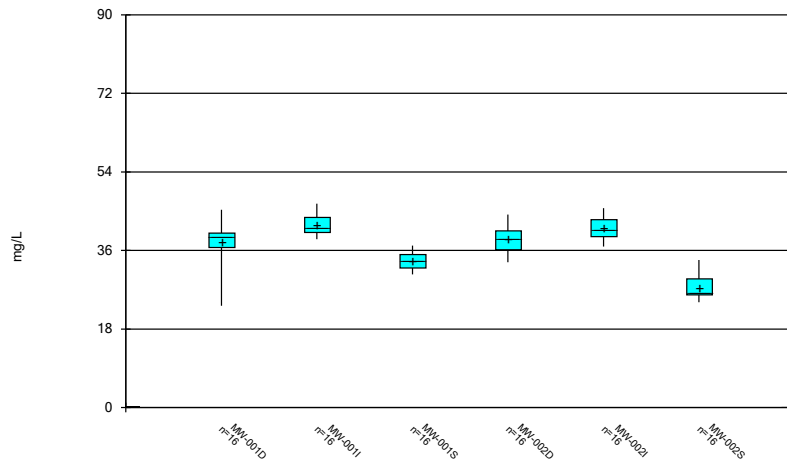
Constituent: pH, field Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



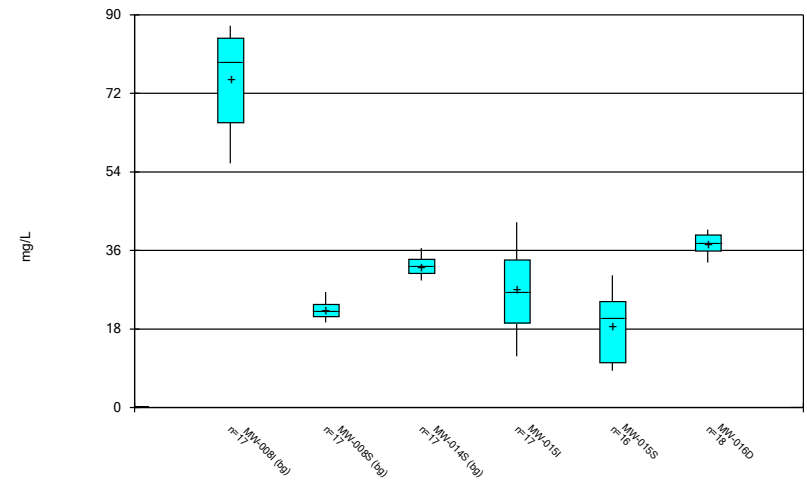
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



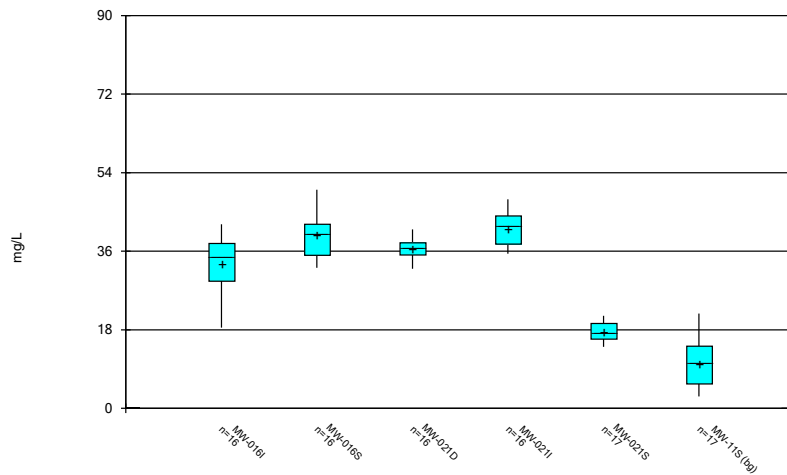
Constituent: Sulfate, total Analysis Run 9/14/2021 10:18 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



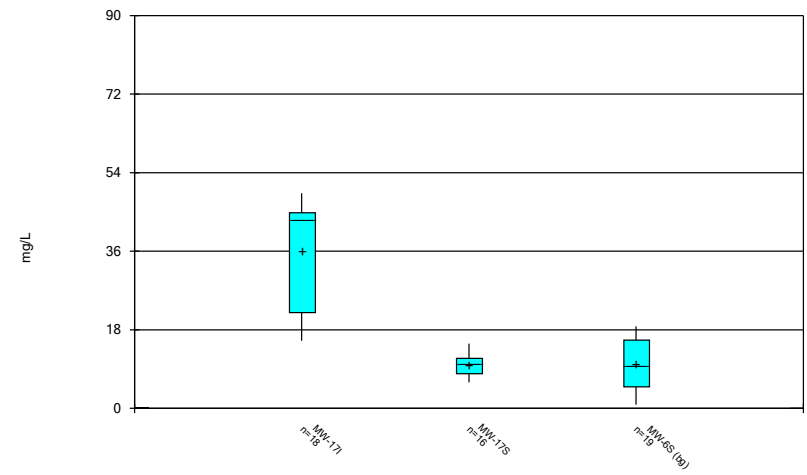
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



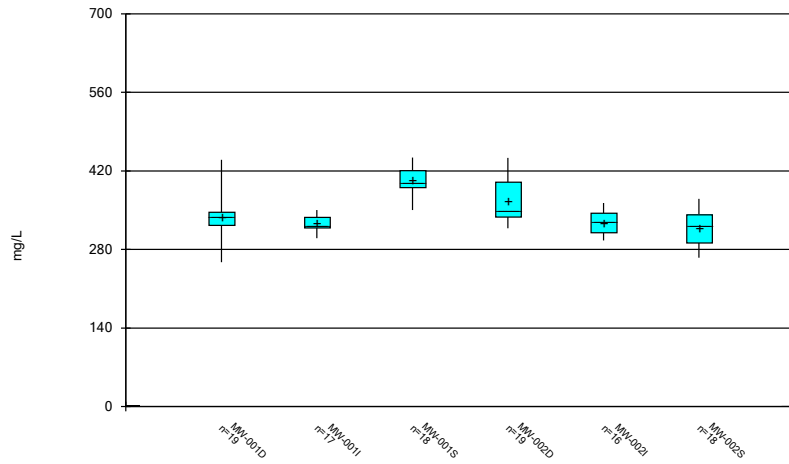
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



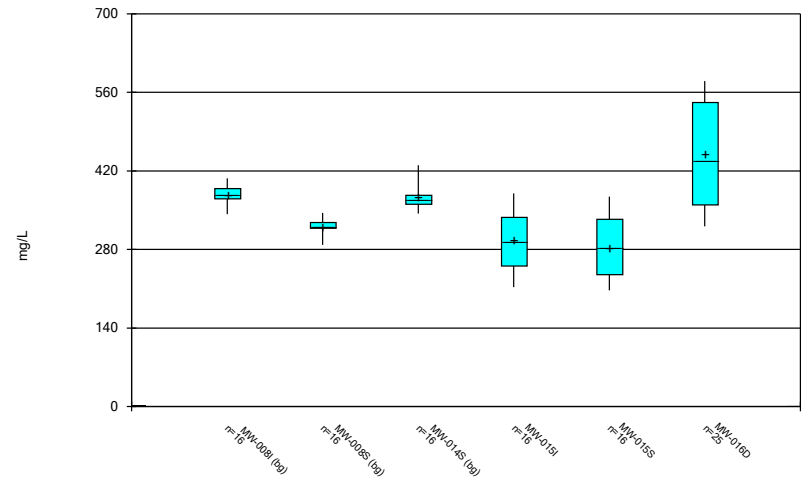
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



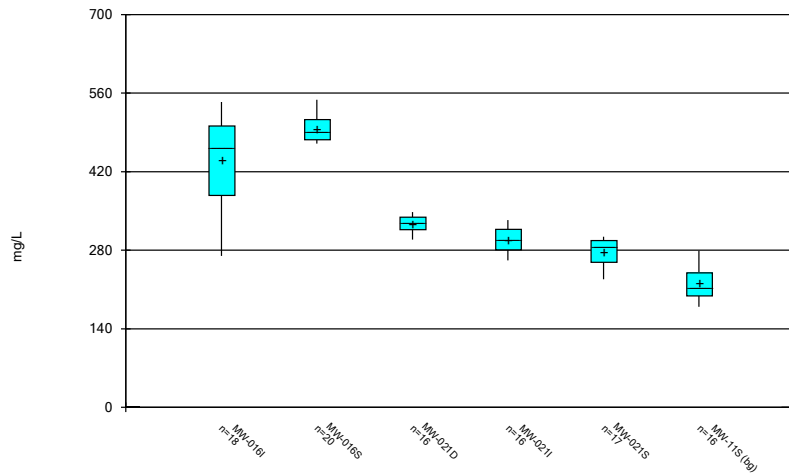
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



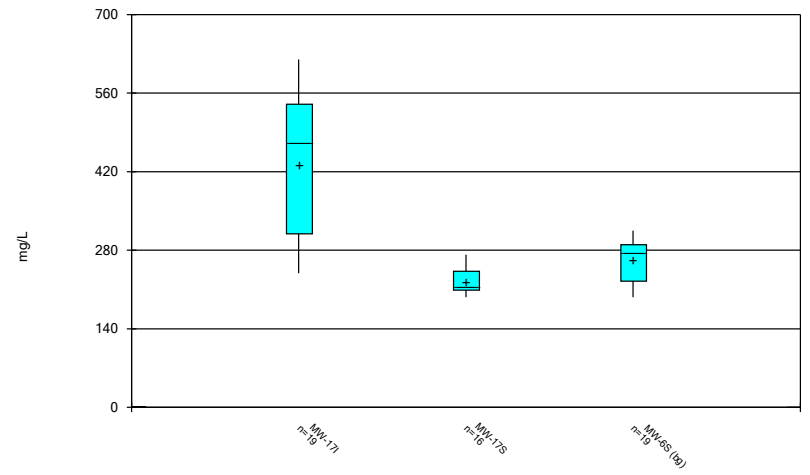
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:18 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Outlier Summary

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 10/27/2021, 1:32 PM

Date	MW-001S Conductivity (uS/cm)	MW-002D Conductivity (uS/cm)	MW-002S Conductivity (uS/cm)	MW-008I Conductivity (uS/cm)	MW-008S Conductivity (uS/cm)	MW-014S Conductivity (uS/cm)	MW-015I Conductivity (uS/cm)	MW-015S Conductivity (uS/cm)	MW-021S Conductivity (uS/cm)	MW-011S Conductivity (uS/cm)	MW-017I Conductivity (uS/cm)	MW-017S Conductivity (uS/cm)
11/16/2016						874 (o)	904 (o)					1460 (o)
11/17/2016			968 (o)	811 (o)	955 (o)							
3/6/2017			80 (o)									
3/7/2017					80 (o)	60 (o)	60 (o)		70 (o)	60 (o)	60 (o)	
7/18/2017												
10/4/2017												
5/22/2019												
7/23/2019												
7/24/2019												
2/18/2020	1386 (o)	1377 (o)	1070 (o)						856 (o)			
5/27/2021												
5/28/2021												

Date	MW-006S Conductivity (uS/cm)	MW-001D Fluoride, total (mg/L)	MW-002D pH, field (SU)	MW-002I pH, field (SU)	MW-002S pH, field (SU)	MW-015S pH, field (SU)	MW-016D pH, field (SU)	MW-021D pH, field (SU)	MW-021I pH, field (SU)	MW-021S pH, field (SU)	MW-001D Sulfate, total (mg/L)	MW-002D Total Dissolved Solids [TDS] (mg/L)
11/16/2016	741 (o)											
11/17/2016												
3/6/2017												
3/7/2017												
7/18/2017							9.03 (o)					
10/4/2017		0.85 (o)									10.4 (o)	
5/22/2019												531 (o)
7/23/2019					5.74 (o)							
7/24/2019												540 (o)
2/18/2020												
5/27/2021			9.45 (o)	9.66 (o)	9.5 (o)			9.68 (o)	9.72 (o)			
5/28/2021							9.64 (o)			10.28 (o)		

Tukey's Outlier Test - Significant Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:03 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Fluoride, total (mg/L)	MW-001D	Yes	0.85	10/4/2017	NP	NaN	17	0.3147	0.1393	In(x)	ShapiroWilk
pH, field (SU)	MW-002D	Yes	8.51,6.28,9.45	7/19/2017,7/23/2019,5/27/2021	NP	NaN	25	7.434	0.5582	In(x)	ShapiroWilk
pH, field (SU)	MW-002I	Yes	9.66	5/27/2021	NP	NaN	21	7.572	0.5913	In(x)	ShapiroWilk
pH, field (SU)	MW-002S	Yes	6.4,9.5	6/9/2016,5/27/2021	NP	NaN	24	7.539	0.5036	In(x)	ShapiroWilk
pH, field (SU)	MW-016D	Yes	9.03,9.64	7/18/2017,5/28/2021	NP	NaN	26	7.478	0.5868	In(x)	ShapiroWilk
pH, field (SU)	MW-016S	Yes	8.26,6.34	5/10/2017,7/18/2017	NP	NaN	20	7.157	0.3847	In(x)	ShapiroWilk
pH, field (SU)	MW-021D	Yes	9.68	5/27/2021	NP	NaN	18	7.674	0.6103	In(x)	ShapiroWilk
pH, field (SU)	MW-021I	Yes	8.56,9.72	5/9/2017,5/27/2021	NP	NaN	19	7.644	0.5927	In(x)	ShapiroWilk
pH, field (SU)	MW-021S	Yes	6.6,8.86,10.28	6/9/2016,5/9/2017,5/28/2021	NP	NaN	23	7.747	0.6813	In(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-001D	Yes	257,440	2/17/2020,8/5/2021	NP	NaN	19	337.7	49.27	sqrt(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-014S (bg)	Yes	430	5/28/2021	NP	NaN	16	372.6	22.52	In(x)	ShapiroWilk

Tukey's Outlier Test - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:03 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Boron, total (mg/L)	MW-001D	No	n/a	n/a	NP	NaN	18	0.03556	0.02837	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	17	0.03576	0.02701	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	16	0.027	0.01087	normal	ShapiroWilk
Boron, total (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	17	0.03229	0.02116	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	18	0.02633	0.01094	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	16	0.04106	0.02353	normal	ShapiroWilk
Boron, total (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	16	0.03456	0.02531	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	16	0.02569	0.01288	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-014S (bg)	No	n/a	n/a	NP	NaN	16	0.02375	0.01217	sqrt(x)	ShapiroWilk
Boron, total (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	17	0.04129	0.01798	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	16	0.04013	0.03004	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	16	0.03425	0.02487	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	17	0.039	0.03266	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	18	0.04044	0.02935	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	17	0.03112	0.0256	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	16	0.0285	0.02163	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	17	0.02259	0.01456	sqrt(x)	ShapiroWilk
Boron, total (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	16	0.06125	0.02147	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	17	0.05335	0.01631	ln(x)	ShapiroWilk
Boron, total (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	0.027	0.01456	x^(1/3)	ShapiroWilk
Boron, total (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	0.04158	0.03115	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-001D	No	n/a	n/a	NP	NaN	17	67.64	6.511	sqrt(x)	ShapiroWilk
Calcium, total (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	16	65.81	2.703	x^5	ShapiroWilk
Calcium, total (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	16	69.69	3.236	x^6	ShapiroWilk
Calcium, total (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	18	79.8	14.51	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	16	68.41	4.03	sqrt(x)	ShapiroWilk
Calcium, total (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	16	56.71	3.536	x^6	ShapiroWilk
Calcium, total (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	16	71.47	4.126	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	16	41.61	2.922	x^6	ShapiroWilk
Calcium, total (mg/L)	MW-014S (bg)	No	n/a	n/a	NP	NaN	16	64.33	5.847	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	16	46.59	3.376	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	16	48.53	8.374	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	23	89.66	15.09	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	18	75.68	21.85	x^2	ShapiroWilk
Calcium, total (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	18	99.98	7.352	x^4	ShapiroWilk
Calcium, total (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	16	69.69	4.046	x^6	ShapiroWilk
Calcium, total (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	16	62.58	3.957	sqrt(x)	ShapiroWilk
Calcium, total (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	16	54.89	3.843	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	16	46.96	6.739	ln(x)	ShapiroWilk
Calcium, total (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	17	59.52	18.45	normal	ShapiroWilk
Calcium, total (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	34.26	2.473	normal	ShapiroWilk
Calcium, total (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	46.51	3.961	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-001D	No	n/a	n/a	NP	NaN	17	37.45	10.9	x^2	ShapiroWilk
Chloride, total (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	23	30.57	5.139	sqrt(x)	ShapiroWilk
Chloride, total (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	21	33.71	3.371	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	25	62.83	39.32	sqrt(x)	ShapiroWilk
Chloride, total (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	18	27.76	2.467	x^2	ShapiroWilk
Chloride, total (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	21	24.38	2.892	x^3	ShapiroWilk
Chloride, total (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	17	20.61	0.901	x^6	ShapiroWilk
Chloride, total (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	17	23.38	1.948	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-014S (bg)	No	n/a	n/a	NP	NaN	17	28.28	1.329	x^6	ShapiroWilk
Chloride, total (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	17	30.94	14.4	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	16	13.83	4.684	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	26	98.67	24.68	x^2	ShapiroWilk
Chloride, total (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	18	52.39	21.68	sqrt(x)	ShapiroWilk

Tukey's Outlier Test - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:03 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Chloride, total (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	17	19.86	3.05	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	16	19.33	0.4328	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	16	19.76	1.267	x^6	ShapiroWilk
Chloride, total (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	20	16.58	1.474	x^3	ShapiroWilk
Chloride, total (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	17	3.297	2.598	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	20	105.9	64.22	sqrt(x)	ShapiroWilk
Chloride, total (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	11.87	1.382	ln(x)	ShapiroWilk
Chloride, total (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	5.55	3.014	sqrt(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-001D	Yes	0.85	10/4/2017	NP	NaN	17	0.3147	0.1393	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	17	0.3788	0.03333	x^3	ShapiroWilk
Fluoride, total (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	16	0.5969	0.03945	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	17	0.1982	0.01185	x^3	ShapiroWilk
Fluoride, total (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	16	0.3219	0.02713	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	20	0.292	0.03995	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	17	0.3065	0.03823	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	17	0.5382	0.03893	x^5	ShapiroWilk
Fluoride, total (mg/L)	MW-014S (bg)	No	n/a	n/a	NP	NaN	17	0.3629	0.02257	x^4	ShapiroWilk
Fluoride, total (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	19	0.29	0.06928	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	18	0.6811	0.1467	x^2	ShapiroWilk
Fluoride, total (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	18	0.2033	0.02029	x^6	ShapiroWilk
Fluoride, total (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	16	0.1381	0.03655	x^2	ShapiroWilk
Fluoride, total (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	17	0.3776	0.0425	sqrt(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	16	0.3469	0.03683	x^3	ShapiroWilk
Fluoride, total (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	18	0.3661	0.05479	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	21	0.6786	0.09748	ln(x)	ShapiroWilk
Fluoride, total (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	17	0.79	0.1151	normal	ShapiroWilk
Fluoride, total (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	25	0.8476	0.2291	x^5	ShapiroWilk
Fluoride, total (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	0.8188	0.1814	x^3	ShapiroWilk
Fluoride, total (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	0.8042	0.2088	x^2	ShapiroWilk
pH, field (SU)	MW-001D	No	n/a	n/a	NP	NaN	22	7.432	0.2925	ln(x)	ShapiroWilk
pH, field (SU)	MW-001I	No	n/a	n/a	NP	NaN	24	7.281	0.252	x^3	ShapiroWilk
pH, field (SU)	MW-001S	No	n/a	n/a	NP	NaN	23	7.345	0.2966	ln(x)	ShapiroWilk
pH, field (SU)	MW-002D	Yes	8.51,6.28,9.45	7/19/2017,7/23/2019,5/27/2021	NP	NaN	25	7.434	0.5582	ln(x)	ShapiroWilk
pH, field (SU)	MW-002I	Yes	9.66	5/27/2021	NP	NaN	21	7.572	0.5913	ln(x)	ShapiroWilk
pH, field (SU)	MW-002S	Yes	6.4,9.5	6/9/2016,5/27/2021	NP	NaN	24	7.539	0.5036	ln(x)	ShapiroWilk
pH, field (SU)	MW-008I (bg)	No	n/a	n/a	NP	NaN	17	7.458	0.3598	ln(x)	ShapiroWilk
pH, field (SU)	MW-008S (bg)	No	n/a	n/a	NP	NaN	17	7.398	0.3927	x^6	ShapiroWilk
pH, field (SU)	MW-014S (bg)	No	n/a	n/a	NP	NaN	17	7.288	0.3428	x^4	ShapiroWilk
pH, field (SU)	MW-015I	No	n/a	n/a	NP	NaN	21	7.468	0.2522	ln(x)	ShapiroWilk
pH, field (SU)	MW-015S	No	n/a	n/a	NP	NaN	18	7.266	0.4202	x^6	ShapiroWilk
pH, field (SU)	MW-016D	Yes	9.03,9.64	7/18/2017,5/28/2021	NP	NaN	26	7.478	0.5868	ln(x)	ShapiroWilk
pH, field (SU)	MW-016I	No	n/a	n/a	NP	NaN	19	7.356	0.2403	x^4	ShapiroWilk
pH, field (SU)	MW-016S	Yes	8.26,6.34	5/10/2017,7/18/2017	NP	NaN	20	7.157	0.3847	ln(x)	ShapiroWilk
pH, field (SU)	MW-021D	Yes	9.68	5/27/2021	NP	NaN	18	7.674	0.6103	ln(x)	ShapiroWilk
pH, field (SU)	MW-021I	Yes	8.56,9.72	5/9/2017,5/27/2021	NP	NaN	19	7.644	0.5927	ln(x)	ShapiroWilk
pH, field (SU)	MW-021S	Yes	6.6,8.86,10.28	6/9/2016,5/9/2017,5/28/2021	NP	NaN	23	7.747	0.6813	ln(x)	ShapiroWilk
pH, field (SU)	MW-11S (bg)	No	n/a	n/a	NP	NaN	17	7.682	0.3651	ln(x)	ShapiroWilk
pH, field (SU)	MW-17I	No	n/a	n/a	NP	NaN	25	7.503	0.3166	normal	ShapiroWilk
pH, field (SU)	MW-17S	No	n/a	n/a	NP	NaN	17	7.502	0.2401	x^6	ShapiroWilk
pH, field (SU)	MW-6S (bg)	No	n/a	n/a	NP	NaN	18	7.623	0.287	sqrt(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-001D	No	n/a	n/a	NP	NaN	17	36.13	8.144	x^5	ShapiroWilk
Sulfate, total (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	16	41.76	2.207	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	16	33.53	2.06	x^2	ShapiroWilk
Sulfate, total (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	16	38.59	2.963	x^(1/3)	ShapiroWilk
Sulfate, total (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	16	41.1	2.604	ln(x)	ShapiroWilk

Tukey's Outlier Test - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:03 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Sulfate, total (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	16	27.47	2.647	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	17	75.37	10.85	x^6	ShapiroWilk
Sulfate, total (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	17	22.46	2.107	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-014S (bg)	No	n/a	n/a	NP	NaN	17	32.33	2.144	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	17	27.13	8.75	normal	ShapiroWilk
Sulfate, total (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	16	18.67	7.724	x^2	ShapiroWilk
Sulfate, total (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	18	37.57	2.363	x^6	ShapiroWilk
Sulfate, total (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	16	32.96	6.825	x^4	ShapiroWilk
Sulfate, total (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	16	39.79	4.891	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	16	36.5	2.262	normal	ShapiroWilk
Sulfate, total (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	16	41.26	4.024	x^3	ShapiroWilk
Sulfate, total (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	17	17.66	2.272	ln(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	17	10.21	5.278	sqrt(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	18	36.05	12.17	x^6	ShapiroWilk
Sulfate, total (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	9.976	2.731	sqrt(x)	ShapiroWilk
Sulfate, total (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	10.14	5.815	normal	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-001D	Yes	257,440	2/17/2020,8/5/2021	NP	NaN	19	337.7	49.27	sqrt(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-001I	No	n/a	n/a	NP	NaN	17	326.6	13.39	sqrt(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-001S	No	n/a	n/a	NP	NaN	18	403.1	22.89	normal	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-002D	No	n/a	n/a	NP	NaN	21	382.9	64.05	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-002I	No	n/a	n/a	NP	NaN	16	327.5	21.83	x^3	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-002S	No	n/a	n/a	NP	NaN	18	318.1	29.29	x^3	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-008I (bg)	No	n/a	n/a	NP	NaN	16	376.6	15.47	x^3	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-008S (bg)	No	n/a	n/a	NP	NaN	16	321.3	13.9	x^5	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-014S (bg)	Yes	430	5/28/2021	NP	NaN	16	372.6	22.52	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-015I	No	n/a	n/a	NP	NaN	16	296.4	49.75	sqrt(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-015S	No	n/a	n/a	NP	NaN	16	284.3	51.89	sqrt(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-016D	No	n/a	n/a	NP	NaN	25	450.3	89.25	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-016I	No	n/a	n/a	NP	NaN	18	441.7	84.09	x^4	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-016S	No	n/a	n/a	NP	NaN	20	496	22.16	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-021D	No	n/a	n/a	NP	NaN	16	327.6	14.76	x^5	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-021I	No	n/a	n/a	NP	NaN	16	298.6	22.28	normal	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-021S	No	n/a	n/a	NP	NaN	17	277.4	23.99	x^6	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-11S (bg)	No	n/a	n/a	NP	NaN	16	221	30.03	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-17I	No	n/a	n/a	NP	NaN	19	433.1	126.4	x^2	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-17S	No	n/a	n/a	NP	NaN	16	225.3	23.36	ln(x)	ShapiroWilk
Total Dissolved Solids [TDS] (mg/L)	MW-6S (bg)	No	n/a	n/a	NP	NaN	19	261.9	35.45	x^4	ShapiroWilk

Tukey's Outlier Test - Conductivity - Significant Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 10/27/2021, 3:14 PM

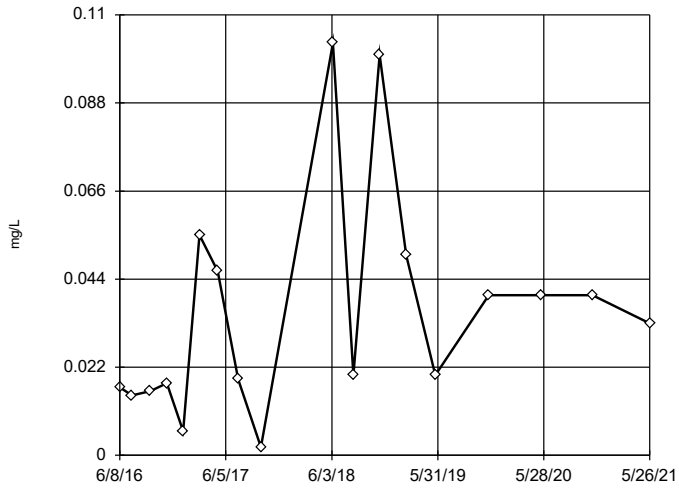
Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Conductivity (uS/cm)	MW-002S	Yes	1070	2/18/2020	NP	NaN	25	509.7	137.2	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-015I	Yes	874,60	11/16/2016,3/7/2017	NP	NaN	22	442.5	137.6	normal	ShapiroWilk
Conductivity (uS/cm)	MW-015S	Yes	904	11/16/2016	NP	NaN	18	426.3	163.6	normal	ShapiroWilk
Conductivity (uS/cm)	MW-017S	Yes	1460,60	11/16/2016,3/7/2017	NP	NaN	17	396.7	285	ln(x)	ShapiroWilk

Tukey's Outlier Test - Conductivity - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 10/27/2021, 3:14 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Conductivity (uS/cm)	MW-001D	No	n/a	n/a	NP	NaN	23	539.8	131.5	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-001I	No	n/a	n/a	NP	NaN	24	514.1	90.5	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-001S	No	n/a	n/a	NP	NaN	23	647.4	200.9	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-002D	No	n/a	n/a	NP	NaN	26	631	205.8	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-002I	No	n/a	n/a	NP	NaN	21	518.8	95.54	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-002S	Yes	1070	2/18/2020	NP	NaN	25	509.7	137.2	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-008I (bg)	No	n/a	n/a	NP	NaN	17	524.1	172.7	normal	ShapiroWilk
Conductivity (uS/cm)	MW-008S (bg)	No	n/a	n/a	NP	NaN	17	482.8	121.2	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-014S (bg)	No	n/a	n/a	NP	NaN	18	547.2	175.1	normal	ShapiroWilk
Conductivity (uS/cm)	MW-015I	Yes	874,60	11/16/2016,3/7/2017	NP	NaN	22	442.5	137.6	normal	ShapiroWilk
Conductivity (uS/cm)	MW-015S	Yes	904	11/16/2016	NP	NaN	18	426.3	163.6	normal	ShapiroWilk
Conductivity (uS/cm)	MW-016D	No	n/a	n/a	NP	NaN	28	757.6	283	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-016I	No	n/a	n/a	NP	NaN	19	678.6	143.3	sqrt(x)	ShapiroWilk
Conductivity (uS/cm)	MW-016S	No	n/a	n/a	NP	NaN	21	746.1	118.5	x^(1/3)	ShapiroWilk
Conductivity (uS/cm)	MW-021D	No	n/a	n/a	NP	NaN	18	529.5	66.02	x^(1/3)	ShapiroWilk
Conductivity (uS/cm)	MW-021I	No	n/a	n/a	NP	NaN	19	447.6	54.8	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-021S	No	n/a	n/a	NP	NaN	23	449.9	108.7	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-011S (bg)	No	n/a	n/a	NP	NaN	18	328.3	104.8	normal	ShapiroWilk
Conductivity (uS/cm)	MW-017I	No	n/a	n/a	NP	NaN	25	601.8	210	normal	ShapiroWilk
Conductivity (uS/cm)	MW-017S	Yes	1460,60	11/16/2016,3/7/2017	NP	NaN	17	396.7	285	ln(x)	ShapiroWilk
Conductivity (uS/cm)	MW-006S (bg)	No	n/a	n/a	NP	NaN	18	401.6	109.2	ln(x)	ShapiroWilk

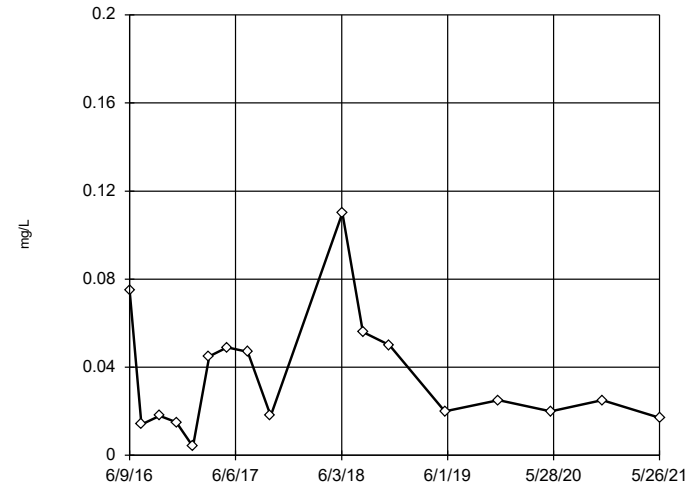
Tukey's Outlier Screening
MW-001D



n = 18
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.3281, low cutoff = -0.0003707, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

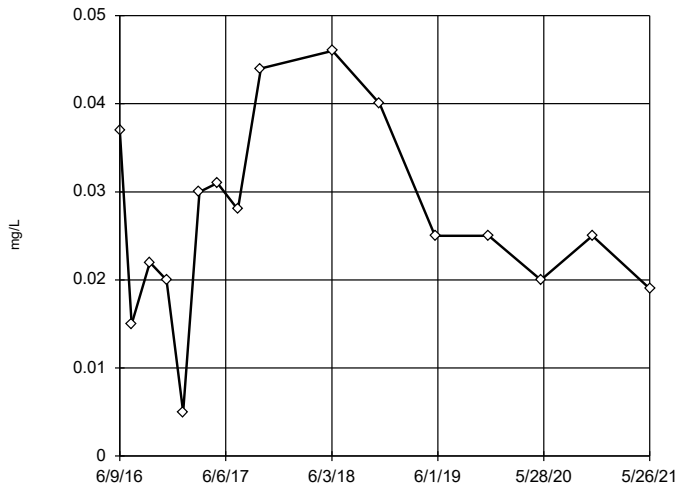
Tukey's Outlier Screening
MW-001I



n = 17
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.3283, low cutoff = -0.0002512, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

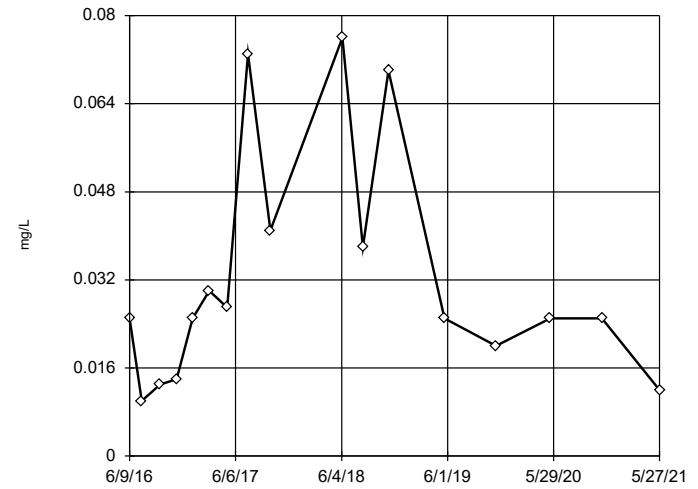
Tukey's Outlier Screening
MW-001S



n = 16
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 0.076, low cutoff = -0.022, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

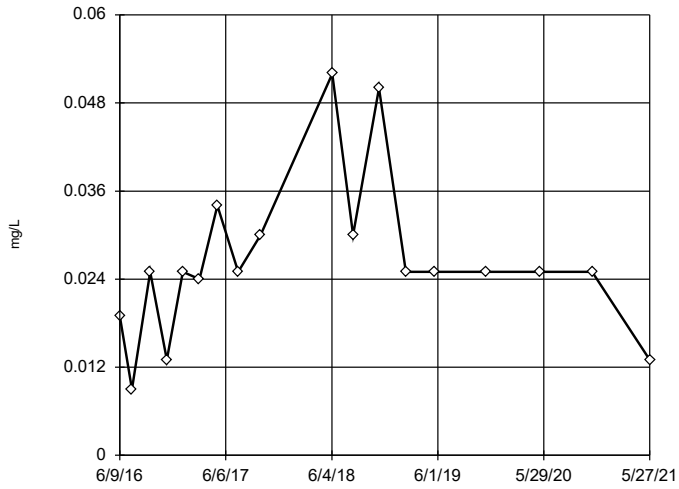
Tukey's Outlier Screening
MW-002D



n = 17
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.5181, low cutoff = 0.001275, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

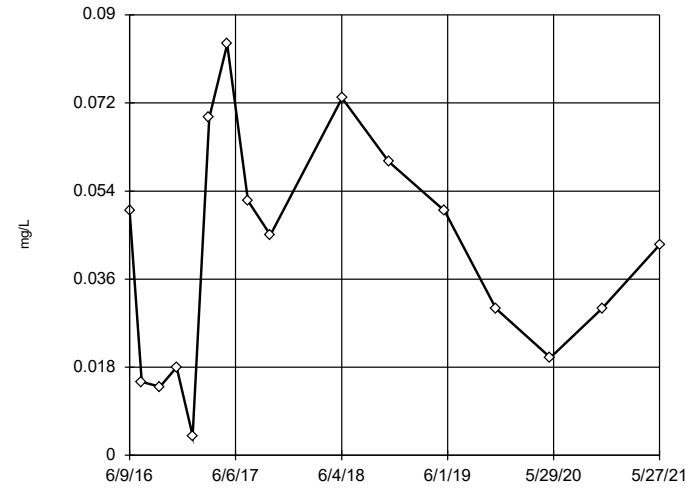
Tukey's Outlier Screening
MW-0021



n = 18
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.0689, low cutoff = 0.005679, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

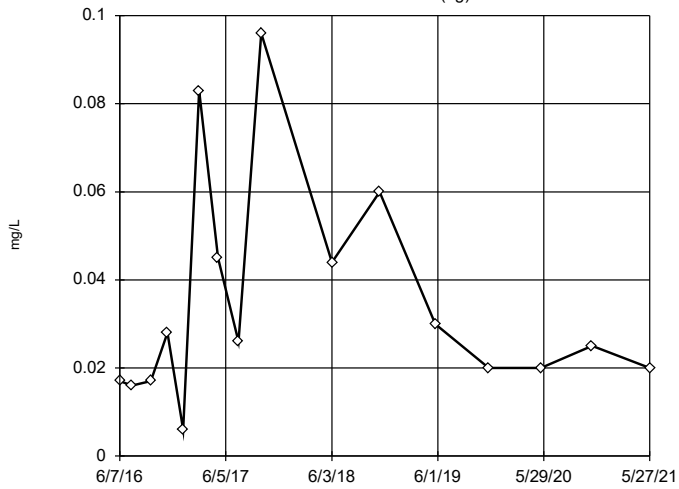
Tukey's Outlier Screening
MW-002S



n = 16
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 0.167, low cutoff = -0.092, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

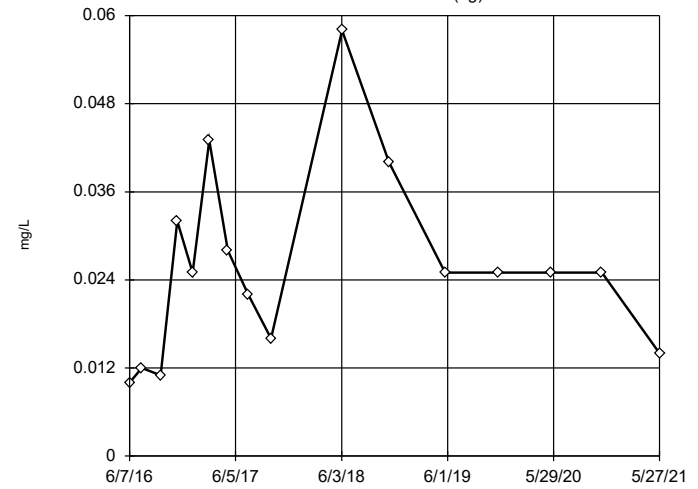
Tukey's Outlier Screening
MW-008I (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.6253, low cutoff = 0.001312, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

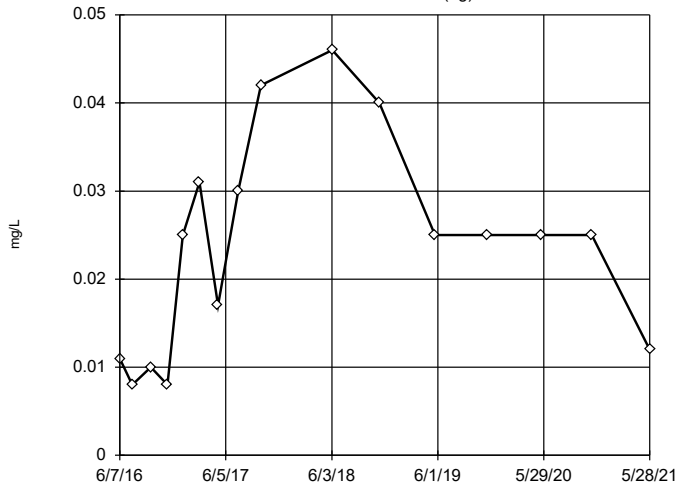
Tukey's Outlier Screening
MW-008S (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.2395, low cutoff = 0.001871, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

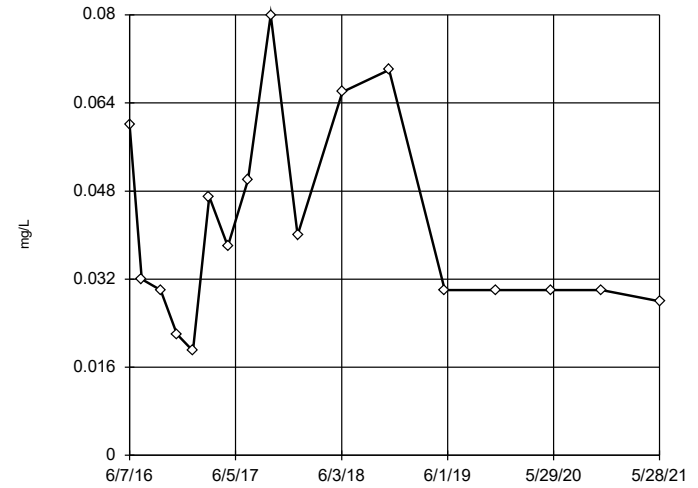
Tukey's Outlier Screening
MW-014S (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.1421, low cutoff = -0.009036, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

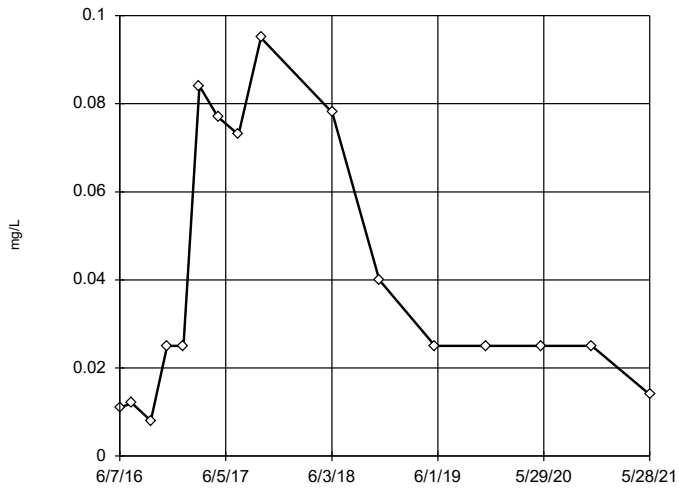
Tukey's Outlier Screening
MW-015I



n = 17
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.3333, low cutoff = 0.00493, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

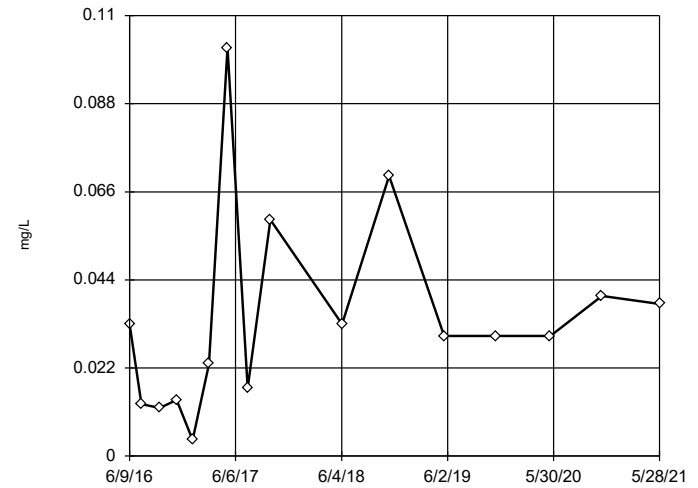
Tukey's Outlier Screening
MW-015S



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 4.825, low cutoff = 0.0002907, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

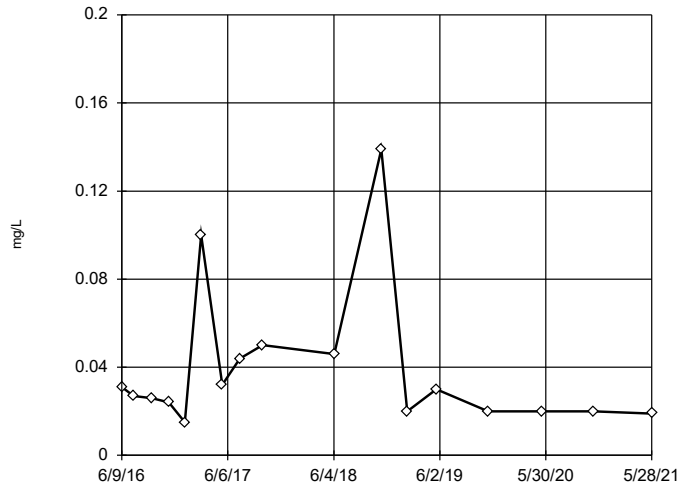
Tukey's Outlier Screening
MW-016D



n = 16
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.2261, low cutoff = -0.000009267, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

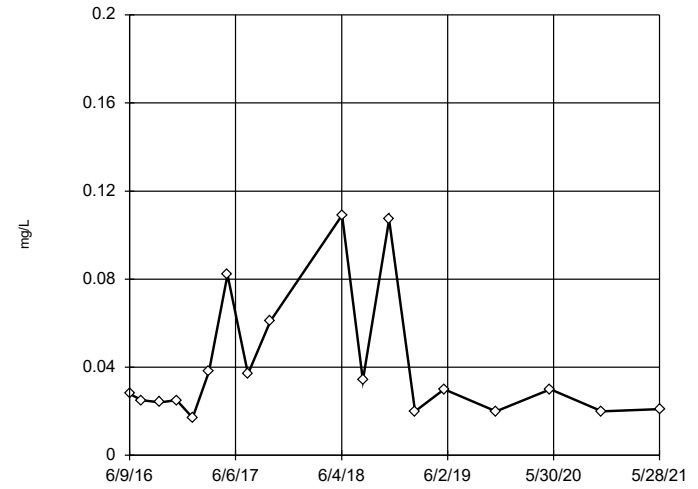
Tukey's Outlier Screening MW-016I



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.5121,
 low cutoff = 0.001757,
 based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

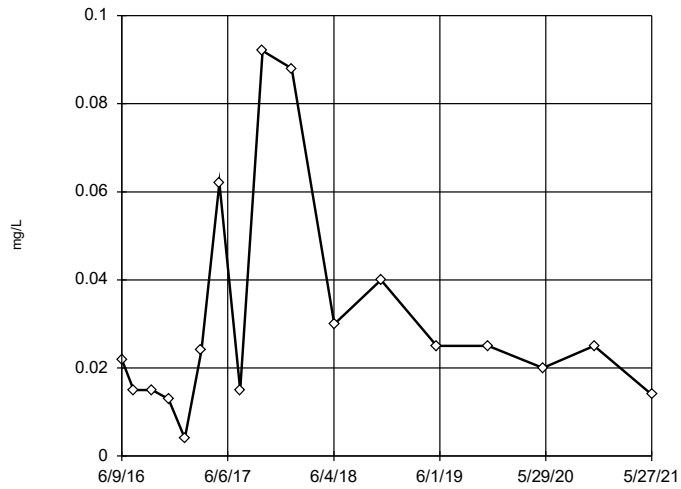
Tukey's Outlier Screening MW-016S



n = 18
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.6242,
 low cutoff = 0.001581,
 based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

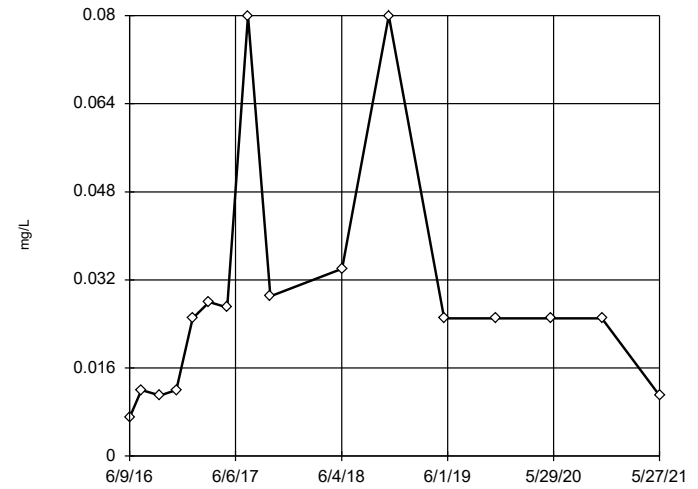
Tukey's Outlier Screening MW-021D



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.4267,
 low cutoff = 0.001218,
 based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening MW-021I

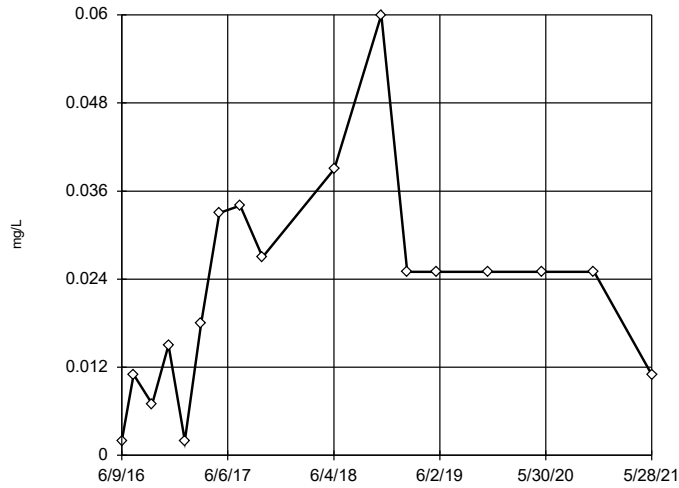


n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.3816,
 low cutoff = 0.0008962,
 based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-021S



n = 17

No outliers found. Tukey's method selected by user.

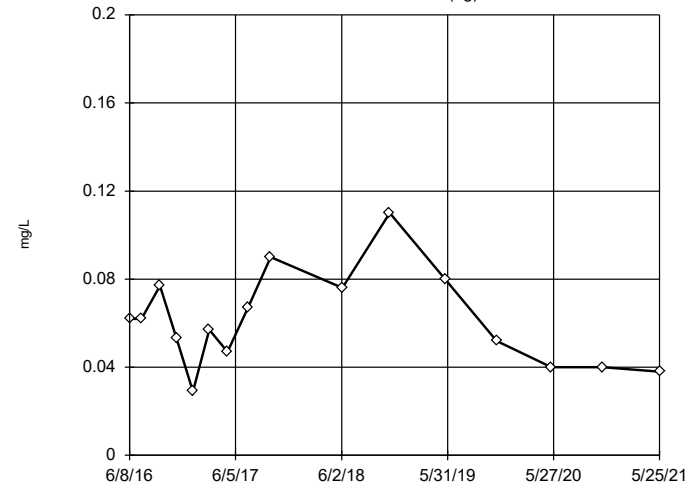
Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.1424, low cutoff = -0.009888, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-11S (bg)



n = 16

No outliers found. Tukey's method selected by user.

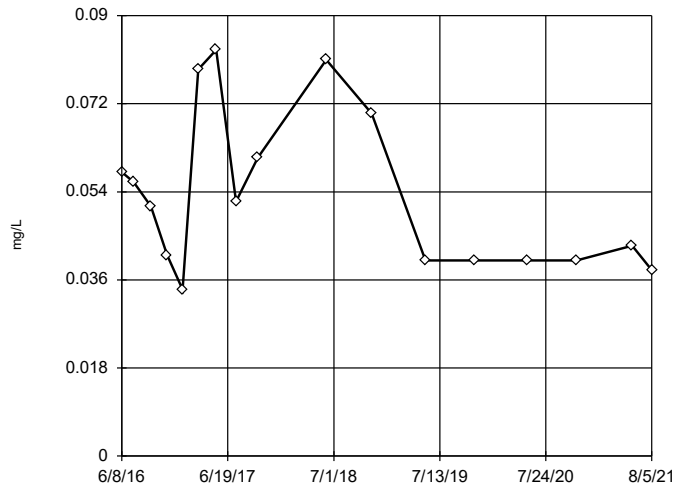
Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.2667, low cutoff = 0.002312, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-17I



n = 17

No outliers found. Tukey's method selected by user.

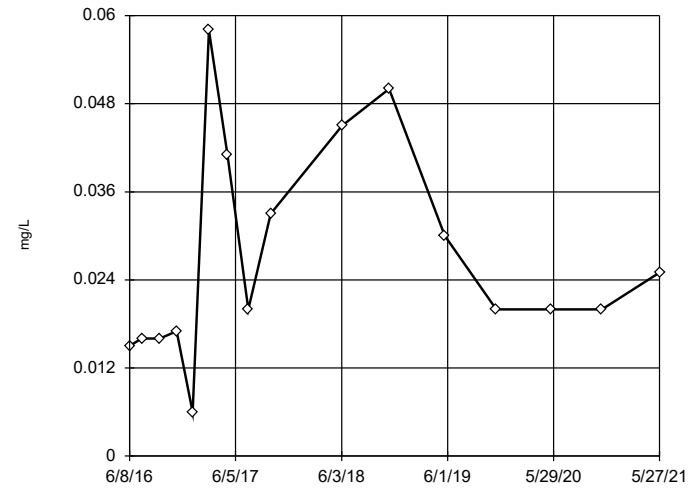
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.2849, low cutoff = 0.009175, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-17S



n = 16

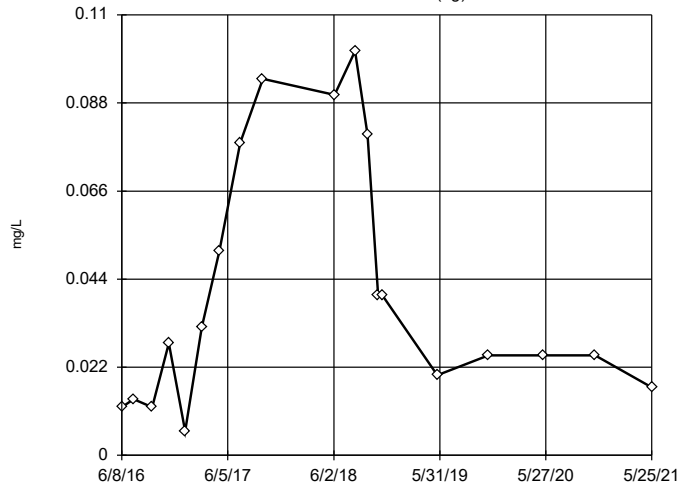
No outliers found. Tukey's method selected by user.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.1827, low cutoff = 0.000007836, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

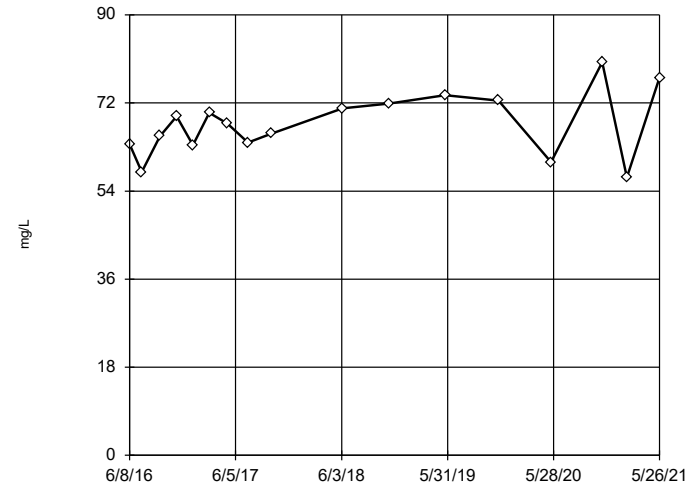
Tukey's Outlier Screening MW-6S (bg)



n = 19
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 7.534, low cutoff = 0.000176, based on IQR multiplier of 3.

Constituent: Boron, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

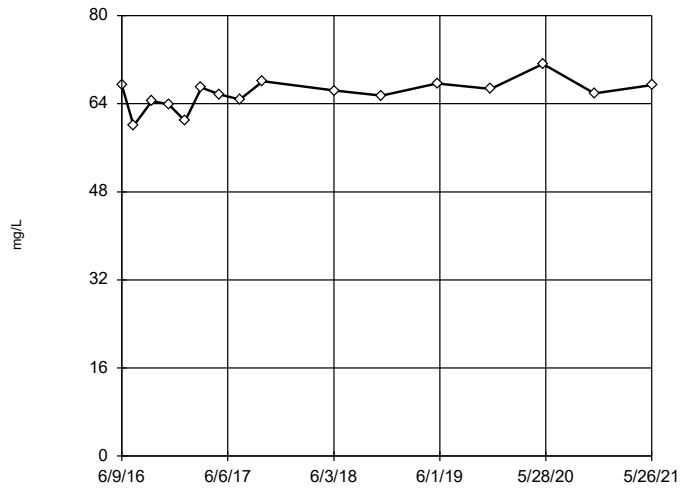
Tukey's Outlier Screening MW-001D



n = 17
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 101.6, low cutoff = 40.75, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

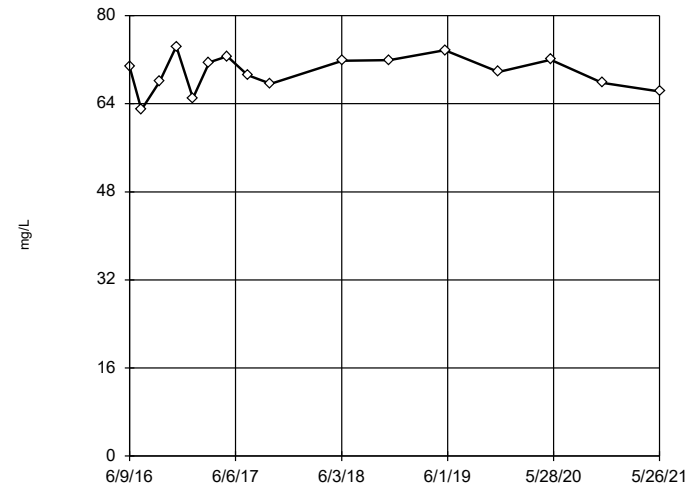
Tukey's Outlier Screening MW-0011



n = 16
No outliers found. Tukey's method selected by user.
Data were x*5 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 73.71, low cutoff = 51, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening MW-001S

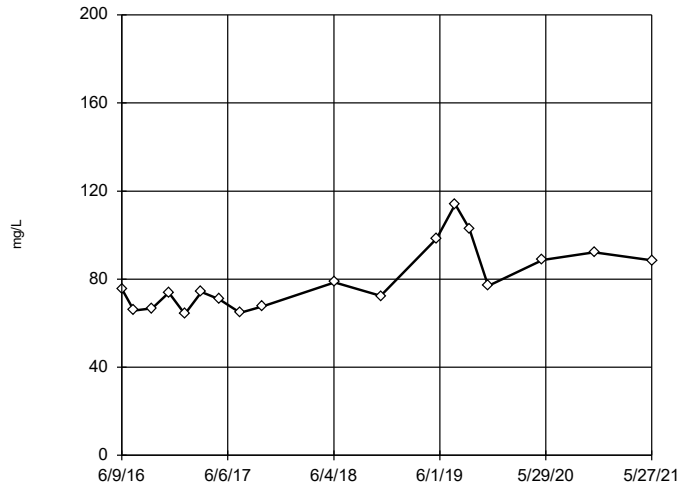


n = 16
No outliers found. Tukey's method selected by user.
Data were x*6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 80.2, low cutoff = -56.07, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-002D



n = 18

No outliers found. Tukey's method selected by user.

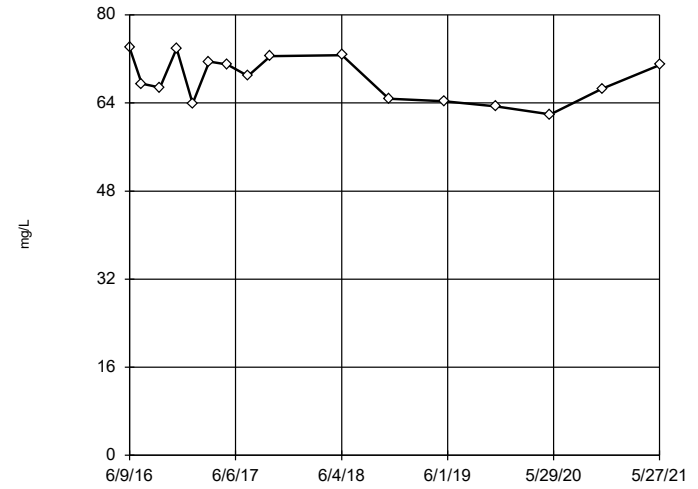
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 220.4, low cutoff = 27.57, based on IQR multiplier of 3.

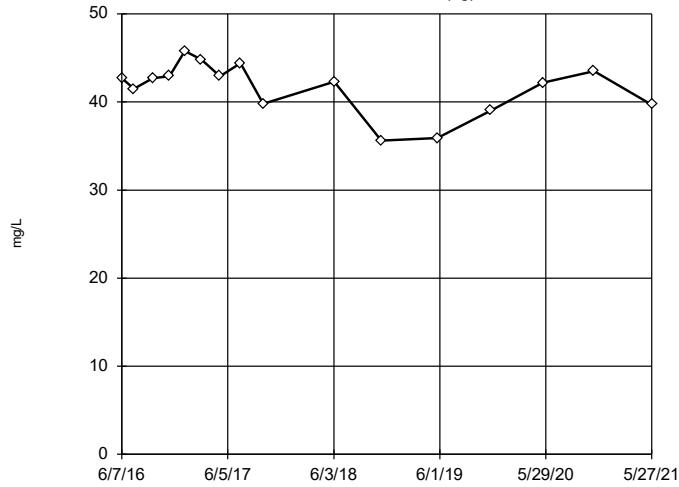
Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-002I



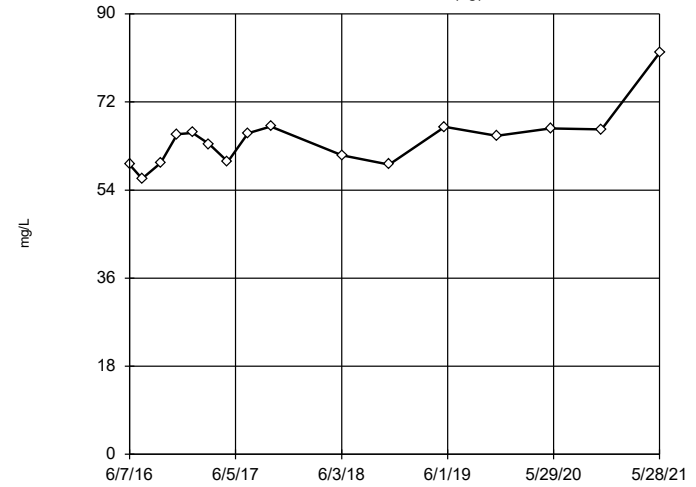
Tukey's Outlier Screening
MW-008S (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were x*6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 49.2, low cutoff = -39.39, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

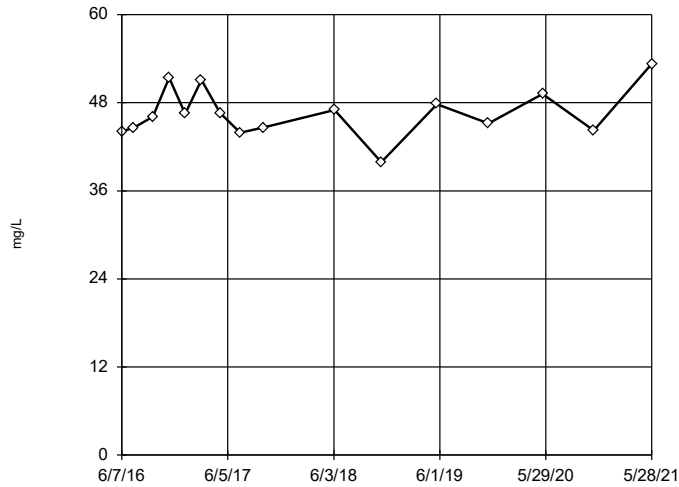
Tukey's Outlier Screening
MW-014S (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 92.14, low cutoff = 43.05, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

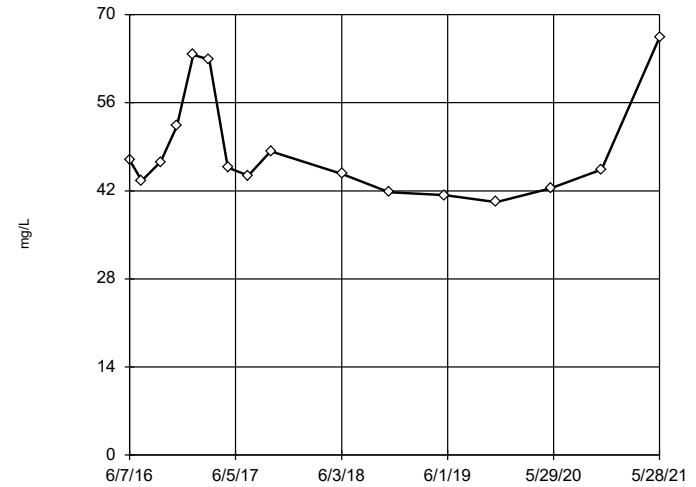
Tukey's Outlier Screening
MW-015I



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 63.19, low cutoff = 34.07, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

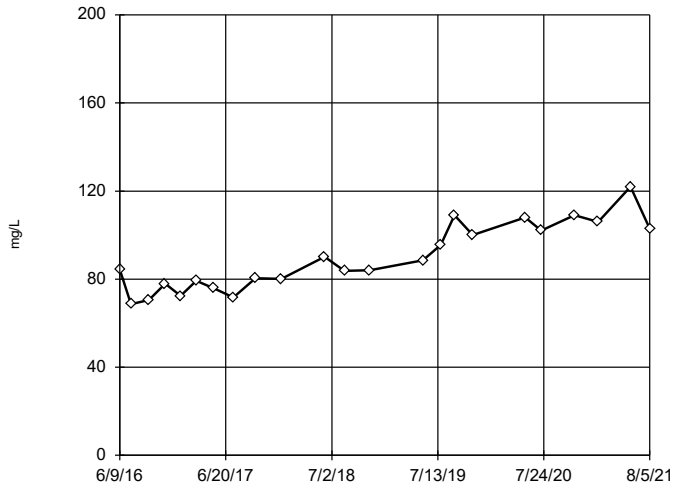
Tukey's Outlier Screening
MW-015S



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 80.28, low cutoff = 26.92, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

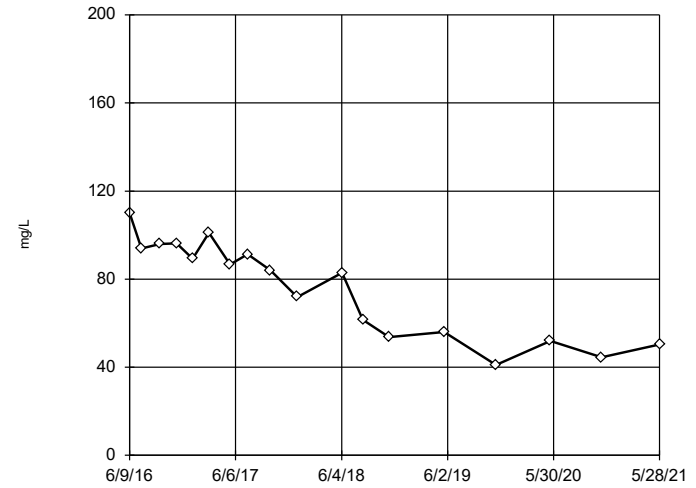
Tukey's Outlier Screening
MW-016D



n = 23
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 238.1, low cutoff = 33.7, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

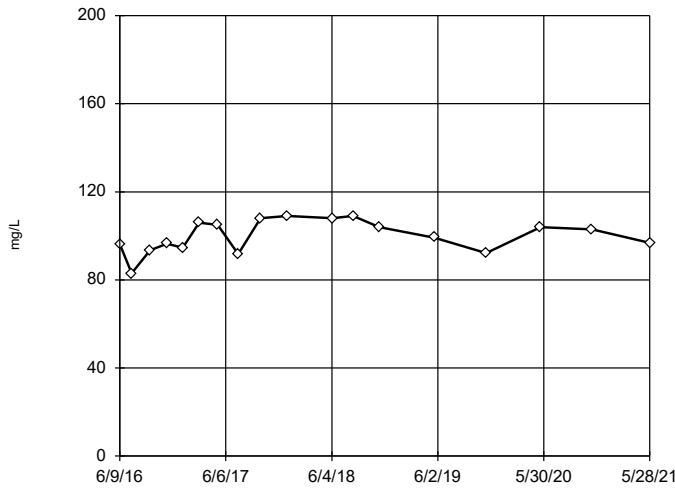
Tukey's Outlier Screening
MW-016I



n = 18
No outliers found. Tukey's method selected by user.
Data were square transformed to achieve best W statistic (graph shown in original units).
High cutoff = 166.3, low cutoff = -126, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

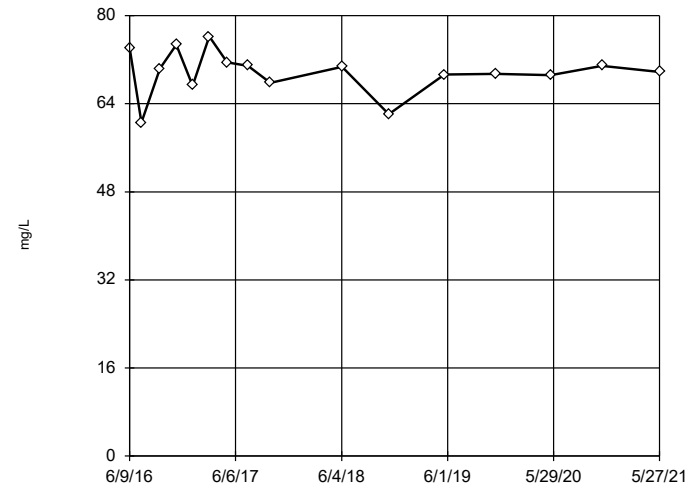
Tukey's Outlier Screening
MW-016S



n = 18
No outliers found. Tukey's method selected by user.
Data were x^4 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 130.5, low cutoff = -94.7, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

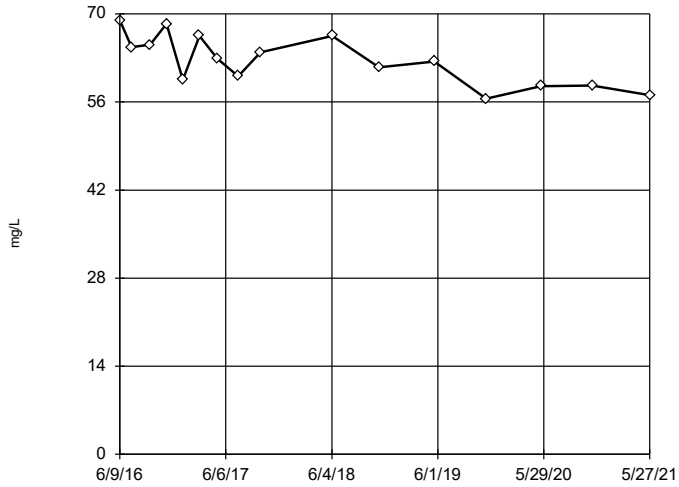
Tukey's Outlier Screening
MW-021D



n = 16
No outliers found. Tukey's method selected by user.
Data were x^6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 77.15, low cutoff = 53.31, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

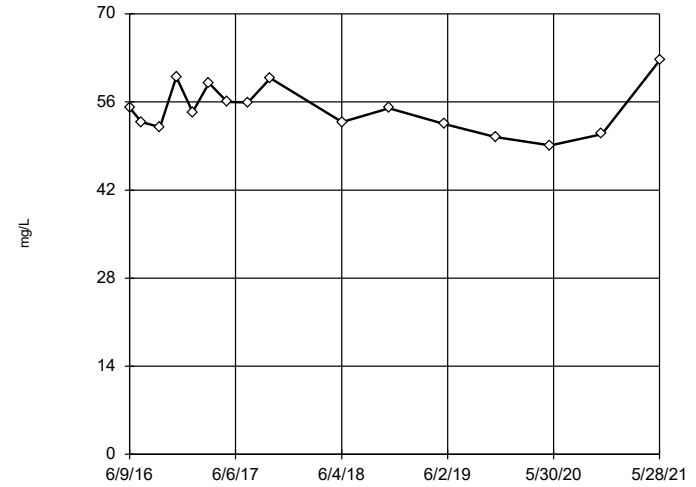
Tukey's Outlier Screening
MW-0211



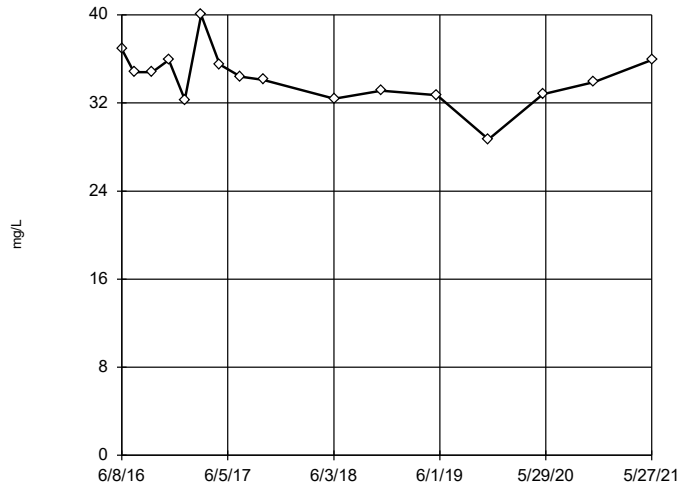
n = 16
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 88.24, low cutoff = 40.99, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-021S



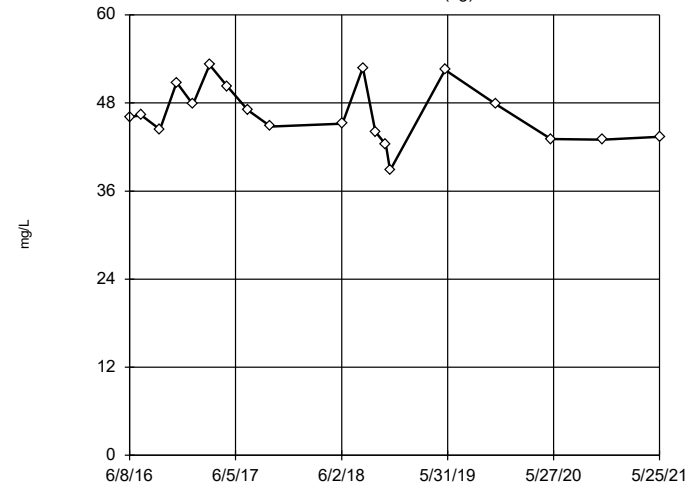
Tukey's Outlier Screening MW-17S



n = 16
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 44.55, low cutoff = 23.9, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

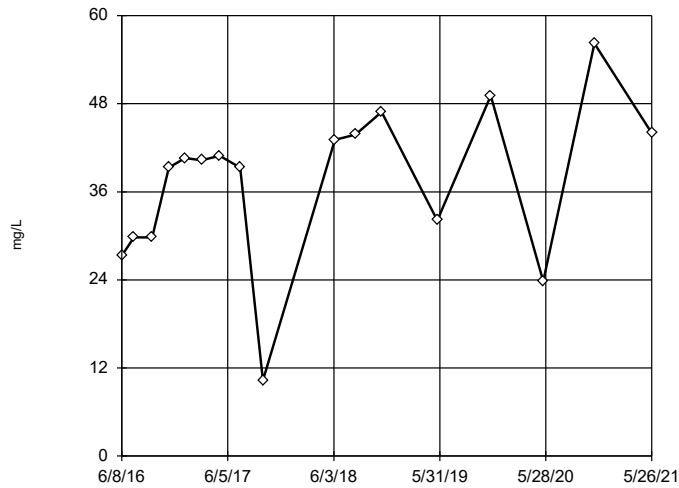
Tukey's Outlier Screening MW-6S (bg)



n = 19
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 78.31, low cutoff = 27.88, based on IQR multiplier of 3.

Constituent: Calcium, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

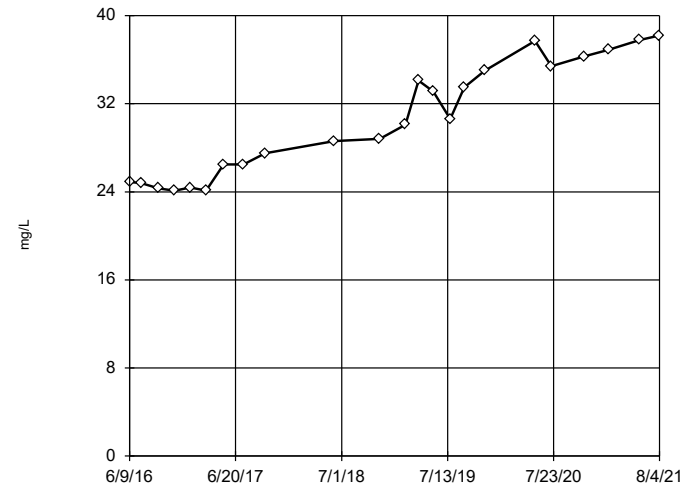
Tukey's Outlier Screening MW-001D



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 71.03, low cutoff = -47.22, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

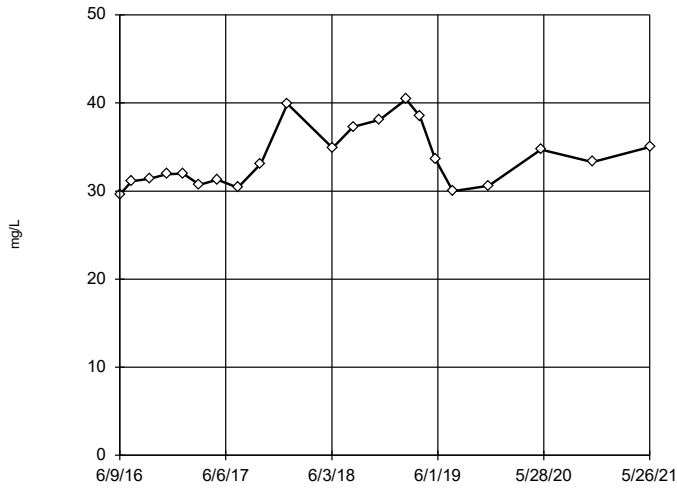
Tukey's Outlier Screening MW-0011



n = 23
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 77.95, low cutoff = 4.455, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

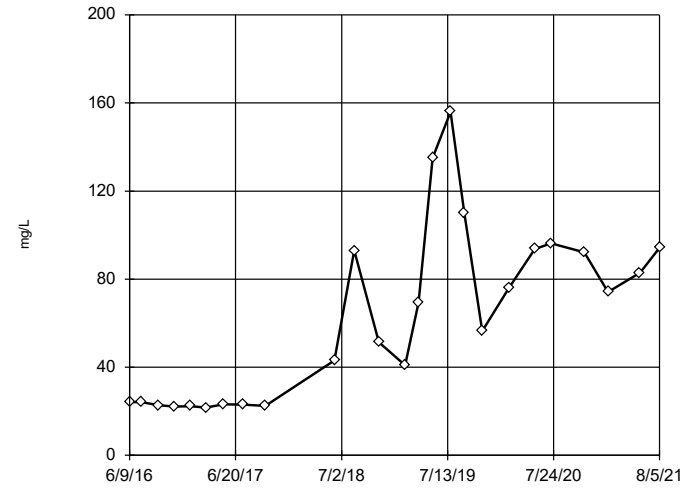
Tukey's Outlier Screening
MW-001S



n = 21
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 57.77, low cutoff = 19.33, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

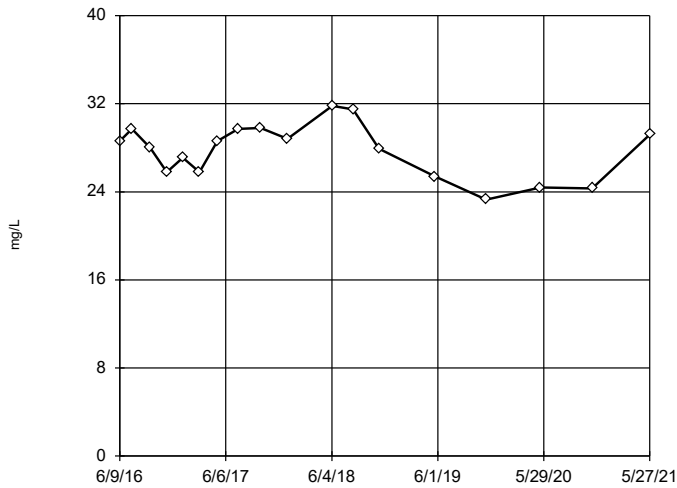
Tukey's Outlier Screening
MW-002D



n = 25
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 587.3, low cutoff = -95.52, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

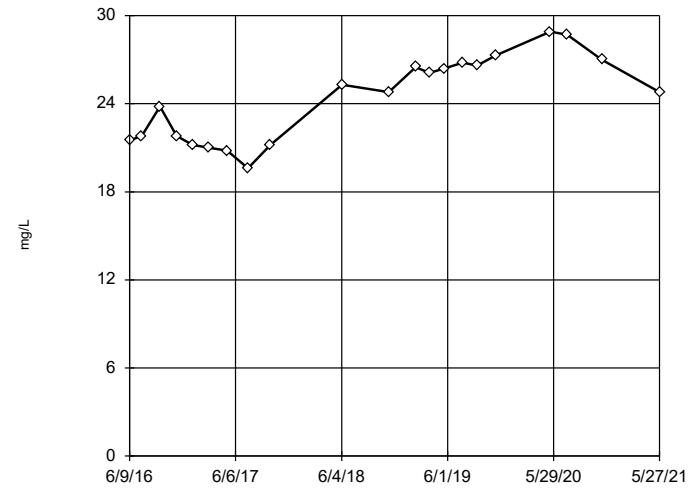
Tukey's Outlier Screening
MW-002I



n = 18
No outliers found. Tukey's method selected by user.
Data were square transformed to achieve best W statistic (graph shown in original units).
High cutoff = 39.52, low cutoff = -4.967, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

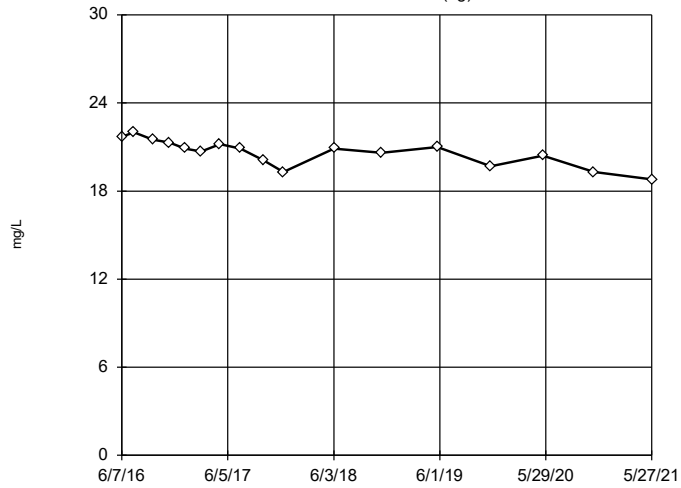
Tukey's Outlier Screening
MW-002S



n = 21
No outliers found. Tukey's method selected by user.
Data were cube transformed to achieve best W statistic (graph shown in original units).
High cutoff = 36.07, low cutoff = -26.29, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

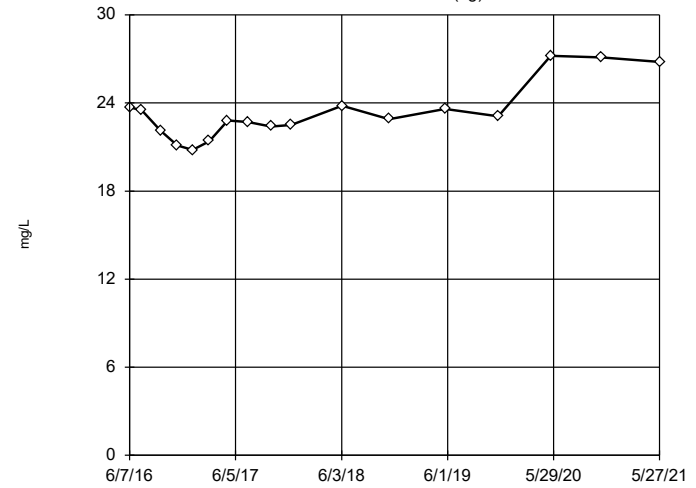
Tukey's Outlier Screening
MW-008I (bg)



n = 17
No outliers found. Tukey's method selected by user.
Data were x*6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 23.8, low cutoff = -17.37, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

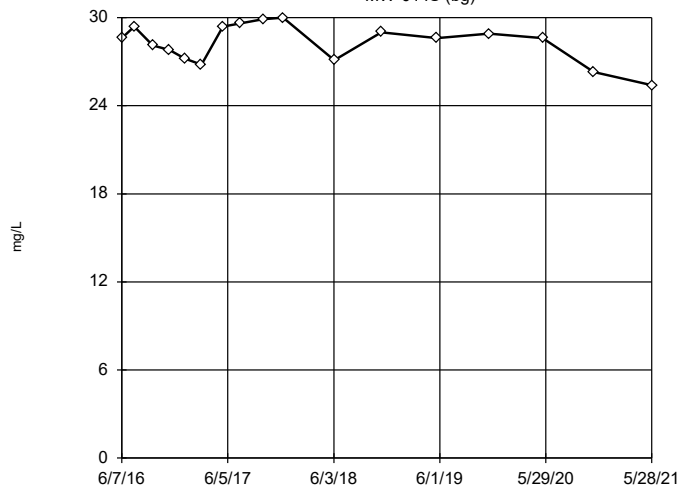
Tukey's Outlier Screening
MW-008S (bg)



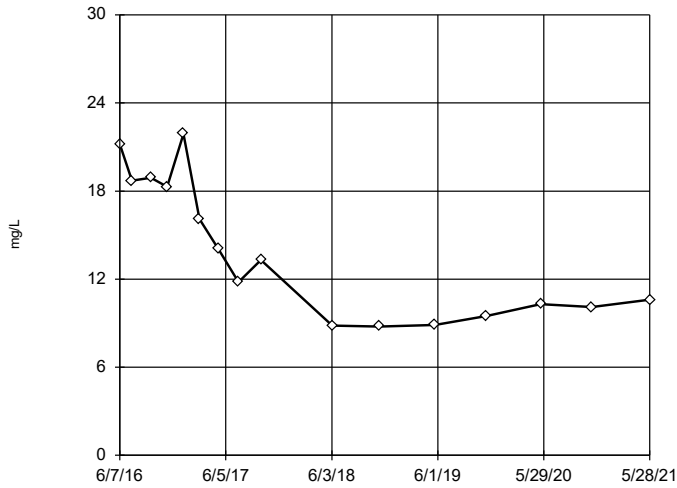
n = 17
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 28.89, low cutoff = 18.29, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-014S (bg)



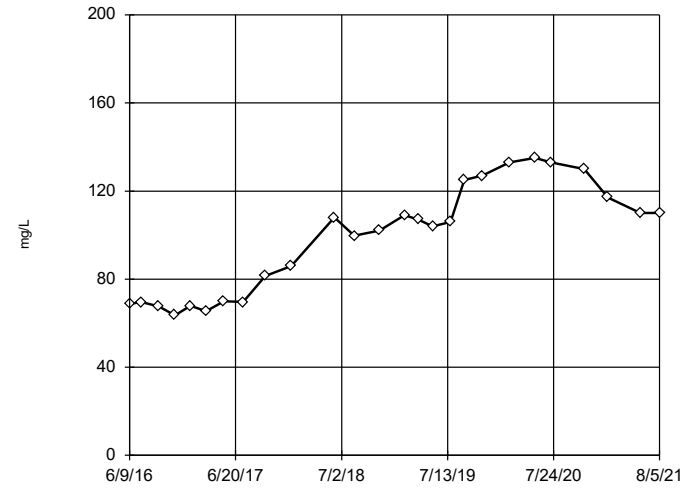
Tukey's Outlier Screening MW-015S



n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 125, low cutoff = 1.448, based on IQR multiplier of 3.

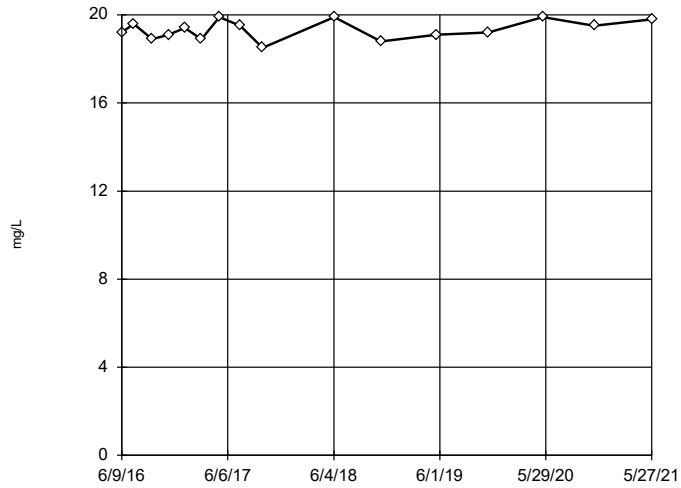
Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening MW-016D



Tukey's Outlier Screening

MW-021D

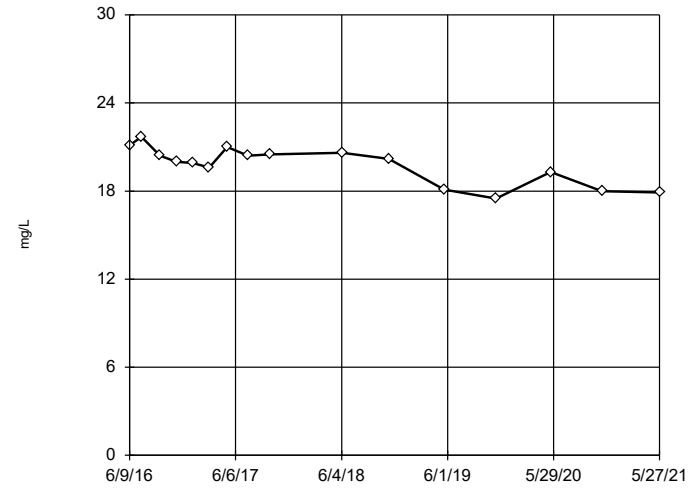


n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 21.96, low cutoff = 17.05, based on IQR multiplier of 3.

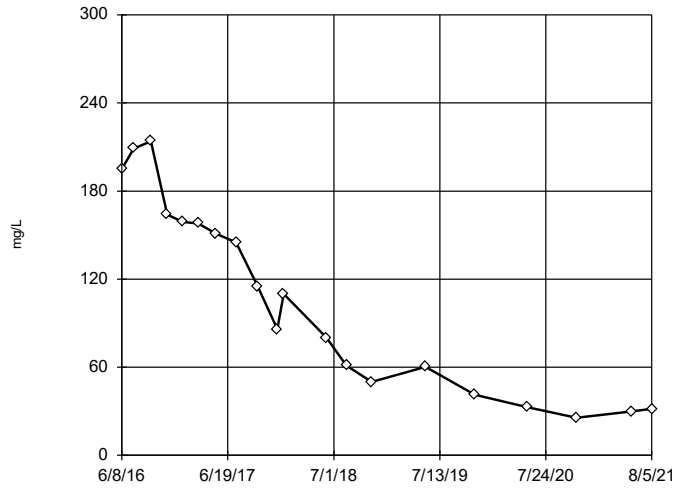
Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-021I



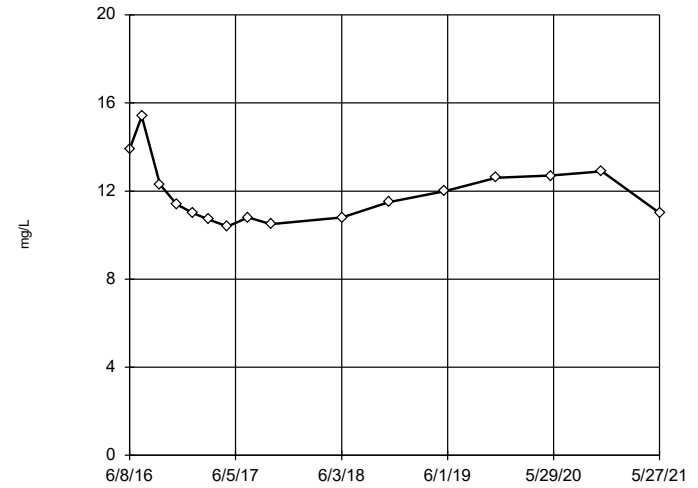
Tukey's Outlier Screening
MW-17I



n = 20
No outliers found.
Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 906.8, low cutoff = -116.1, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

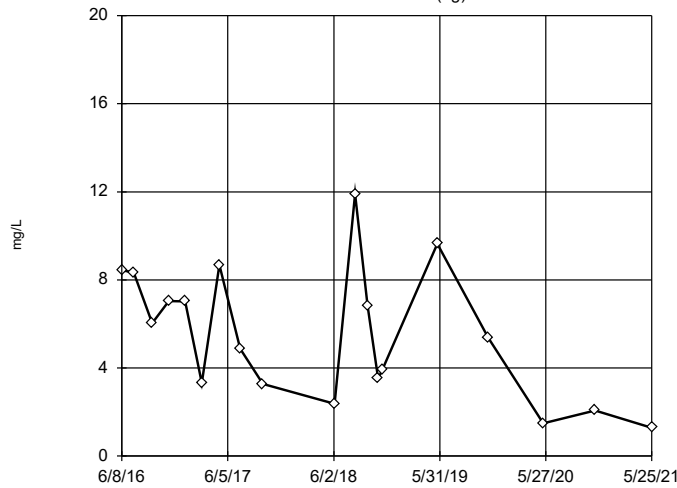
Tukey's Outlier Screening
MW-17S



n = 16
No outliers found.
Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 20.33, low cutoff = 6.721, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

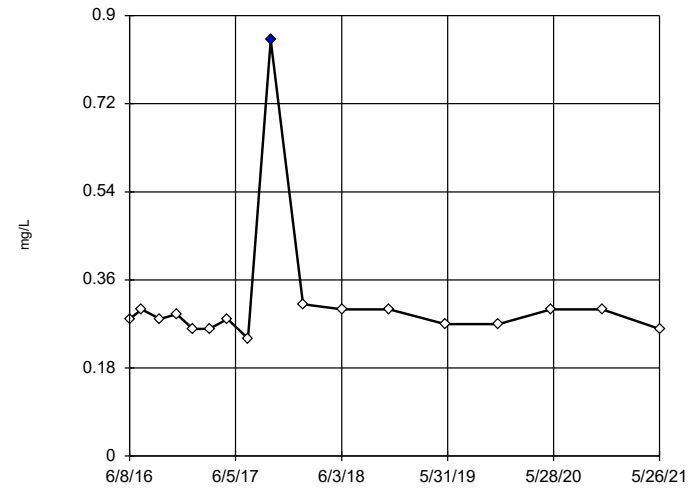
Tukey's Outlier Screening
MW-6S (bg)



n = 19
No outliers found.
Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 37.52, low cutoff = -2.029, based on IQR multiplier of 3.

Constituent: Chloride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

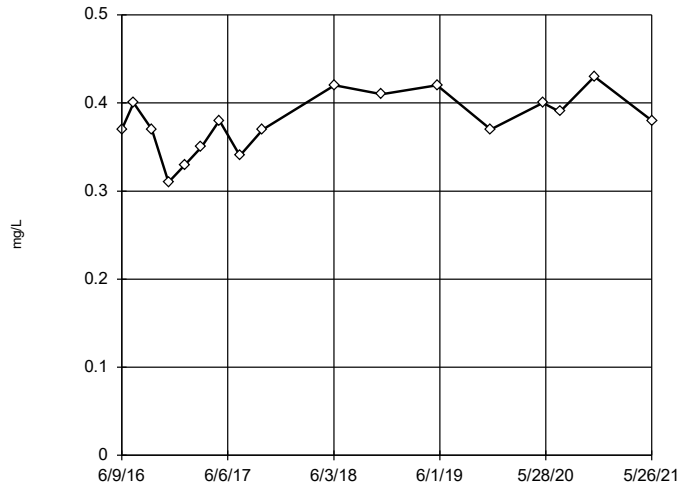
Tukey's Outlier Screening
MW-001D



n = 17
Outlier is drawn as solid.
Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.4355, low cutoff = 0.1825, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

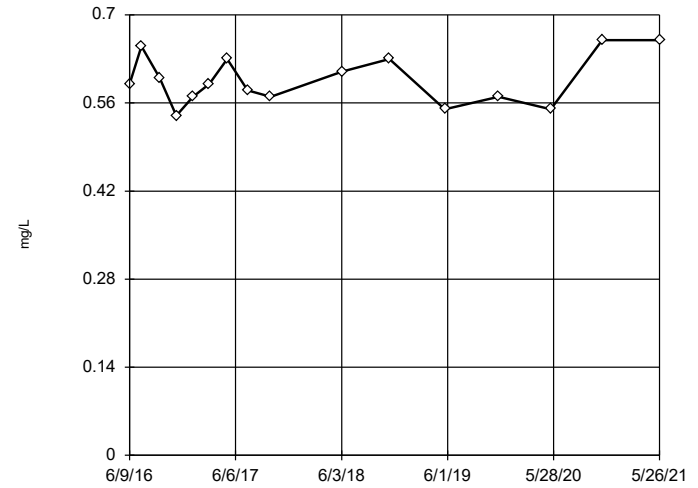
Tukey's Outlier Screening
MW-0011



n = 17
No outliers found. Tukey's method selected by user.
Data were cube transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.5007, low cutoff = -0.231, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

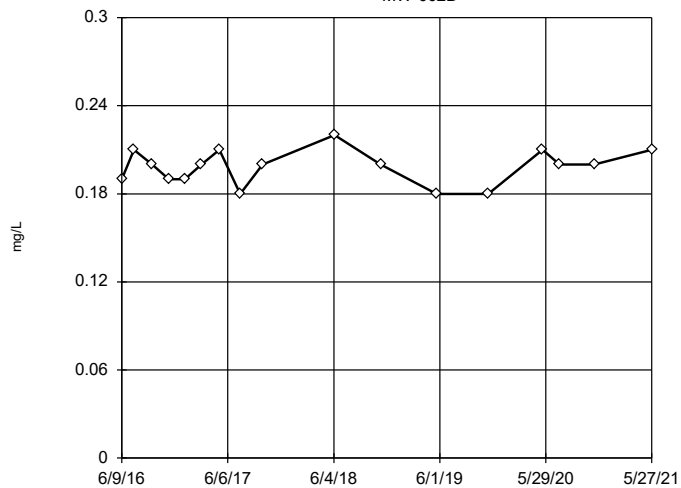
Tukey's Outlier Screening
MW-001S



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.8506, low cutoff = 0.4222, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

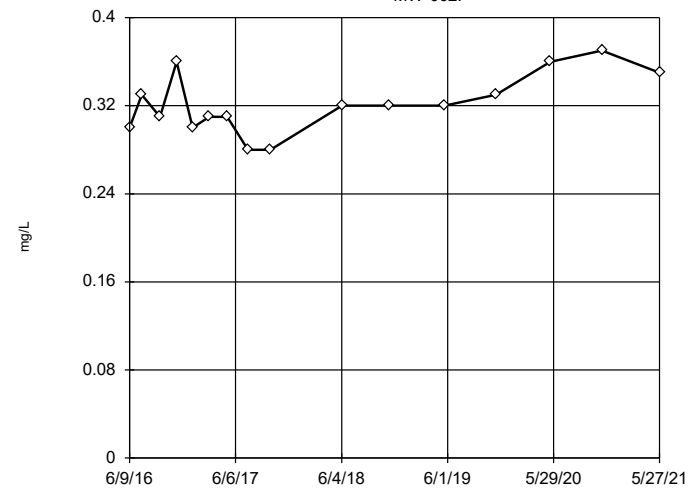
Tukey's Outlier Screening
MW-002D



n = 17
No outliers found. Tukey's method selected by user.
Data were cube transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.2544, low cutoff = -0.07027, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

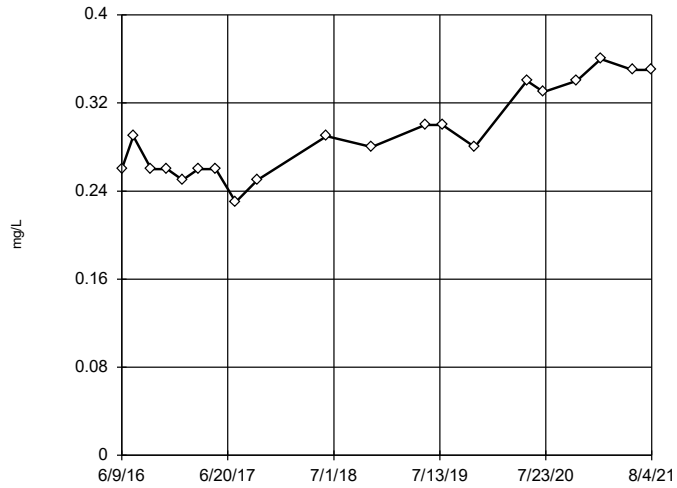
Tukey's Outlier Screening
MW-002I



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.4704, low cutoff = 0.2203, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

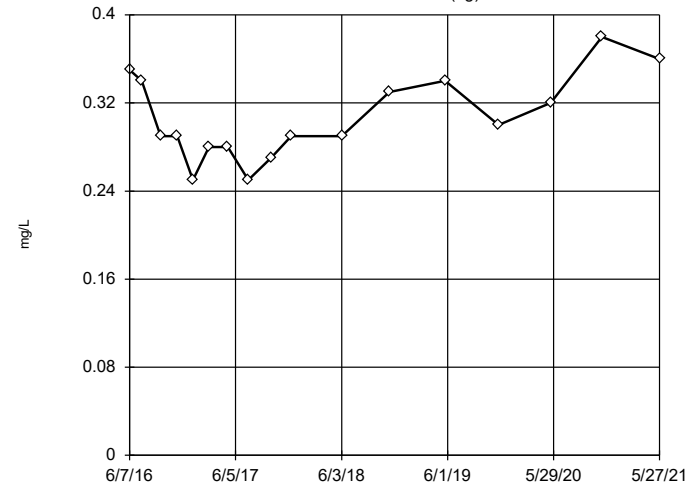
Tukey's Outlier Screening MW-002S



n = 20
 No outliers found. Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.7163, low cutoff = 0.1216, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

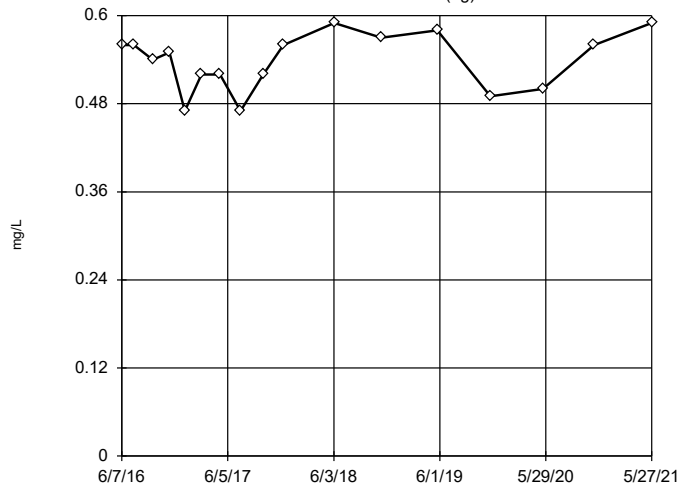
Tukey's Outlier Screening MW-008I (bg)



n = 17
 No outliers found. Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.6088, low cutoff = 0.1564, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

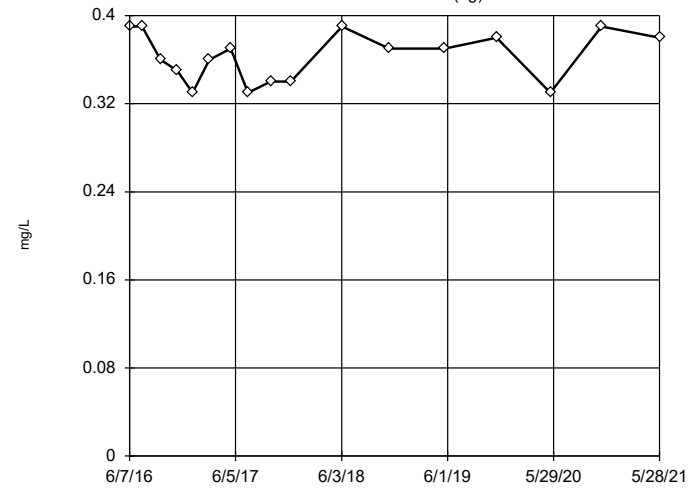
Tukey's Outlier Screening MW-008S (bg)



n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*5 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.6614, low cutoff = -0.5095, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

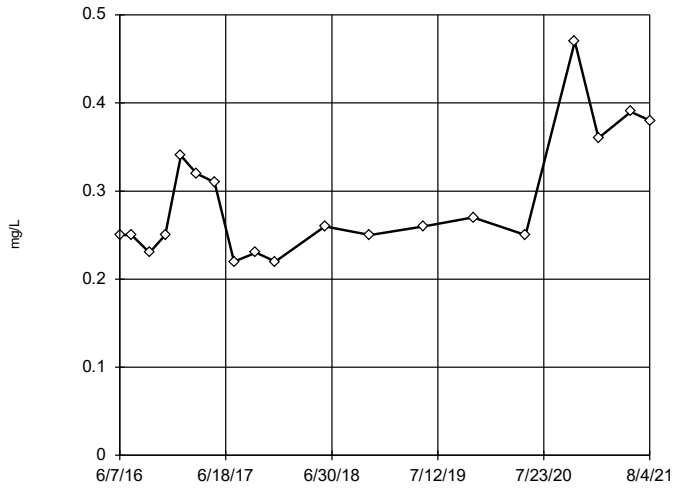
Tukey's Outlier Screening MW-014S (bg)



n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*4 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.4678, low cutoff = -0.3345, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

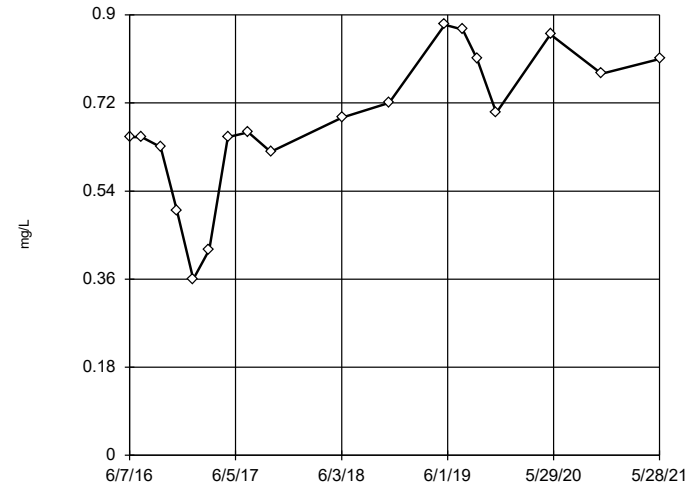
Tukey's Outlier Screening
MW-015I



n = 19
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.8553, low cutoff = 0.09939, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

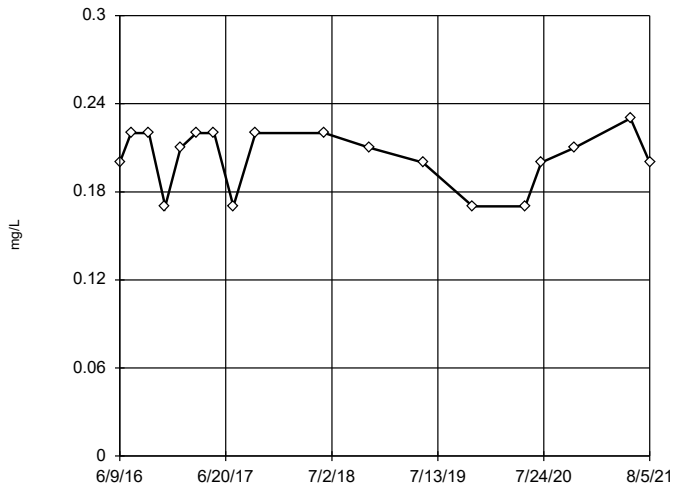
Tukey's Outlier Screening
MW-015S



n = 18
No outliers found. Tukey's method selected by user.
Data were square transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1.205, low cutoff = -0.6369, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

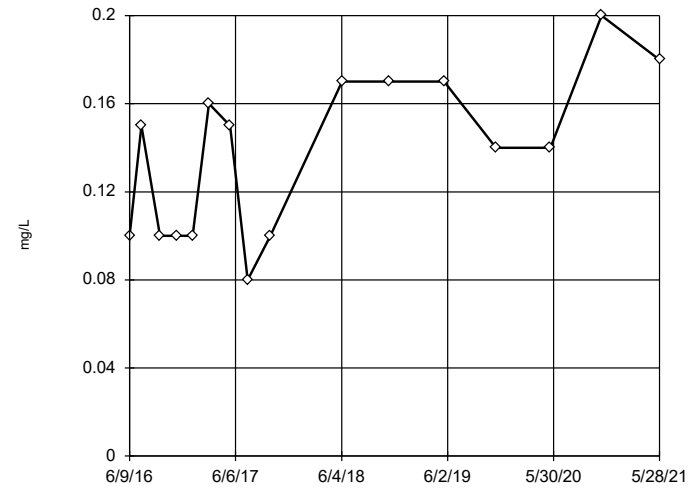
Tukey's Outlier Screening
MW-016D



n = 18
No outliers found. Tukey's method selected by user.
Data were x*6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.2617, low cutoff = -0.2339, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

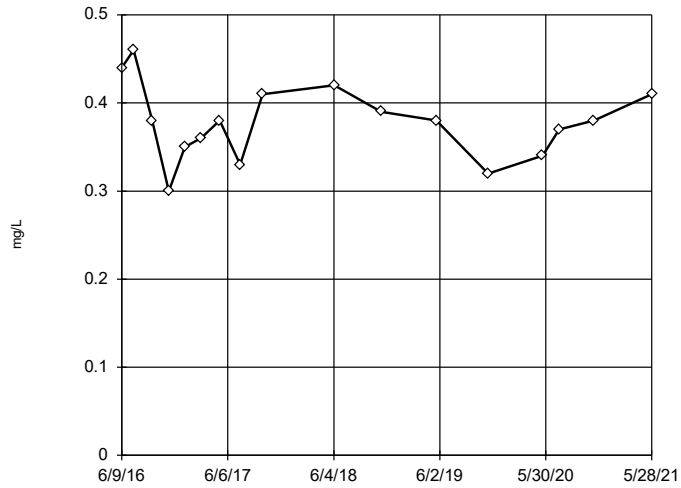
Tukey's Outlier Screening
MW-016I



n = 16
No outliers found. Tukey's method selected by user.
Data were square transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.2926, low cutoff = -0.2161, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:00 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

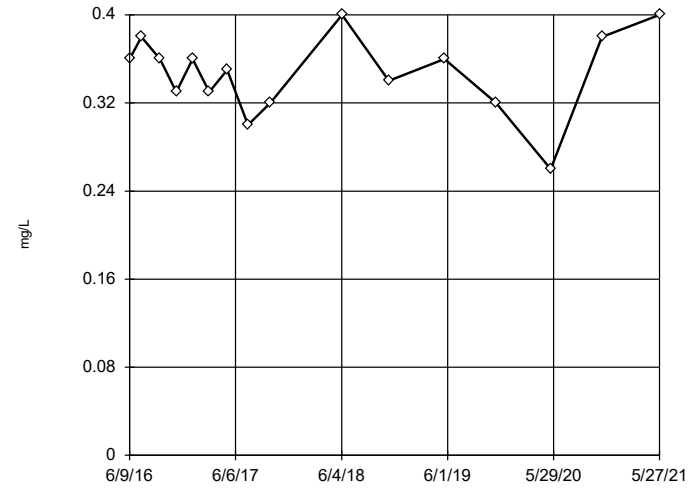
Tukey's Outlier Screening
MW-016S



n = 17
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.6387, low cutoff = 0.1836, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

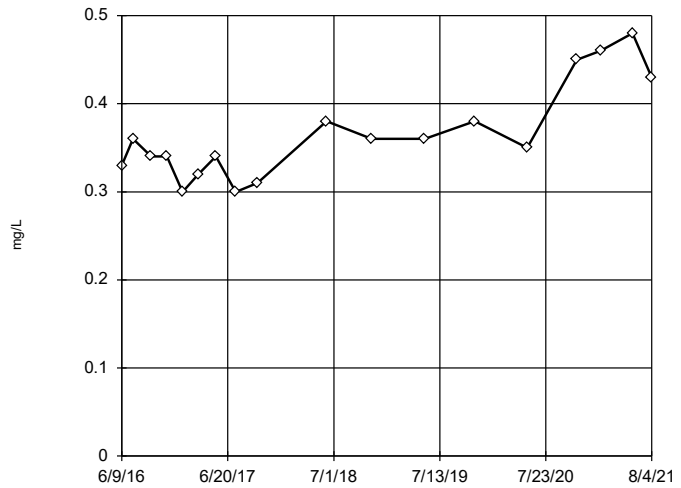
Tukey's Outlier Screening
MW-021D



n = 16
No outliers found. Tukey's method selected by user.
Data were cube transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.4642, low cutoff = -0.246, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

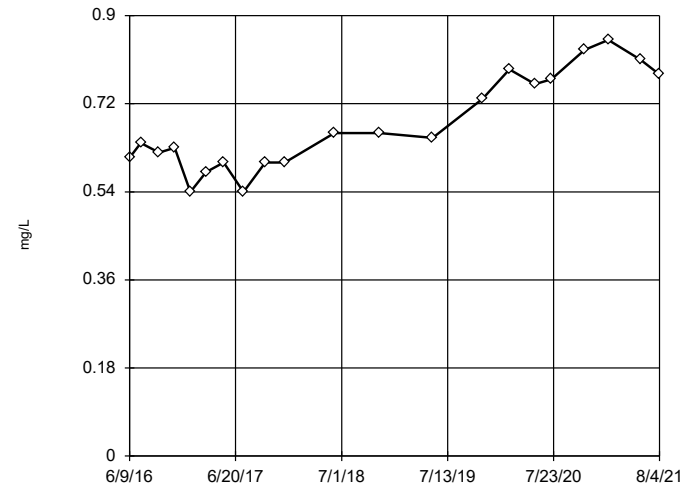
Tukey's Outlier Screening
MW-021I



n = 18
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.7781, low cutoff = 0.1688, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

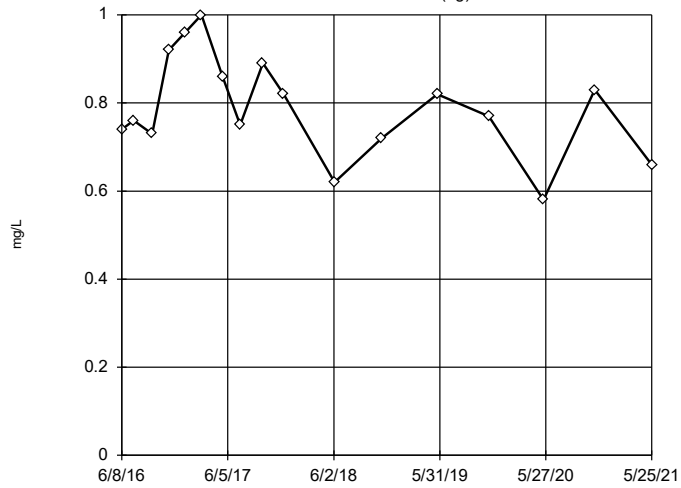
Tukey's Outlier Screening
MW-021S



n = 21
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1.67, low cutoff = 0.2784, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

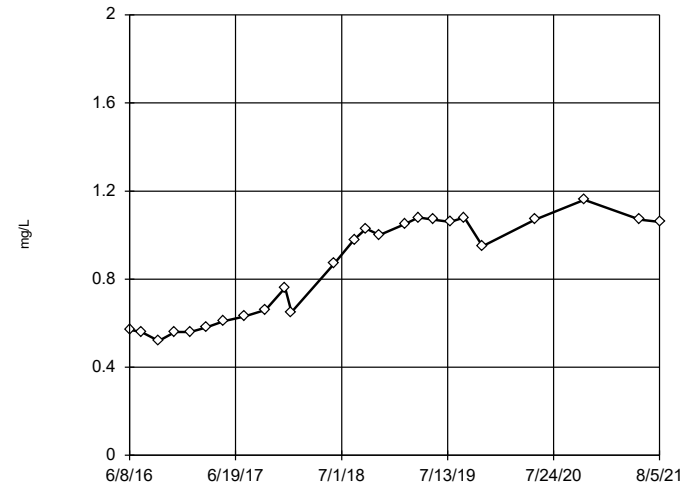
Tukey's Outlier Screening MW-11S (bg)



n = 17
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 1.325, low cutoff = 0.275, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

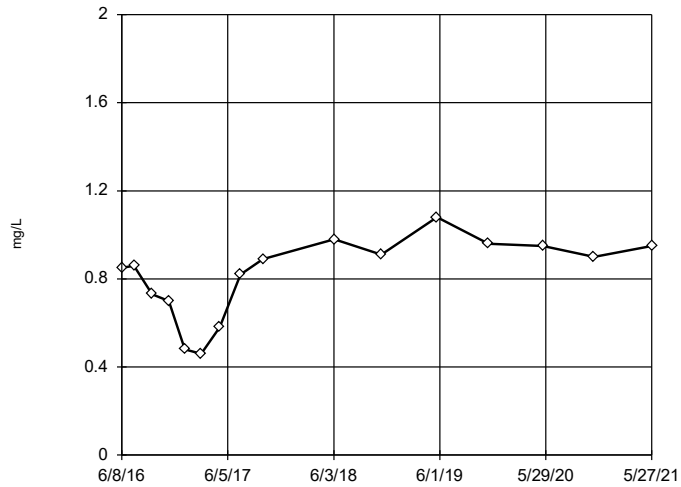
Tukey's Outlier Screening MW-17I



n = 25
 No outliers found.
 Tukey's method selected by user.
 Data were x^5 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1.394, low cutoff = -1.307, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

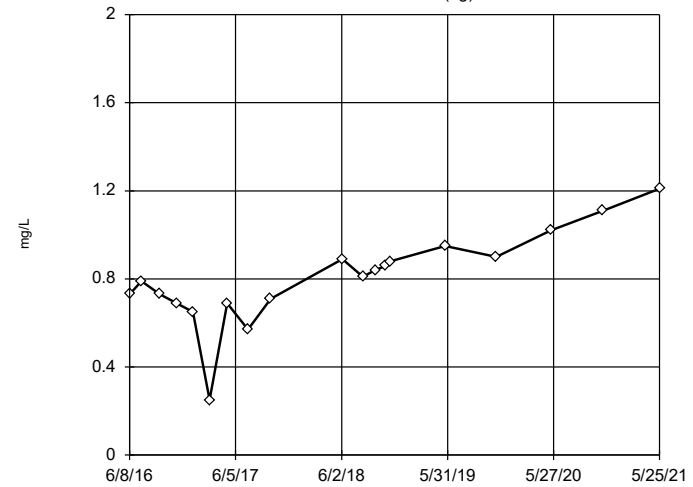
Tukey's Outlier Screening MW-17S



n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1.326, low cutoff = -1.035, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening MW-6S (bg)

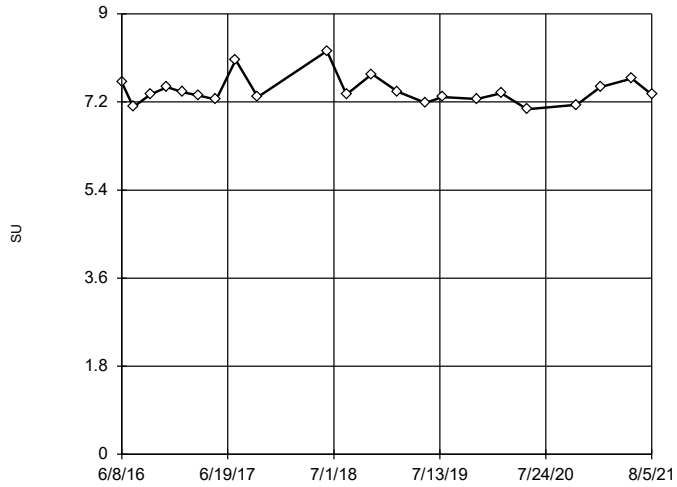


n = 19
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1.346, low cutoff = -0.725, based on IQR multiplier of 3.

Constituent: Fluoride, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001D

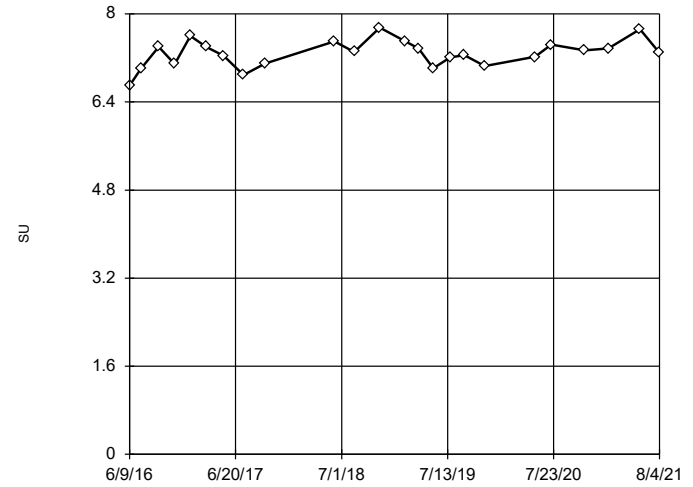


n = 22
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.508, low cutoff = 6.438, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001I

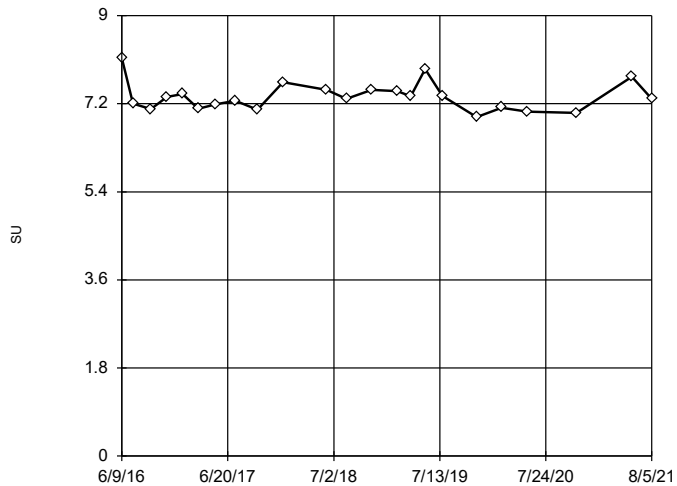


n = 24
 No outliers found.
 Tukey's method selected by user.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.256, low cutoff = 5.878, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001S

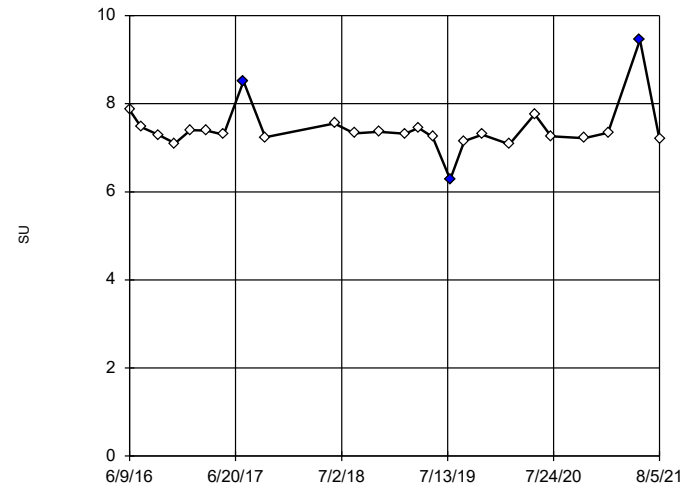


n = 23
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.746, low cutoff = 6.072, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

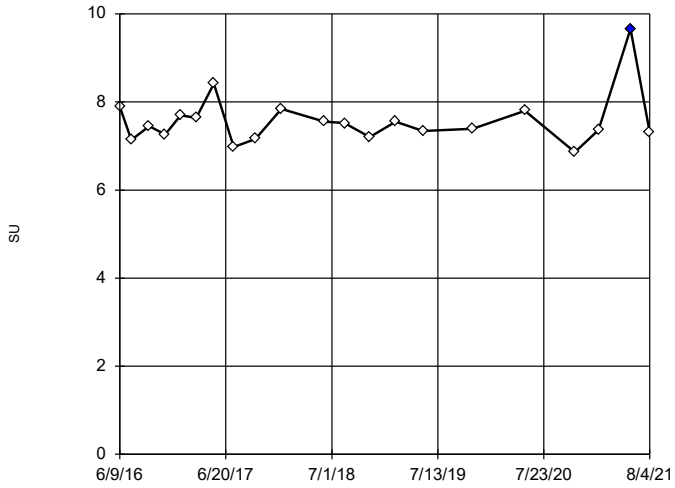
MW-002D



n = 25
 Outliers are drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.195, low cutoff = 6.582, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

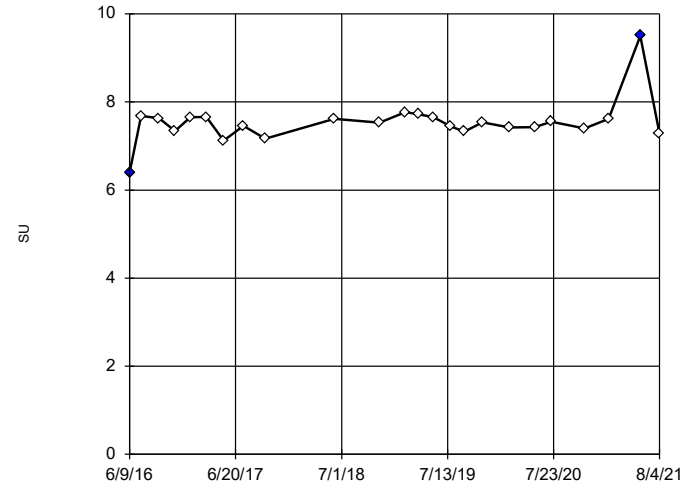
Tukey's Outlier Screening MW-0021



n = 21
 Outlier is drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 9.545, low cutoff = 5.87, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

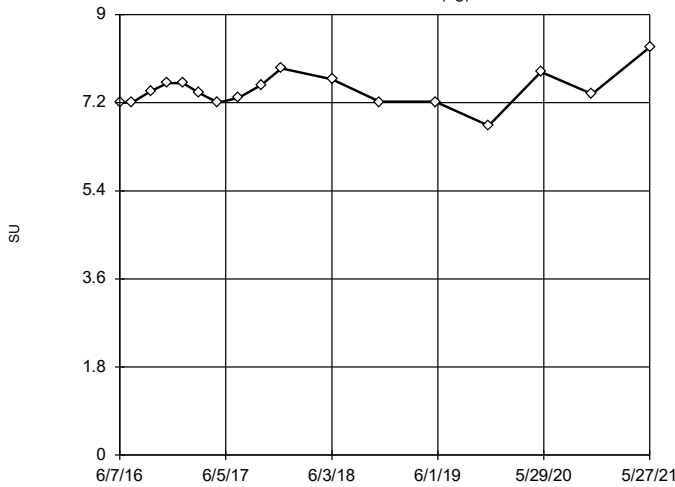
Tukey's Outlier Screening MW-002S



n = 24
 Outliers are drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.578, low cutoff = 6.577, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

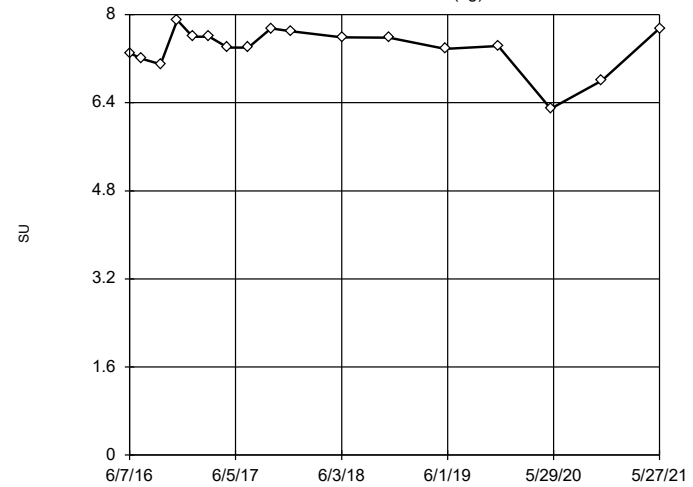
Tukey's Outlier Screening MW-008I (bg)



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 9.09, low cutoff = 6.06, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

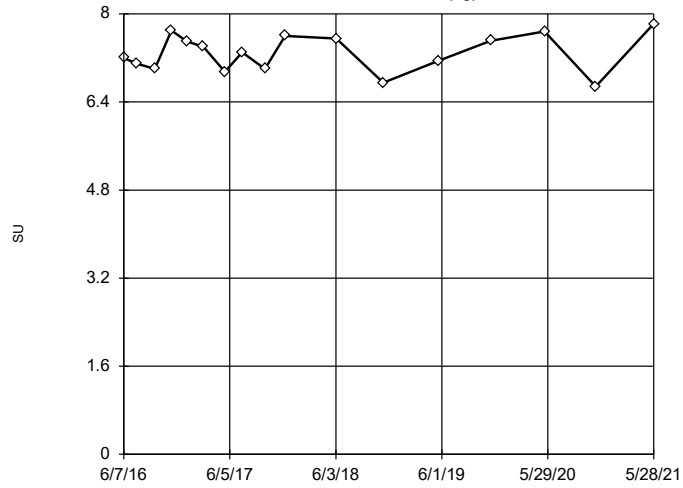
Tukey's Outlier Screening MW-008S (bg)



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were x^6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.459, low cutoff = -5.227, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

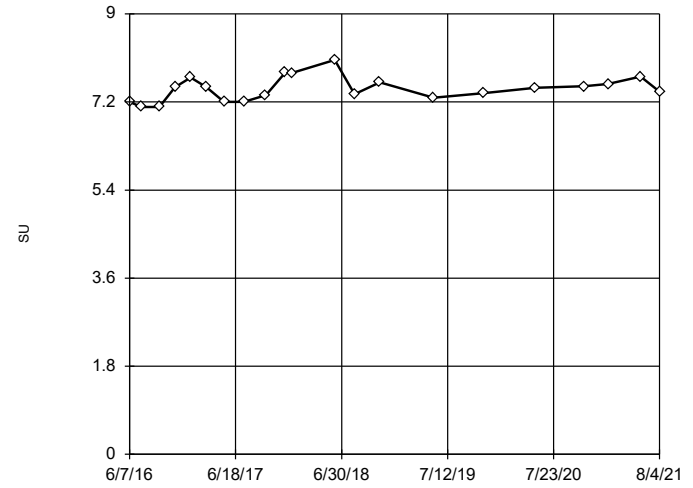
Tukey's Outlier Screening
MW-014S (bg)



n = 17
No outliers found.
Tukey's method selected by user.
Data were x⁴ transformed to achieve best W statistic (graph shown in original units).
High cutoff = 8.789, low cutoff = -4.069, based on IQR multiplier of 3.

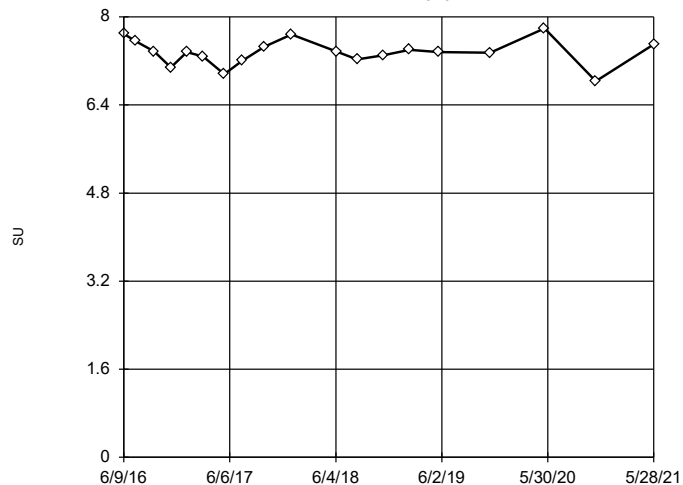
Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-015I



Tukey's Outlier Screening

MW-016I

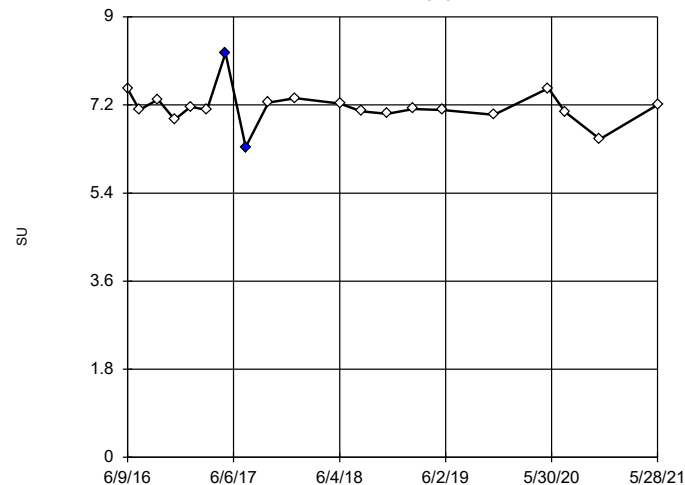


n = 19
 No outliers found. Tukey's method selected by user.
 Data were x⁴ transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 8.172, low cutoff = 6.158, based on IQR multiplier of 3.

Constituent: pH, field Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

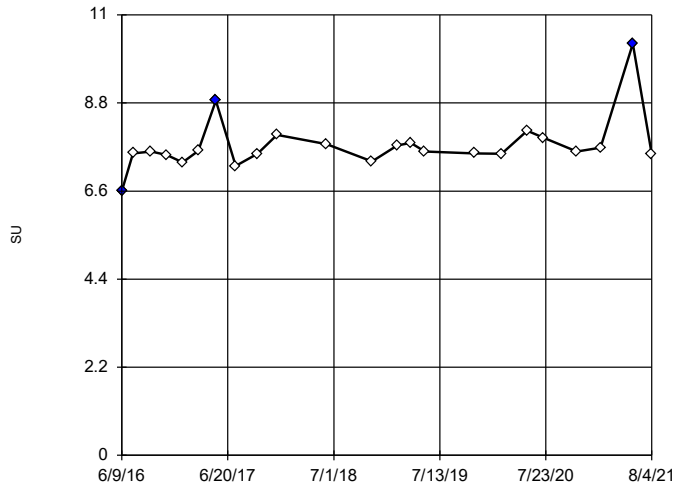
Tukey's Outlier Screening

MW-016S

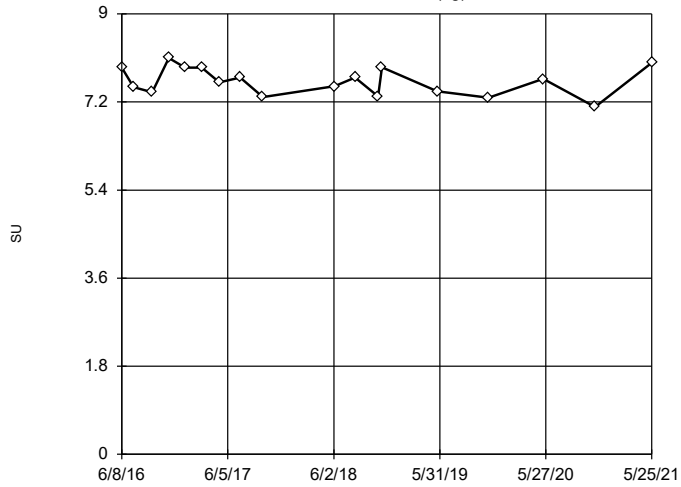


Tukey's Outlier Screening

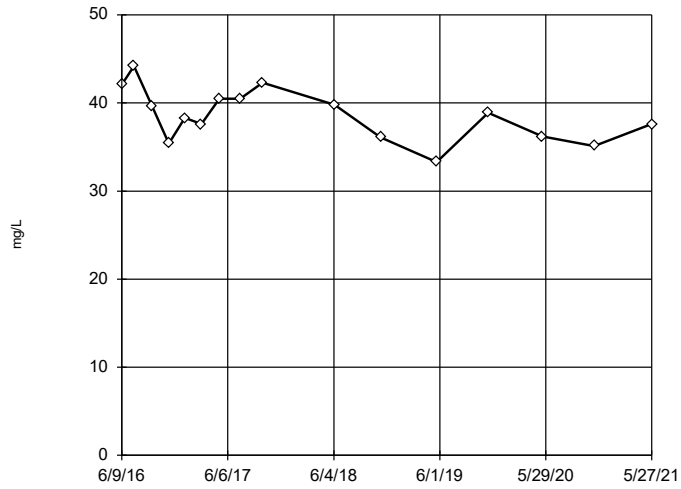
MW-021S



Tukey's Outlier Screening MW-6S (bg)



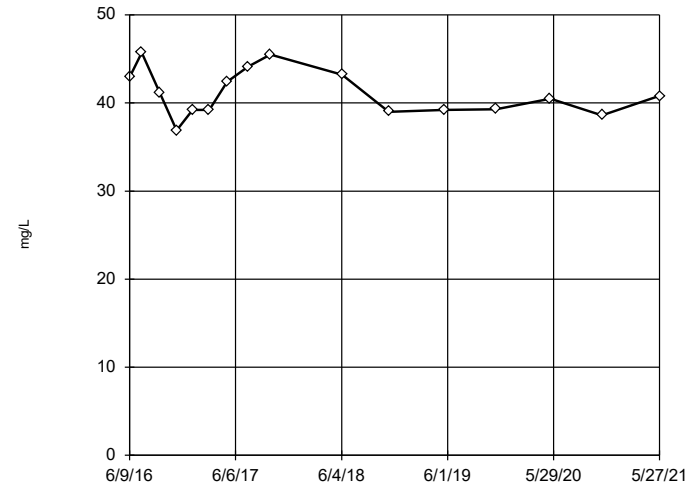
Tukey's Outlier Screening
MW-002D



n = 16
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 55.61, low cutoff = 24.99, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

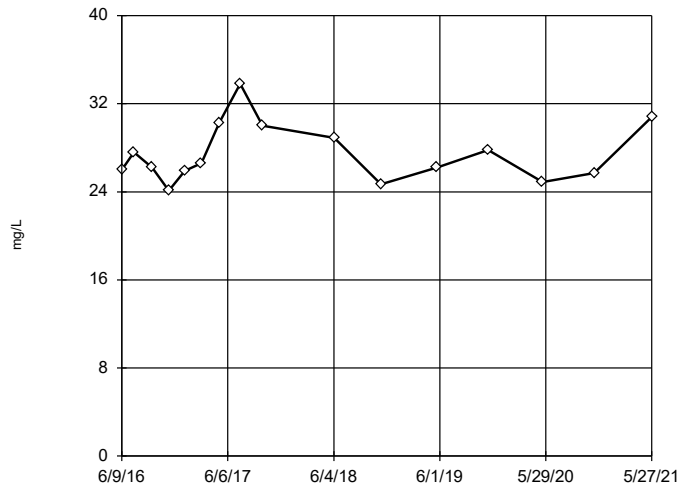
Tukey's Outlier Screening
MW-002I



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 57.02, low cutoff = 29.6, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

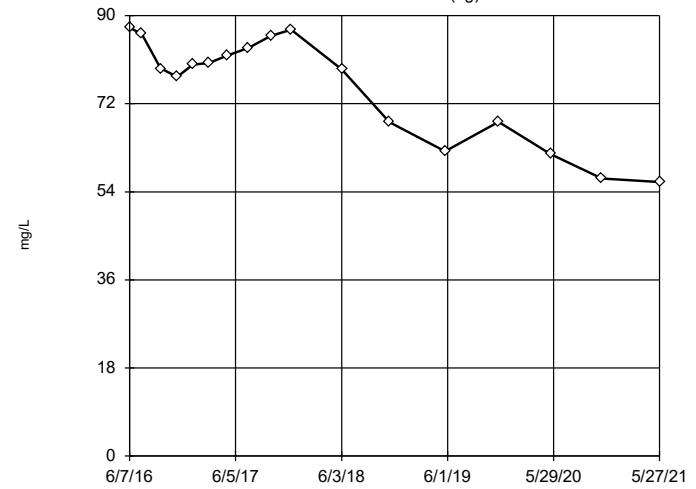
Tukey's Outlier Screening
MW-002S



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 43.77, low cutoff = 17.36, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

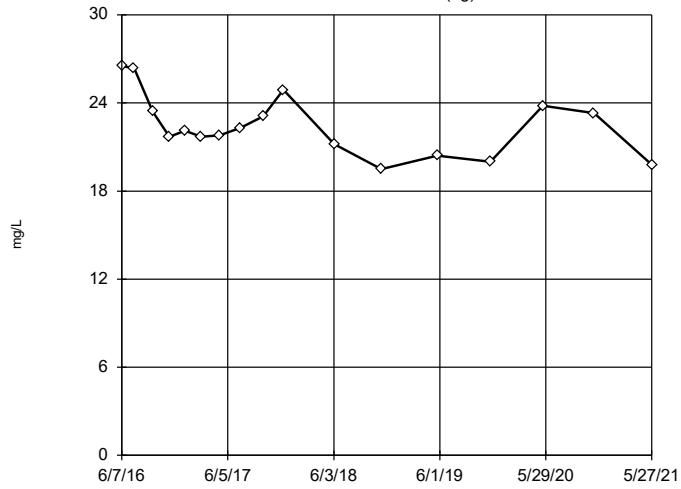
Tukey's Outlier Screening
MW-008I (bg)



n = 17
No outliers found. Tukey's method selected by user.
Data were x^6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 103.6, low cutoff = -96.13, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

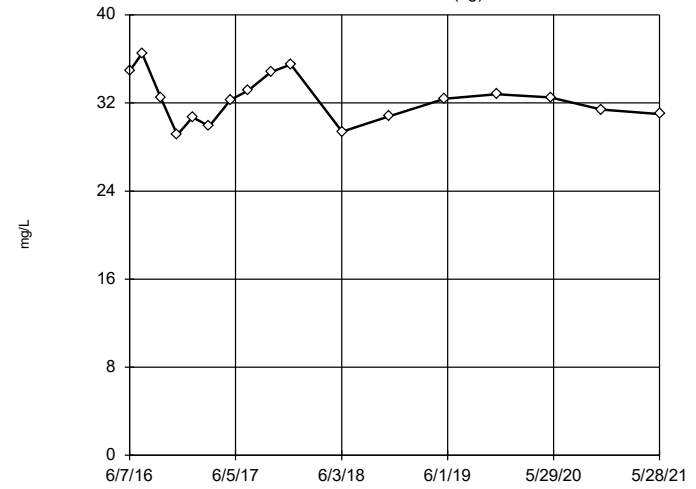
Tukey's Outlier Screening MW-008S (bg)



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 34.49, low cutoff = 14.23, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

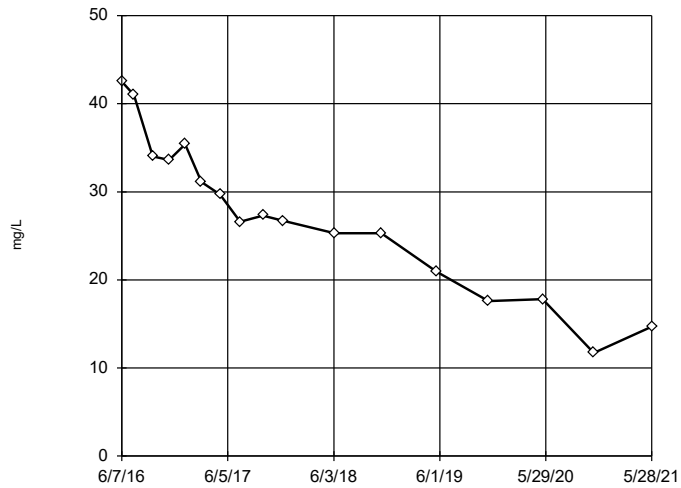
Tukey's Outlier Screening MW-014S (bg)



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 45.63, low cutoff = 22.87, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

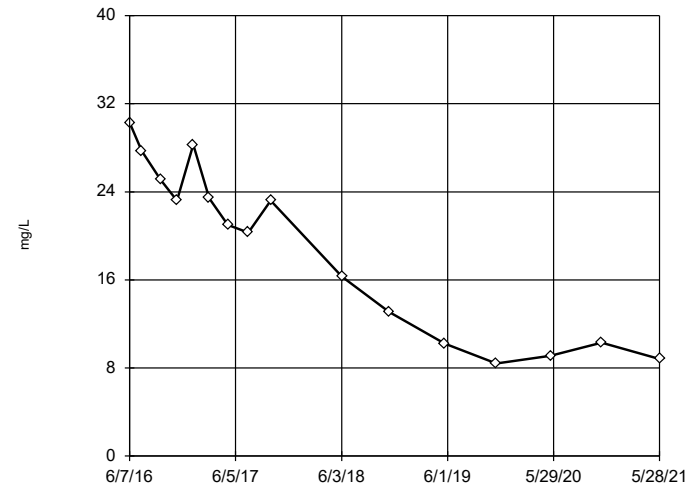
Tukey's Outlier Screening MW-015I



n = 17
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 77.15, low cutoff = -24, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

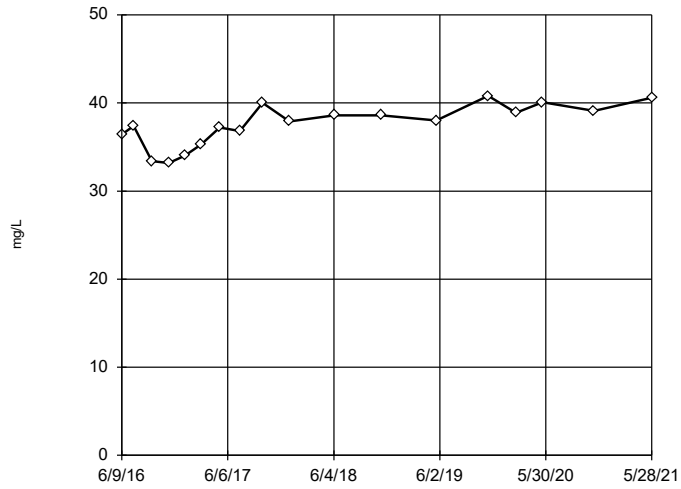
Tukey's Outlier Screening MW-015S



n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 45.17, low cutoff = -36.69, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

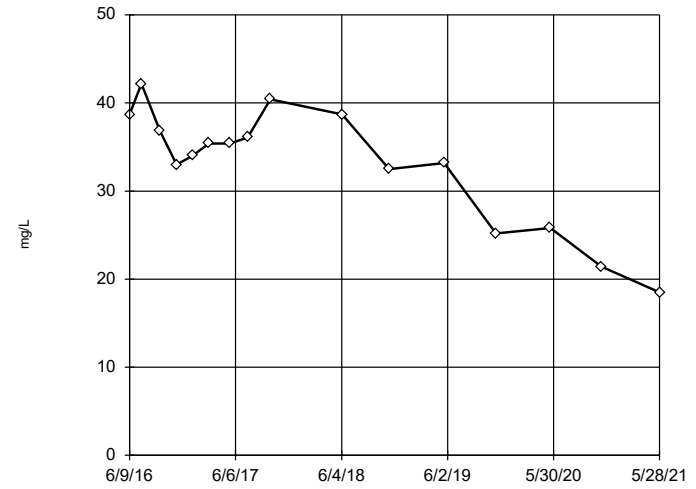
Tukey's Outlier Screening MW-016D



n = 18
 No outliers found.
 Tukey's method selected by user.
 Data were x^6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 45.56, low cutoff = -37.94, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

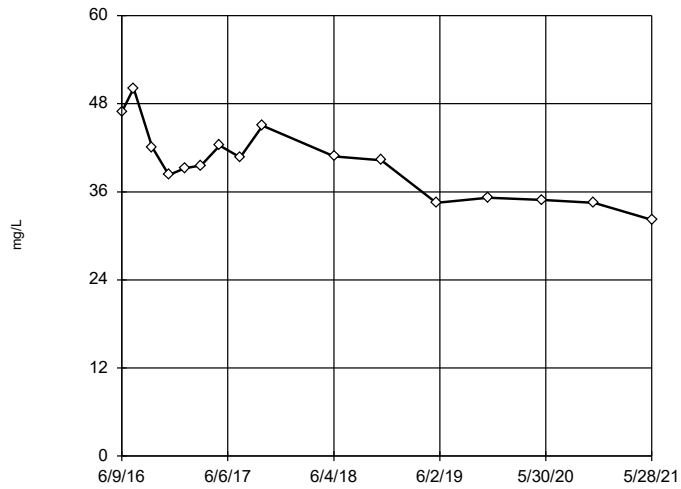
Tukey's Outlier Screening MW-016I



n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were x^4 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 49.11, low cutoff = -41.61, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

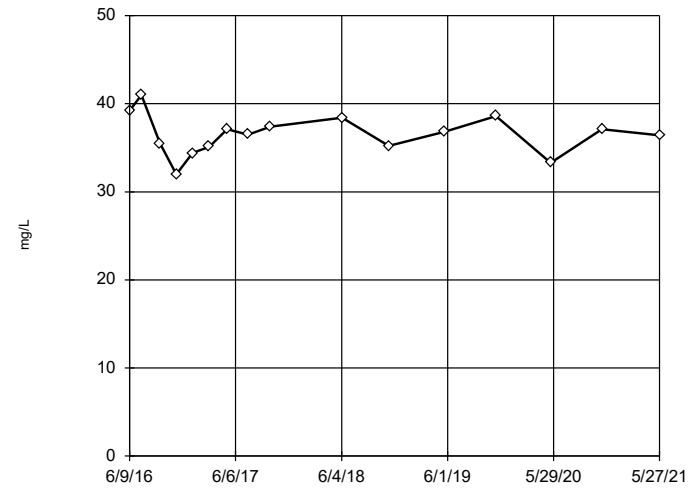
Tukey's Outlier Screening MW-016S



n = 16
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 73.65, low cutoff = 20.08, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening MW-021D

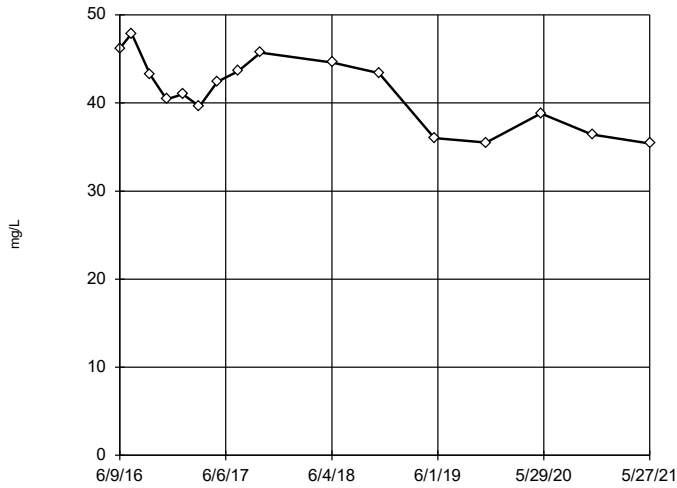


n = 16
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 46.15, low cutoff = 26.9, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-0211



n = 16

No outliers found. Tukey's method selected by user.

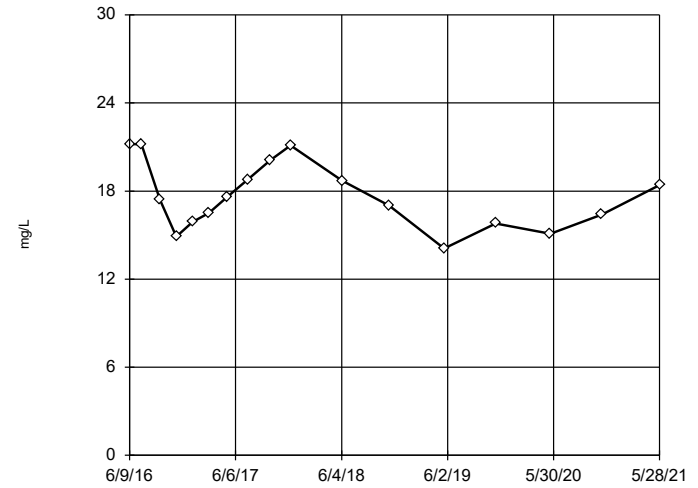
Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 56.8, low cutoff = -35.34, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-021S



n = 17

No outliers found. Tukey's method selected by user.

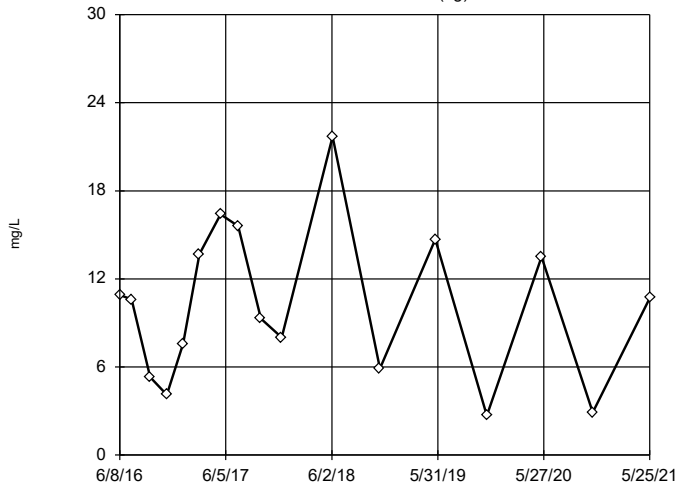
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 35.86, low cutoff = 8.592, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-11S (bg)



n = 17

No outliers found. Tukey's method selected by user.

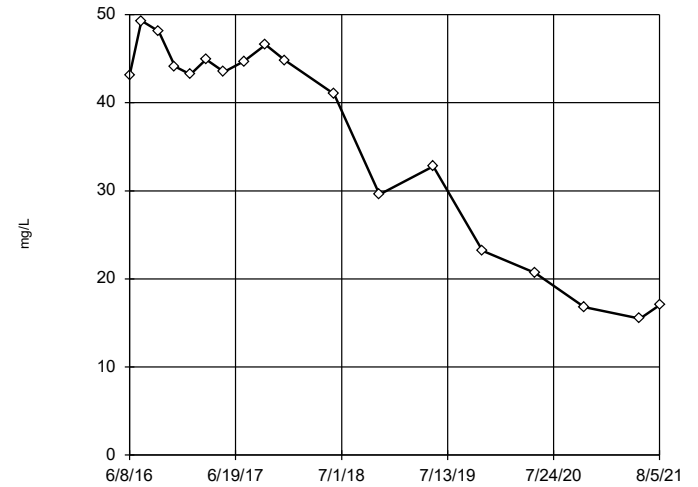
Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 63.59, low cutoff = -3.388, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-171



n = 18

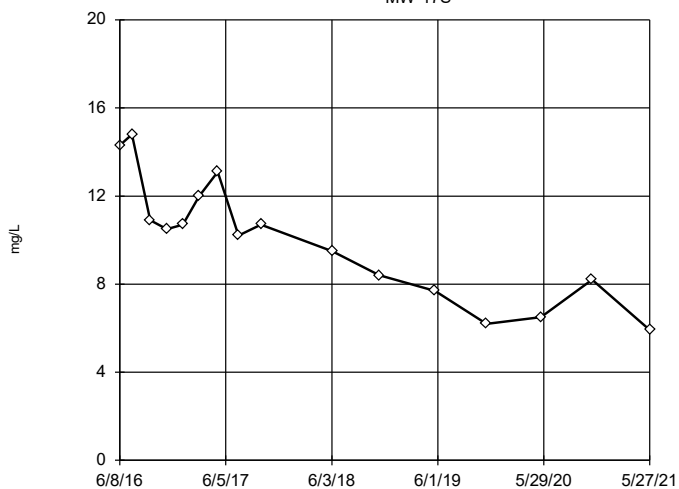
No outliers found. Tukey's method selected by user.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 56.41, low cutoff = -53.69, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

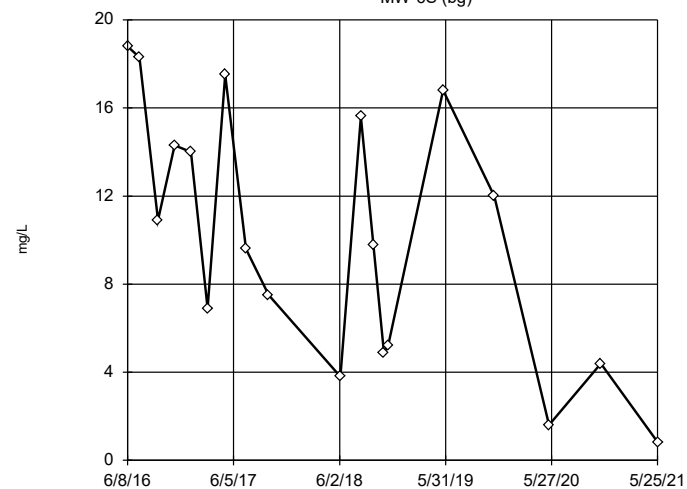
Tukey's Outlier Screening
MW-17S



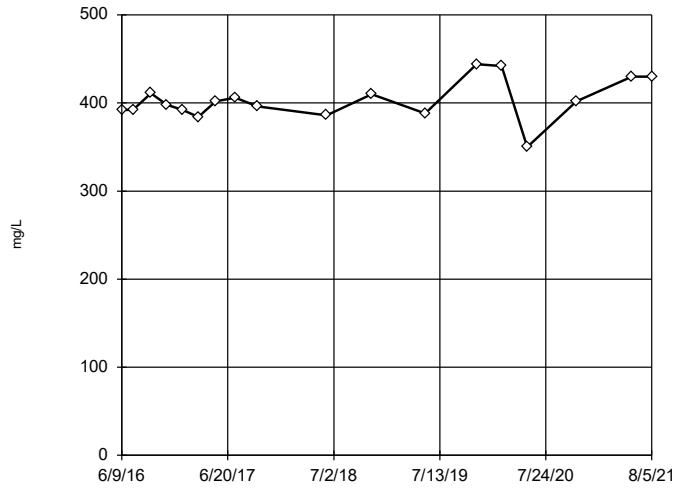
n = 16
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 25.74, low cutoff = 1.273, based on IQR multiplier of 3.

Constituent: Sulfate, total Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-6S (bg)



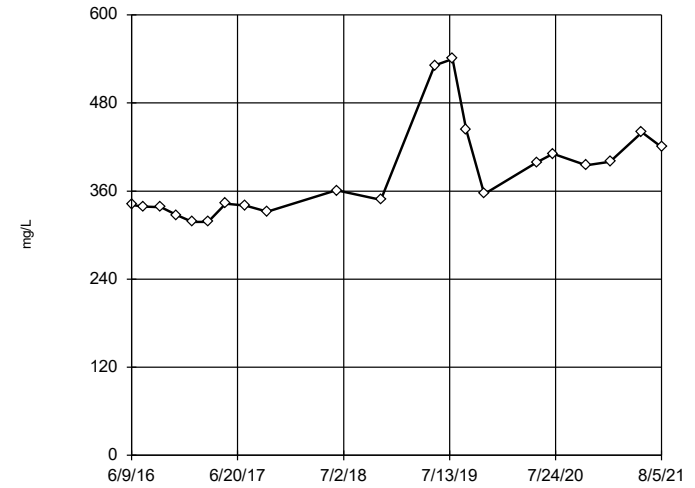
Tukey's Outlier Screening
MW-001S



n = 18
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 512, low cutoff = 298.5, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

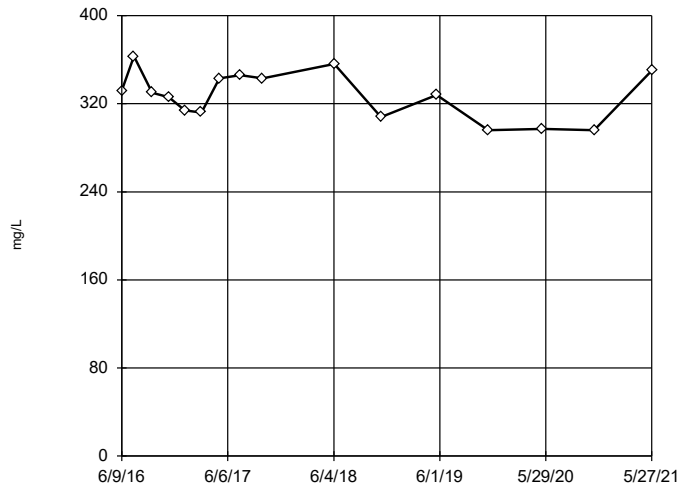
Tukey's Outlier Screening
MW-002D



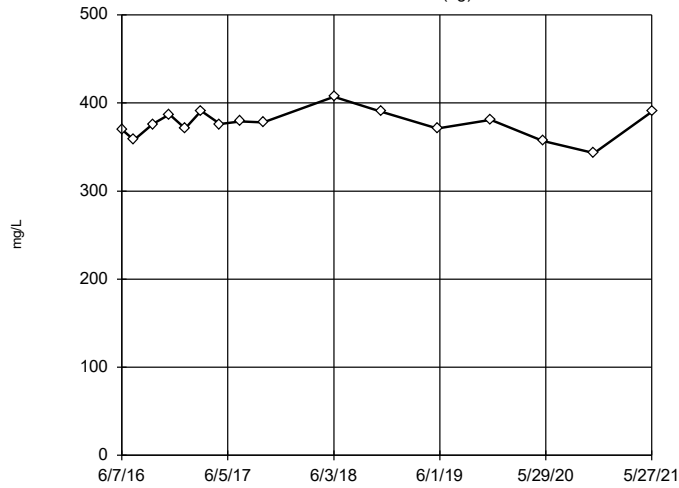
n = 21
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 768.3, low cutoff = 183.1, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-002I



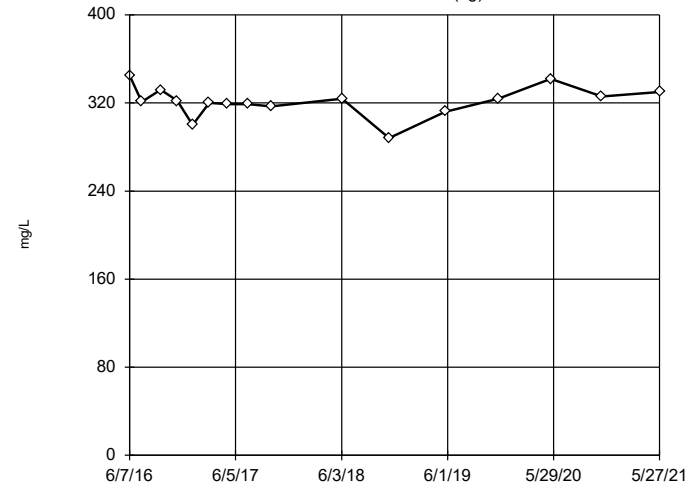
Tukey's Outlier Screening
MW-008I (bg)



n = 16
No outliers found. Tukey's method selected by user.
Data were cube transformed to achieve best W statistic (graph shown in original units).
High cutoff = 434.4, low cutoff = 301.9, based on IQR multiplier of 3.

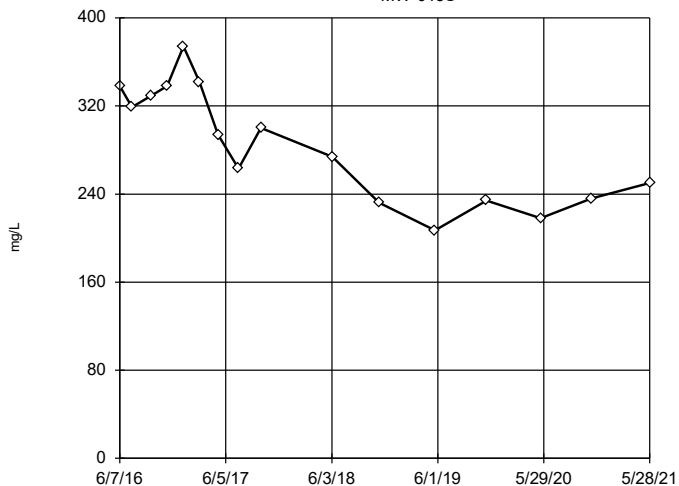
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-008S (bg)



Tukey's Outlier Screening

MW-015S



n = 16

No outliers found. Tukey's method selected by user.

Data were square root transformed to achieve best W statistic (graph shown in original units).

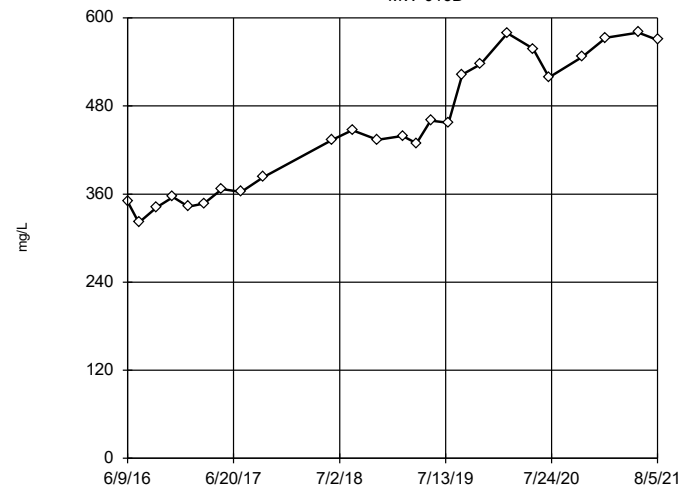
High cutoff = 732.1, low cutoff = 42.69, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM

Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-016D



n = 25

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

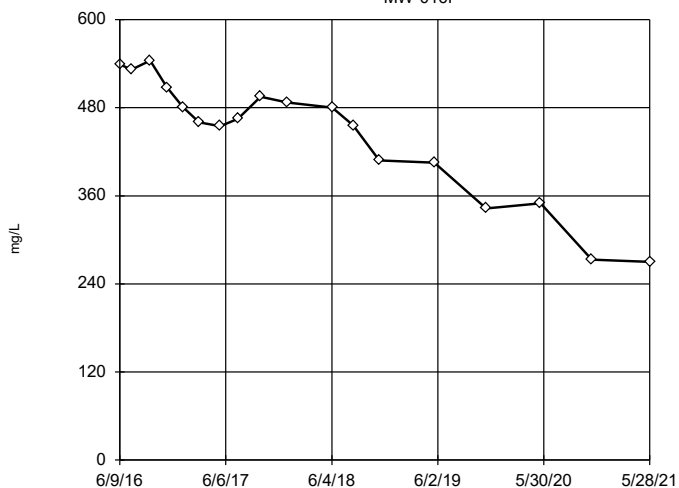
High cutoff = 1857, low cutoff = 104.9, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM

Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-016I



n = 18

No outliers found. Tukey's method selected by user.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

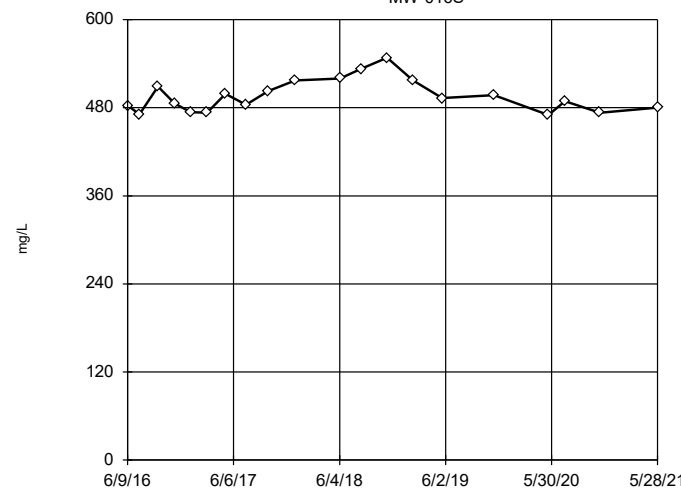
High cutoff = 660.6, low cutoff = -570.8, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM

Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-016S



n = 20

No outliers found. Tukey's method selected by user.

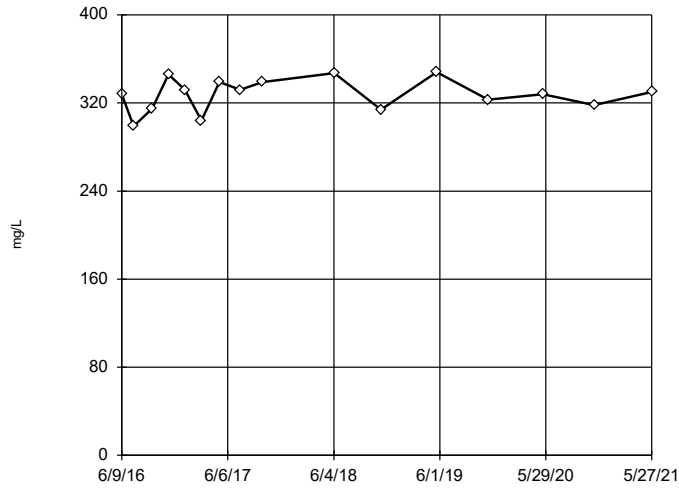
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 638.1, low cutoff = 383.5, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM

Rockport Landfill Client: Geosyntec Data: Rockport_LF

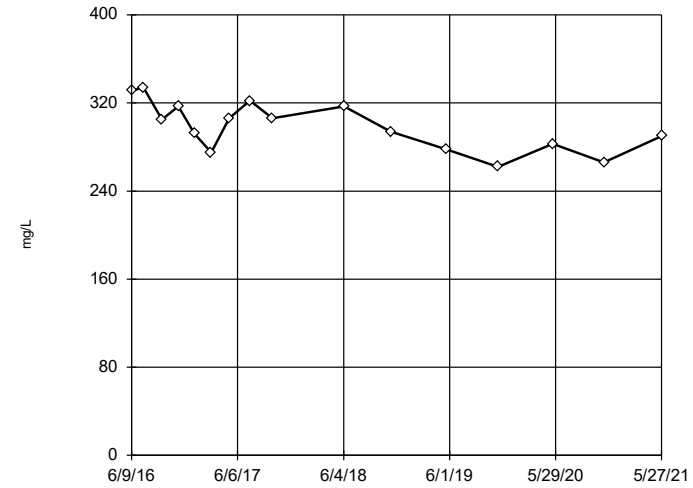
Tukey's Outlier Screening
MW-021D



n = 16
No outliers found.
Tukey's method selected by user.
Data were x*5 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 384.3, low cutoff = -235.5, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

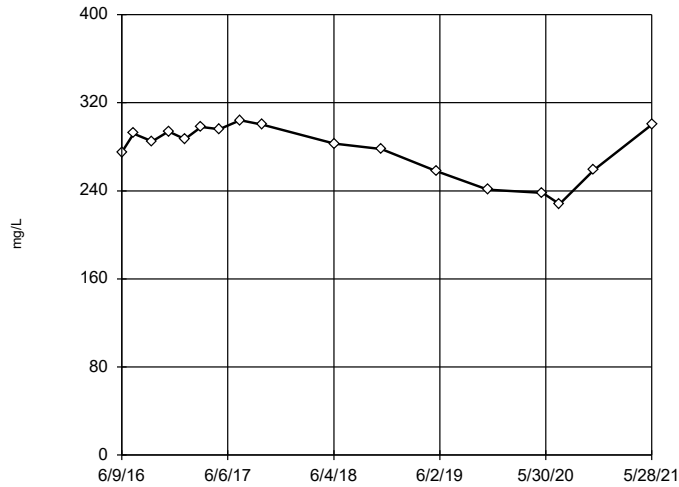
Tukey's Outlier Screening
MW-021I



n = 16
No outliers found.
Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 426.5, low cutoff = 171, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

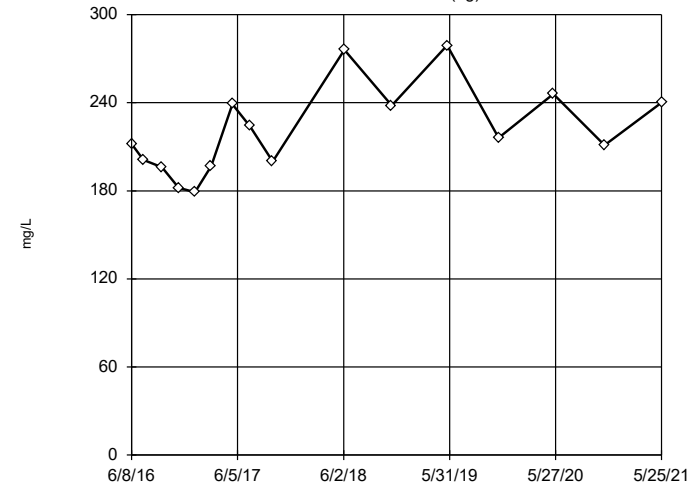
Tukey's Outlier Screening
MW-021S



n = 17
No outliers found.
Tukey's method selected by user.
Data were x*6 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 350.4, low cutoff = -308.7, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

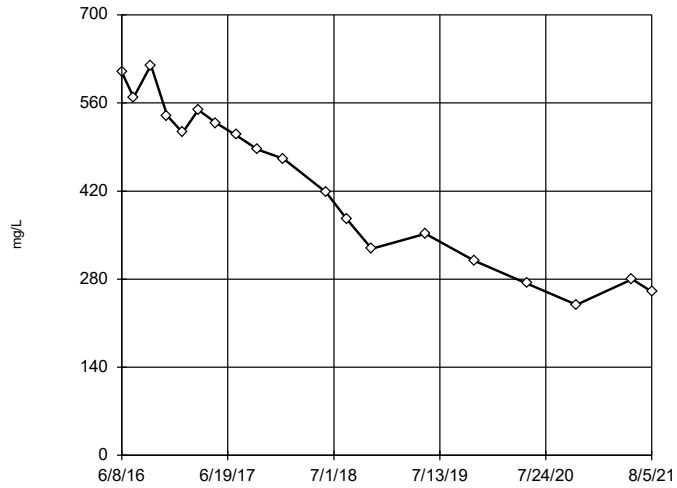
Tukey's Outlier Screening
MW-11S (bg)



n = 16
No outliers found.
Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 420.7, low cutoff = 113, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

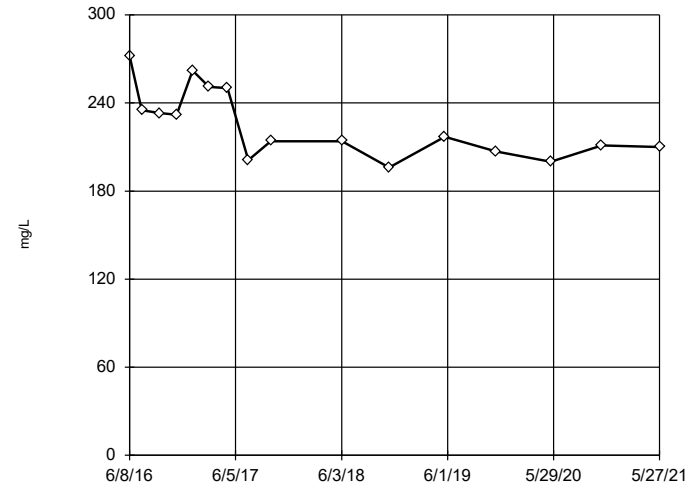
Tukey's Outlier Screening
MW-171



n = 19
No outliers found. Tukey's method selected by user.
Data were square transformed to achieve best W statistic (graph shown in original units).
High cutoff = 938.1, low cutoff = -702.1, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

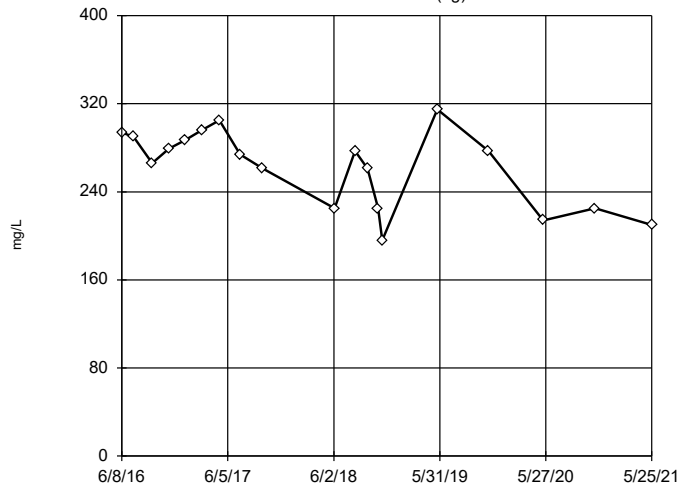
Tukey's Outlier Screening
MW-17S



n = 16
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 380.8, low cutoff = 132.7, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-6S (bg)

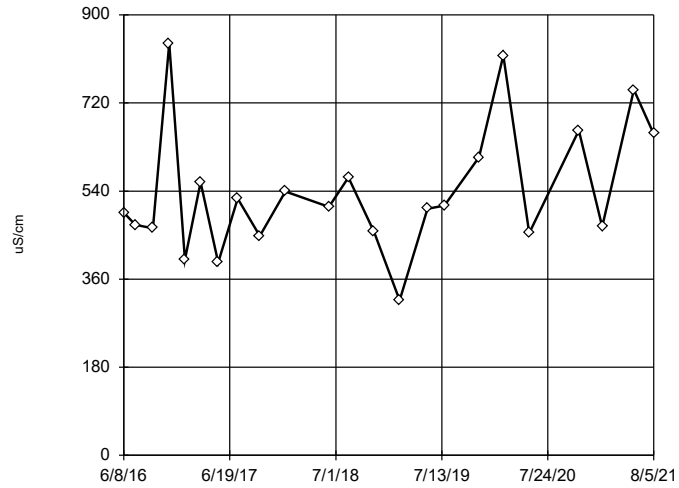


n = 19
No outliers found. Tukey's method selected by user.
Data were x^4 transformed to achieve best W statistic (graph shown in original units).
High cutoff = 378.9, low cutoff = -323.6, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:01 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001D

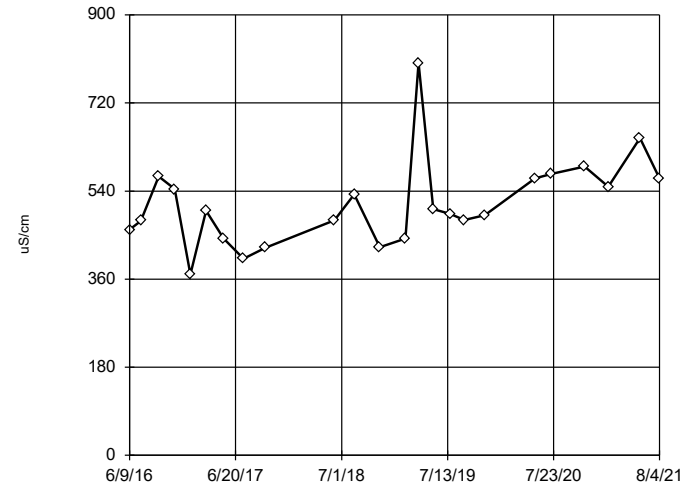


n = 23
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1441, low cutoff = 193.1, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001I

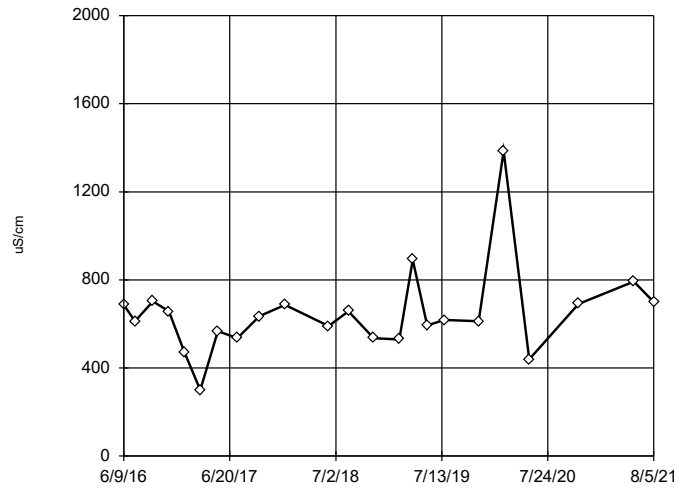


n = 24
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1112, low cutoff = 230, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-001S

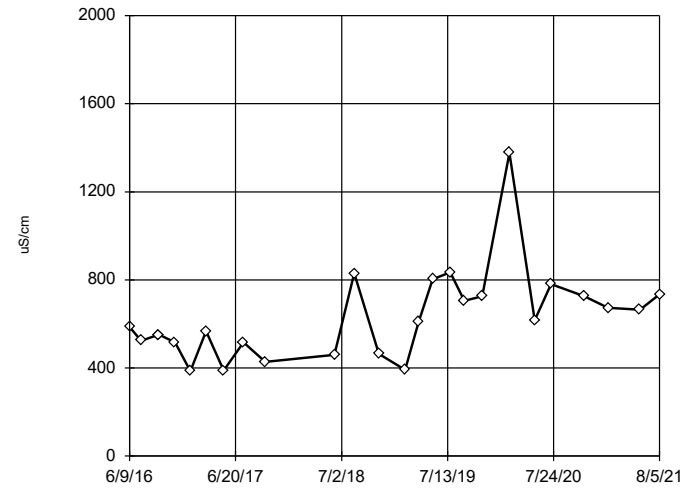


n = 23
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1481, low cutoff = 250.2, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-002D

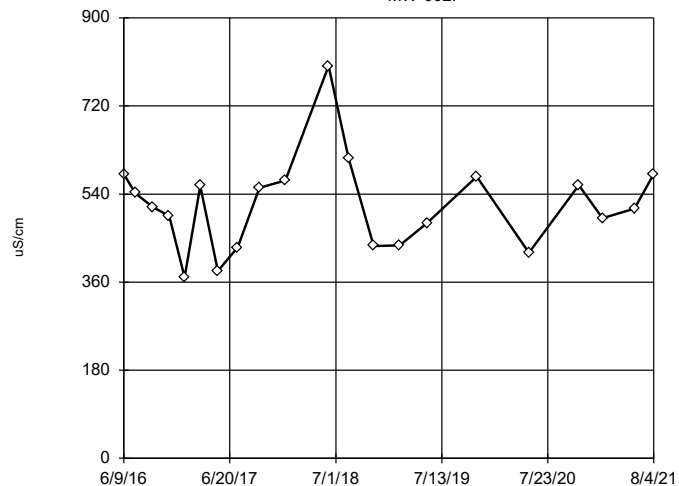


n = 26
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 2424, low cutoff = 147.4, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-0021

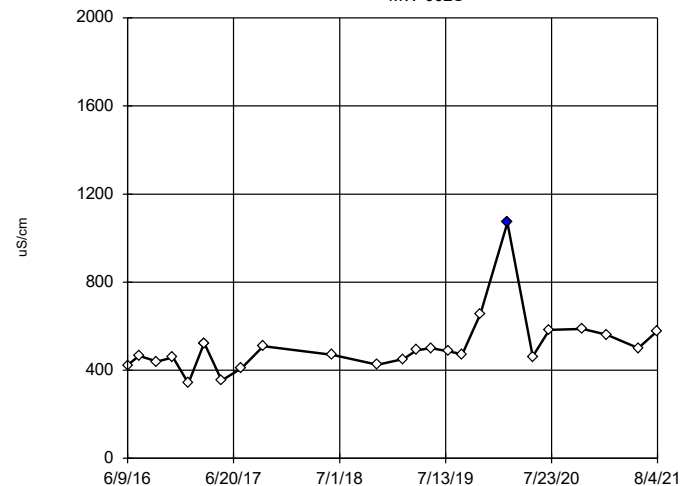


n = 21
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1305, low cutoff = 190.5, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-002S

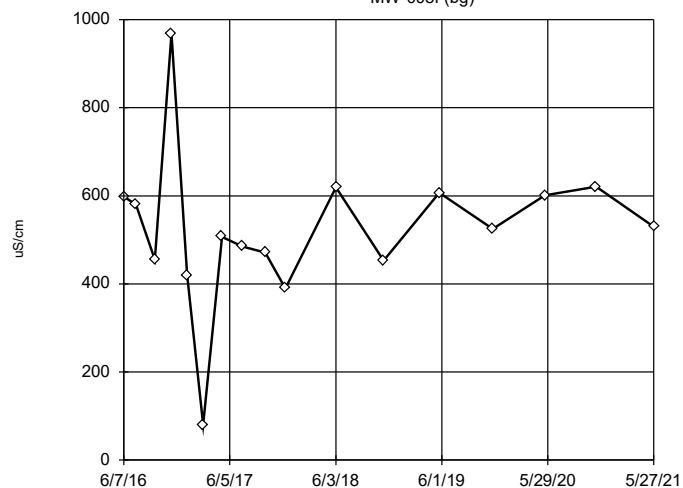


n = 25
 Outlier is drawn as solid. Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 973.6, low cutoff = 247.8, based on IQR multiplier of 3.

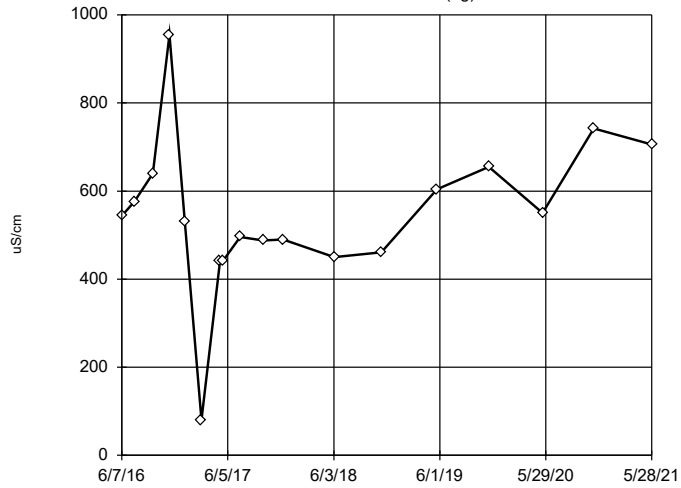
Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening

MW-008I (bg)



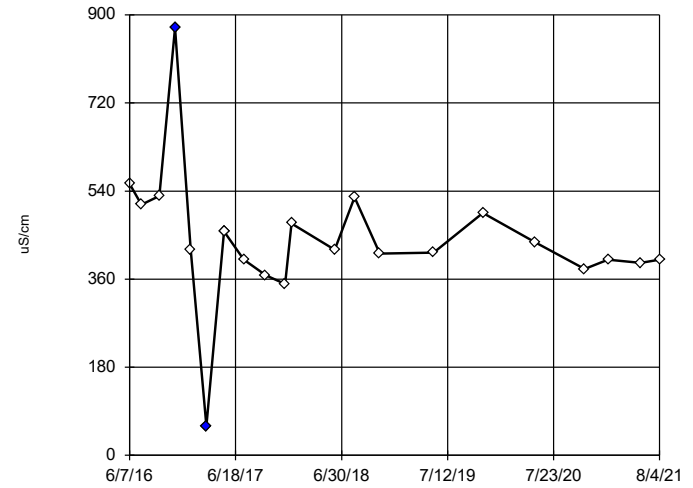
Tukey's Outlier Screening
MW-014S (bg)



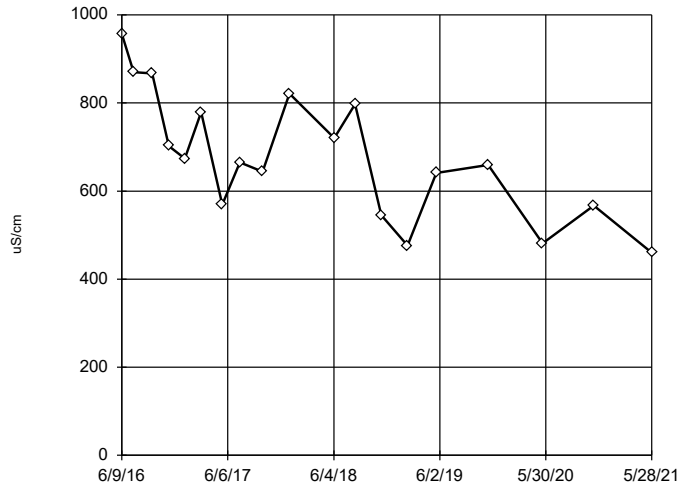
n = 18
No outliers found.
Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 1224, low cutoff = -120.5, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:12 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-015I



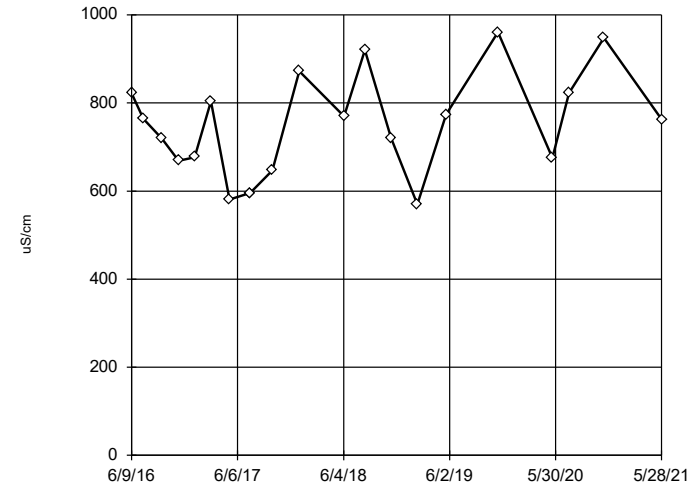
Tukey's Outlier Screening
MW-016I



n = 19
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1721, low cutoff = 111.4, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

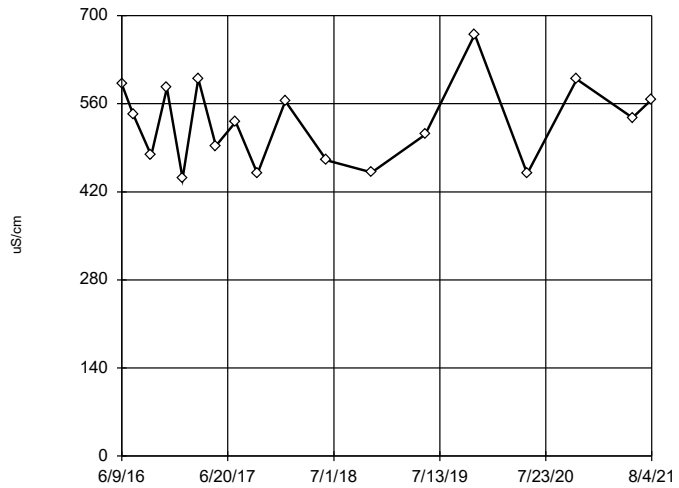
Tukey's Outlier Screening
MW-016S



n = 21
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1476, low cutoff = 298.3, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

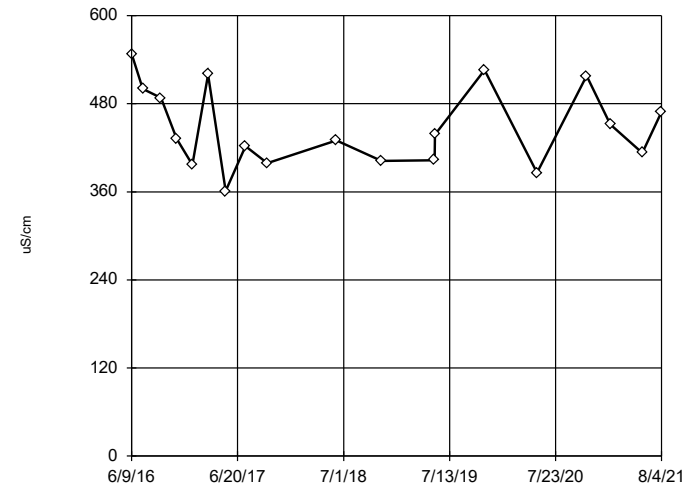
Tukey's Outlier Screening
MW-021D



n = 18
No outliers found. Tukey's method selected by user.
Data were cube root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1107, low cutoff = 190.5, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

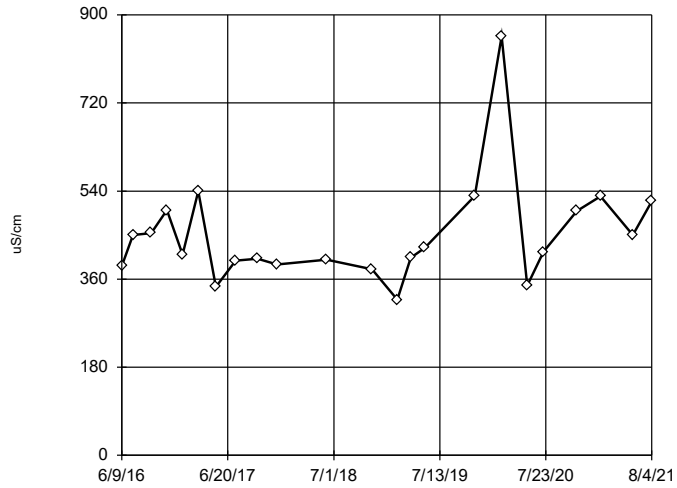
Tukey's Outlier Screening
MW-021I



n = 19
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 962.1, low cutoff = 208.9, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

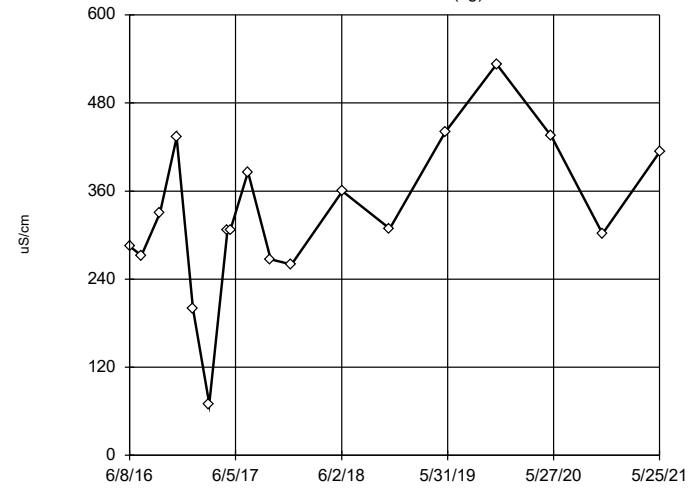
Tukey's Outlier Screening
MW-021S



n = 23
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 1062, low cutoff = 184, based on IQR multiplier of 3.

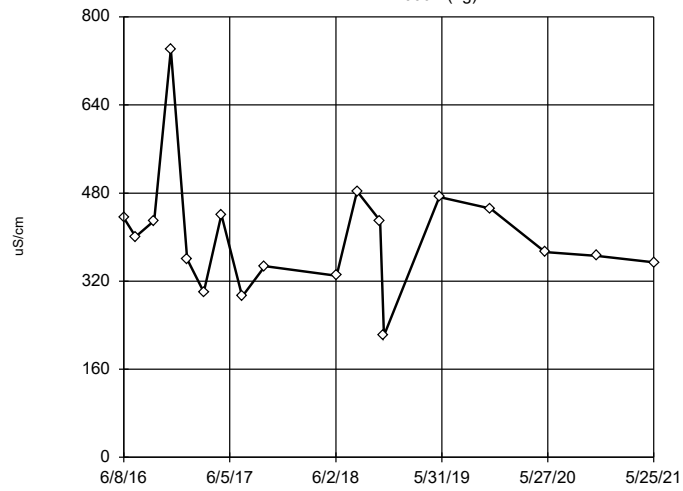
Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Tukey's Outlier Screening
MW-011S (bg)



Tukey's Outlier Screening

MW-006S (bg)



n = 18

No outliers found.
Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1025, low cutoff = 147.3, based on IQR multiplier of 3.

Constituent: Conductivity Analysis Run 10/27/2021 3:13 PM View: Conductivity

Rockport Landfill Client: Geosyntec Data: Rockport_LF

Welch's t-test/Mann-Whitney - Significant Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:24 AM

Constituent	Well	Calc.	0.01	Method
Calcium, total (mg/L)	MW-016D	3.842	Yes	Mann-W
Calcium, total (mg/L)	MW-016I	-3.027	Yes	Mann-W
Calcium, total (mg/L)	MW-021I	-2.973	Yes	Mann-W
Chloride, total (mg/L)	MW-001I	3.778	Yes	Mann-W
Chloride, total (mg/L)	MW-002D	3.642	Yes	Mann-W
Chloride, total (mg/L)	MW-002S	2.961	Yes	Mann-W
Chloride, total (mg/L)	MW-008I (bg)	-2.612	Yes	Mann-W
Chloride, total (mg/L)	MW-015I	-2.889	Yes	Mann-W
Chloride, total (mg/L)	MW-016D	3.974	Yes	Mann-W
Chloride, total (mg/L)	MW-016I	-3.027	Yes	Mann-W
Chloride, total (mg/L)	MW-016S	2.795	Yes	Mann-W
Chloride, total (mg/L)	MW-021I	-2.852	Yes	Mann-W
Chloride, total (mg/L)	MW-17I	-3.001	Yes	Mann-W
Fluoride, total (mg/L)	MW-002S	3.241	Yes	Mann-W
Fluoride, total (mg/L)	MW-021I	2.919	Yes	Mann-W
Fluoride, total (mg/L)	MW-021S	3.737	Yes	Mann-W
Fluoride, total (mg/L)	MW-6S (bg)	2.853	Yes	Mann-W
Sulfate, total (mg/L)	MW-001I	-2.973	Yes	Mann-W
Sulfate, total (mg/L)	MW-008I (bg)	-2.774	Yes	Mann-W
Sulfate, total (mg/L)	MW-015I	-3.002	Yes	Mann-W
Sulfate, total (mg/L)	MW-015S	-2.852	Yes	Mann-W
Sulfate, total (mg/L)	MW-016D	2.959	Yes	Mann-W
Sulfate, total (mg/L)	MW-016I	-2.975	Yes	Mann-W
Sulfate, total (mg/L)	MW-016S	-2.67	Yes	Mann-W
Sulfate, total (mg/L)	MW-021I	-2.729	Yes	Mann-W
Sulfate, total (mg/L)	MW-17I	-3.253	Yes	Mann-W
Sulfate, total (mg/L)	MW-17S	-2.852	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-002D	3.511	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-015I	-2.791	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-016D	3.933	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-016I	-3.027	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-17I	-3.287	Yes	Mann-W

Welch's t-test/Mann-Whitney - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:24 AM

Constituent	Well	Calc.	0.01	Method
Boron, total (mg/L)	MW-001D	0.7986	No	Mann-W
Boron, total (mg/L)	MW-001I	-0.6806	No	Mann-W
Boron, total (mg/L)	MW-001S	-1.339	No	Mann-W
Boron, total (mg/L)	MW-002D	-1.548	No	Mann-W
Boron, total (mg/L)	MW-002I	-0.4876	No	Mann-W
Boron, total (mg/L)	MW-002S	-1.032	No	Mann-W
Boron, total (mg/L)	MW-008I (bg)	-1.035	No	Mann-W
Boron, total (mg/L)	MW-008S (bg)	-0.4308	No	Mann-W
Boron, total (mg/L)	MW-014S (bg)	-0.308	No	Mann-W
Boron, total (mg/L)	MW-015I	-1.777	No	Mann-W
Boron, total (mg/L)	MW-015S	-0.9961	No	Mann-W
Boron, total (mg/L)	MW-016D	0.7912	No	Mann-W
Boron, total (mg/L)	MW-016I	-2.392	No	Mann-W
Boron, total (mg/L)	MW-016S	-1.811	No	Mann-W
Boron, total (mg/L)	MW-021D	-0.512	No	Mann-W
Boron, total (mg/L)	MW-021I	-0.987	No	Mann-W
Boron, total (mg/L)	MW-021S	-0.2296	No	Mann-W
Boron, total (mg/L)	MW-11S (bg)	-2.368	No	Mann-W
Boron, total (mg/L)	MW-17I	-2.333	No	Mann-W
Boron, total (mg/L)	MW-17S	-0.2445	No	Mann-W
Boron, total (mg/L)	MW-6S (bg)	-1.153	No	Mann-W
Calcium, total (mg/L)	MW-001D	0.5798	No	Mann-W
Calcium, total (mg/L)	MW-001I	1.456	No	Mann-W
Calcium, total (mg/L)	MW-001S	-0.667	No	Mann-W
Calcium, total (mg/L)	MW-002D	2.169	No	Mann-W
Calcium, total (mg/L)	MW-002I	-1.88	No	Mann-W
Calcium, total (mg/L)	MW-002S	0.7888	No	Mann-W
Calcium, total (mg/L)	MW-008I (bg)	-2.245	No	Mann-W
Calcium, total (mg/L)	MW-008S (bg)	-0.9108	No	Mann-W
Calcium, total (mg/L)	MW-014S (bg)	1.76	No	Mann-W
Calcium, total (mg/L)	MW-015I	0.6675	No	Mann-W
Calcium, total (mg/L)	MW-015S	-0.667	No	Mann-W
Calcium, total (mg/L)	MW-016D	3.842	Yes	Mann-W
Calcium, total (mg/L)	MW-016I	-3.027	Yes	Mann-W
Calcium, total (mg/L)	MW-016S	-0.6382	No	Mann-W
Calcium, total (mg/L)	MW-021D	-0.3641	No	Mann-W
Calcium, total (mg/L)	MW-021I	-2.973	Yes	Mann-W
Calcium, total (mg/L)	MW-021S	-1.517	No	Mann-W
Calcium, total (mg/L)	MW-11S (bg)	1.578	No	Mann-W
Calcium, total (mg/L)	MW-17I	-2.269	No	Mann-W
Calcium, total (mg/L)	MW-17S	-0.9716	No	Mann-W
Calcium, total (mg/L)	MW-6S (bg)	-1.501	No	Mann-W
Chloride, total (mg/L)	MW-001D	1.417	No	Mann-W
Chloride, total (mg/L)	MW-001I	3.778	Yes	Mann-W
Chloride, total (mg/L)	MW-001S	0.1343	No	Mann-W
Chloride, total (mg/L)	MW-002D	3.642	Yes	Mann-W
Chloride, total (mg/L)	MW-002I	-2.074	No	Mann-W
Chloride, total (mg/L)	MW-002S	2.961	Yes	Mann-W
Chloride, total (mg/L)	MW-008I (bg)	-2.612	Yes	Mann-W
Chloride, total (mg/L)	MW-008S (bg)	2.434	No	Mann-W
Chloride, total (mg/L)	MW-014S (bg)	-1.533	No	Mann-W
Chloride, total (mg/L)	MW-015I	-2.889	Yes	Mann-W
Chloride, total (mg/L)	MW-015S	-1.516	No	Mann-W
Chloride, total (mg/L)	MW-016D	3.974	Yes	Mann-W
Chloride, total (mg/L)	MW-016I	-3.027	Yes	Mann-W

Welch's t-test/Mann-Whitney - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:24 AM

Constituent	Well	Calc.	0.01	Method
Chloride, total (mg/L)	MW-016S	2.795	Yes	Mann-W
Chloride, total (mg/L)	MW-021D	1.403	No	Mann-W
Chloride, total (mg/L)	MW-021I	-2.852	Yes	Mann-W
Chloride, total (mg/L)	MW-021S	2.142	No	Mann-W
Chloride, total (mg/L)	MW-11S (bg)	-1.303	No	Mann-W
Chloride, total (mg/L)	MW-17I	-3.001	Yes	Mann-W
Chloride, total (mg/L)	MW-17S	1.336	No	Mann-W
Chloride, total (mg/L)	MW-6S (bg)	-2.45	No	Mann-W
Fluoride, total (mg/L)	MW-001D	0	No	Mann-W
Fluoride, total (mg/L)	MW-001I	1.169	No	Mann-W
Fluoride, total (mg/L)	MW-001S	0.488	No	Mann-W
Fluoride, total (mg/L)	MW-002D	0.4905	No	Mann-W
Fluoride, total (mg/L)	MW-002I	2.508	No	Mann-W
Fluoride, total (mg/L)	MW-002S	3.241	Yes	Mann-W
Fluoride, total (mg/L)	MW-008I (bg)	1.997	No	Mann-W
Fluoride, total (mg/L)	MW-008S (bg)	-0.1715	No	Mann-W
Fluoride, total (mg/L)	MW-014S (bg)	0.6883	No	Mann-W
Fluoride, total (mg/L)	MW-015I	2.525	No	Mann-W
Fluoride, total (mg/L)	MW-015S	2.075	No	Mann-W
Fluoride, total (mg/L)	MW-016D	-1.111	No	Mann-W
Fluoride, total (mg/L)	MW-016I	1.422	No	Mann-W
Fluoride, total (mg/L)	MW-016S	-1.008	No	Mann-W
Fluoride, total (mg/L)	MW-021D	-0.1225	No	Mann-W
Fluoride, total (mg/L)	MW-021I	2.919	Yes	Mann-W
Fluoride, total (mg/L)	MW-021S	3.737	Yes	Mann-W
Fluoride, total (mg/L)	MW-11S (bg)	-1.303	No	Mann-W
Fluoride, total (mg/L)	MW-17I	1.365	No	Mann-W
Fluoride, total (mg/L)	MW-17S	1.76	No	Mann-W
Fluoride, total (mg/L)	MW-6S (bg)	2.853	Yes	Mann-W
pH, field (SU)	MW-001D	-0.8466	No	Mann-W
pH, field (SU)	MW-001I	0.4902	No	Mann-W
pH, field (SU)	MW-001S	-1.891	No	Mann-W
pH, field (SU)	MW-002D	-1.593	No	Mann-W
pH, field (SU)	MW-002I	-0.7859	No	Mann-W
pH, field (SU)	MW-002S	-1.356	No	Mann-W
pH, field (SU)	MW-008I (bg)	0.5114	No	Mann-W
pH, field (SU)	MW-008S (bg)	-1.021	No	Mann-W
pH, field (SU)	MW-014S (bg)	0.963	No	Mann-W
pH, field (SU)	MW-015I	0.819	No	Mann-W
pH, field (SU)	MW-015S	1.965	No	Mann-W
pH, field (SU)	MW-016D	-1.165	No	Mann-W
pH, field (SU)	MW-016I	0.2502	No	Mann-W
pH, field (SU)	MW-016S	-0.7868	No	Mann-W
pH, field (SU)	MW-021D	-1.756	No	Mann-W
pH, field (SU)	MW-021I	-1.381	No	Mann-W
pH, field (SU)	MW-021S	0.6355	No	Mann-W
pH, field (SU)	MW-11S (bg)	-0.5102	No	Mann-W
pH, field (SU)	MW-17I	1.393	No	Mann-W
pH, field (SU)	MW-17S	0.4755	No	Mann-W
pH, field (SU)	MW-6S (bg)	-0.905	No	Mann-W
Sulfate, total (mg/L)	MW-001D	-0.6675	No	Mann-W
Sulfate, total (mg/L)	MW-001I	-2.973	Yes	Mann-W
Sulfate, total (mg/L)	MW-001S	1.153	No	Mann-W
Sulfate, total (mg/L)	MW-002D	-1.457	No	Mann-W
Sulfate, total (mg/L)	MW-002I	-1.034	No	Mann-W

Welch's t-test/Mann-Whitney - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 9/14/2021, 10:24 AM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Sulfate, total (mg/L)	MW-002S	-0.182	No	Mann-W
Sulfate, total (mg/L)	MW-008I (bg)	-2.774	Yes	Mann-W
Sulfate, total (mg/L)	MW-008S (bg)	-0.6231	No	Mann-W
Sulfate, total (mg/L)	MW-014S (bg)	-0.1133	No	Mann-W
Sulfate, total (mg/L)	MW-015I	-3.002	Yes	Mann-W
Sulfate, total (mg/L)	MW-015S	-2.852	Yes	Mann-W
Sulfate, total (mg/L)	MW-016D	2.959	Yes	Mann-W
Sulfate, total (mg/L)	MW-016I	-2.975	Yes	Mann-W
Sulfate, total (mg/L)	MW-016S	-2.67	Yes	Mann-W
Sulfate, total (mg/L)	MW-021D	-0.1214	No	Mann-W
Sulfate, total (mg/L)	MW-021I	-2.729	Yes	Mann-W
Sulfate, total (mg/L)	MW-021S	-1.416	No	Mann-W
Sulfate, total (mg/L)	MW-11S (bg)	-1.302	No	Mann-W
Sulfate, total (mg/L)	MW-17I	-3.253	Yes	Mann-W
Sulfate, total (mg/L)	MW-17S	-2.852	Yes	Mann-W
Sulfate, total (mg/L)	MW-6S (bg)	-2.15	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-001D	0.465	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-001I	1.638	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-001S	1.879	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-002D	3.511	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-002I	-1.761	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-002S	2.564	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-008I (bg)	-0.8508	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-008S (bg)	1.943	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-014S (bg)	1.882	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-015I	-2.791	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-015S	-2.124	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-016D	3.933	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-016I	-3.027	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-016S	-1.791	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-021D	-0.8508	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-021I	-2.49	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-021S	-2.004	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-11S (bg)	1.031	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-17I	-3.287	Yes	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-17S	-2.124	No	Mann-W
Total Dissolved Solids [TDS] (mg/L)	MW-6S (bg)	-1.905	No	Mann-W

Welch's t-test/Mann-Whitney - Conductivity - Significant Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 10/27/2021, 3:18 PM

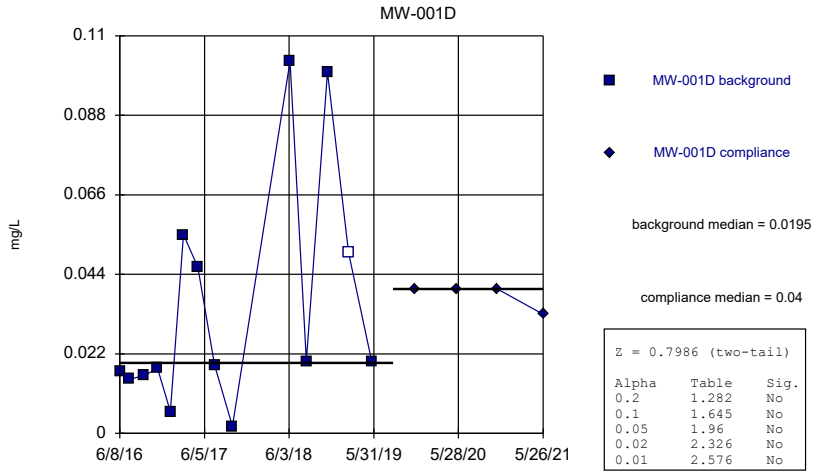
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Conductivity (uS/cm)	MW-001I	2.732	Yes	Mann-W
Conductivity (uS/cm)	MW-002S	2.955	Yes	Mann-W
Conductivity (uS/cm)	MW-016D	3.68	Yes	Mann-W
Conductivity (uS/cm)	MW-017S	2.878	Yes	Mann-W

Welch's t-test/Mann-Whitney - Conductivity - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 10/27/2021, 3:18 PM

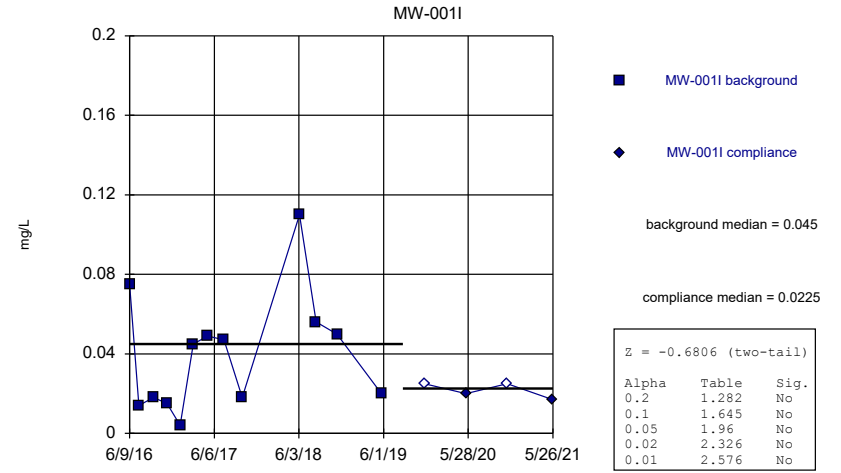
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Conductivity (uS/cm)	MW-001D	1.904	No	Mann-W
Conductivity (uS/cm)	MW-001I	2.732	Yes	Mann-W
Conductivity (uS/cm)	MW-001S	0.9796	No	Mann-W
Conductivity (uS/cm)	MW-002D	2.331	No	Mann-W
Conductivity (uS/cm)	MW-002I	0.3894	No	Mann-W
Conductivity (uS/cm)	MW-002S	2.955	Yes	Mann-W
Conductivity (uS/cm)	MW-008I (bg)	1.501	No	Mann-W
Conductivity (uS/cm)	MW-008S (bg)	2.122	No	Mann-W
Conductivity (uS/cm)	MW-014S (bg)	2.488	No	Mann-W
Conductivity (uS/cm)	MW-015I	-1.364	No	Mann-W
Conductivity (uS/cm)	MW-015S	0.667	No	Mann-W
Conductivity (uS/cm)	MW-016D	3.68	Yes	Mann-W
Conductivity (uS/cm)	MW-016I	-2.25	No	Mann-W
Conductivity (uS/cm)	MW-016S	1.693	No	Mann-W
Conductivity (uS/cm)	MW-021D	1.134	No	Mann-W
Conductivity (uS/cm)	MW-021I	0.6578	No	Mann-W
Conductivity (uS/cm)	MW-021S	1.798	No	Mann-W
Conductivity (uS/cm)	MW-011S (bg)	1.643	No	Mann-W
Conductivity (uS/cm)	MW-017I	-2.301	No	Mann-W
Conductivity (uS/cm)	MW-017S	2.878	Yes	Mann-W
Conductivity (uS/cm)	MW-006S (bg)	0.1699	No	Mann-W

Mann-Whitney (Wilcoxon Rank Sum)



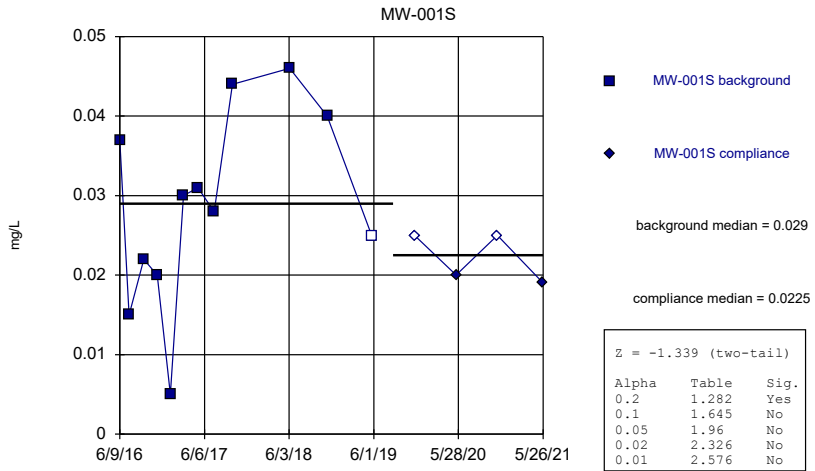
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



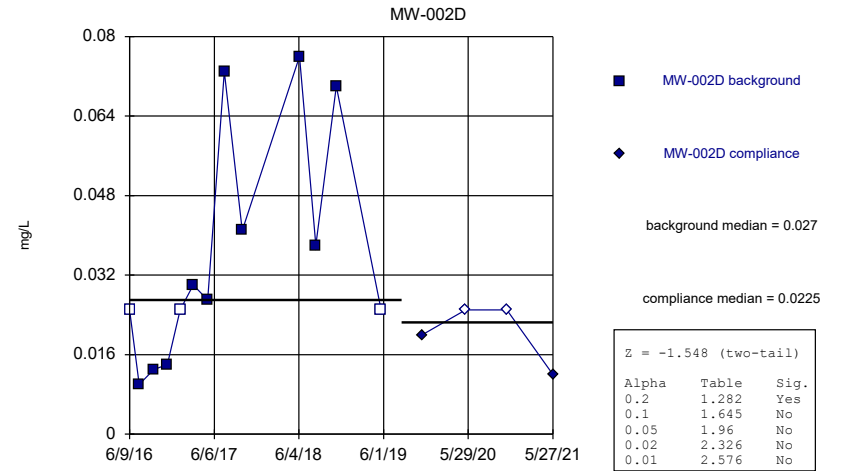
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



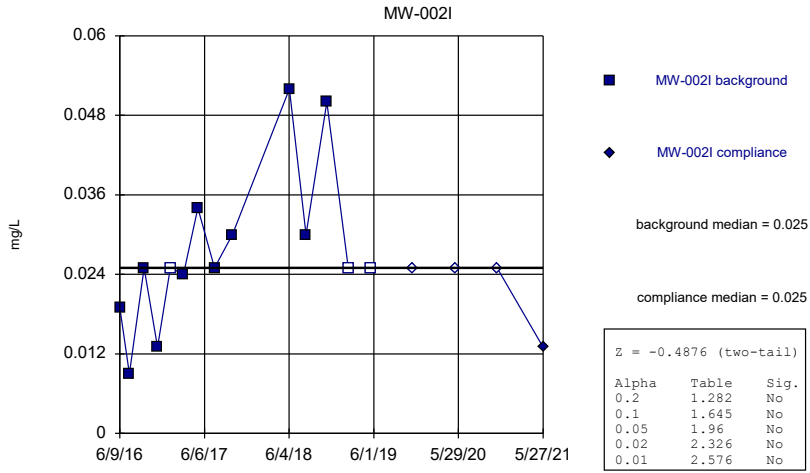
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



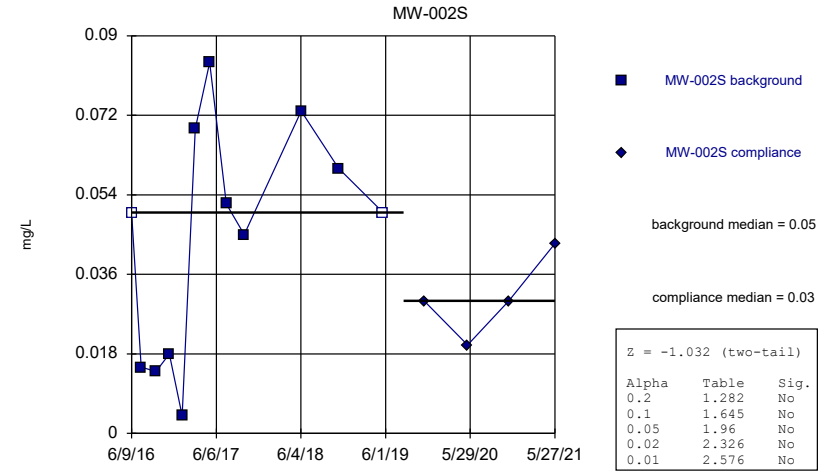
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



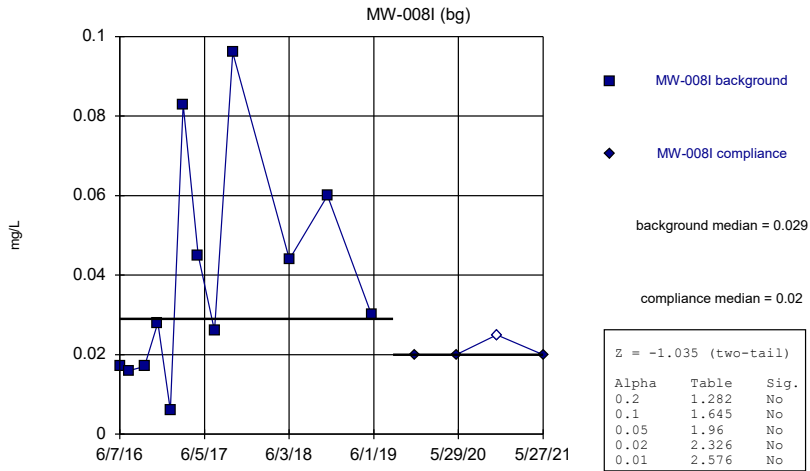
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



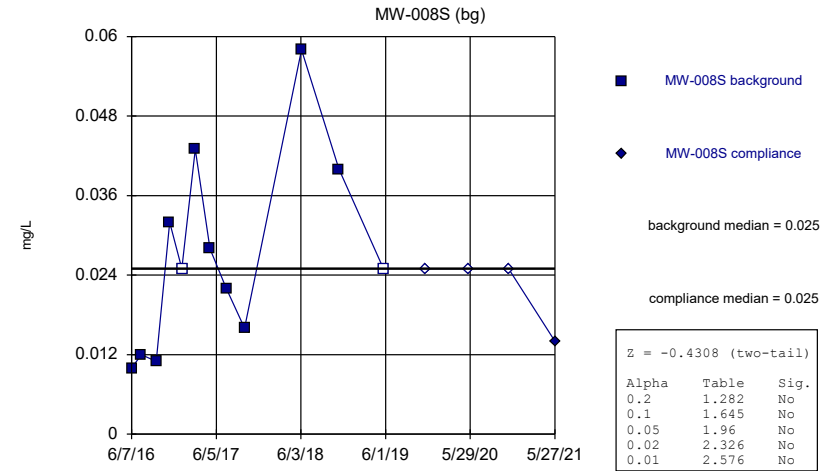
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

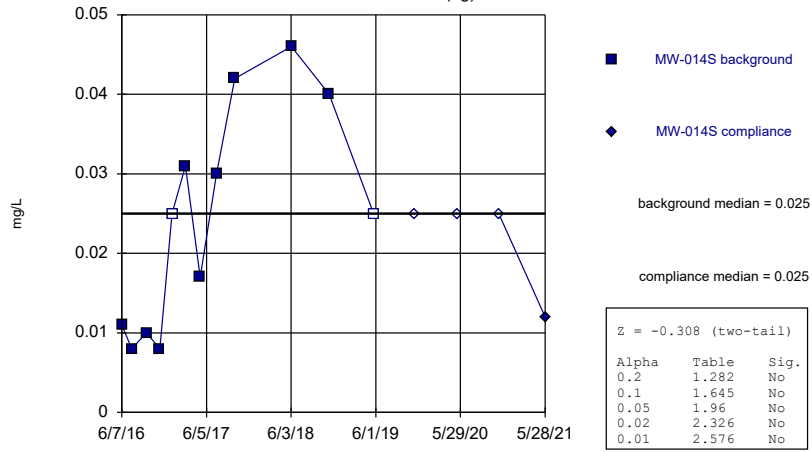
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

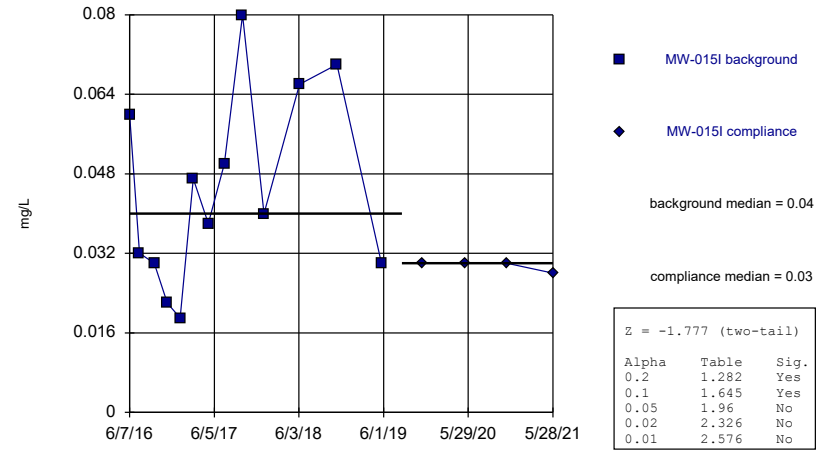
MW-014S (bg)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

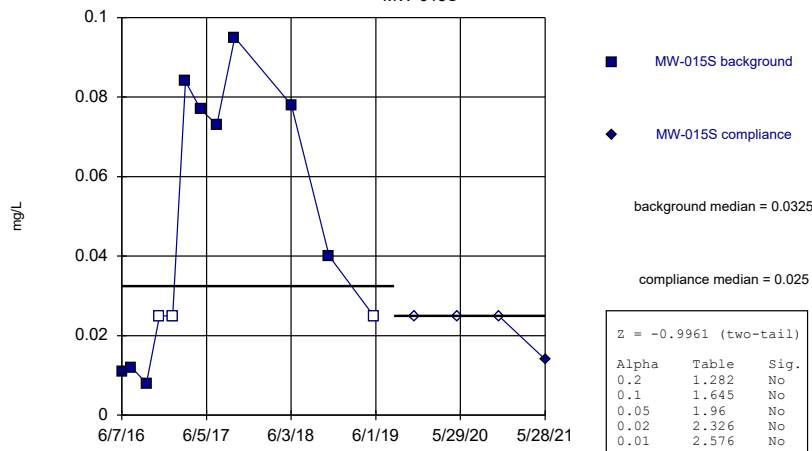
MW-015I



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

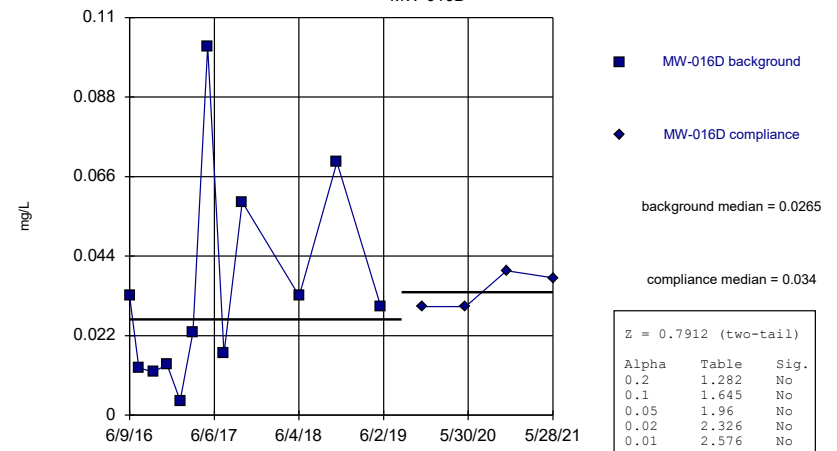
MW-015S



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

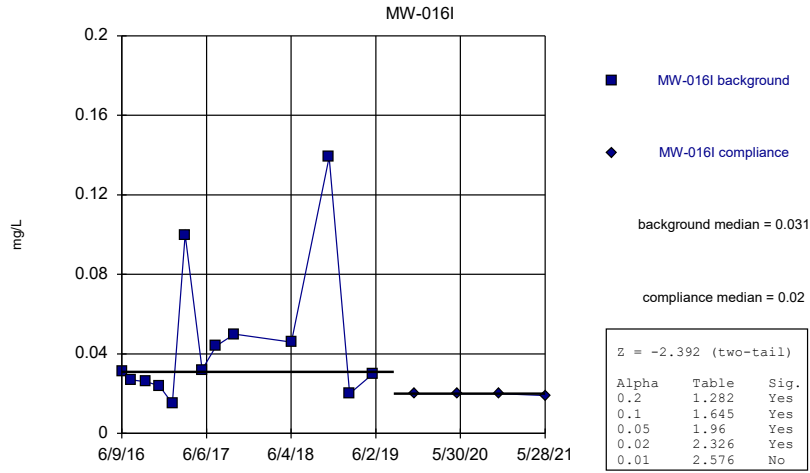
Mann-Whitney (Wilcoxon Rank Sum)

MW-016D



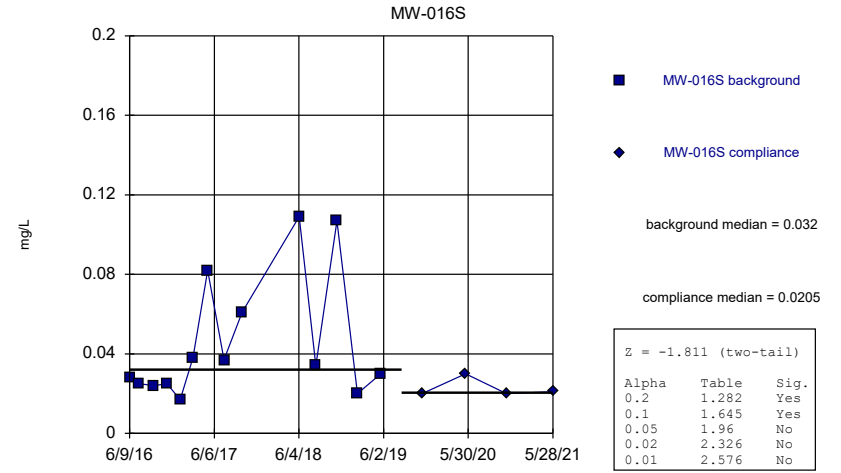
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



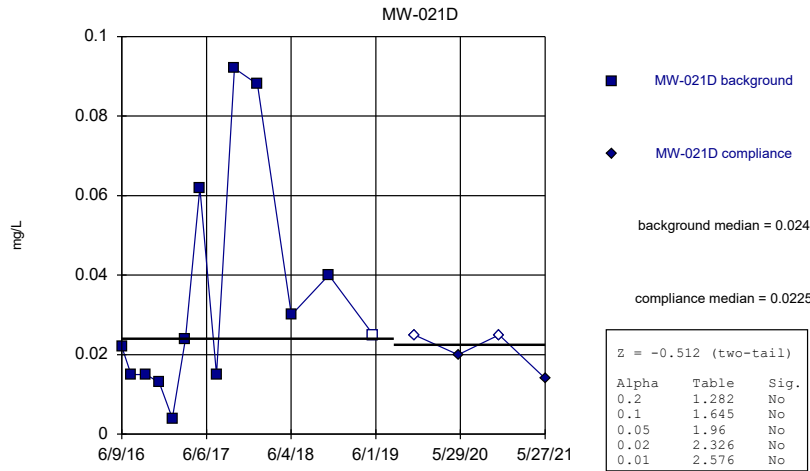
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



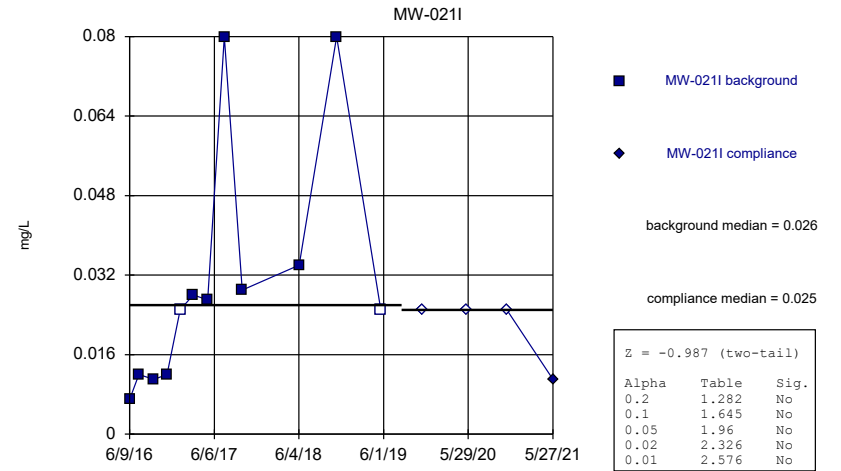
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



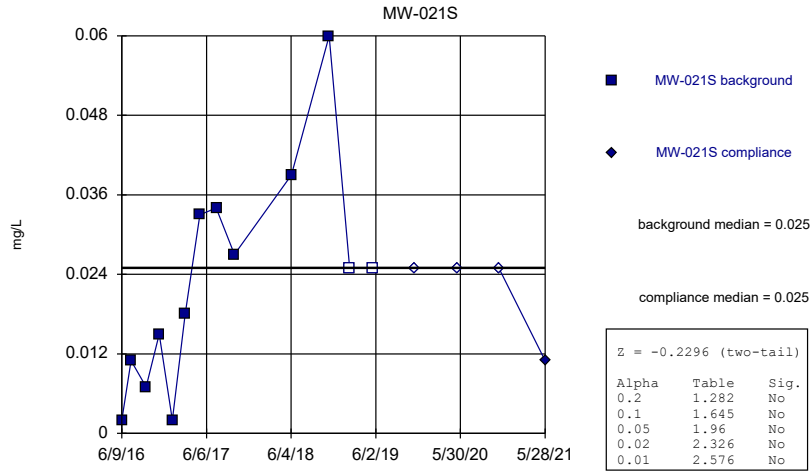
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



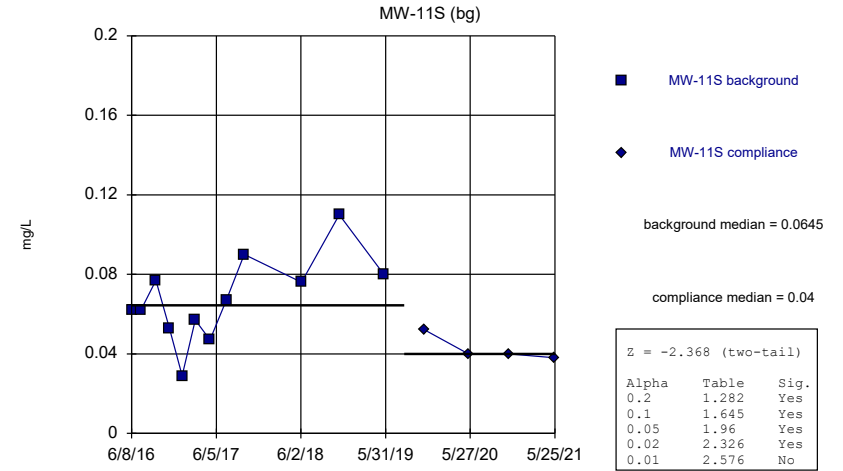
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



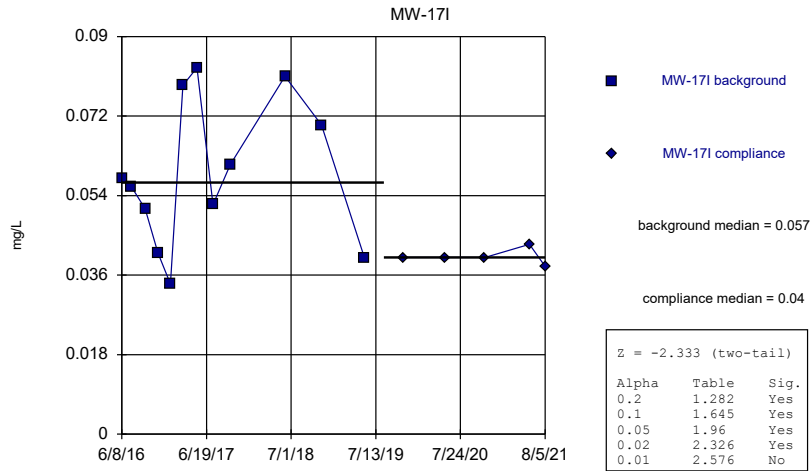
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



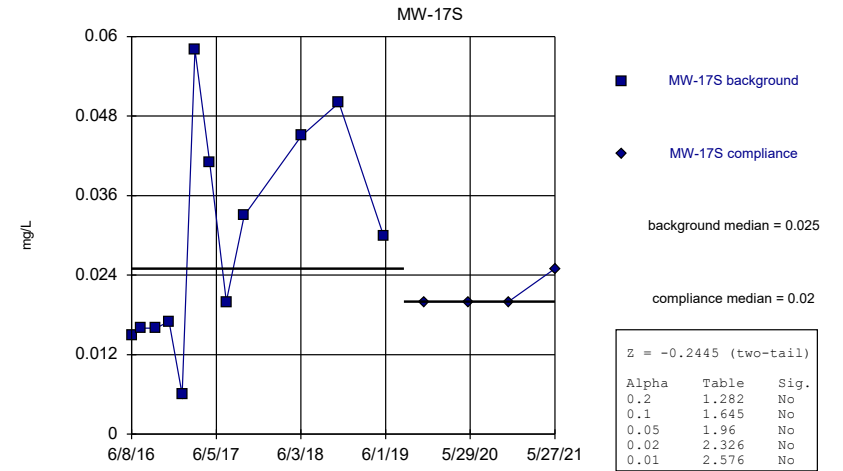
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

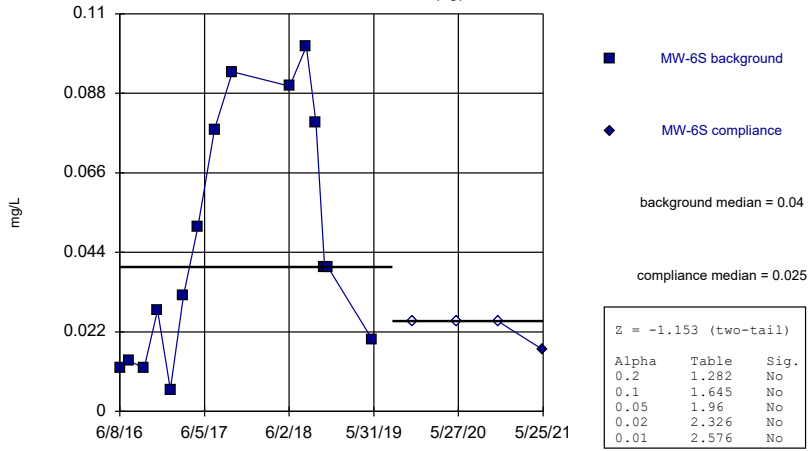
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

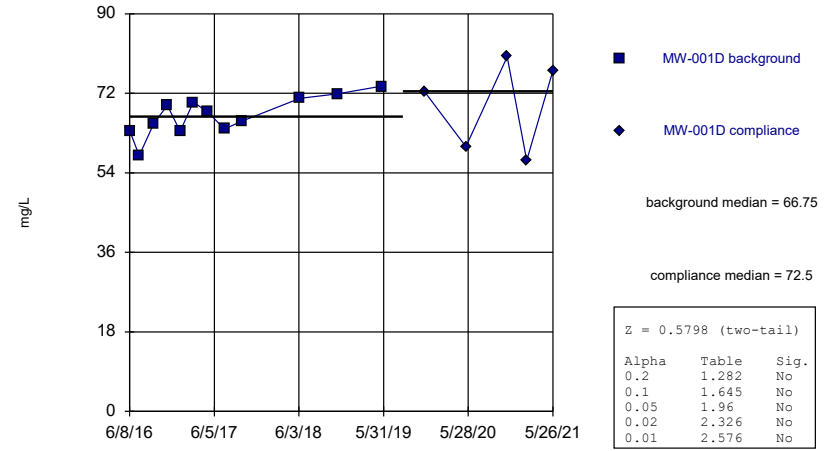
MW-6S (bg)



Constituent: Boron, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

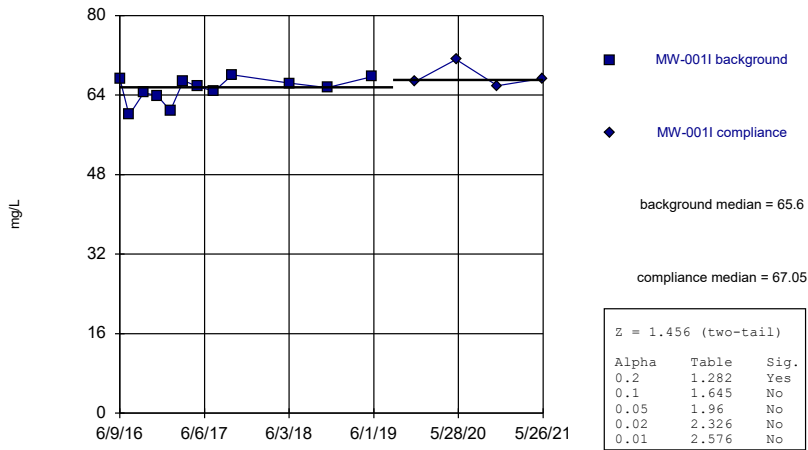
MW-001D



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

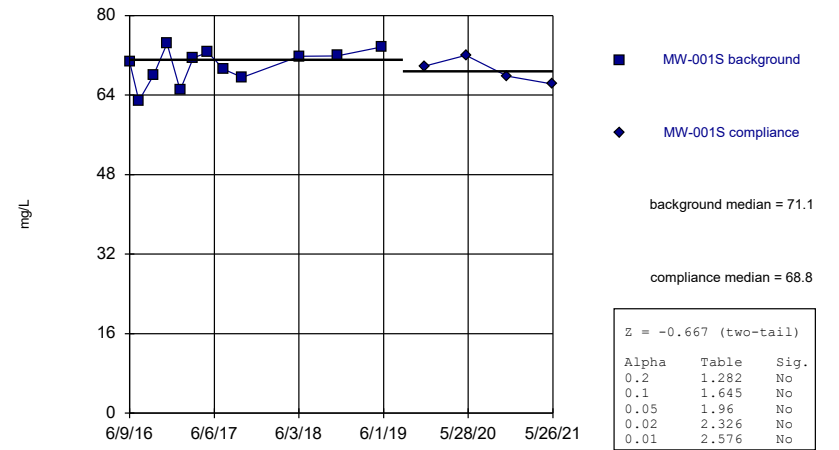
MW-001I



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
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Mann-Whitney (Wilcoxon Rank Sum)

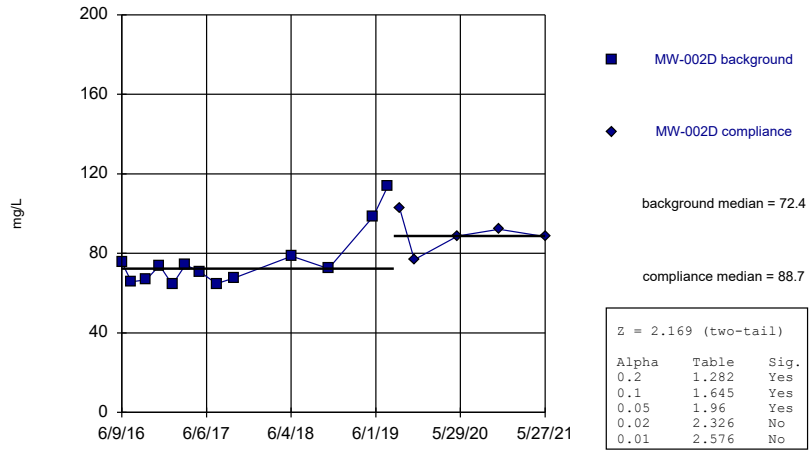
MW-001S



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

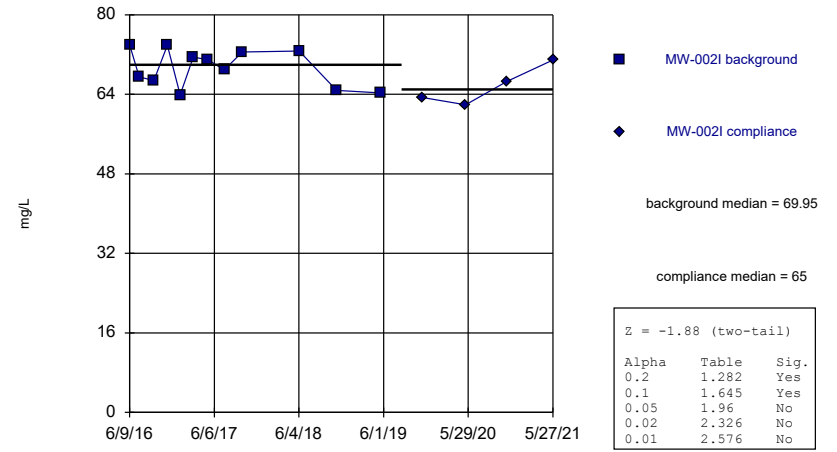
MW-002D



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

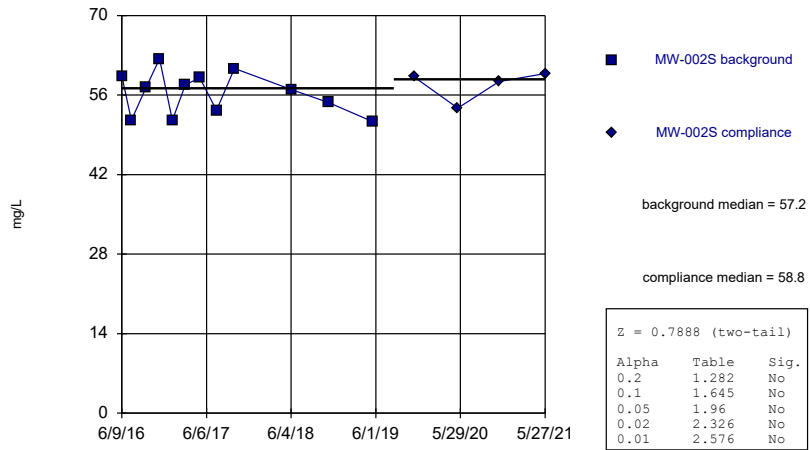
MW-002I



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

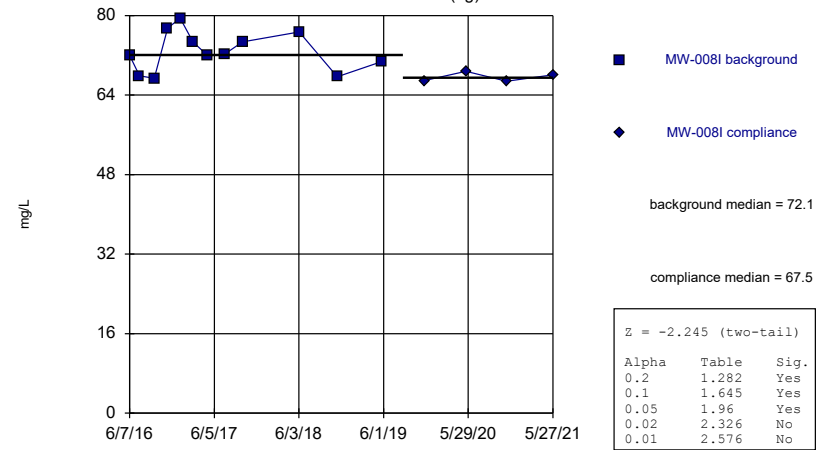
MW-002S



Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

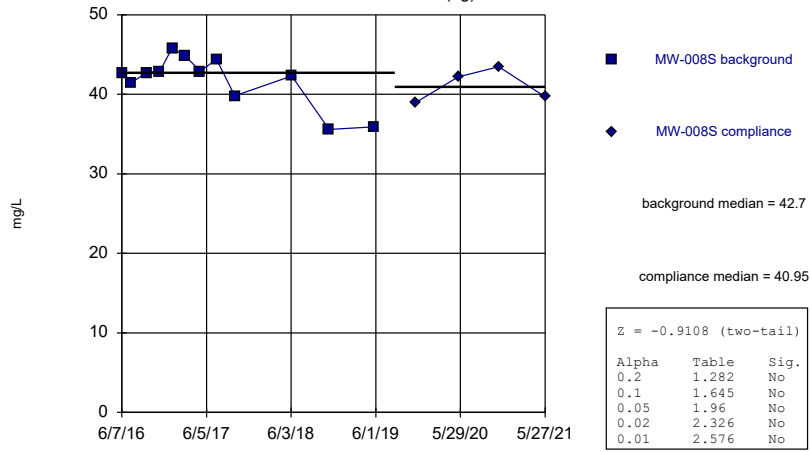
Mann-Whitney (Wilcoxon Rank Sum)

MW-008I (bg)



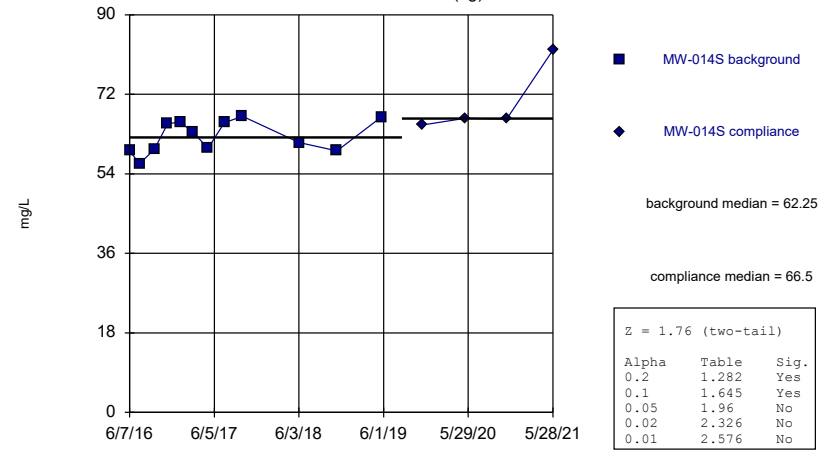
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008S (bg)



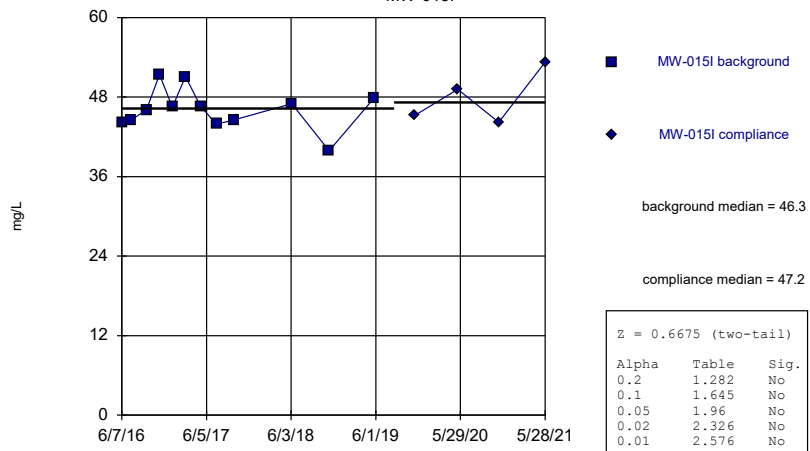
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-014S (bg)



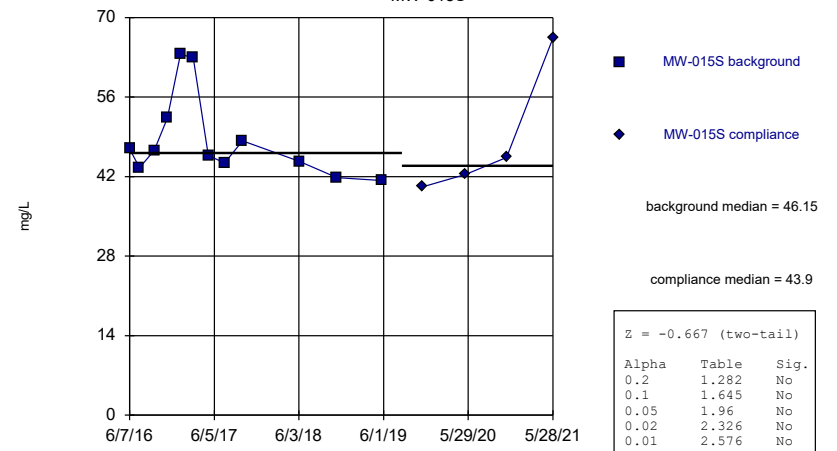
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-015I



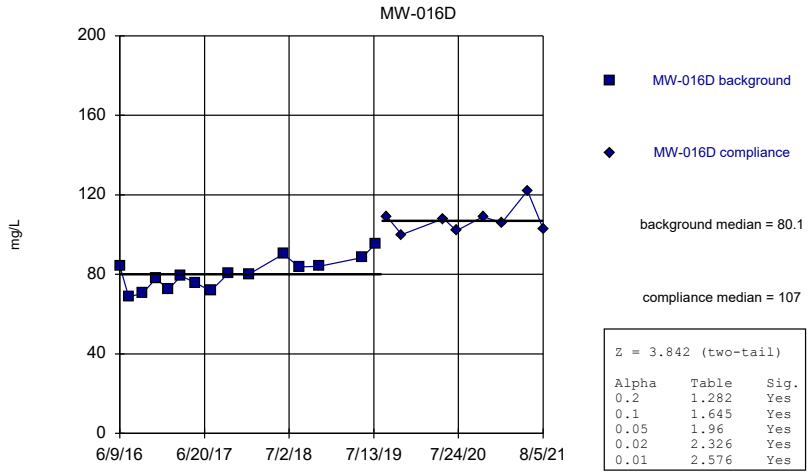
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-015S



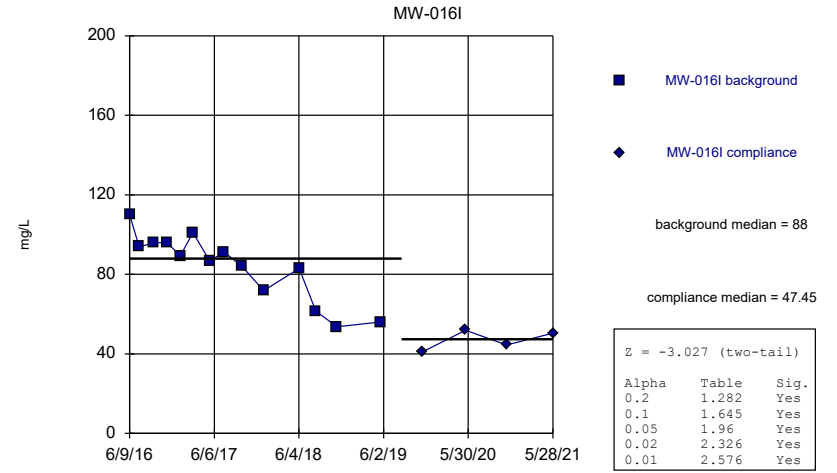
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



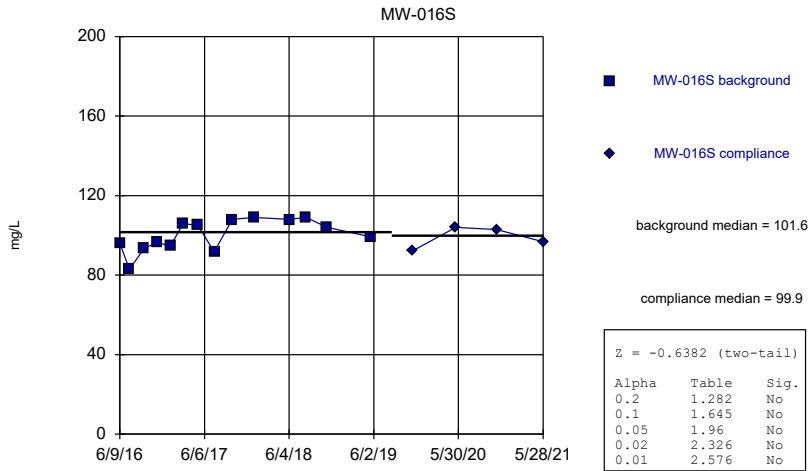
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



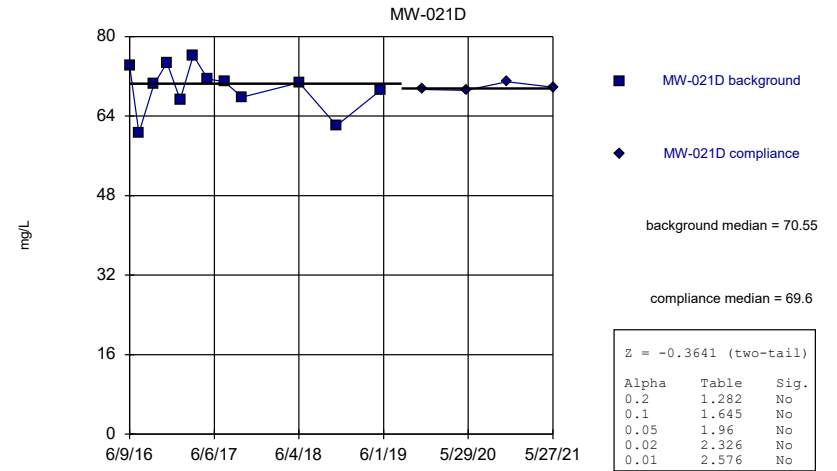
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



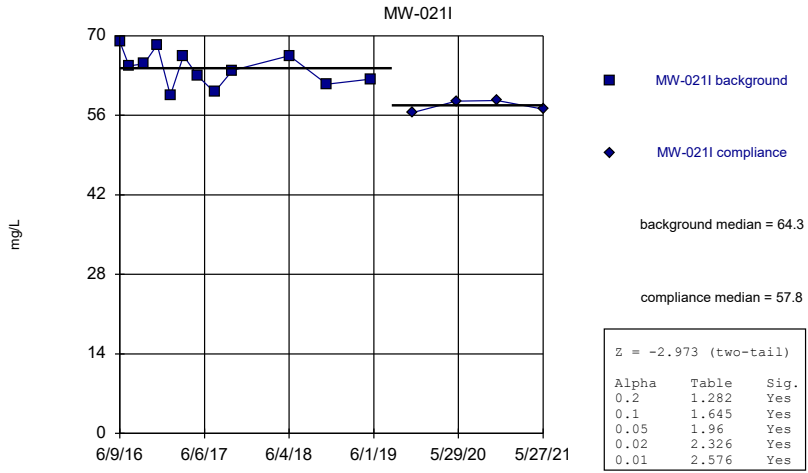
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



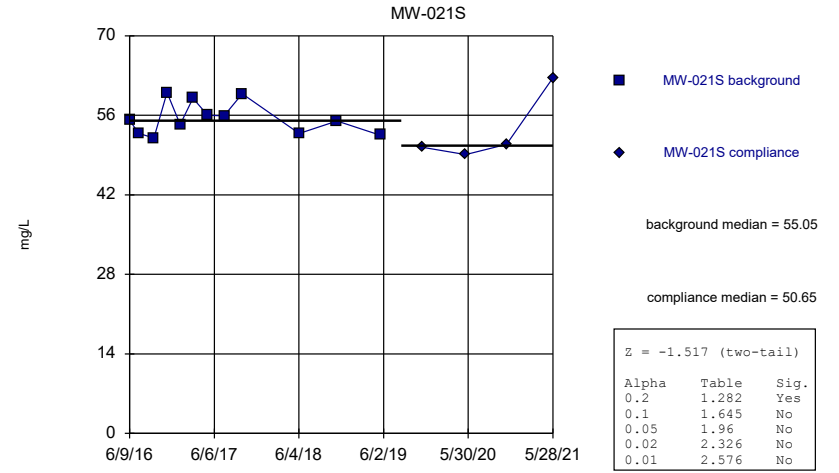
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



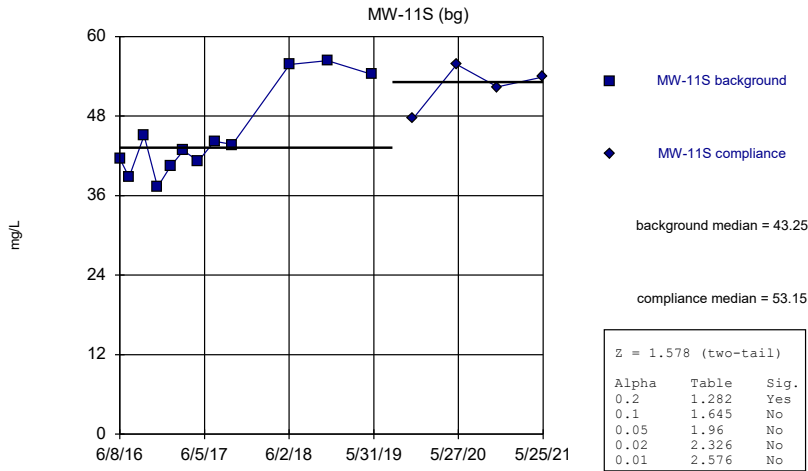
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



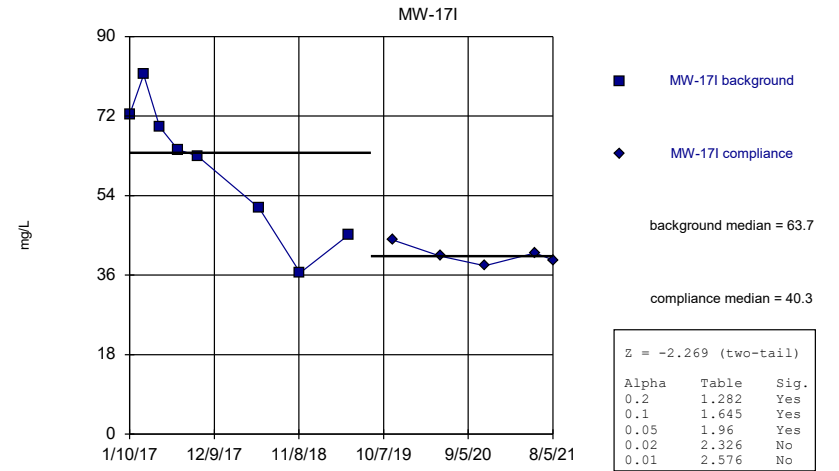
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



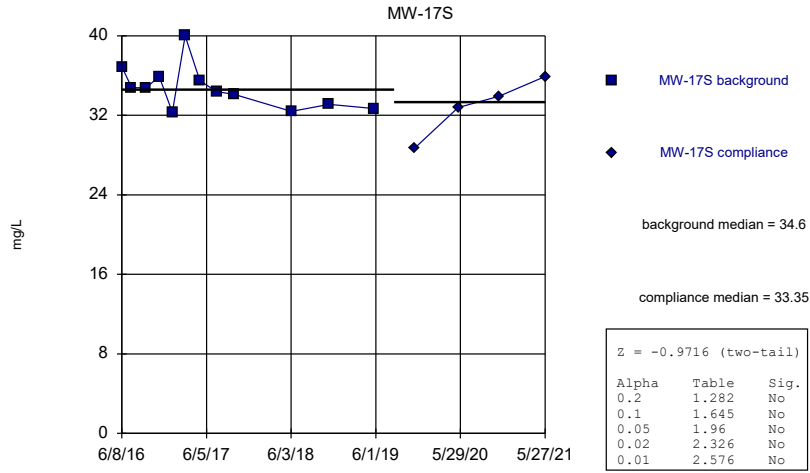
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



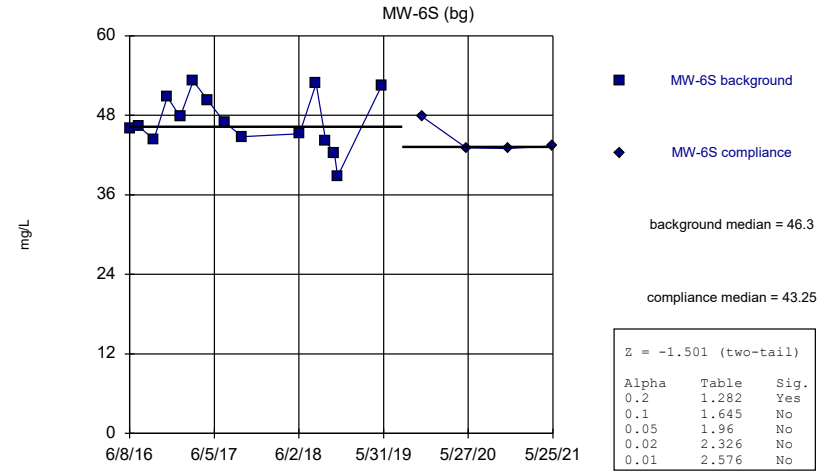
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



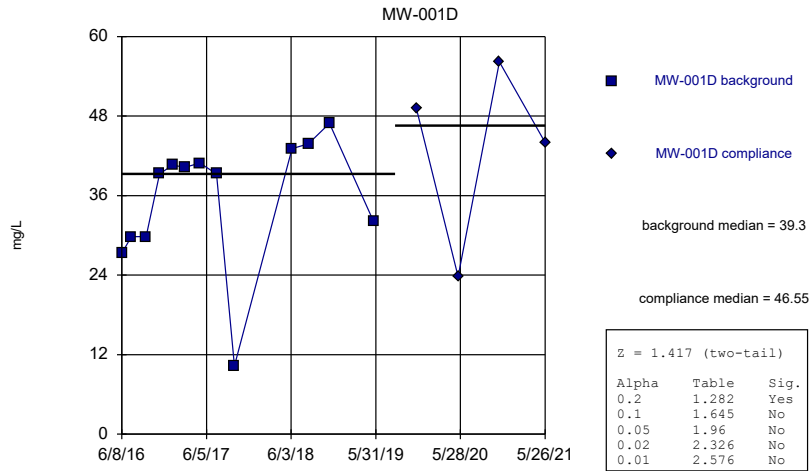
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



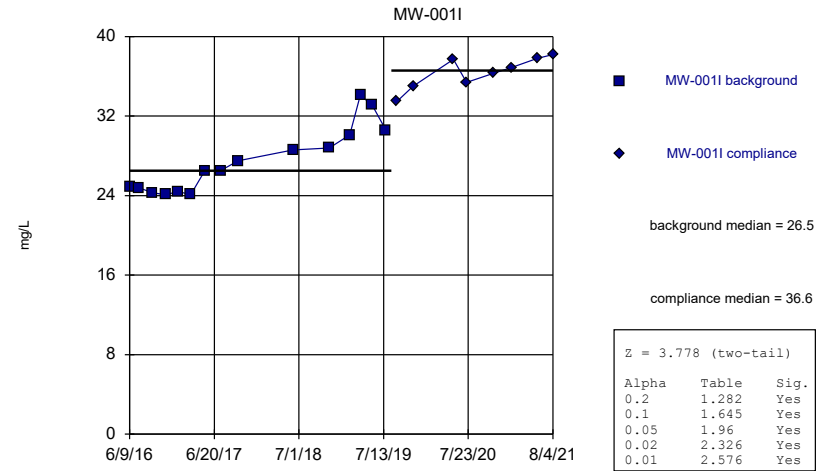
Constituent: Calcium, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Chloride, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

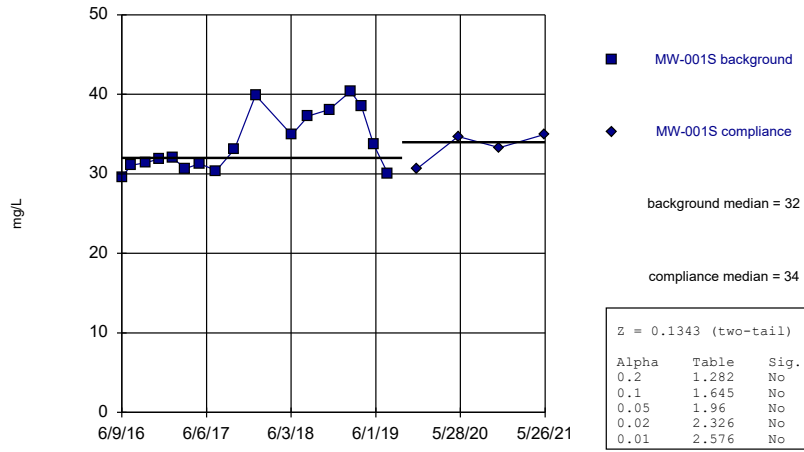
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Chloride, total Analysis Run 9/14/2021 10:21 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

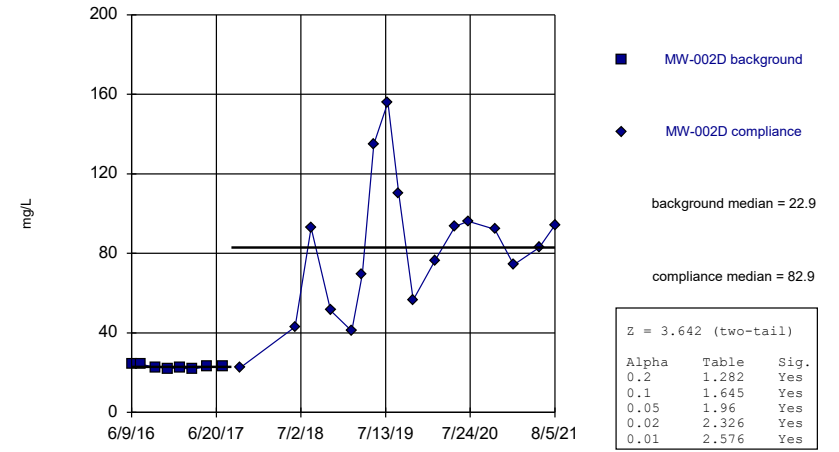
MW-001S



Constituent: Chloride, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

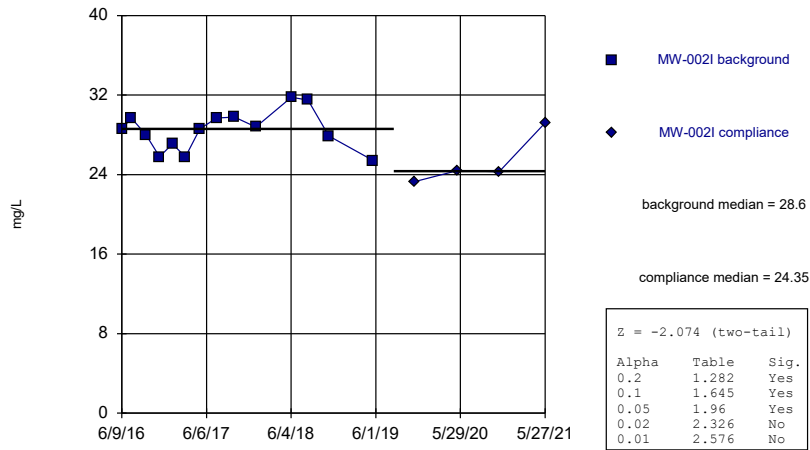
MW-002D



Constituent: Chloride, total Analysis Run 9/14/2021 10:21 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

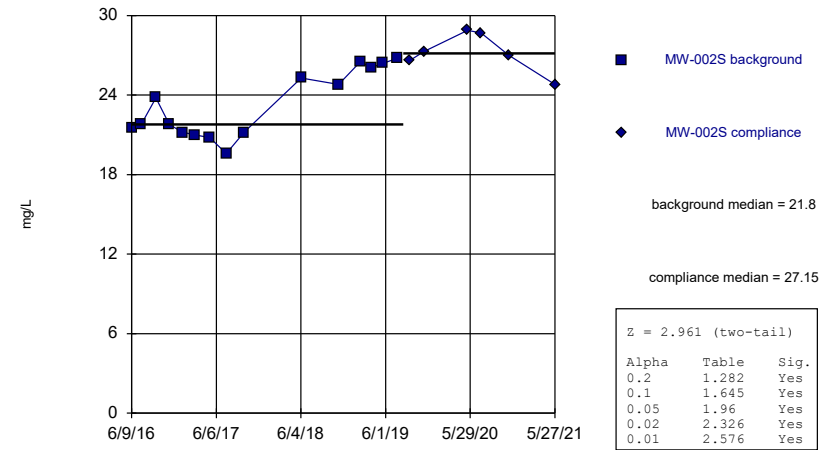
MW-002I



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

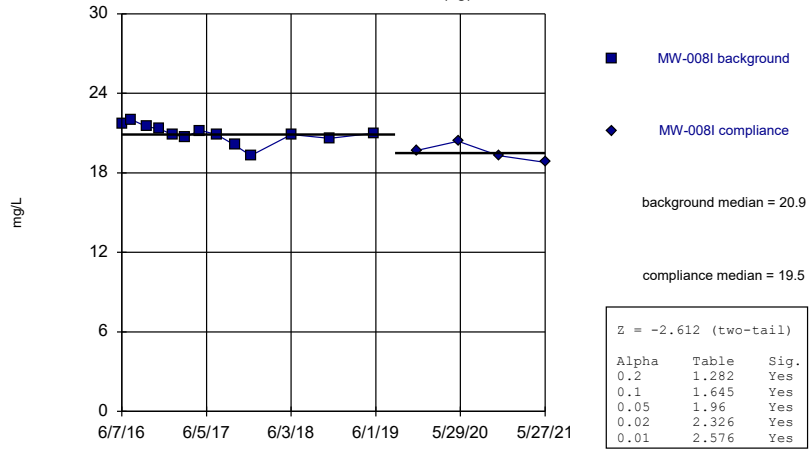
Mann-Whitney (Wilcoxon Rank Sum)

MW-002S



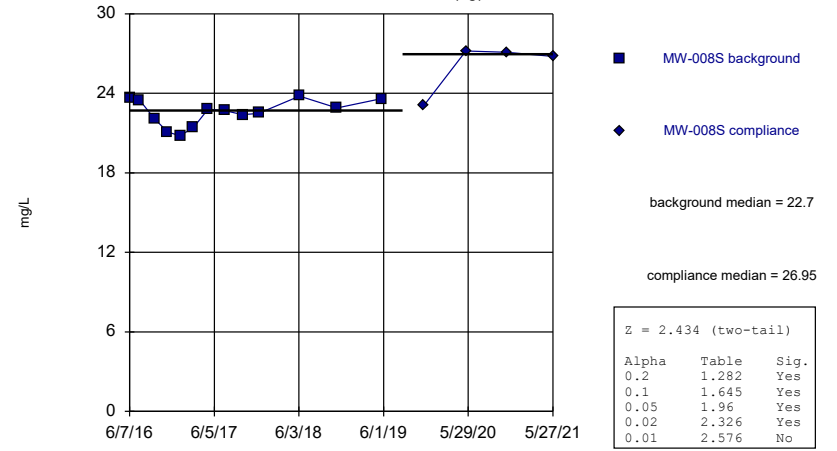
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008I (bg)



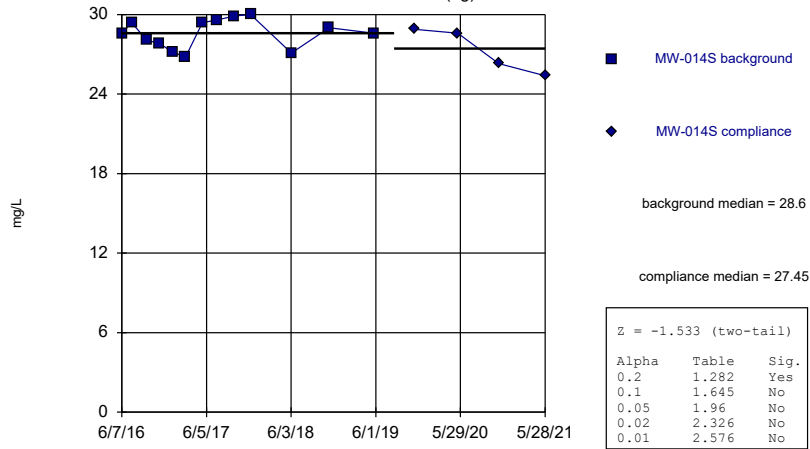
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008S (bg)



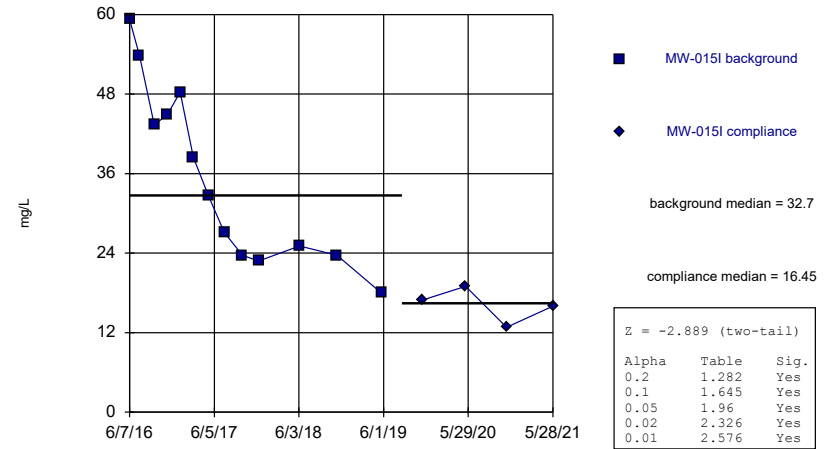
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-014S (bg)



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

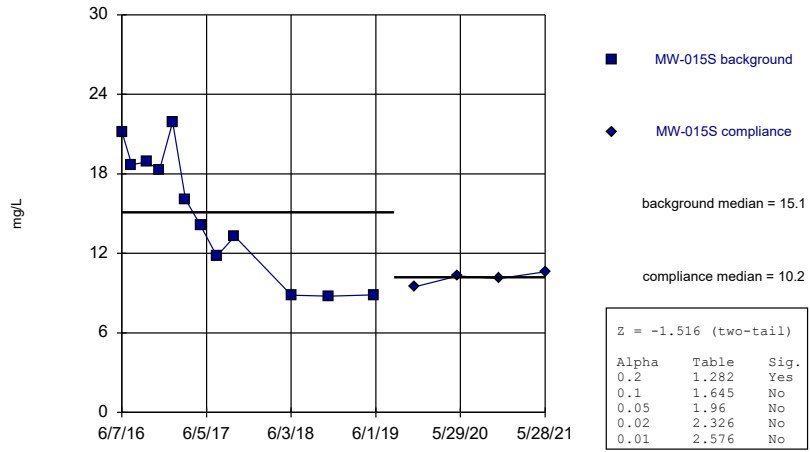
Mann-Whitney (Wilcoxon Rank Sum)
MW-015I



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

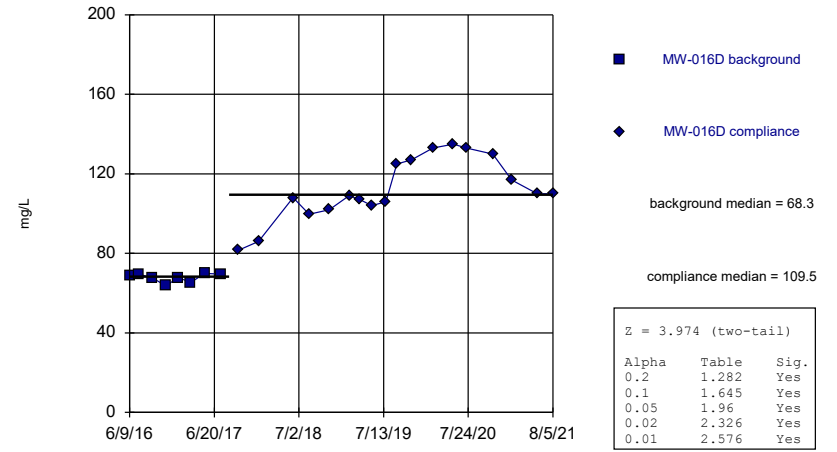
MW-015S



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

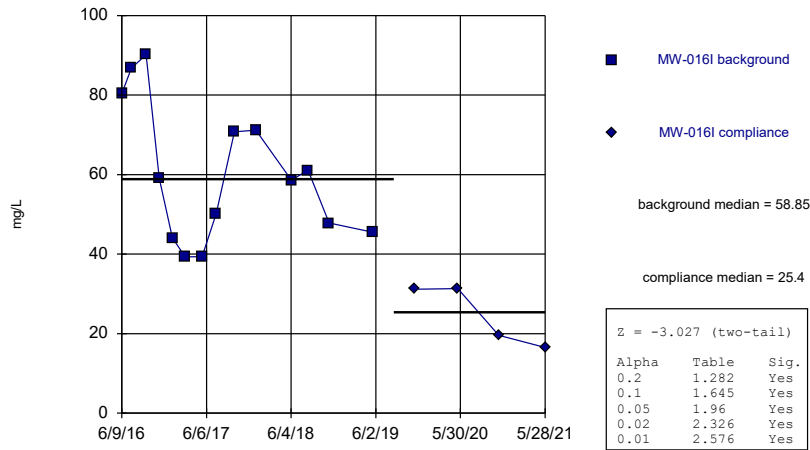
MW-016D



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

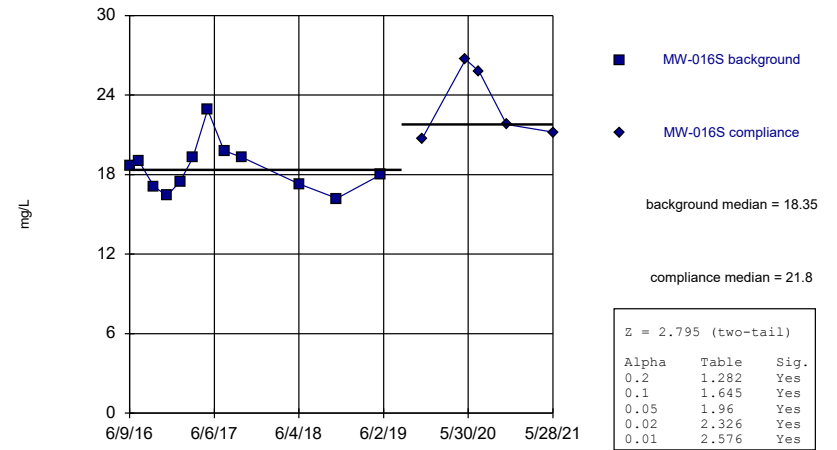
MW-016I



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

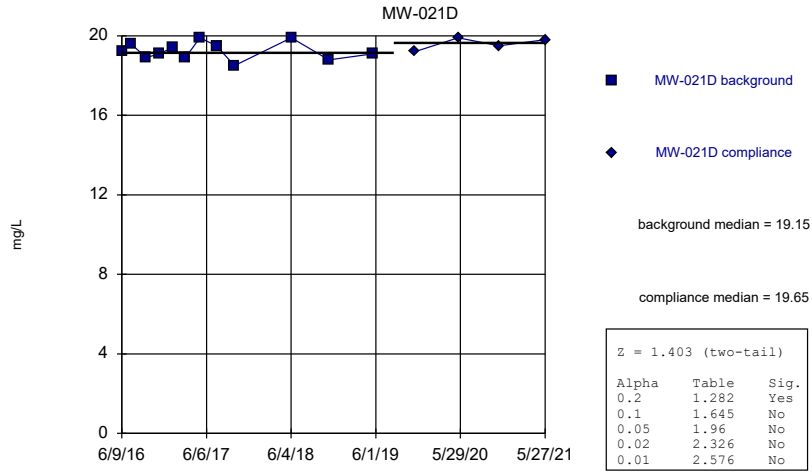
Mann-Whitney (Wilcoxon Rank Sum)

MW-016S



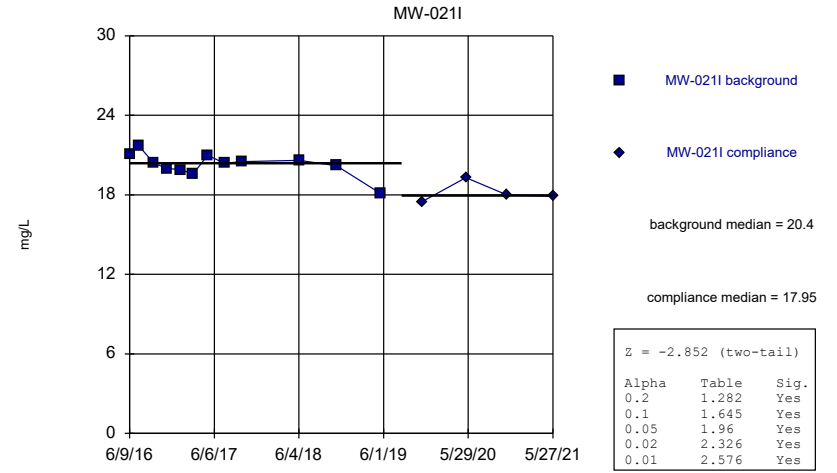
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



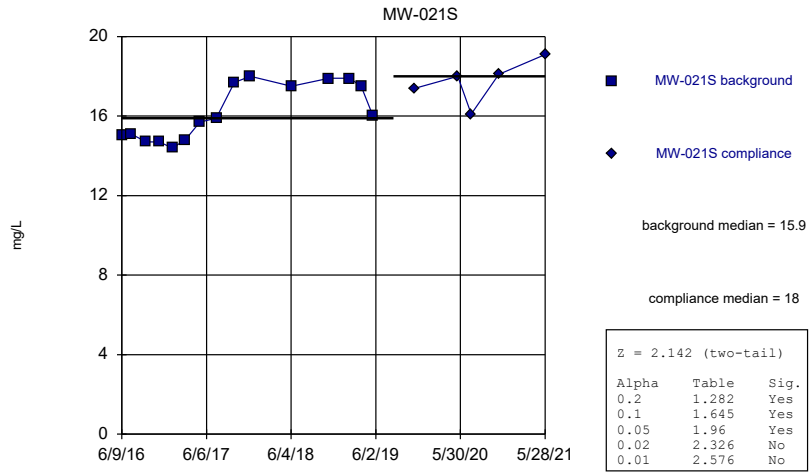
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



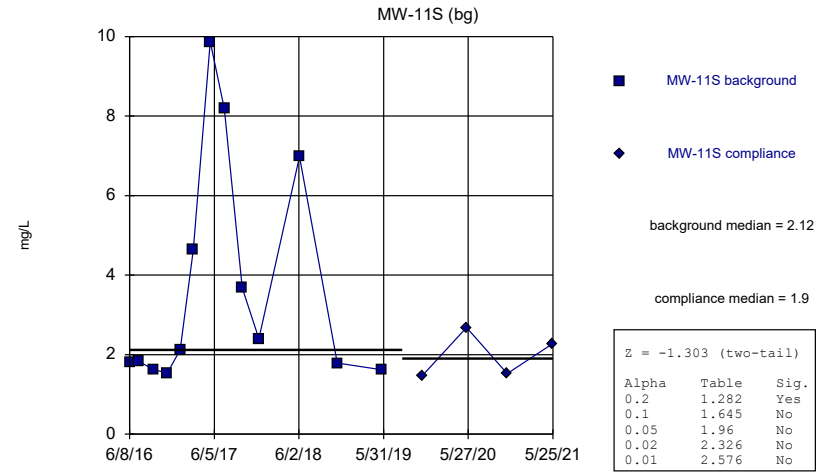
Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

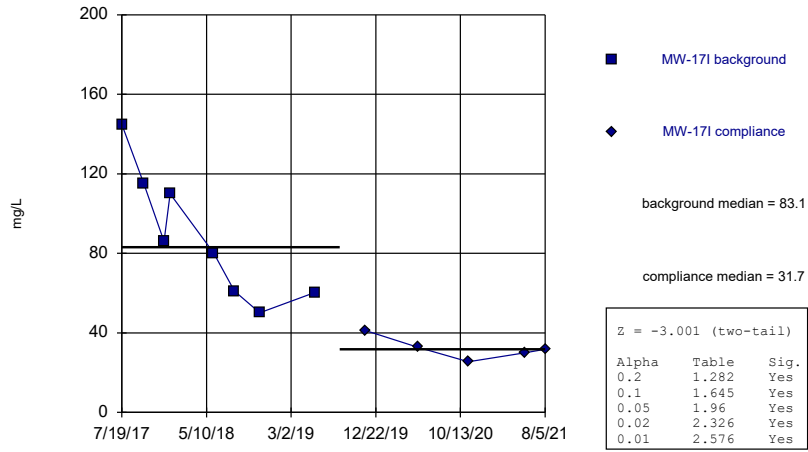
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

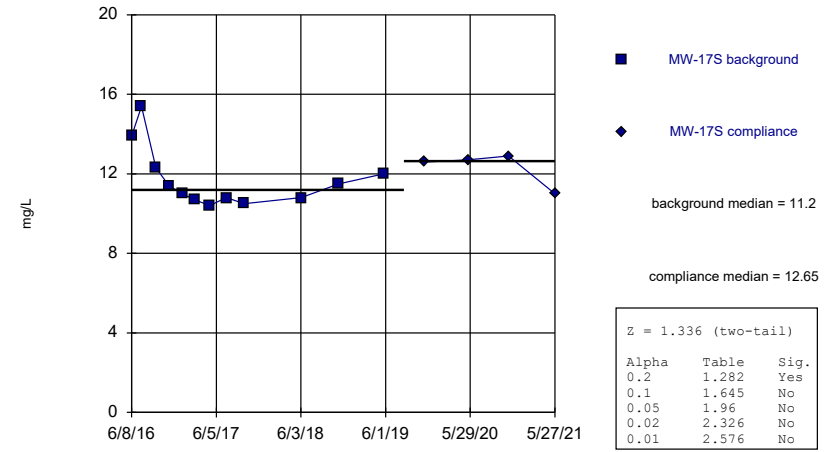
MW-17I



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

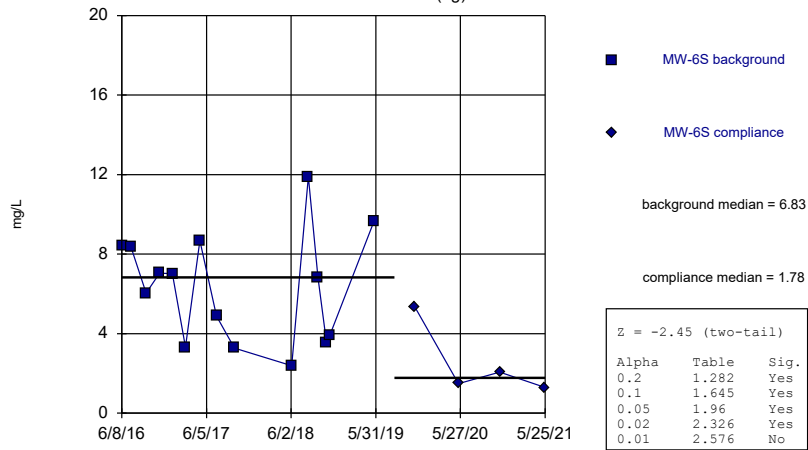
MW-17S



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

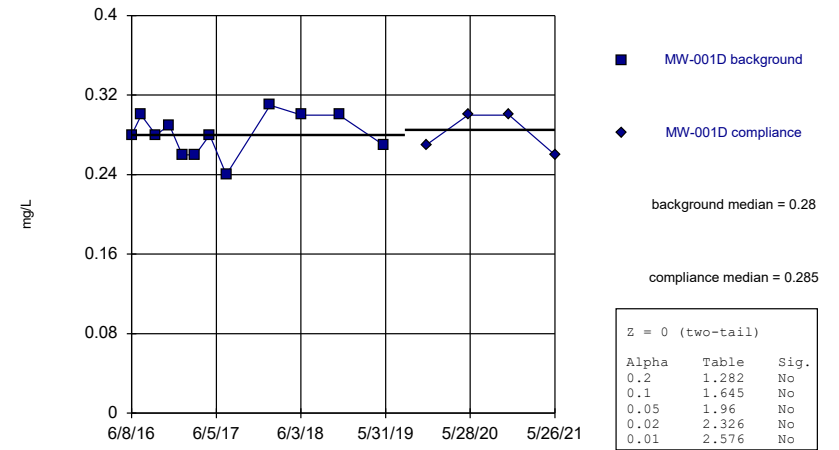
MW-6S (bg)



Constituent: Chloride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

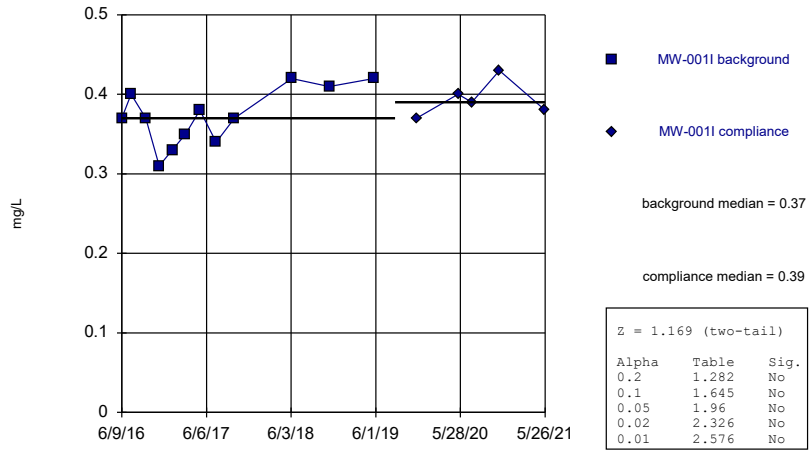
MW-001D



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

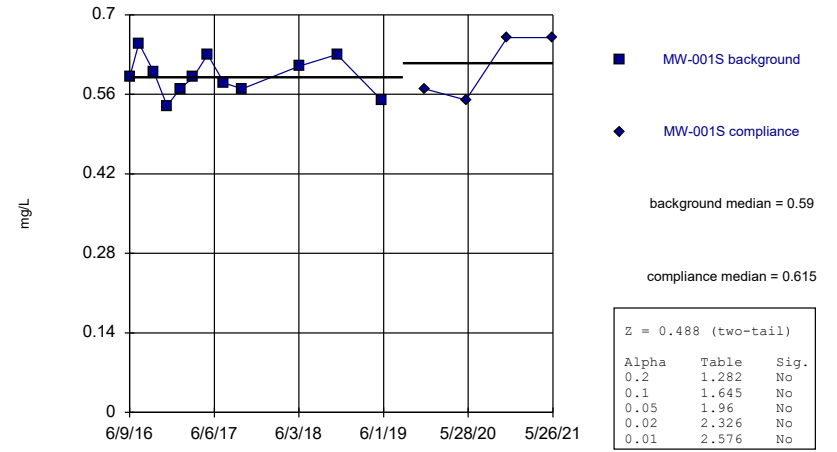
MW-001I



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

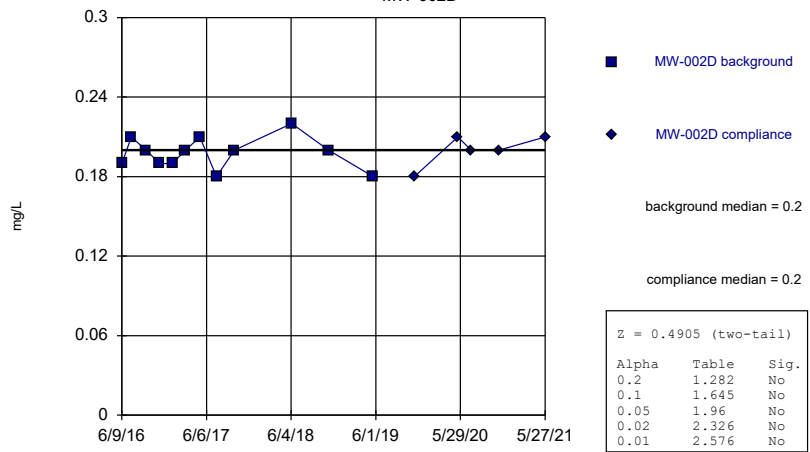
MW-001S



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

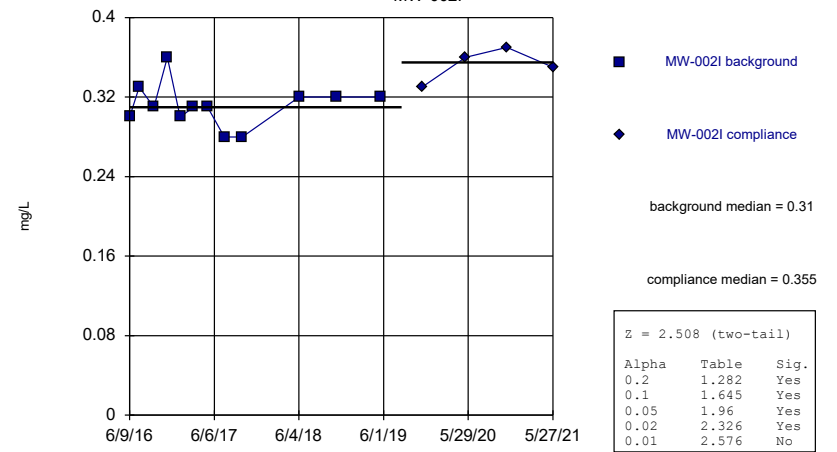
MW-002D



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

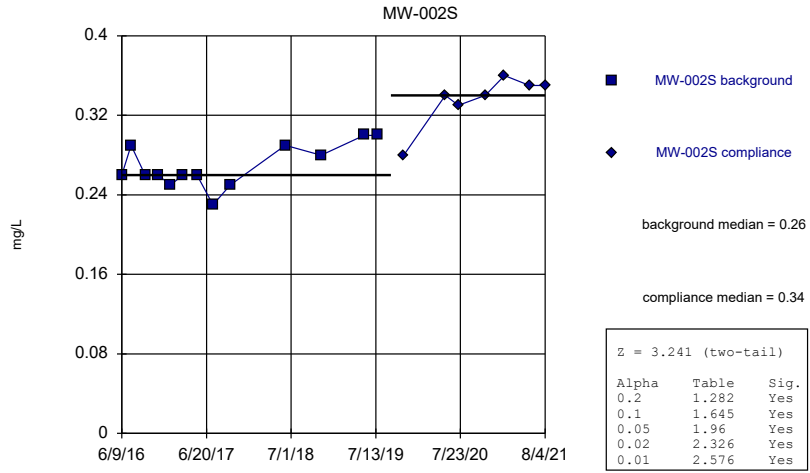
Mann-Whitney (Wilcoxon Rank Sum)

MW-002I



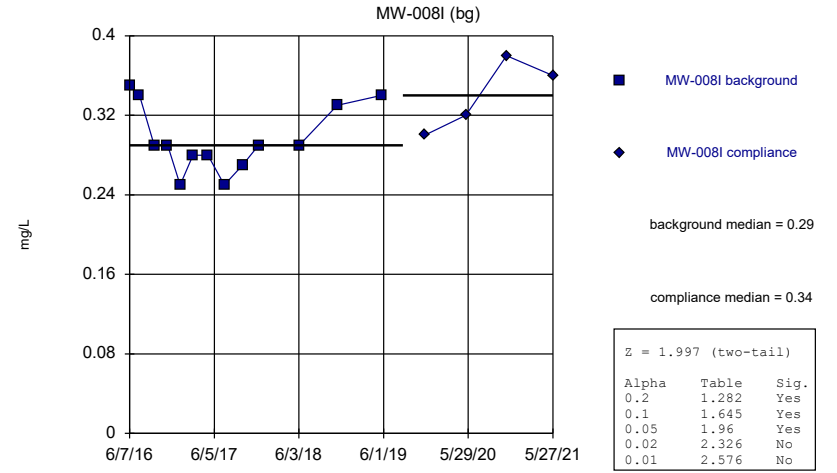
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



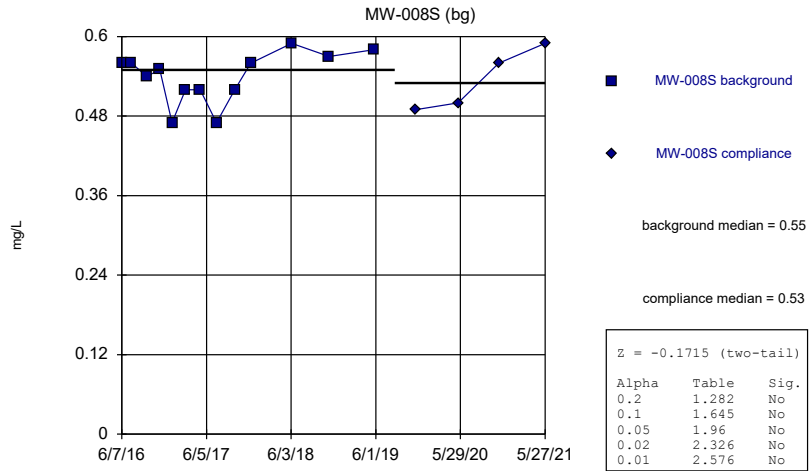
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



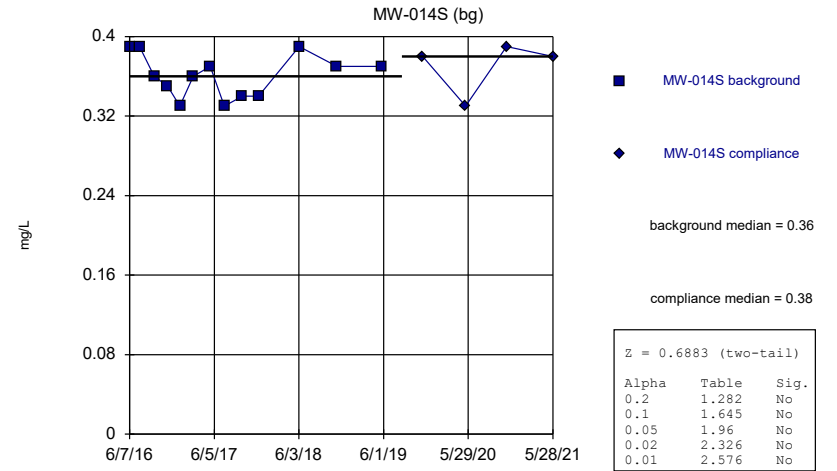
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



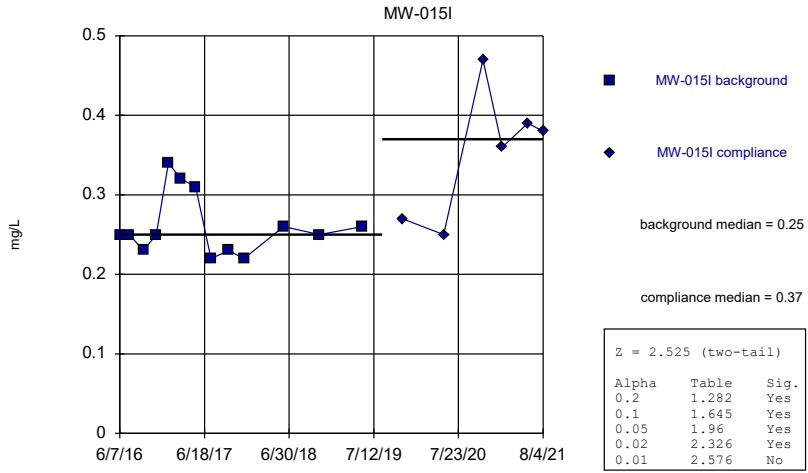
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



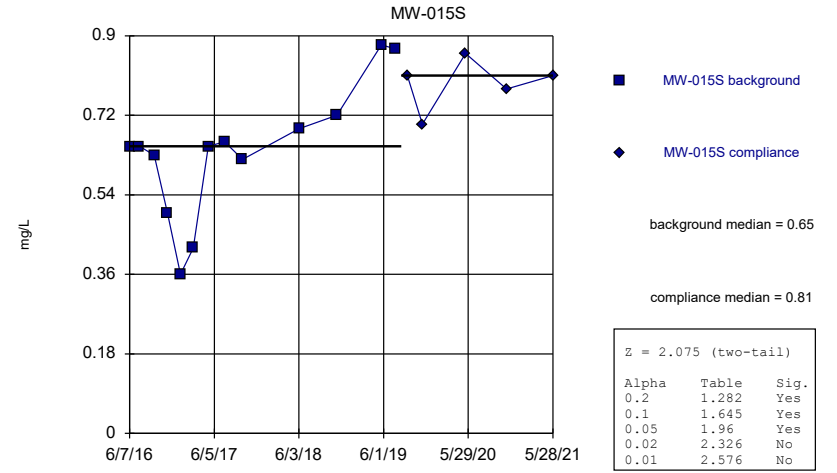
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



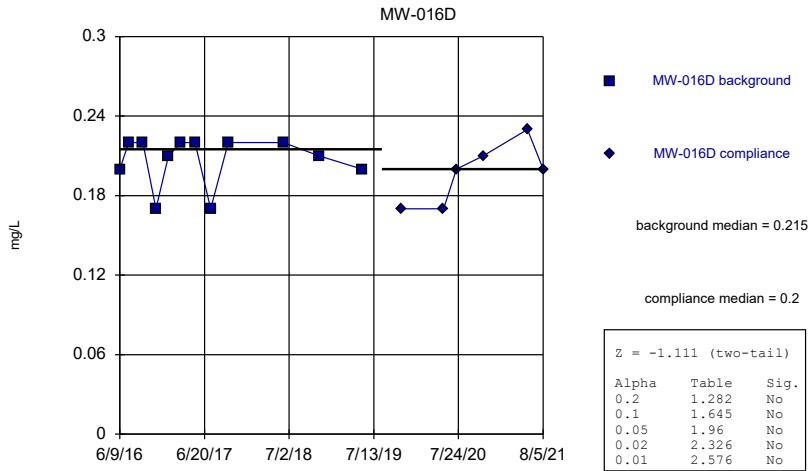
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



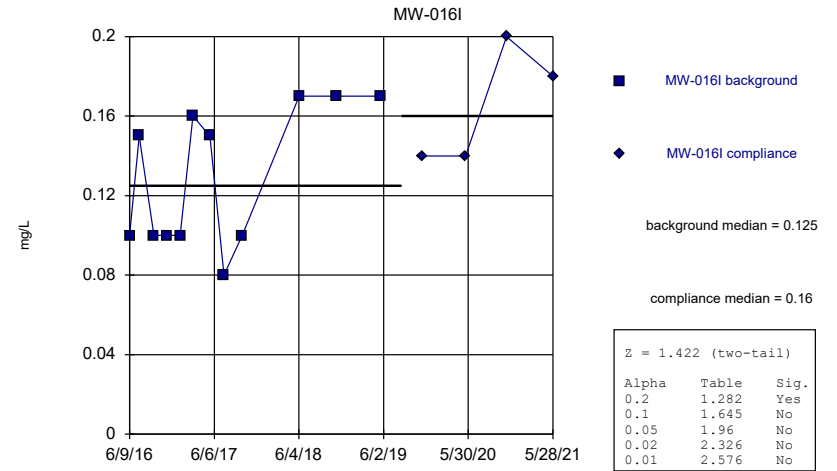
Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

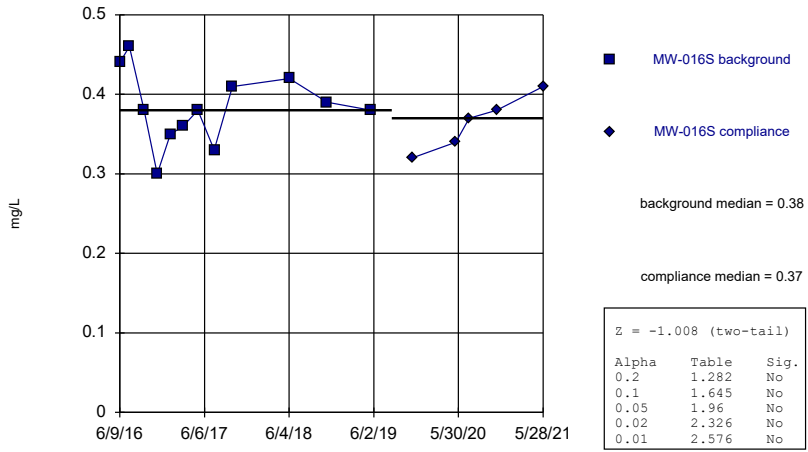
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

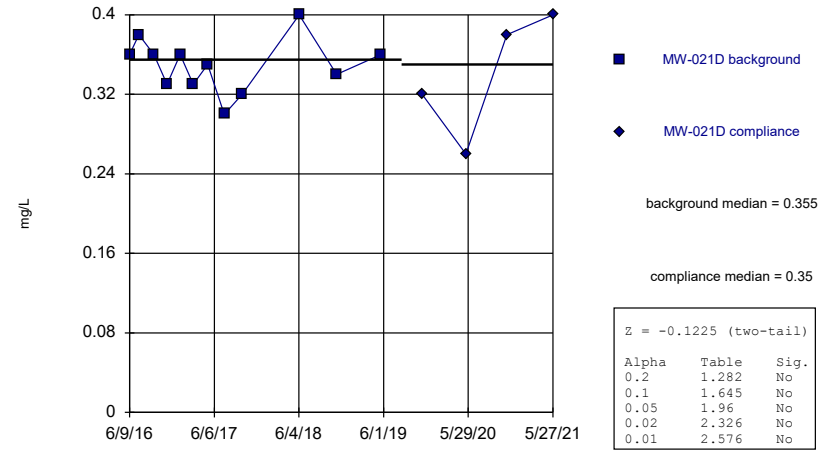
MW-016S



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

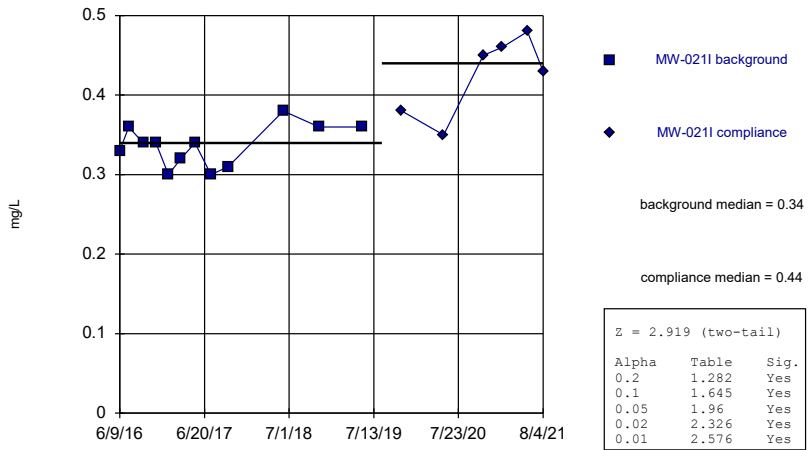
MW-021D



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

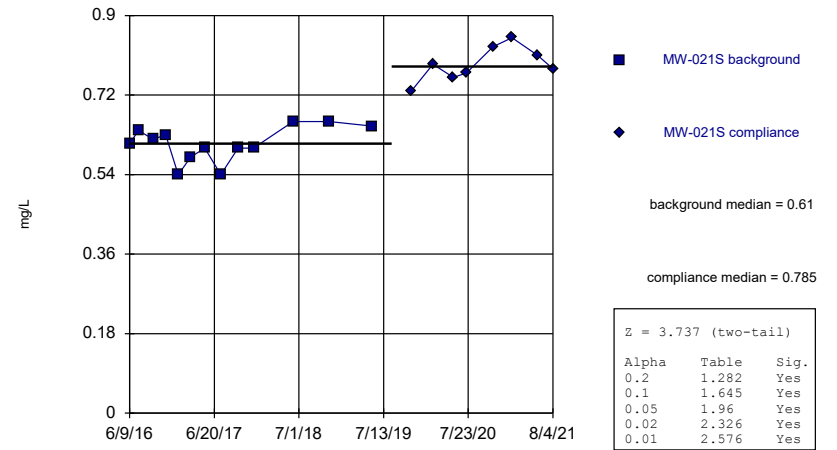
MW-021I



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

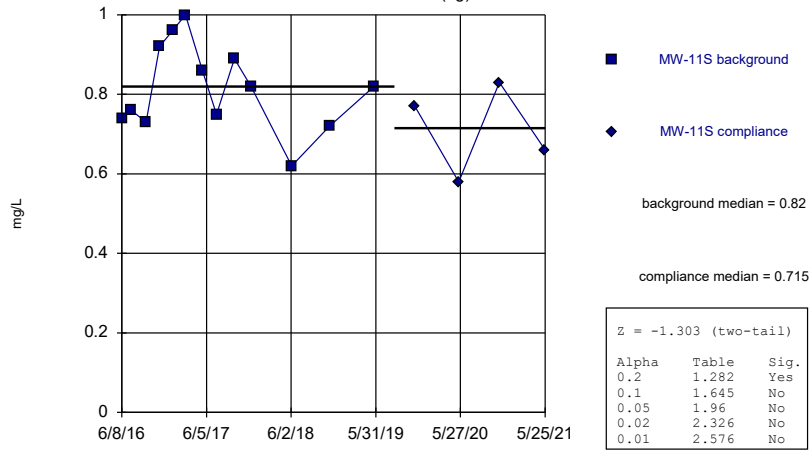
MW-021S



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

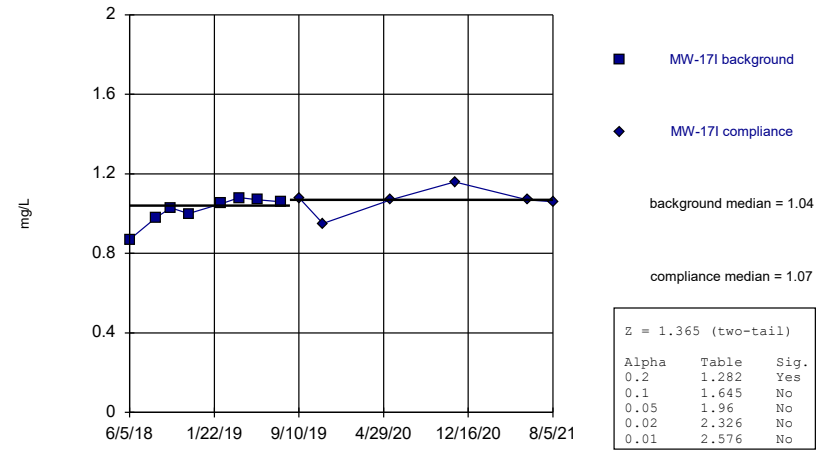
MW-11S (bg)



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

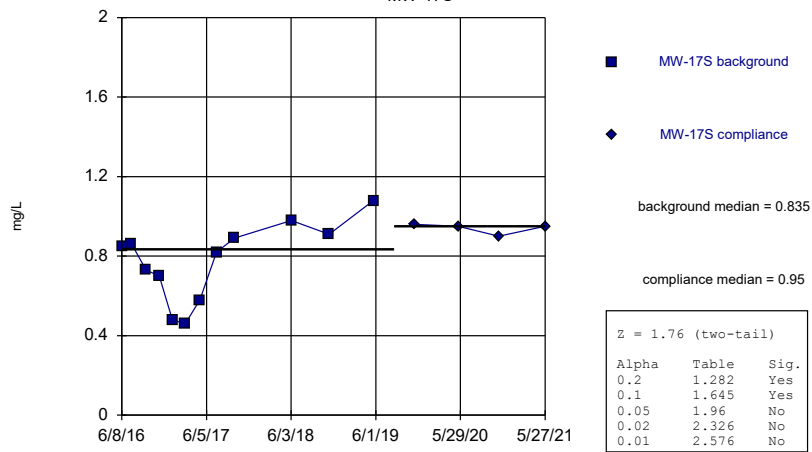
MW-171



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

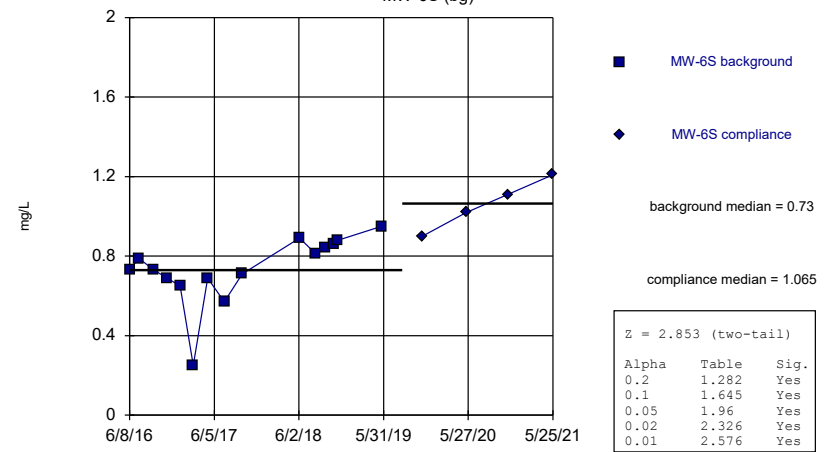
MW-17S



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

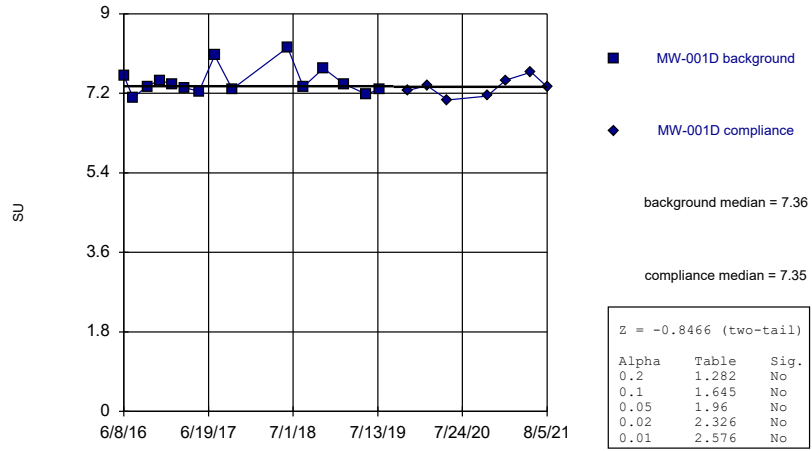
MW-6S (bg)



Constituent: Fluoride, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

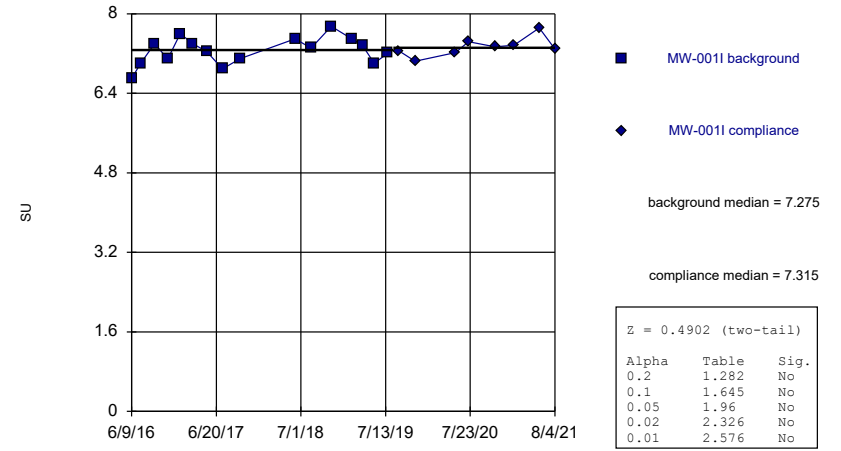
MW-001D



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

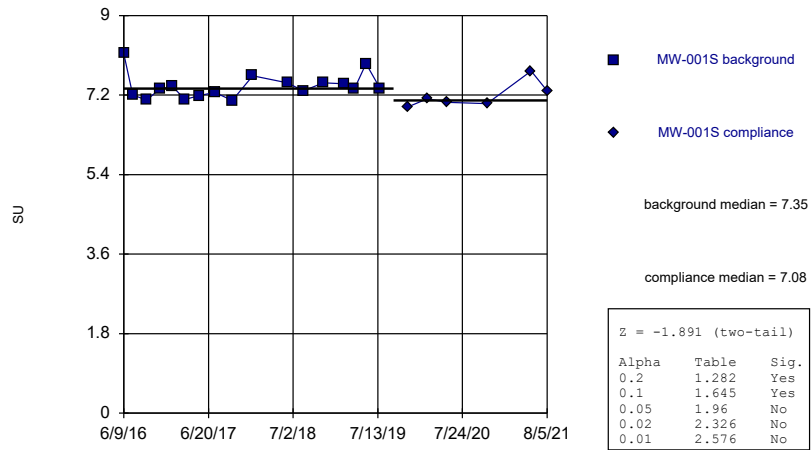
MW-0011



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

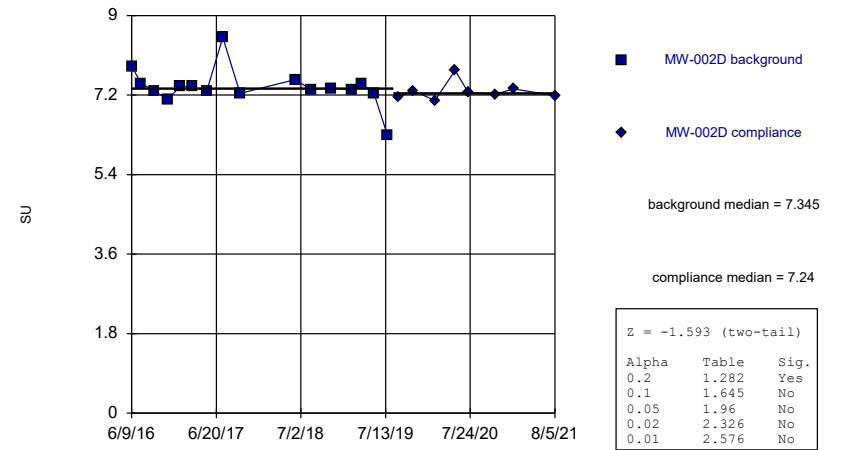
MW-001S



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

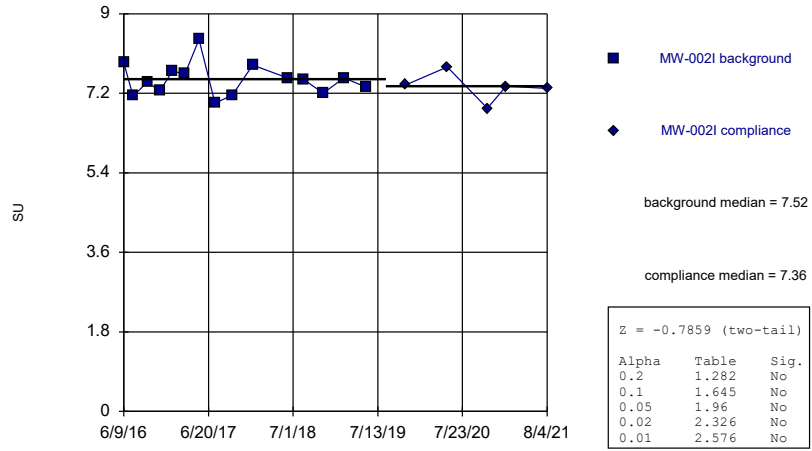
MW-002D



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

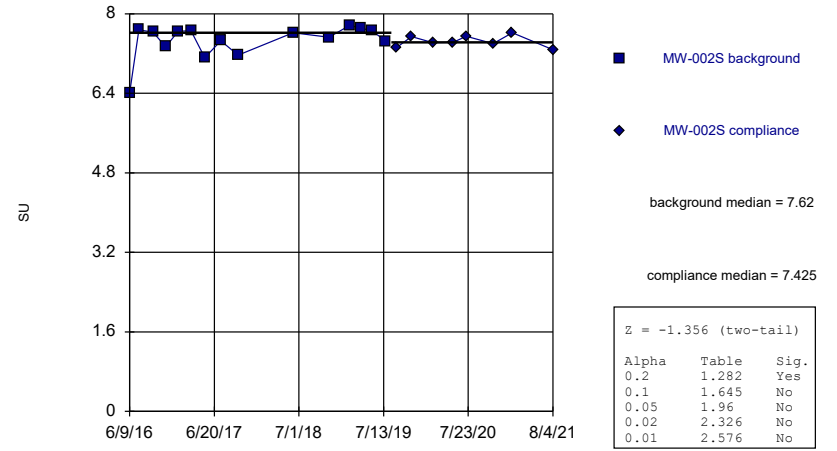
MW-002I



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

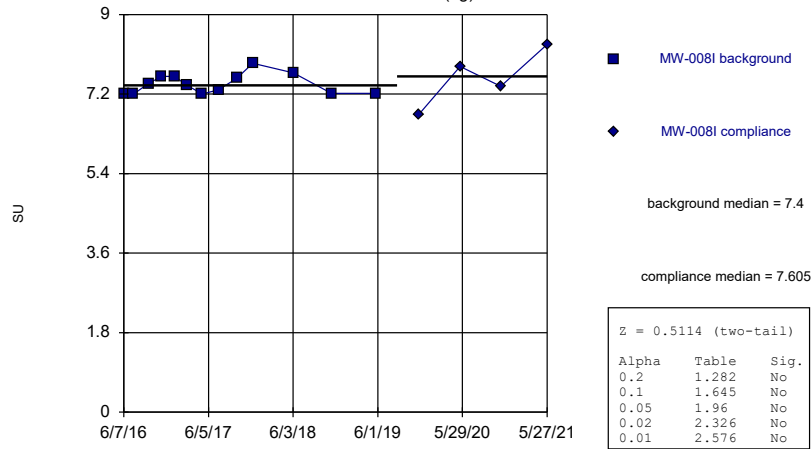
MW-002S



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

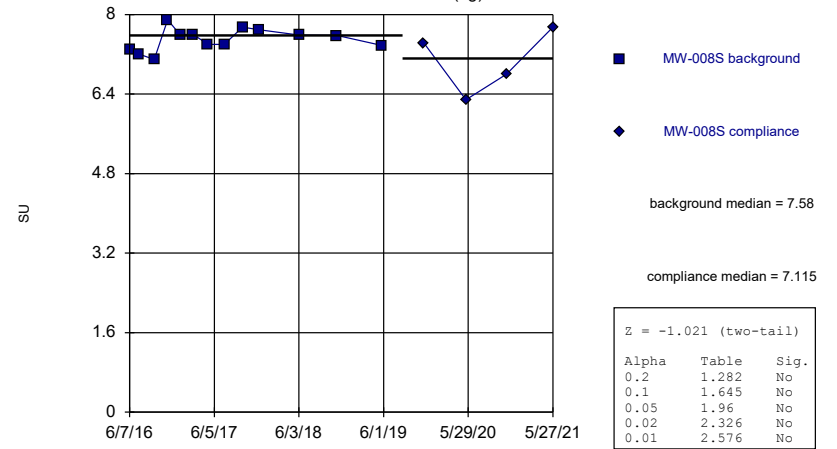
MW-008I (bg)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

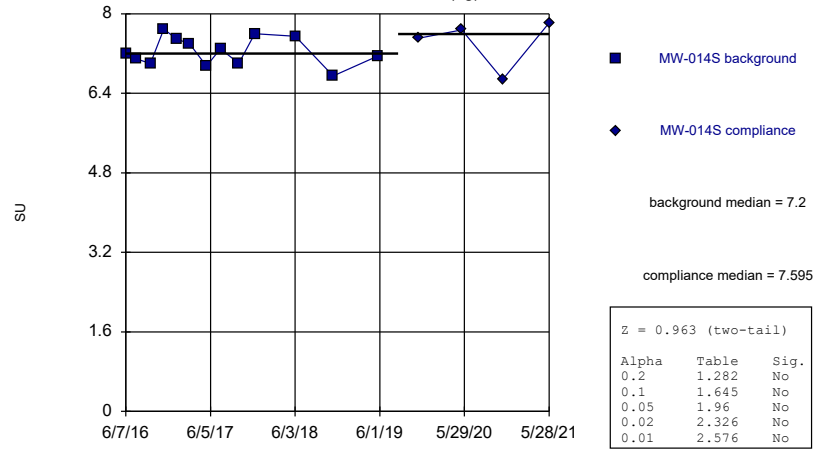
MW-008S (bg)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

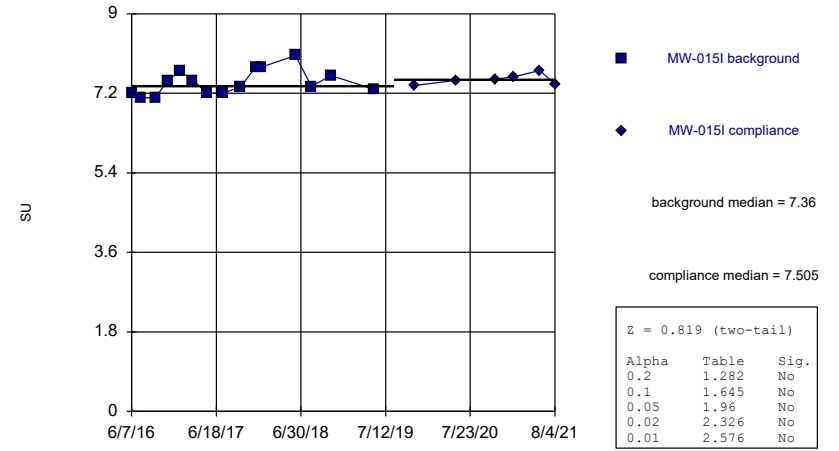
MW-014S (bg)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

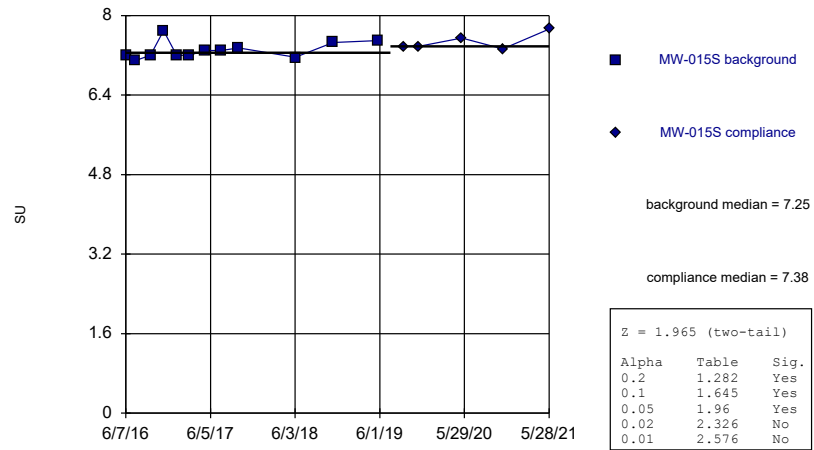
MW-015I



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

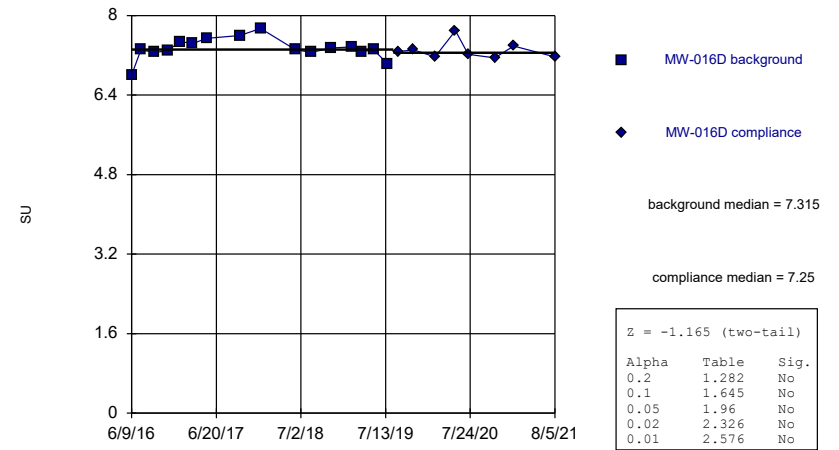
MW-015S



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

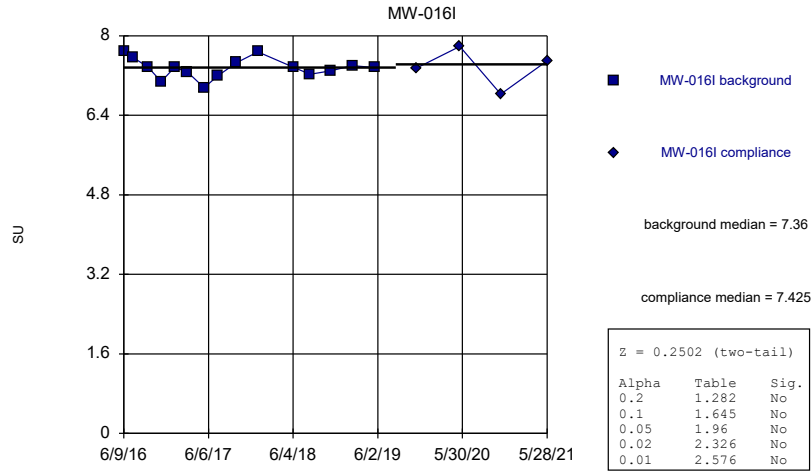
Mann-Whitney (Wilcoxon Rank Sum)

MW-016D



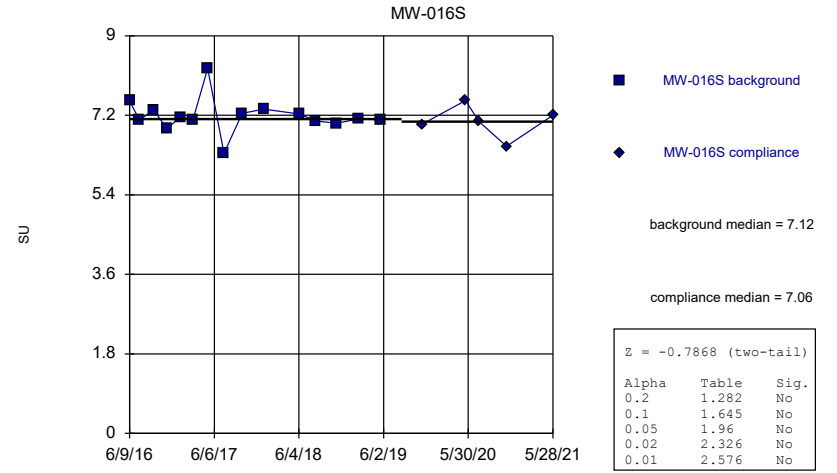
Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



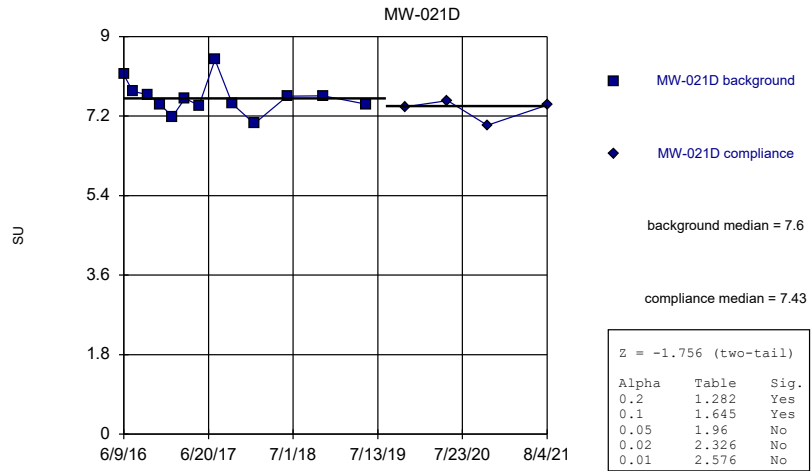
Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



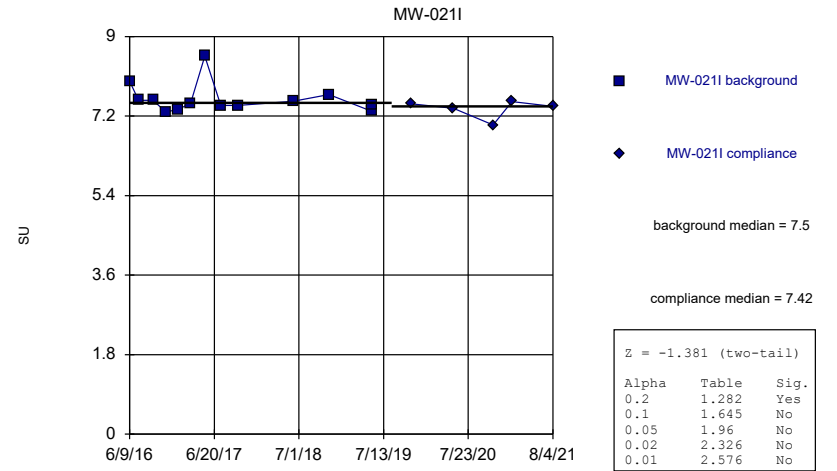
Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

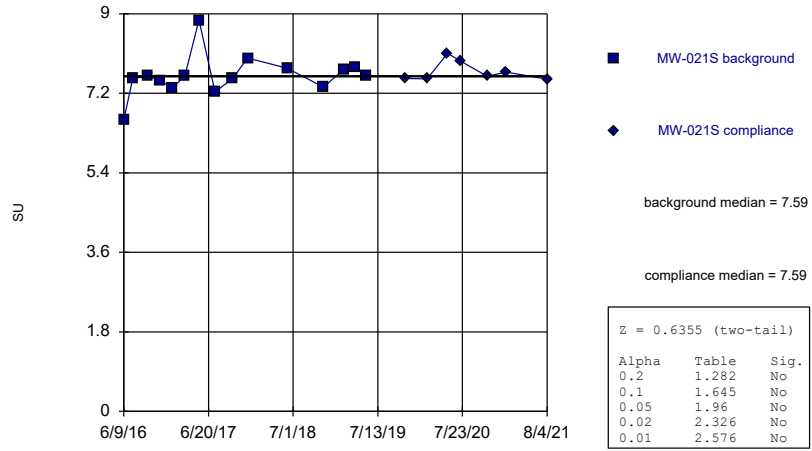
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

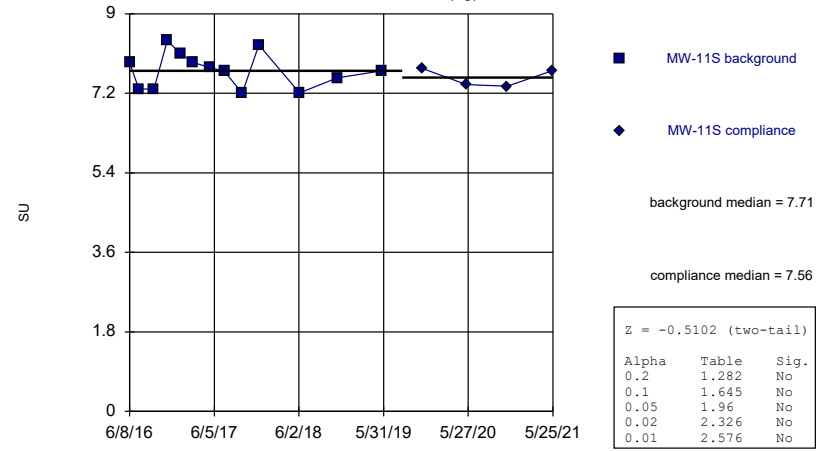
MW-021S



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

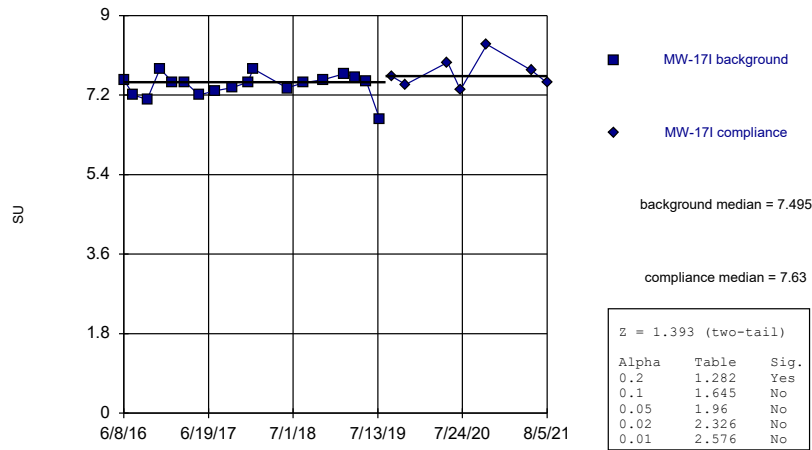
MW-11S (bg)



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

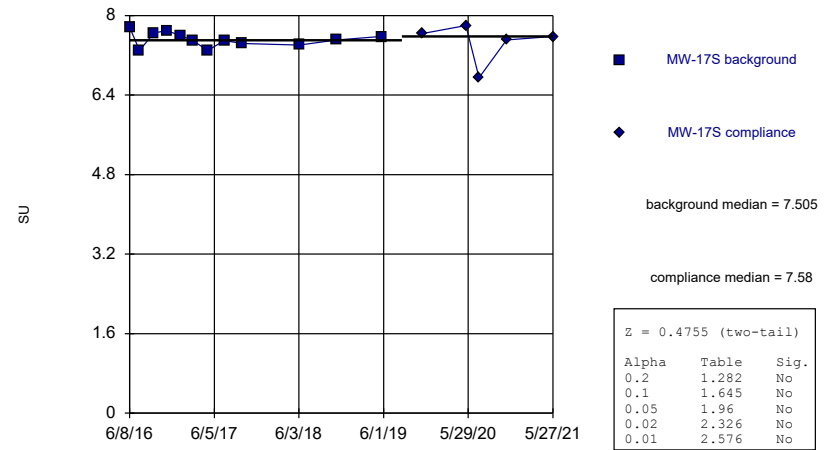
MW-171



Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

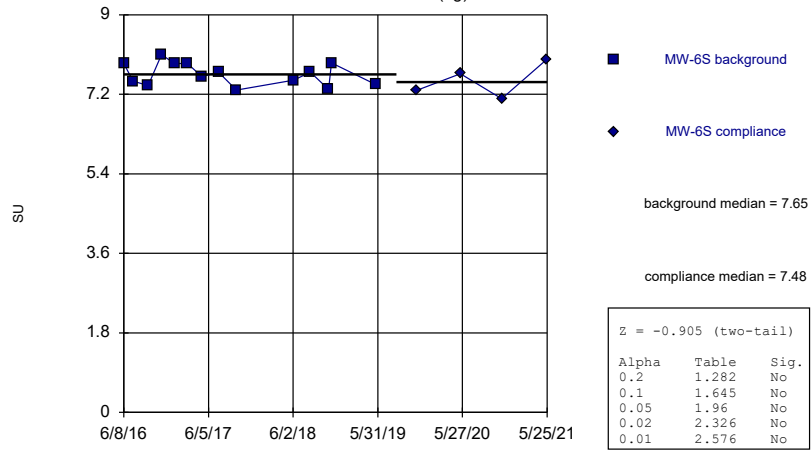
Mann-Whitney (Wilcoxon Rank Sum)

MW-17S



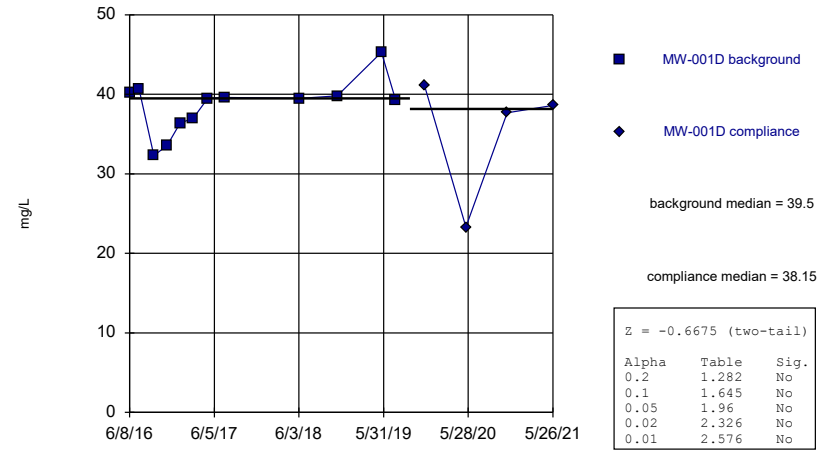
Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-6S (bg)



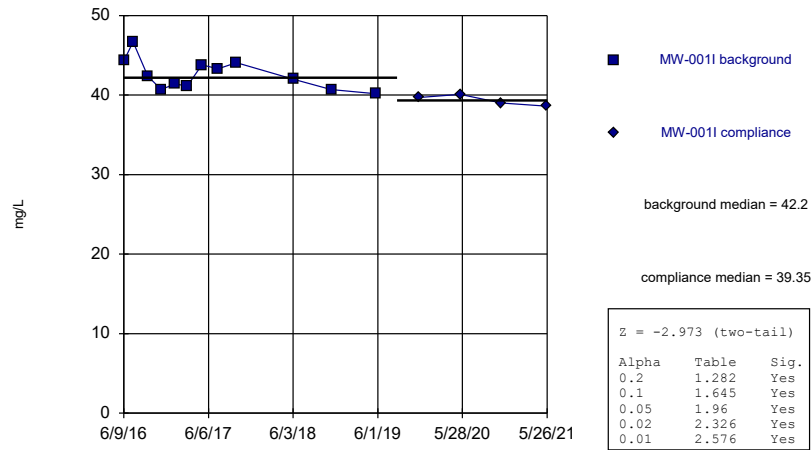
Constituent: pH, field Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-001D



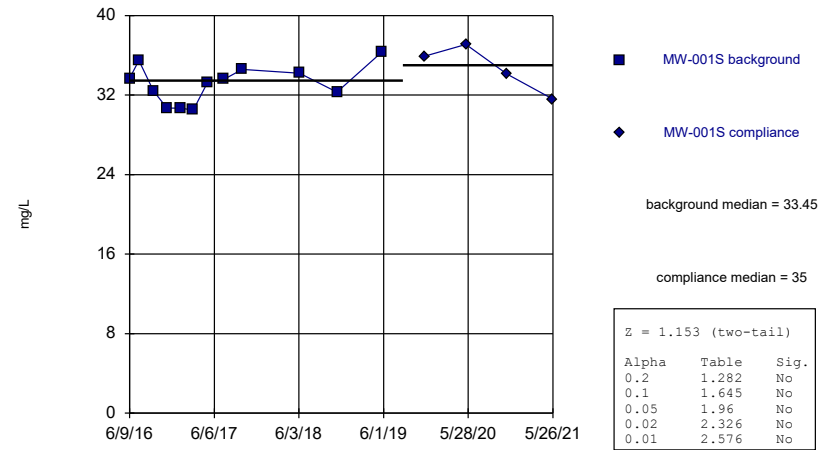
Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-001I



Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

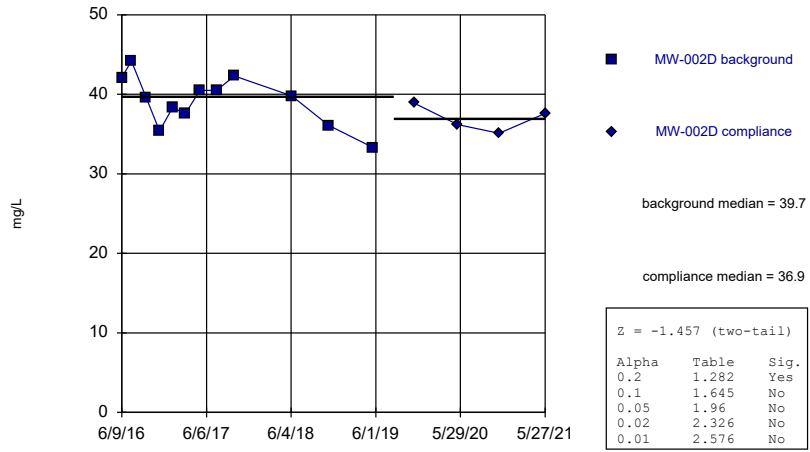
Mann-Whitney (Wilcoxon Rank Sum)
MW-001S



Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

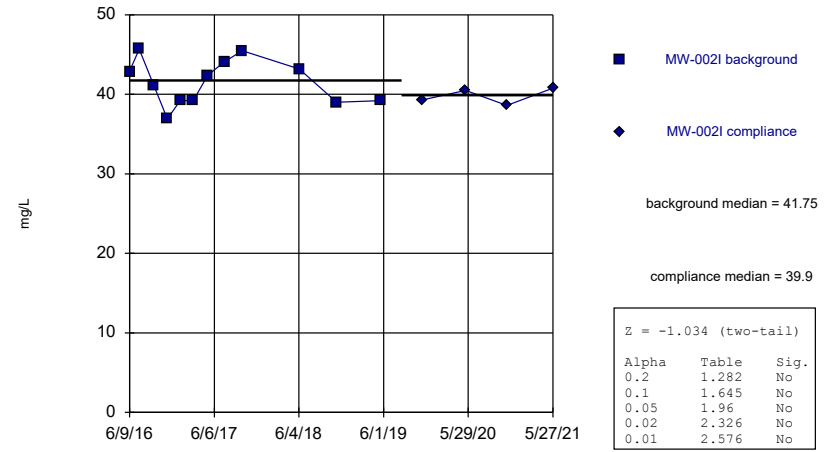
MW-002D



Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

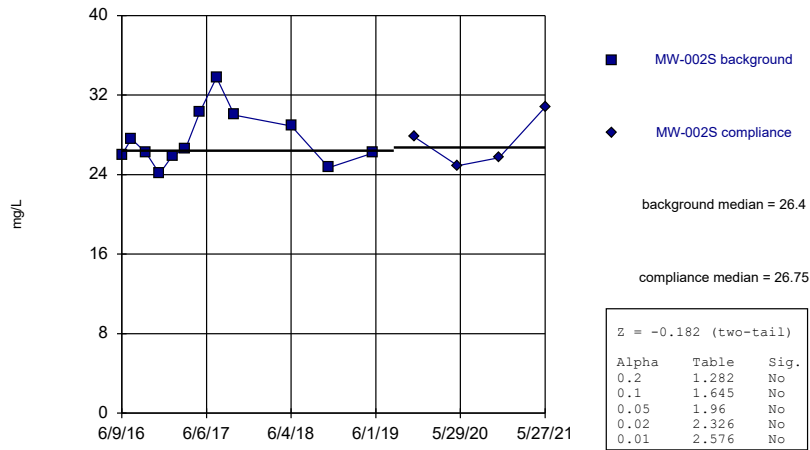
MW-002I



Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

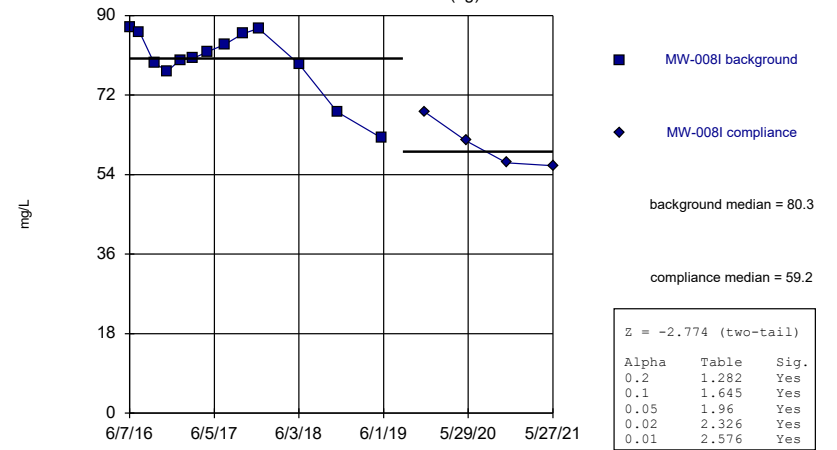
MW-002S



Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

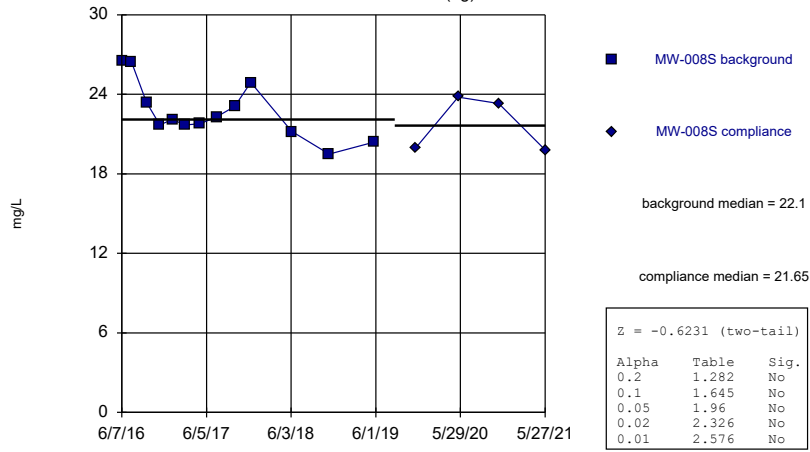
Mann-Whitney (Wilcoxon Rank Sum)

MW-008I (bg)



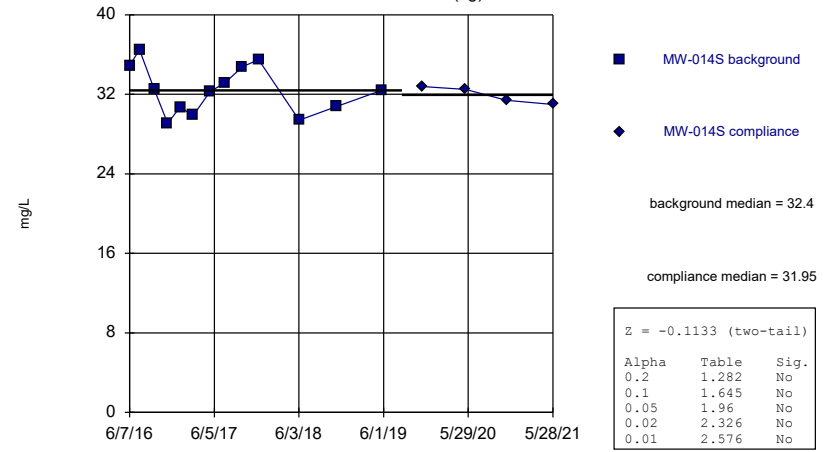
Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008S (bg)



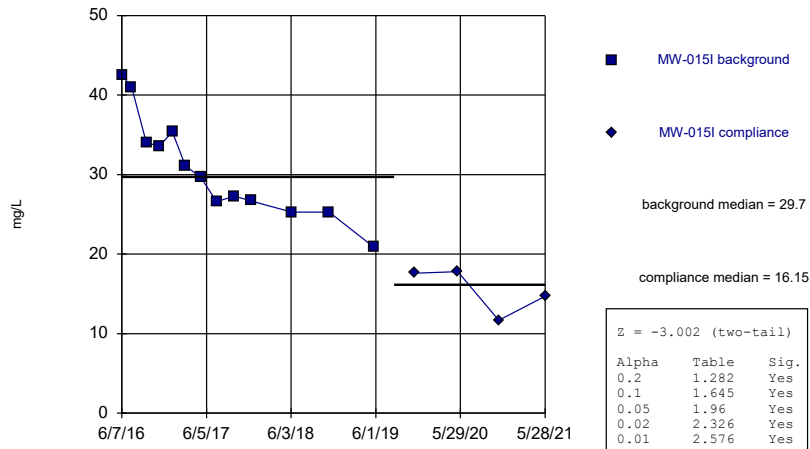
Constituent: Sulfate, total Analysis Run 9/14/2021 10:22 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-014S (bg)



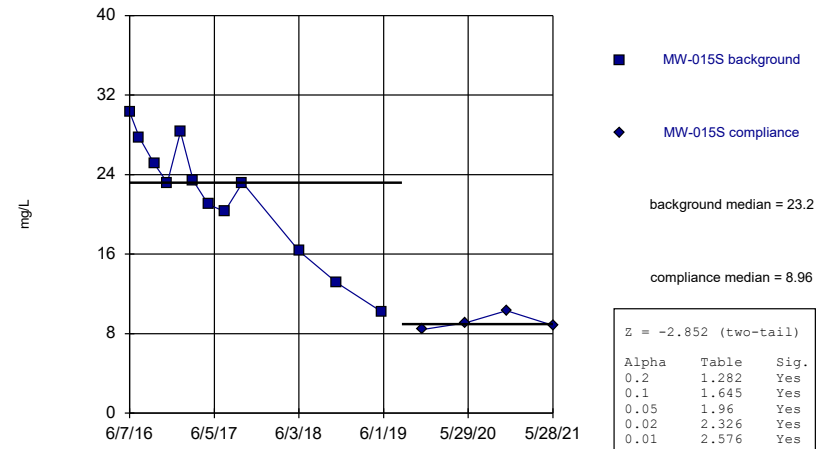
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-015I



Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

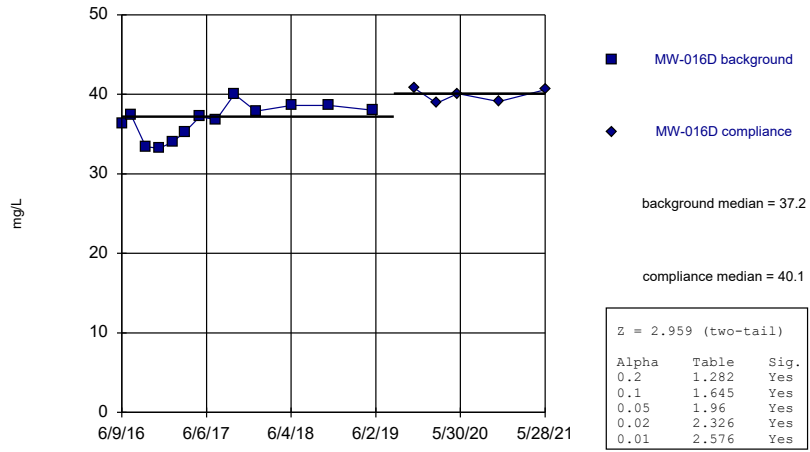
Mann-Whitney (Wilcoxon Rank Sum)
MW-015S



Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

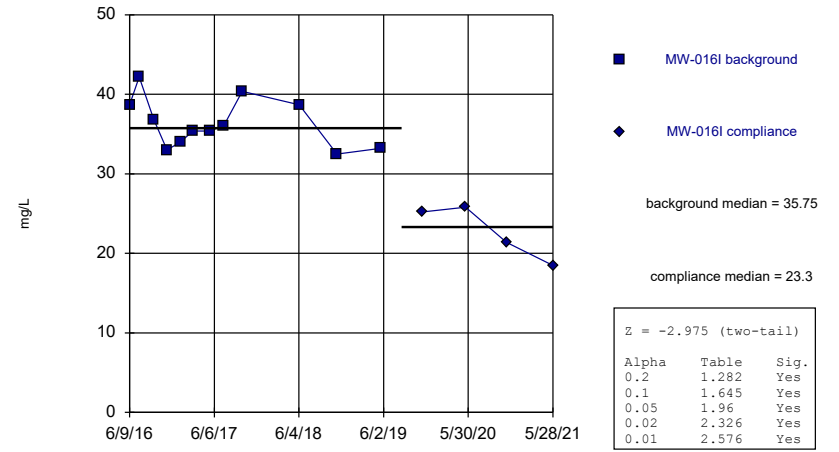
MW-016D



Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

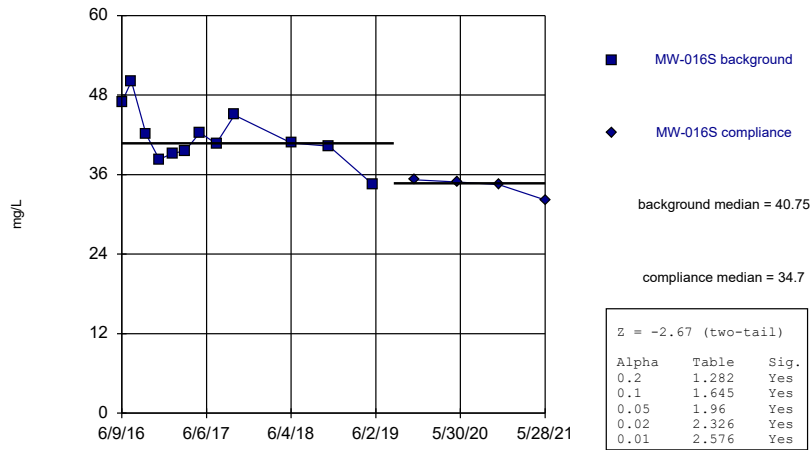
MW-016I



Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

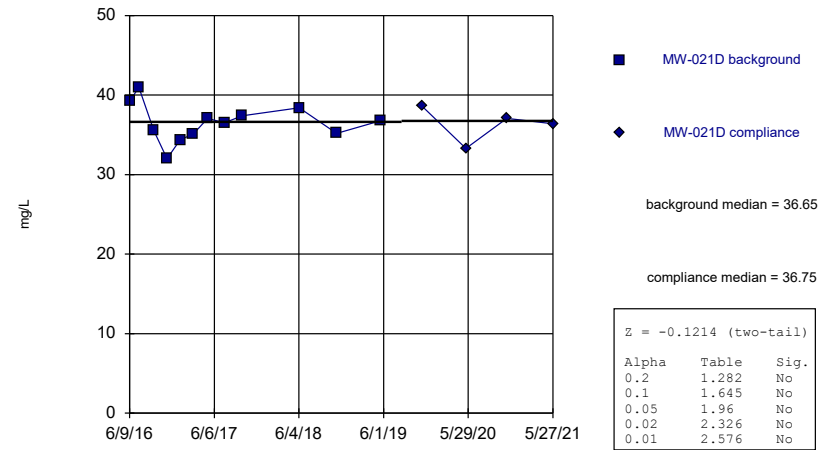
MW-016S



Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

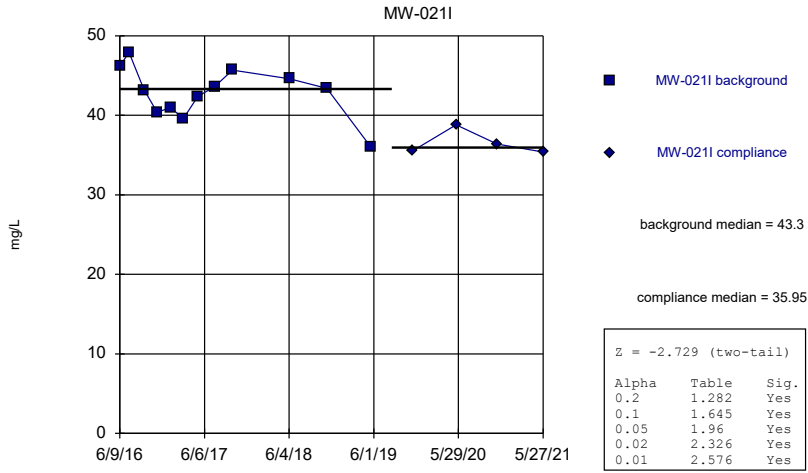
Mann-Whitney (Wilcoxon Rank Sum)

MW-021D



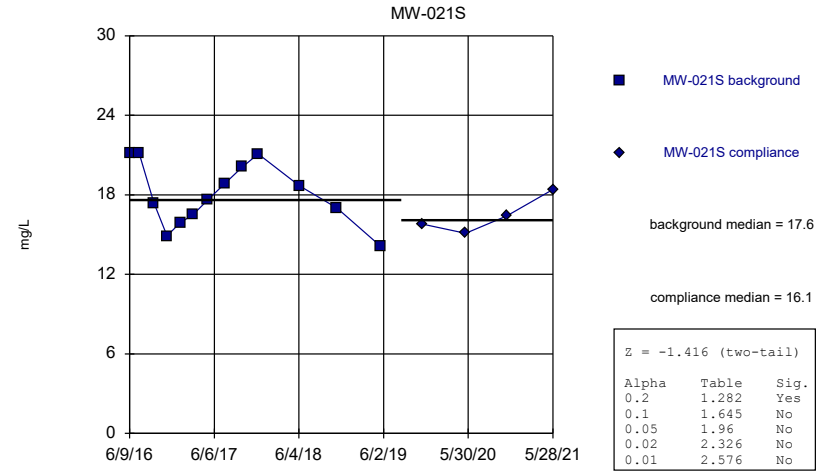
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



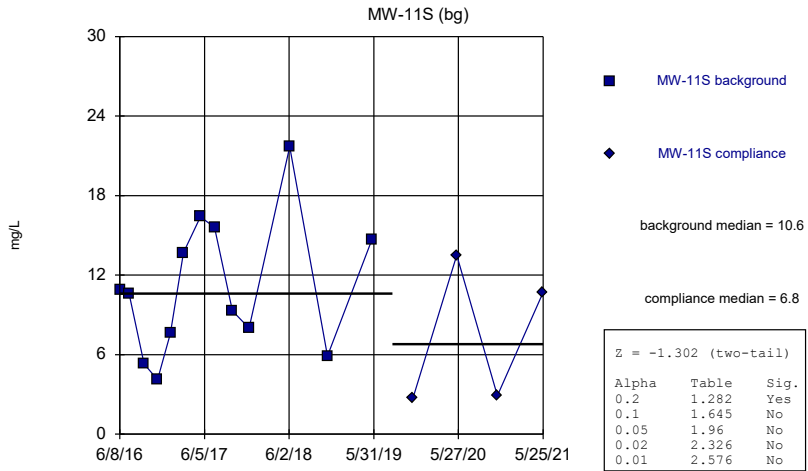
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



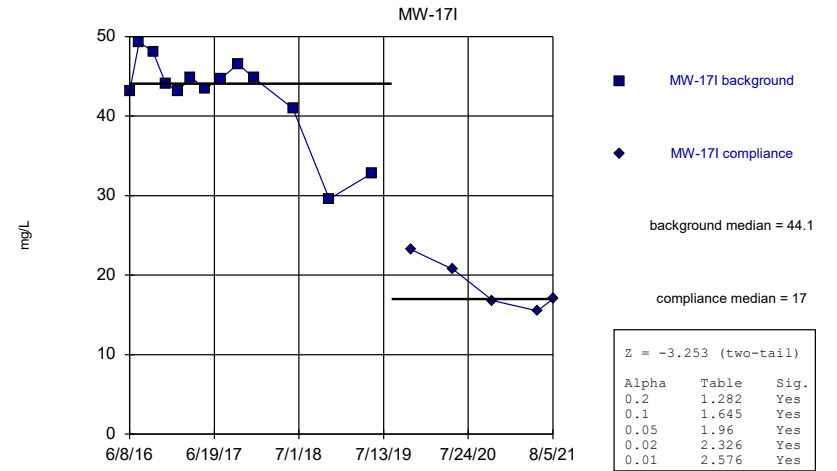
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



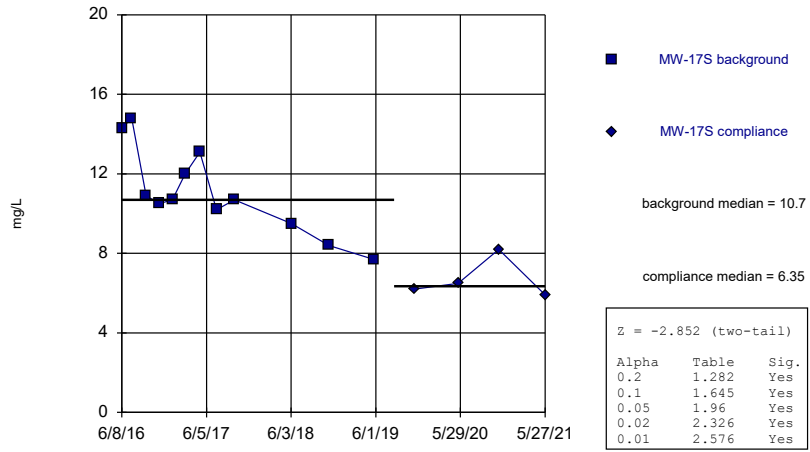
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



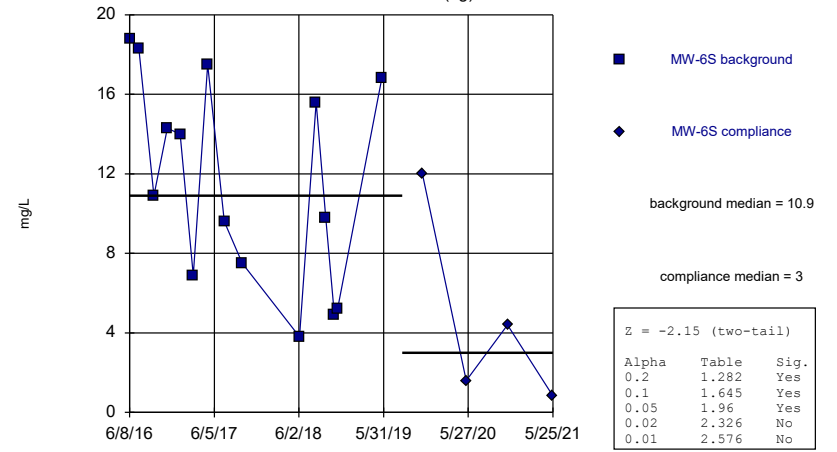
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-17S



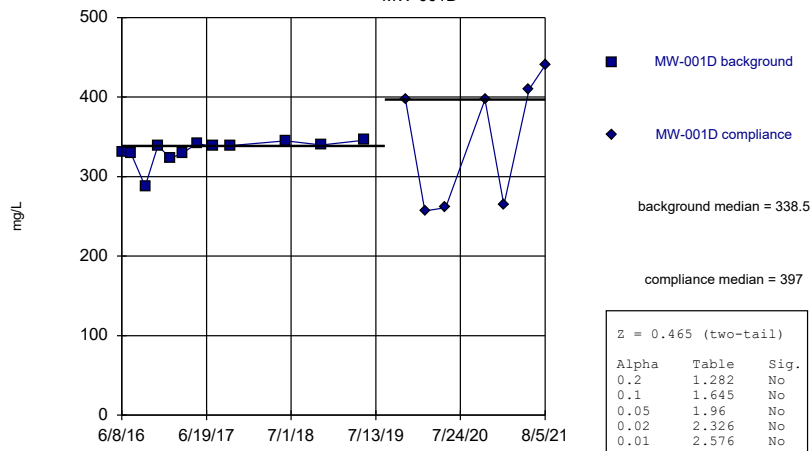
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-6S (bg)



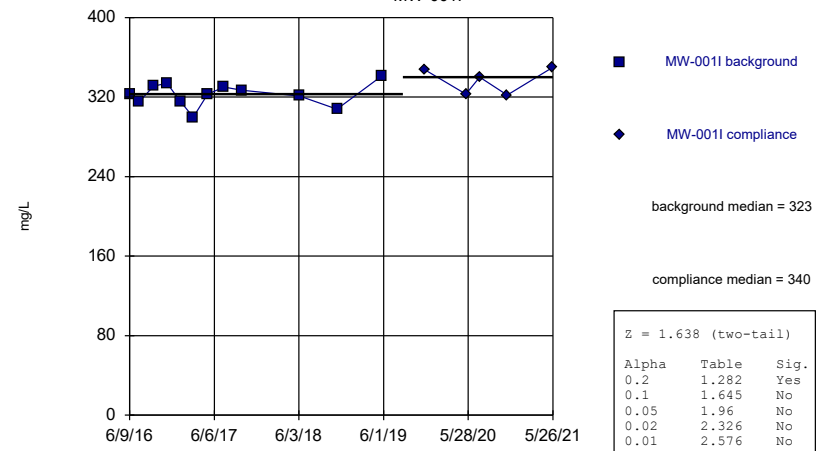
Constituent: Sulfate, total Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-001D



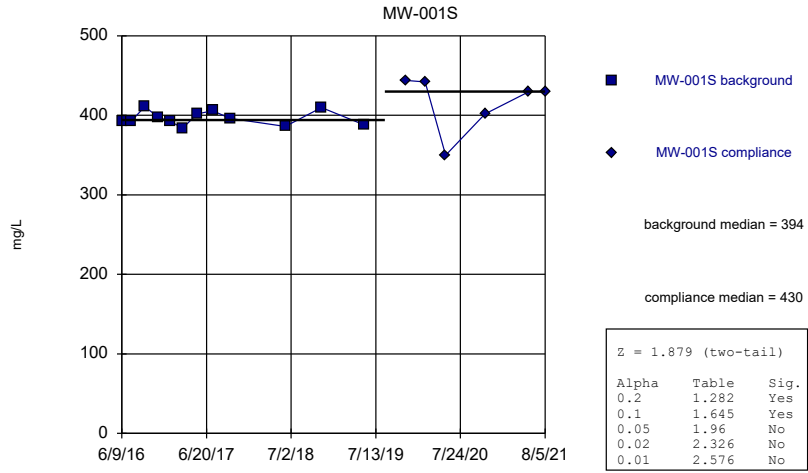
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-001I



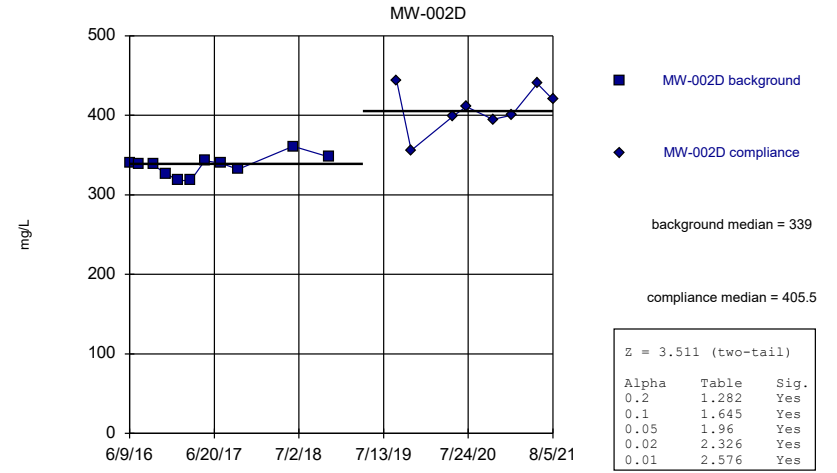
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



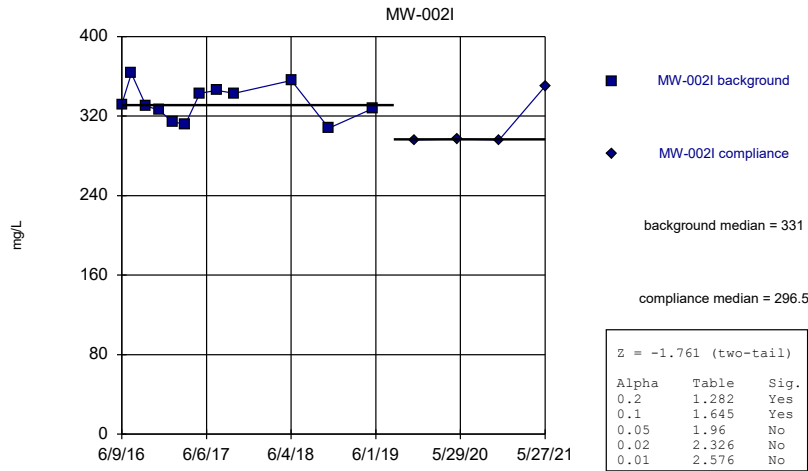
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



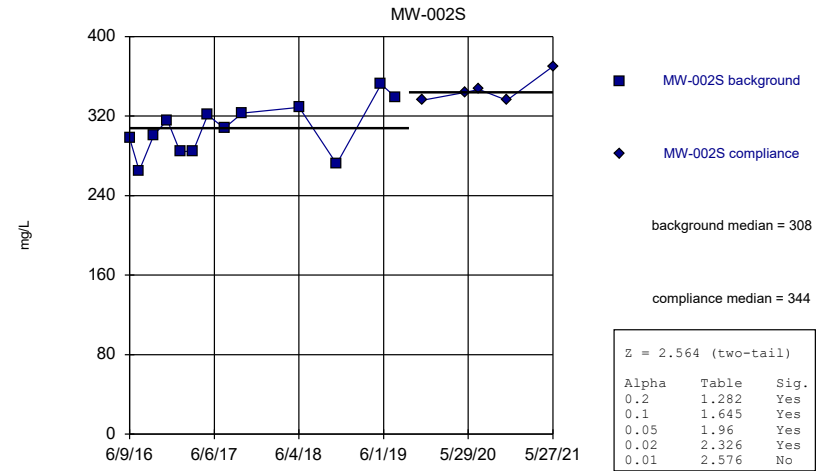
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



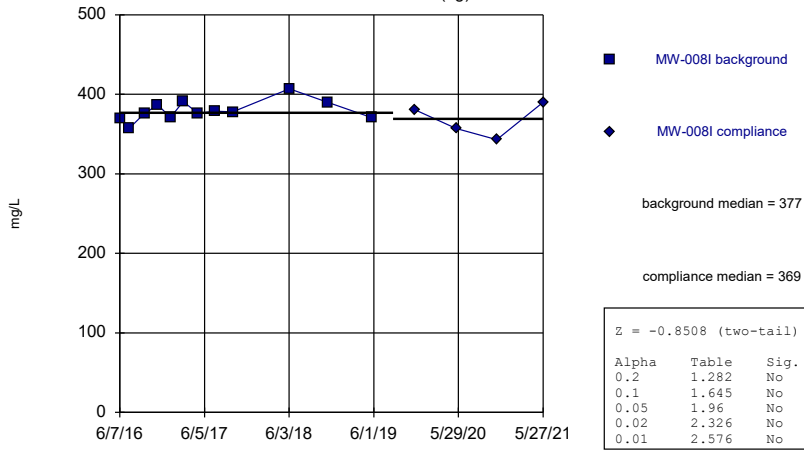
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



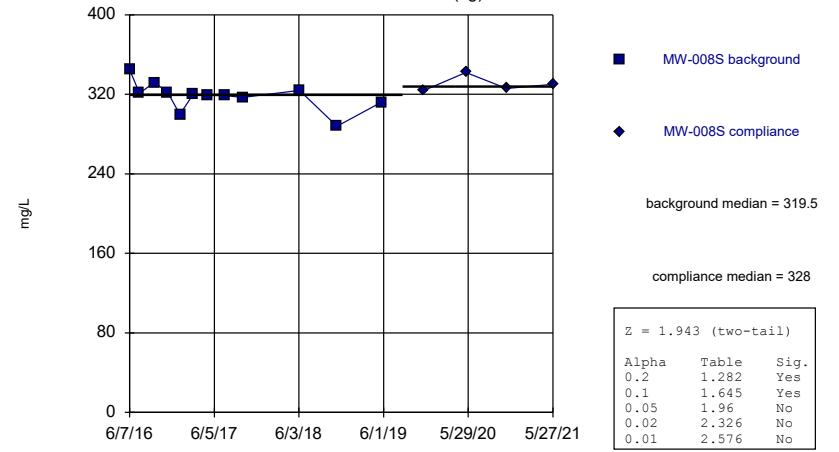
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008I (bg)



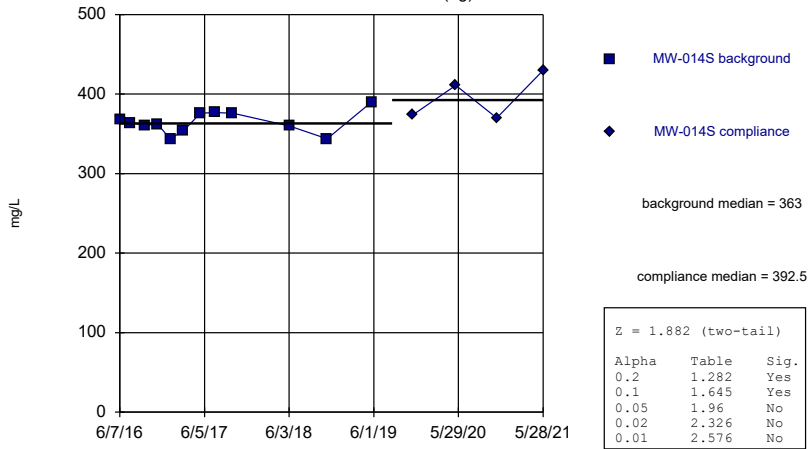
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-008S (bg)



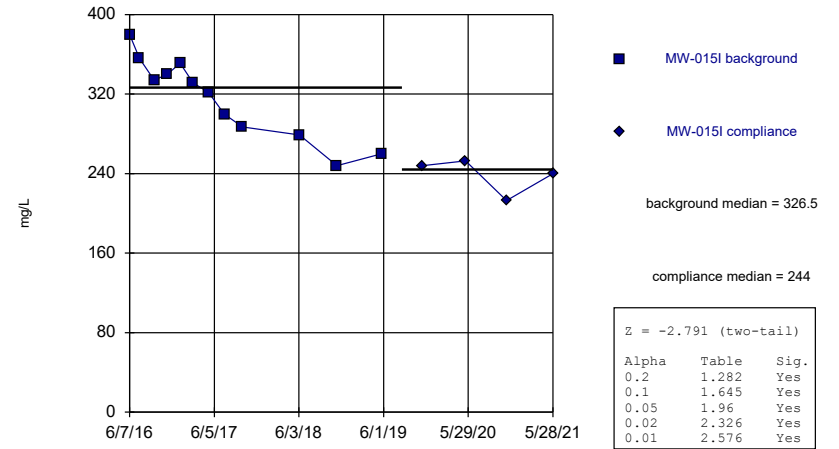
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-014S (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

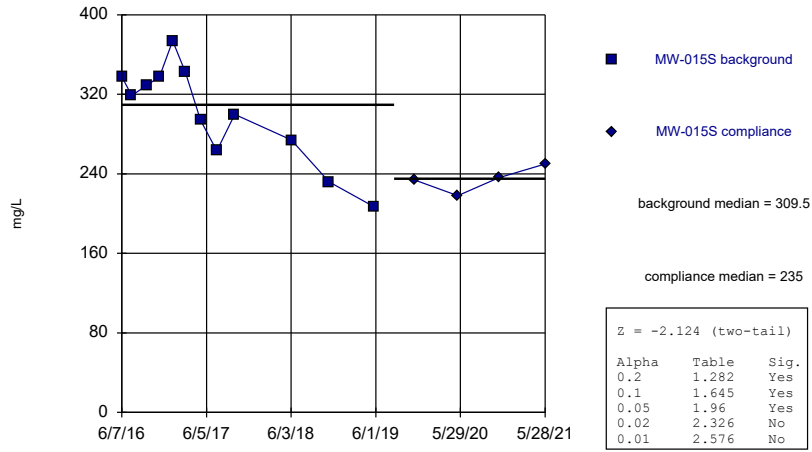
Mann-Whitney (Wilcoxon Rank Sum)
MW-015I



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

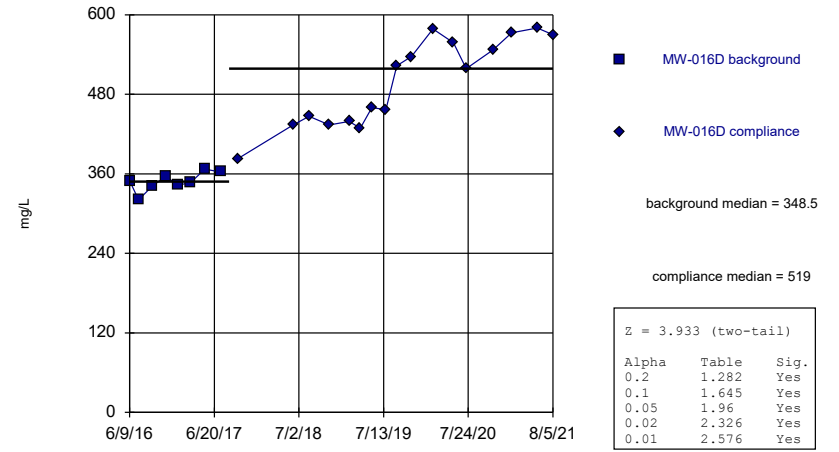
MW-015S



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

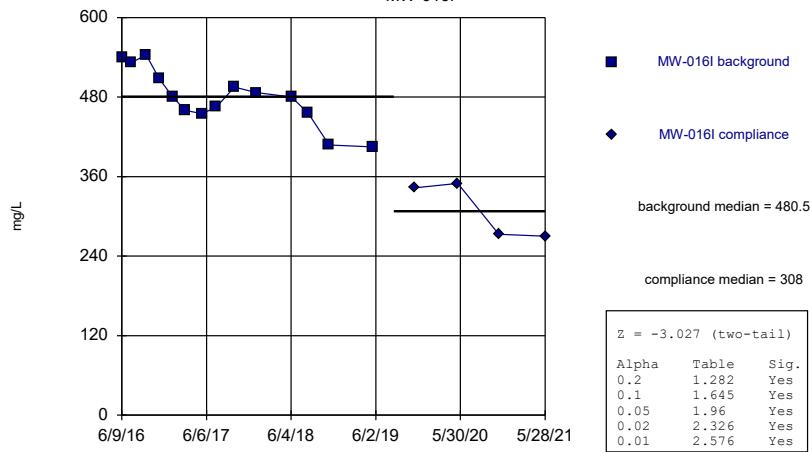
MW-016D



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

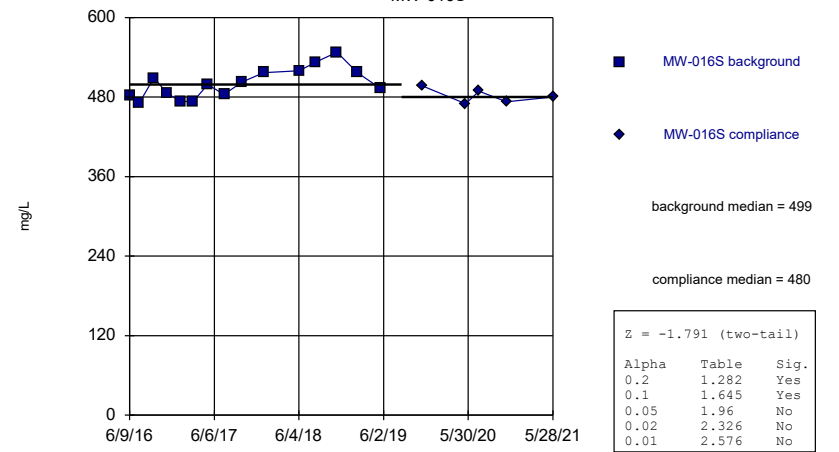
MW-016I



Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

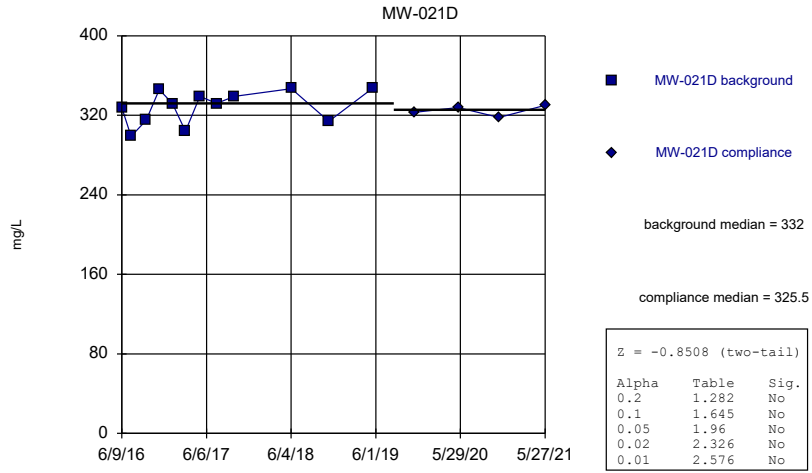
Mann-Whitney (Wilcoxon Rank Sum)

MW-016S



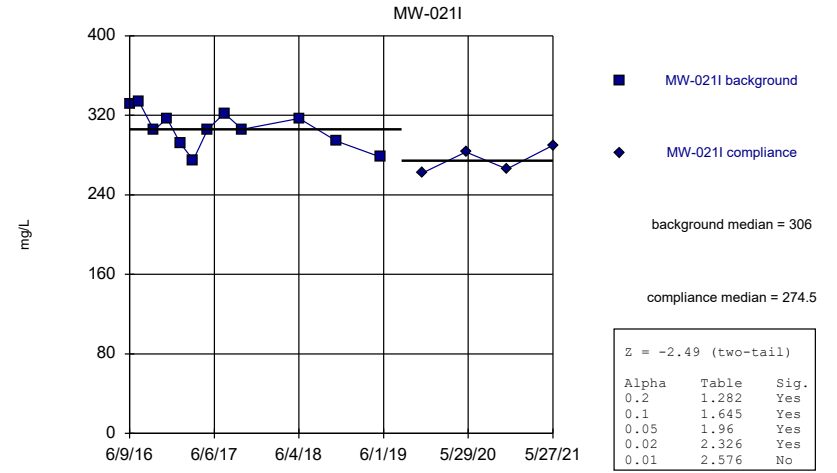
Constituent: Total Dissolved Solids [TDS] Analysis Run 9/14/2021 10:23 AM
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



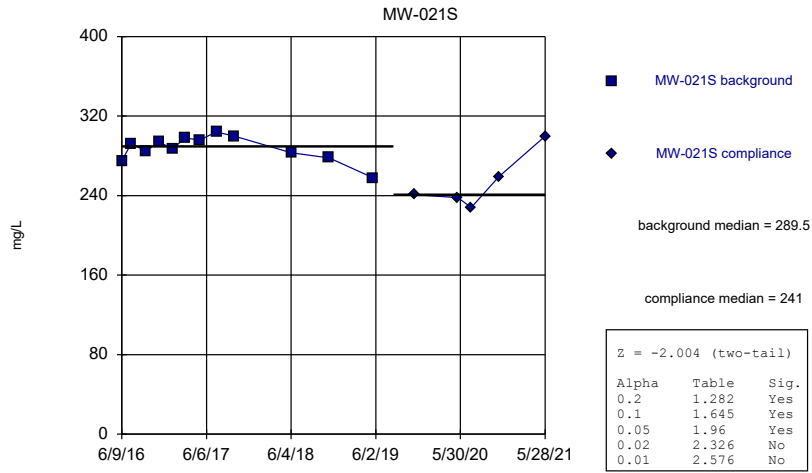
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



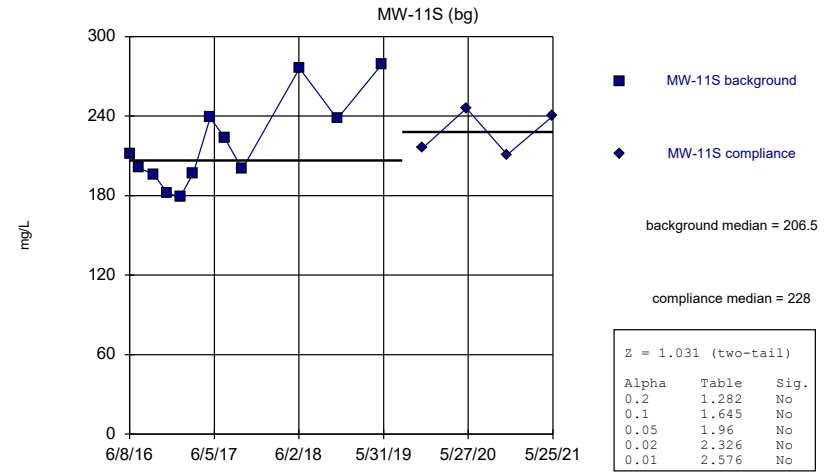
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



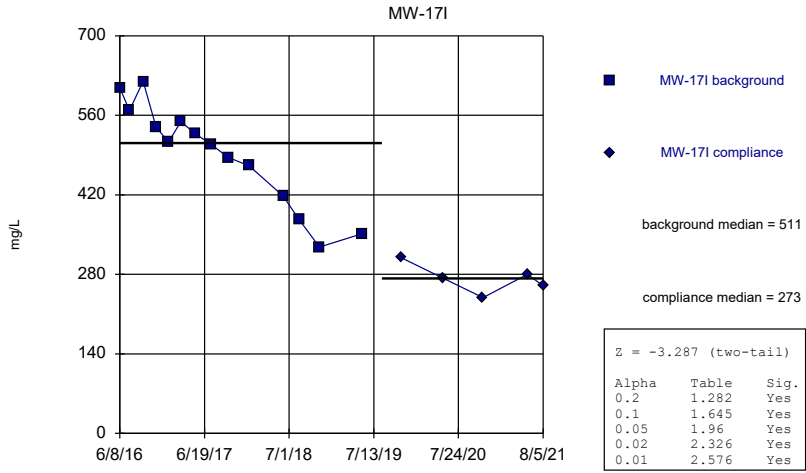
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



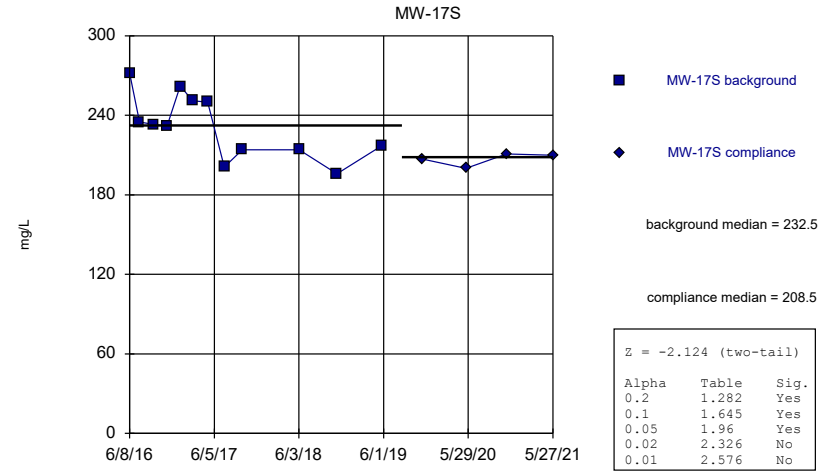
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Mann-Whitney (Wilcoxon Rank Sum)



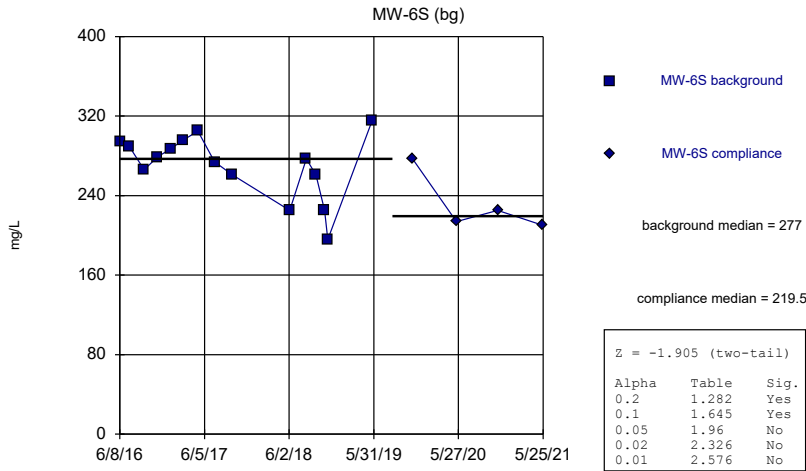
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Mann-Whitney (Wilcoxon Rank Sum)



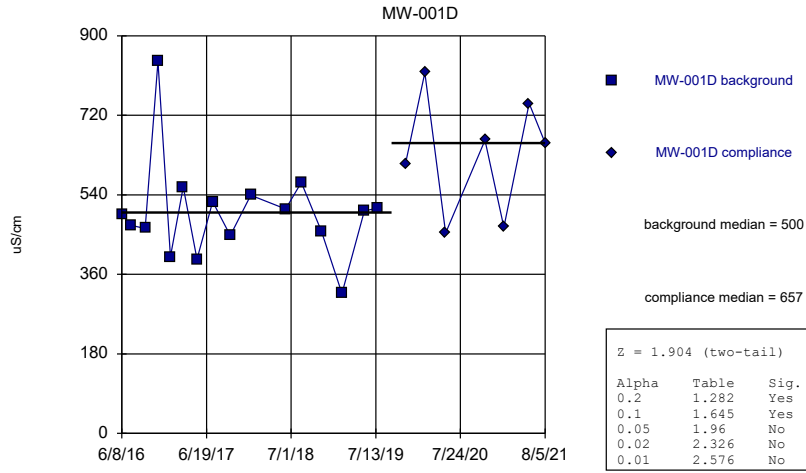
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



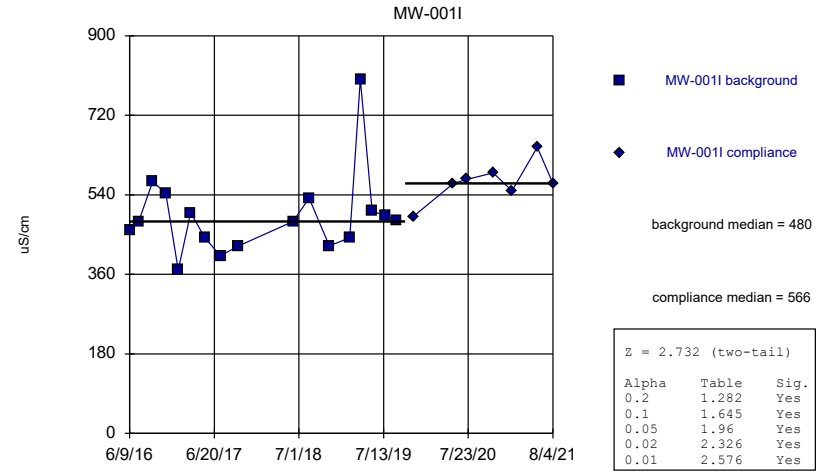
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Mann-Whitney (Wilcoxon Rank Sum)



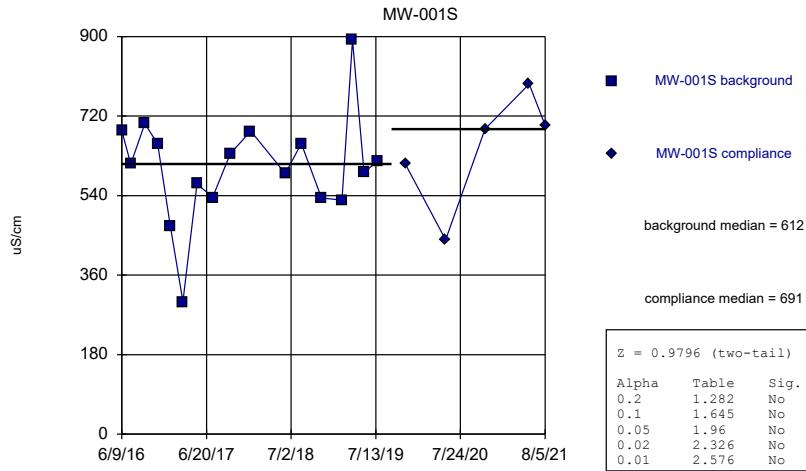
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



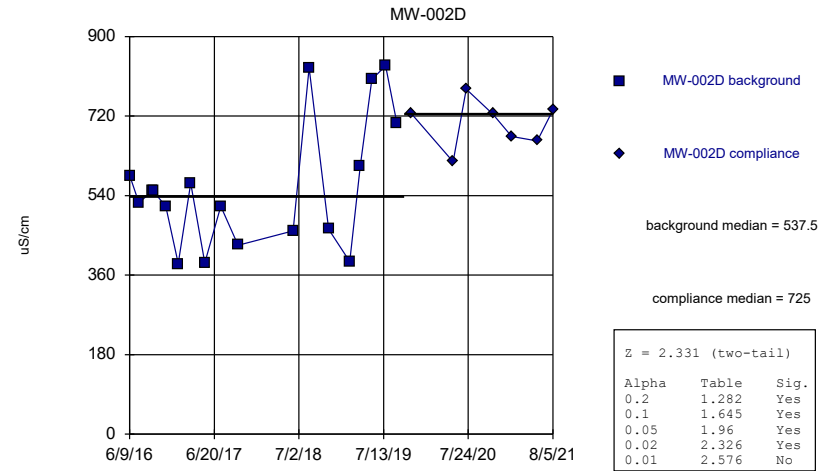
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



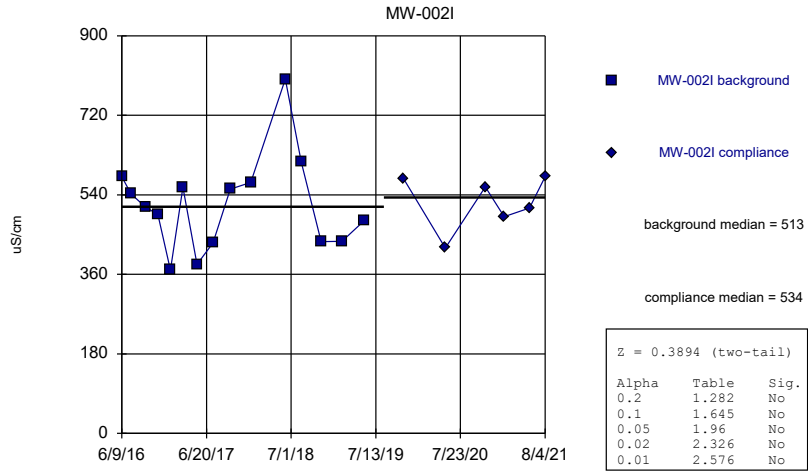
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



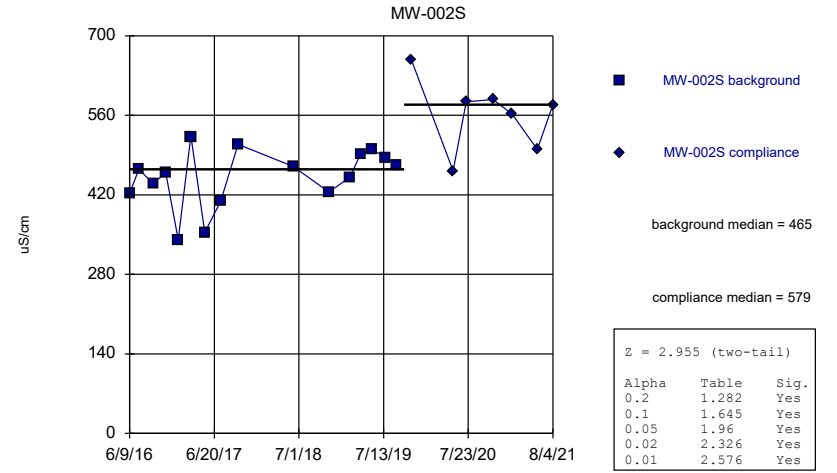
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Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



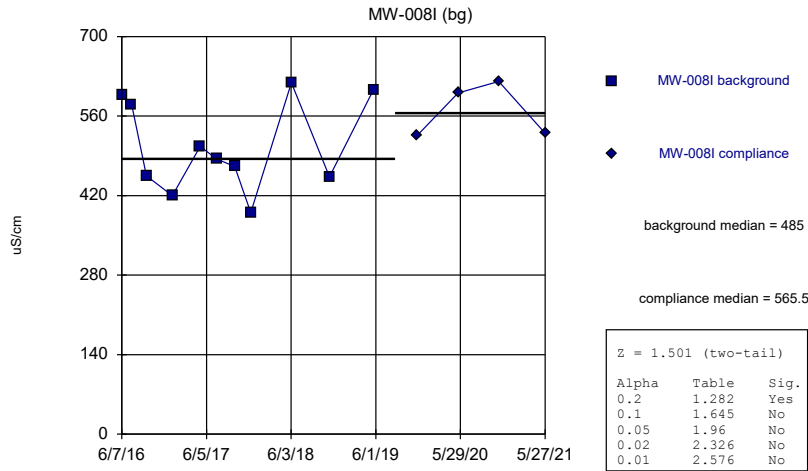
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Mann-Whitney (Wilcoxon Rank Sum)



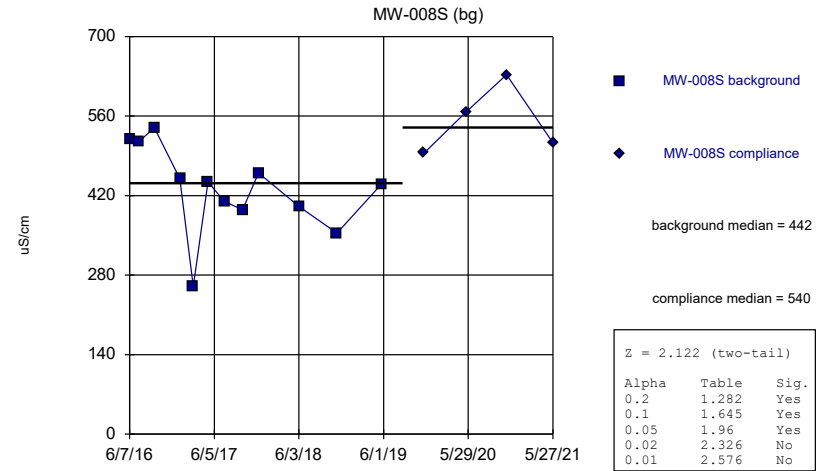
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



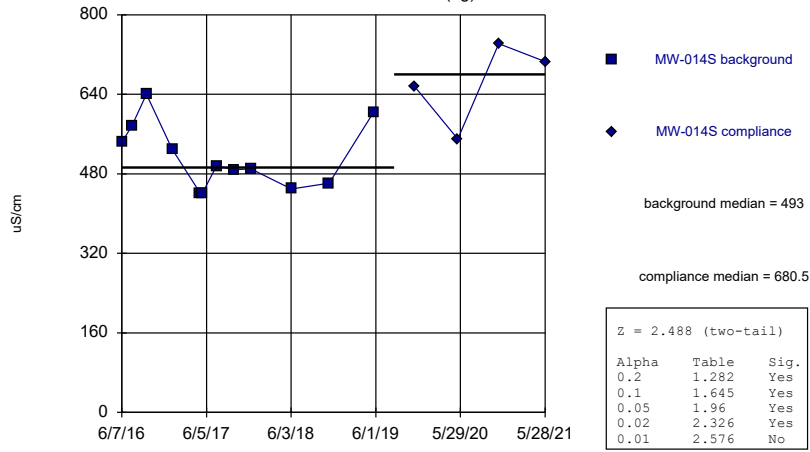
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Mann-Whitney (Wilcoxon Rank Sum)



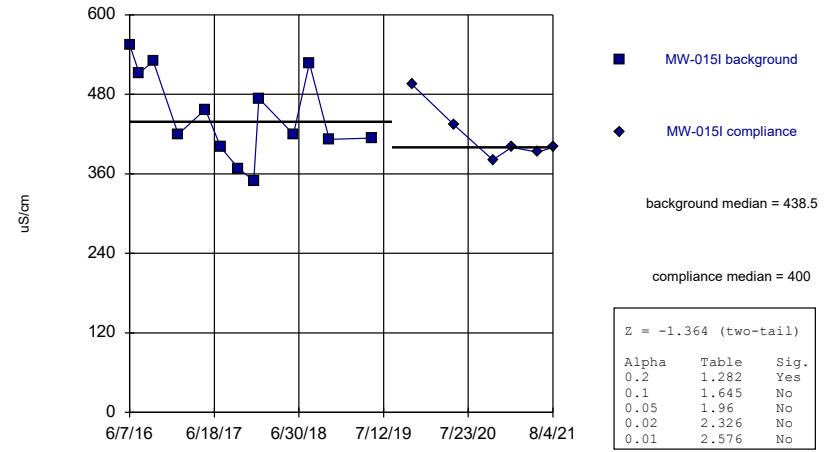
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-014S (bg)



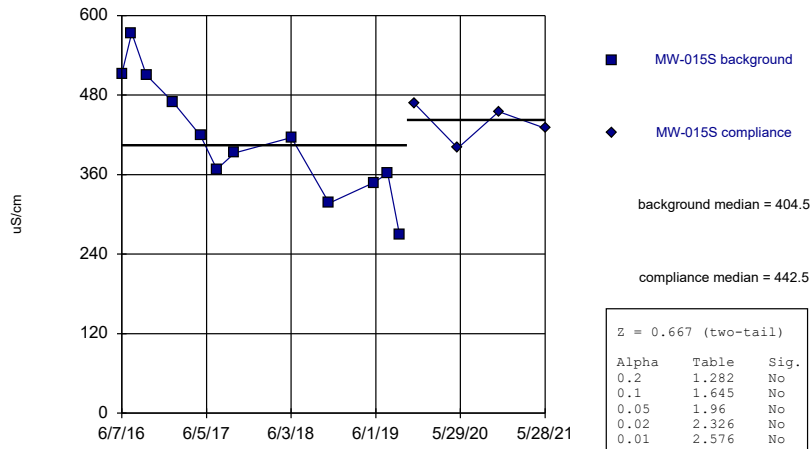
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-015I



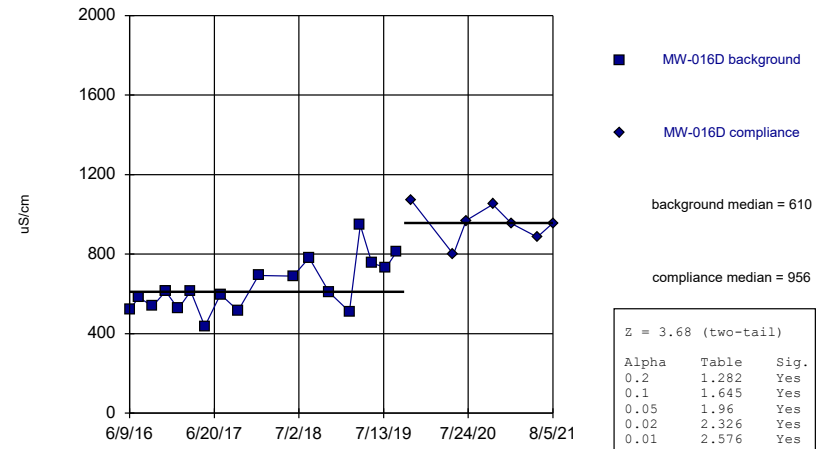
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Mann-Whitney (Wilcoxon Rank Sum)
MW-015S



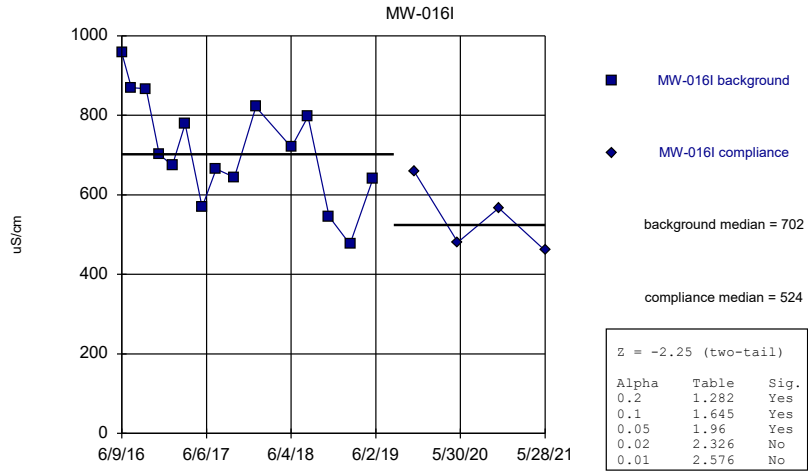
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)
MW-016D



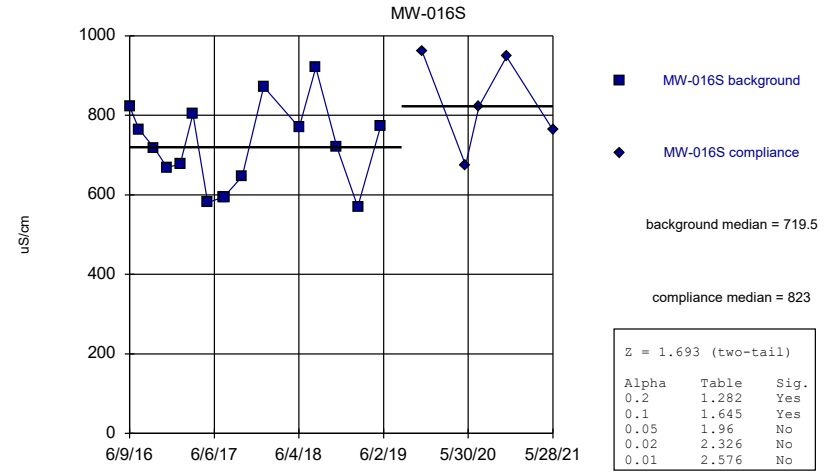
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



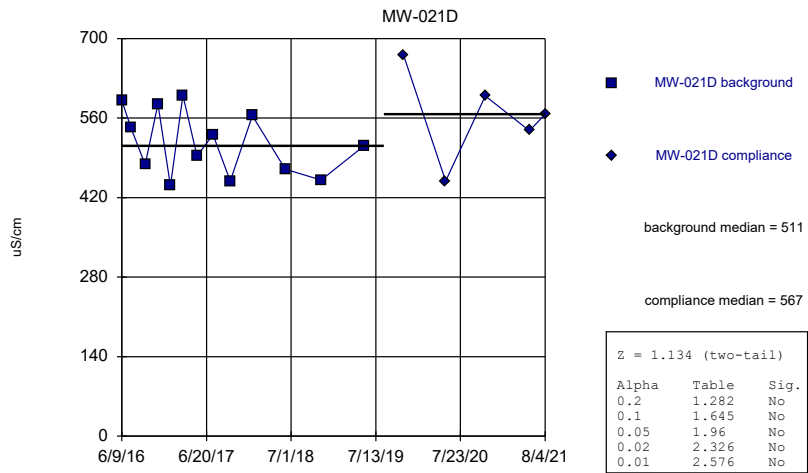
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Mann-Whitney (Wilcoxon Rank Sum)



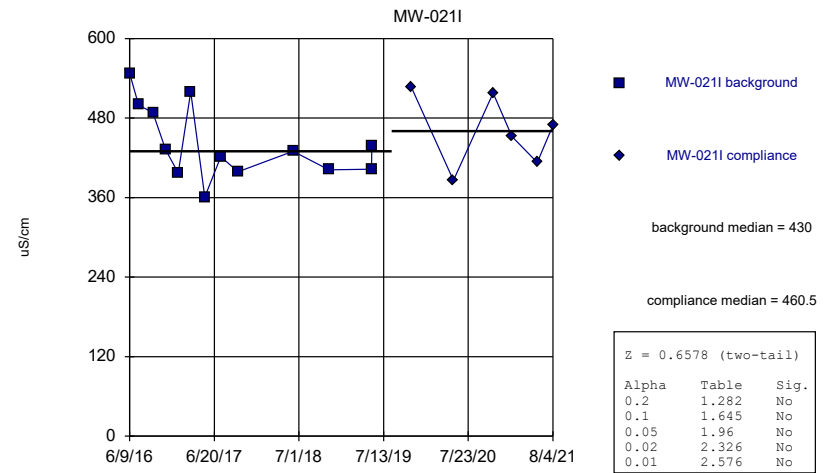
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Mann-Whitney (Wilcoxon Rank Sum)



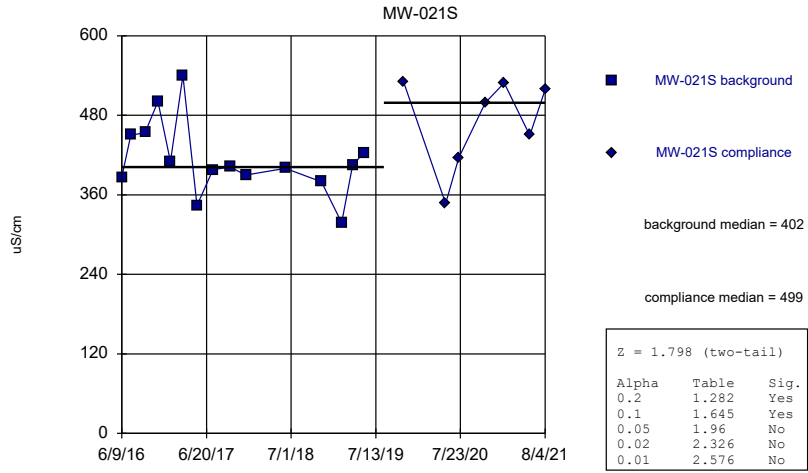
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



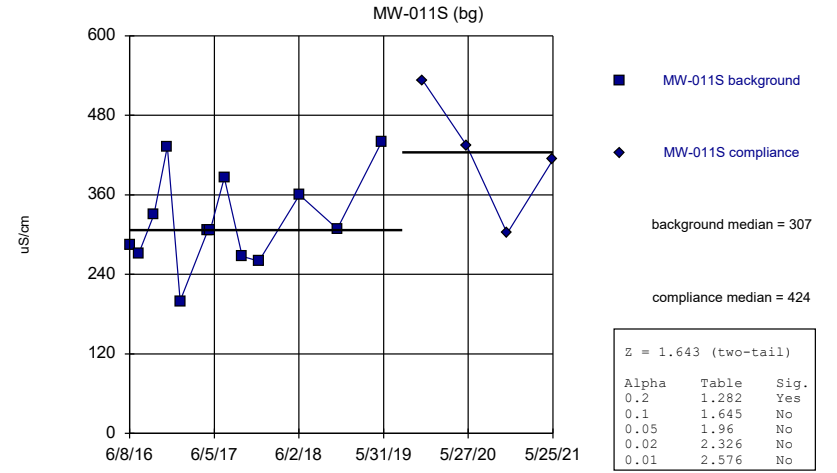
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Mann-Whitney (Wilcoxon Rank Sum)



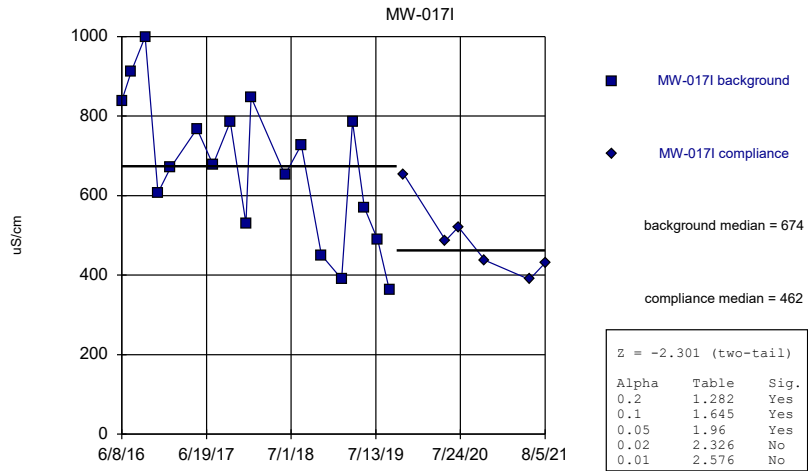
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



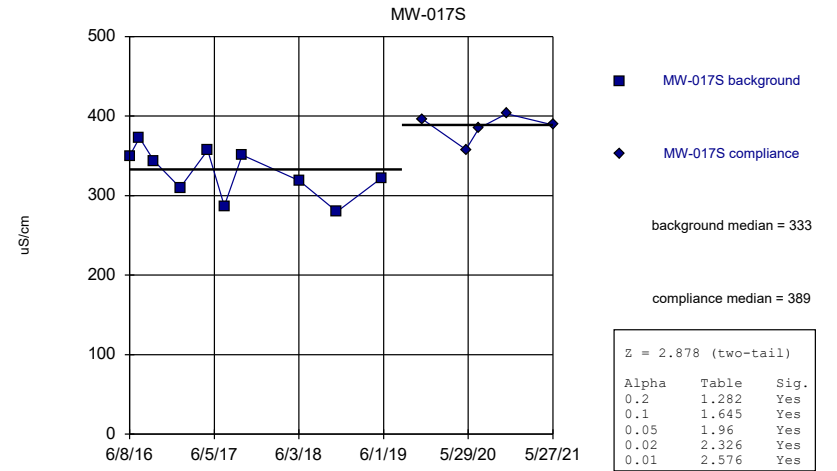
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 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)

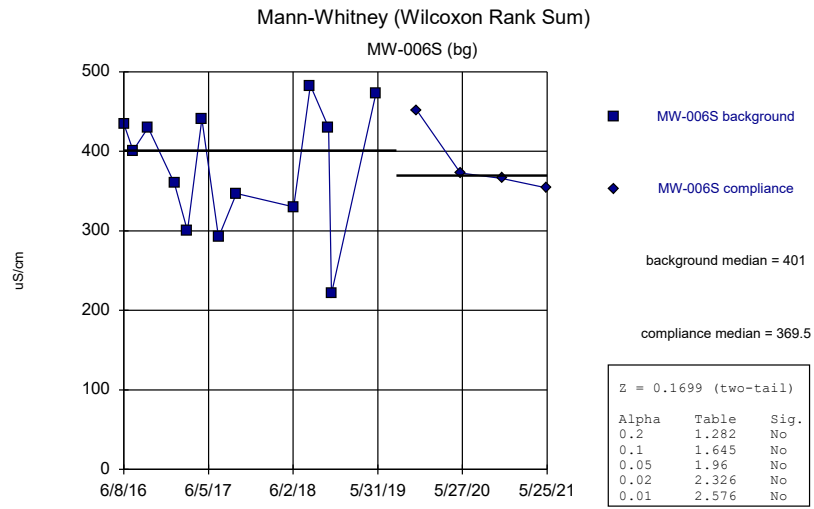


Constituent: Conductivity Analysis Run 10/27/2021 3:17 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Conductivity Analysis Run 10/27/2021 3:17 PM View: Conductivity
 Rockport Landfill Client: Geosyntec Data: Rockport_LF



Constituent: Conductivity Analysis Run 10/27/2021 3:17 PM View: Conductivity

Rockport Landfill Client: Geosyntec Data: Rockport_LF

Intrawell Prediction Limits - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 1/12/2022, 3:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	MW-001D	0.1289	n/a	n/a	1 future	n/a	18	0.1749	0.07257	5.556	None	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-001I	0.1227	n/a	n/a	1 future	n/a	17	0.1775	0.0672	11.76	None	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-001S	0.05875	n/a	n/a	1 future	n/a	16	0.02692	0.01222	18.75	Kaplan-Meier	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-002D	0.1001	n/a	n/a	1 future	n/a	17	0.1683	0.05759	29.41	Kaplan-Meier	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-002I	0.0662	n/a	n/a	1 future	n/a	18	0.1483	0.04294	33.33	Kaplan-Meier	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-002S	0.1023	n/a	n/a	1 future	n/a	16	0.04106	0.02353	12.5	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-006S	0.1456	n/a	n/a	1 future	n/a	19	0.1808	0.08015	15.79	Kaplan-Meier	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-008I	0.1143	n/a	n/a	1 future	n/a	16	0.1759	0.06229	6.25	None	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-008S	0.06183	n/a	n/a	1 future	n/a	16	0.025	0.01414	31.25	Kaplan-Meier	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-011S	0.1172	n/a	n/a	1 future	n/a	16	0.06125	0.02147	0	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-014S	0.06011	n/a	n/a	1 future	n/a	16	0.02318	0.01418	31.25	Kaplan-Meier	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-015I	0.08753	n/a	n/a	1 future	n/a	17	0.04129	0.01798	0	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-015S	0.1496	n/a	n/a	1 future	n/a	16	0.1746	0.08146	37.5	Kaplan-Meier	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-016D	0.09902	n/a	n/a	1 future	n/a	16	0.03425	0.02487	0	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-016I	0.1483	n/a	n/a	1 future	n/a	17	-3.453	0.6008	0	None	ln(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-016S	0.147	n/a	n/a	1 future	n/a	18	-3.393	0.5812	0	None	ln(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-017I	0.09528	n/a	n/a	1 future	n/a	17	0.05335	0.01631	0	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-017S	0.06493	n/a	n/a	1 future	n/a	16	0.027	0.01456	0	None	No	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-021D	0.1111	n/a	n/a	1 future	n/a	17	0.1572	0.06848	17.65	Kaplan-Meier	sqrt(x)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-021I	0.08348	n/a	n/a	1 future	n/a	16	0.2634	0.06667	31.25	Kaplan-Meier	x^(1/3)	0.0004115	Param Intra 1 of 2
Boron, total (mg/L)	MW-021S	0.06163	n/a	n/a	1 future	n/a	17	0.01993	0.01622	29.41	Kaplan-Meier	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-001D	84.38	n/a	n/a	1 future	n/a	17	67.64	6.511	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-001I	72.85	n/a	n/a	1 future	n/a	16	65.81	2.703	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-001S	78.12	n/a	n/a	1 future	n/a	16	69.69	3.236	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-002D	116.6	n/a	n/a	1 future	n/a	18	79.8	14.51	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-002I	78.91	n/a	n/a	1 future	n/a	16	68.41	4.03	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-002S	65.92	n/a	n/a	1 future	n/a	16	56.71	3.536	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-006S	56.43	n/a	n/a	1 future	n/a	19	46.51	3.961	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-008I	82.21	n/a	n/a	1 future	n/a	16	71.47	4.126	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-008S	49.22	n/a	n/a	1 future	n/a	16	41.61	2.922	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-011S	64.51	n/a	n/a	1 future	n/a	16	46.96	6.739	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-014S	80.2	n/a	n/a	1 future	n/a	16	4.16	0.0861	0	None	ln(x)	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-015I	55.38	n/a	n/a	1 future	n/a	16	46.59	3.376	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-015S	66.4	n/a	n/a	1 future	n/a	16	n/a	n/a	0	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
Calcium, total (mg/L)	MW-016D	126	n/a	n/a	1 future	n/a	23	89.66	15.09	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-016I	100.6	n/a	n/a	1 future	n/a	8	55.25	12.88	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-016S	118.6	n/a	n/a	1 future	n/a	18	99.98	7.352	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-017I	58.46	n/a	n/a	1 future	n/a	8	41.94	4.689	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-017S	40.7	n/a	n/a	1 future	n/a	16	34.26	2.473	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-021D	80.22	n/a	n/a	1 future	n/a	16	69.69	4.046	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-021I	72.88	n/a	n/a	1 future	n/a	16	62.58	3.957	0	None	No	0.0004115	Param Intra 1 of 2
Calcium, total (mg/L)	MW-021S	64.9	n/a	n/a	1 future	n/a	16	54.89	3.843	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-001D	65.47	n/a	n/a	1 future	n/a	17	37.45	10.9	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-001I	42.08	n/a	n/a	1 future	n/a	8	36.35	1.626	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-001S	41.97	n/a	n/a	1 future	n/a	21	33.71	3.371	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-002D	131.7	n/a	n/a	1 future	n/a	8	83.26	13.74	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-002I	34.02	n/a	n/a	1 future	n/a	18	27.76	2.467	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-002S	31.47	n/a	n/a	1 future	n/a	21	24.38	2.892	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-006S	13.1	n/a	n/a	1 future	n/a	19	5.55	3.014	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-008I	22.92	n/a	n/a	1 future	n/a	17	20.61	0.901	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-008S	28.39	n/a	n/a	1 future	n/a	17	23.38	1.948	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-011S	9.87	n/a	n/a	1 future	n/a	17	n/a	n/a	0	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Chloride, total (mg/L)	MW-014S	31.69	n/a	n/a	1 future	n/a	17	28.28	1.329	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-015I	34.23	n/a	n/a	1 future	n/a	8	19.29	4.241	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-015S	26.03	n/a	n/a	1 future	n/a	16	13.83	4.684	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-016D	161.3	n/a	n/a	1 future	n/a	8	124.4	10.47	0	None	No	0.0004115	Param Intra 1 of 2

Intrawell Prediction Limits - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 1/12/2022, 3:46 PM

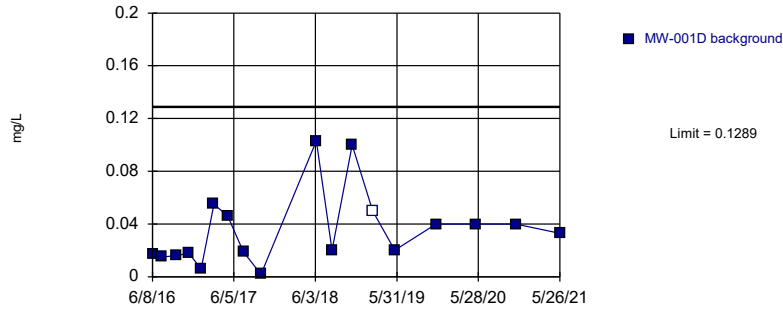
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride, total (mg/L)	MW-016I	98.44	n/a	n/a	1 future	n/a	8	38.95	16.88	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-016S	27.71	n/a	n/a	1 future	n/a	17	19.86	3.05	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-017I	90.84	n/a	n/a	1 future	n/a	8	41.58	13.98	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-017S	15.47	n/a	n/a	1 future	n/a	16	11.87	1.382	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-021D	20.45	n/a	n/a	1 future	n/a	16	19.33	0.4328	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-021I	23.06	n/a	n/a	1 future	n/a	16	19.76	1.267	0	None	No	0.0004115	Param Intra 1 of 2
Chloride, total (mg/L)	MW-021S	20.22	n/a	n/a	1 future	n/a	20	16.58	1.474	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-001D	856.8	n/a	n/a	1 future	n/a	23	539.8	131.5	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-001I	746.8	n/a	n/a	1 future	n/a	8	558.3	53.51	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-001S	912.7	n/a	n/a	1 future	n/a	22	613.8	122.9	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-002D	936.4	n/a	n/a	1 future	n/a	25	601.2	141.4	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-002I	753	n/a	n/a	1 future	n/a	21	518.8	95.54	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-002S	785.9	n/a	n/a	1 future	n/a	8	550.6	66.77	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-006S	564.5	n/a	n/a	1 future	n/a	17	381.6	71.12	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-008I	729.7	n/a	n/a	1 future	n/a	15	524.1	77.04	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-008S	696	n/a	n/a	1 future	n/a	16	462.3	89.73	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-011S	562.6	n/a	n/a	1 future	n/a	17	343.5	85.23	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-014S	799.2	n/a	n/a	1 future	n/a	16	550.9	95.35	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-015I	584.5	n/a	n/a	1 future	n/a	20	440	58.44	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-015S	623.4	n/a	n/a	1 future	n/a	16	419.4	78.36	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-016D	1287	n/a	n/a	1 future	n/a	8	937	99.37	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-016I	1038	n/a	n/a	1 future	n/a	19	678.6	143.3	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-016S	1037	n/a	n/a	1 future	n/a	21	746.1	118.5	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-017I	1057	n/a	n/a	1 future	n/a	24	624.4	180.8	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-017S	514.3	n/a	n/a	1 future	n/a	8	356.5	44.79	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-021D	697.1	n/a	n/a	1 future	n/a	18	529.5	66.02	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-021I	584.9	n/a	n/a	1 future	n/a	19	447.6	54.8	0	None	No	0.0004115	Param Intra 1 of 2
Conductivity (uS/cm)	MW-021S	588.6	n/a	n/a	1 future	n/a	22	431.5	64.64	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-001D	0.3332	n/a	n/a	1 future	n/a	16	0.2813	0.01996	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-001I	0.4645	n/a	n/a	1 future	n/a	17	0.3788	0.03333	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-001S	0.6996	n/a	n/a	1 future	n/a	16	0.5969	0.03945	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-002D	0.2287	n/a	n/a	1 future	n/a	17	0.1982	0.01185	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-002I	0.3925	n/a	n/a	1 future	n/a	16	0.3219	0.02713	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-002S	0.3907	n/a	n/a	1 future	n/a	20	0.292	0.03995	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-006S	1.327	n/a	n/a	1 future	n/a	19	0.8042	0.2088	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-008I	0.4048	n/a	n/a	1 future	n/a	17	0.3065	0.03823	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-008S	0.6383	n/a	n/a	1 future	n/a	17	0.5382	0.03893	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-011S	1.086	n/a	n/a	1 future	n/a	17	0.79	0.1151	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-014S	0.421	n/a	n/a	1 future	n/a	17	0.3629	0.02257	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-015I	0.4745	n/a	n/a	1 future	n/a	19	0.5352	0.06134	0	None	sqrt(x)	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-015S	1.053	n/a	n/a	1 future	n/a	18	0.6811	0.1467	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-016D	0.2446	n/a	n/a	1 future	n/a	18	0.008638	0.002364	0	None	x^3	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-016I	0.2333	n/a	n/a	1 future	n/a	16	0.1381	0.03655	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-016S	0.4869	n/a	n/a	1 future	n/a	17	0.3776	0.0425	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-017I	1.16	n/a	n/a	1 future	n/a	25	n/a	n/a	0	n/a	n/a	0.002832	NP Intra (normality) 1 of 2
Fluoride, total (mg/L)	MW-017S	1.291	n/a	n/a	1 future	n/a	16	0.8188	0.1814	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-021D	0.4428	n/a	n/a	1 future	n/a	16	0.3469	0.03683	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-021I	0.5052	n/a	n/a	1 future	n/a	18	0.3661	0.05479	0	None	No	0.0004115	Param Intra 1 of 2
Fluoride, total (mg/L)	MW-021S	0.9176	n/a	n/a	1 future	n/a	21	0.6786	0.09748	0	None	No	0.0004115	Param Intra 1 of 2
pH, field (SU)	MW-001D	8.149	6.744	n/a	1 future	n/a	22	2.726	0.053	0	None	sqrt(x)	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-001I	7.884	6.679	n/a	1 future	n/a	24	7.281	0.252	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-001S	8.06	6.63	n/a	1 future	n/a	23	7.345	0.2966	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-002D	8.51	6.28	n/a	1 future	n/a	24	n/a	n/a	0	n/a	n/a	0.006247	NP Intra (normality) 1 of 2
pH, field (SU)	MW-002I	8.35	6.586	n/a	1 future	n/a	20	7.468	0.3567	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-002S	7.964	6.747	n/a	1 future	n/a	23	174755	33364	0	None	x^6	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-006S	8.352	6.895	n/a	1 future	n/a	18	7.623	0.287	0	None	No	0.0002057	Param Intra 1 of 2

Intrawell Prediction Limits - All Results

Rockport Landfill Client: Geosyntec Data: Rockport_LF Printed 1/12/2022, 3:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
pH, field (SU)	MW-008I	8.383	6.533	n/a	1 future	n/a	17	7.458	0.3598	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-008S	8.408	6.389	n/a	1 future	n/a	17	7.398	0.3927	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-011S	8.62	6.743	n/a	1 future	n/a	17	7.682	0.3651	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-014S	8.169	6.406	n/a	1 future	n/a	17	7.288	0.3428	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-015I	8.086	6.85	n/a	1 future	n/a	21	7.468	0.2522	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-015S	7.826	6.884	n/a	1 future	n/a	17	7.355	0.1832	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-016D	7.81	6.837	n/a	1 future	n/a	24	7.323	0.2034	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-016I	7.958	6.754	n/a	1 future	n/a	19	7.356	0.2403	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-016S	8.107	6.206	n/a	1 future	n/a	20	7.157	0.3847	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-017I	8.253	6.752	n/a	1 future	n/a	25	7.503	0.3166	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-017S	8.053	6.873	n/a	1 future	n/a	17	423.5	38.43	0	None	x^3	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-021D	8.482	6.631	n/a	1 future	n/a	17	7.556	0.36	0	None	No	0.0002057	Param Intra 1 of 2
pH, field (SU)	MW-021I	8.56	7	n/a	1 future	n/a	18	n/a	n/a	0	n/a	n/a	0.01075	NP Intra (normality) 1 of 2
pH, field (SU)	MW-021S	8.86	6.6	n/a	1 future	n/a	22	n/a	n/a	0	n/a	n/a	0.007415	NP Intra (normality) 1 of 2
Sulfate, total (mg/L)	MW-001D	48.12	n/a	n/a	1 future	n/a	16	1446	333.7	0	None	x^2	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-001I	47.51	n/a	n/a	1 future	n/a	16	41.76	2.207	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-001S	38.89	n/a	n/a	1 future	n/a	16	33.53	2.06	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-002D	46.31	n/a	n/a	1 future	n/a	16	38.59	2.963	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-002I	47.88	n/a	n/a	1 future	n/a	16	41.1	2.604	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-002S	34.36	n/a	n/a	1 future	n/a	16	27.47	2.647	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-006S	24.71	n/a	n/a	1 future	n/a	19	10.14	5.815	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-008I	103.3	n/a	n/a	1 future	n/a	17	75.37	10.85	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-008S	27.88	n/a	n/a	1 future	n/a	17	22.46	2.107	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-011S	20.85	n/a	n/a	1 future	n/a	17	10.21	4.14	0	None	No	0.0004115	Param Intra 1 of 2 Deseas
Sulfate, total (mg/L)	MW-014S	37.84	n/a	n/a	1 future	n/a	17	32.33	2.144	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-015I	39.28	n/a	n/a	1 future	n/a	8	20	5.47	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-015S	30.36	n/a	n/a	1 future	n/a	8	12.43	5.089	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-016D	43.57	n/a	n/a	1 future	n/a	18	37.57	2.363	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-016I	50.73	n/a	n/a	1 future	n/a	16	32.96	6.825	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-016S	52.52	n/a	n/a	1 future	n/a	16	39.79	4.891	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-017I	56.65	n/a	n/a	1 future	n/a	8	24.58	9.101	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-017S	17.09	n/a	n/a	1 future	n/a	16	9.976	2.731	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-021D	42.39	n/a	n/a	1 future	n/a	16	36.5	2.262	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-021I	51.73	n/a	n/a	1 future	n/a	16	41.26	4.024	0	None	No	0.0004115	Param Intra 1 of 2
Sulfate, total (mg/L)	MW-021S	23.5	n/a	n/a	1 future	n/a	17	17.66	2.272	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-001D	461.1	n/a	n/a	1 future	n/a	19	337.7	49.27	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-001I	361	n/a	n/a	1 future	n/a	17	326.6	13.39	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-001S	461.1	n/a	n/a	1 future	n/a	18	403.1	22.89	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-002D	506.1	n/a	n/a	1 future	n/a	8	408	27.83	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-002I	384.3	n/a	n/a	1 future	n/a	16	327.5	21.83	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-002S	392.4	n/a	n/a	1 future	n/a	18	318.1	29.29	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-006S	350.7	n/a	n/a	1 future	n/a	19	261.9	35.45	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-008I	416.9	n/a	n/a	1 future	n/a	16	376.6	15.47	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-008S	357.5	n/a	n/a	1 future	n/a	16	321.3	13.9	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-011S	299.2	n/a	n/a	1 future	n/a	16	221	30.03	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-014S	431.2	n/a	n/a	1 future	n/a	16	372.6	22.52	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-015I	334.5	n/a	n/a	1 future	n/a	8	253.5	22.98	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-015S	419.4	n/a	n/a	1 future	n/a	16	284.3	51.89	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-016D	632.2	n/a	n/a	1 future	n/a	9	554	23.61	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-016I	648.1	n/a	n/a	1 future	n/a	8	373.1	78.03	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-016S	550.7	n/a	n/a	1 future	n/a	20	496	22.16	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-017I	469.3	n/a	n/a	1 future	n/a	8	302.1	47.45	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-017S	286.1	n/a	n/a	1 future	n/a	16	225.3	23.36	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-021D	366.1	n/a	n/a	1 future	n/a	16	327.6	14.76	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-021I	356.6	n/a	n/a	1 future	n/a	16	298.6	22.28	0	None	No	0.0004115	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-021S	339.1	n/a	n/a	1 future	n/a	17	277.4	23.99	0	None	No	0.0004115	Param Intra 1 of 2

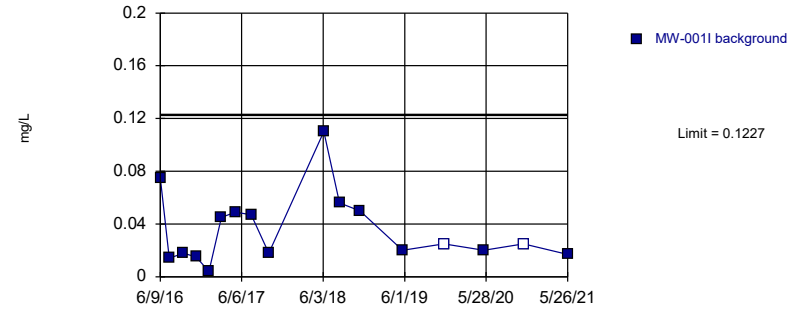
Prediction Limit
Intrawell Parametric, MW-001D



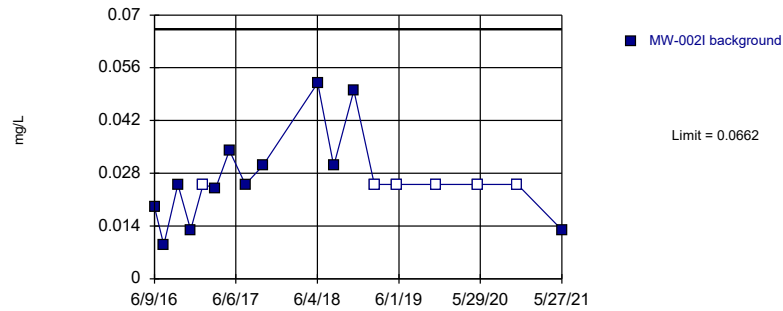
Background Data Summary (based on square root transformation): Mean=0.1749, Std. Dev.=0.07257, n=18, 5.556% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9454, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-0011



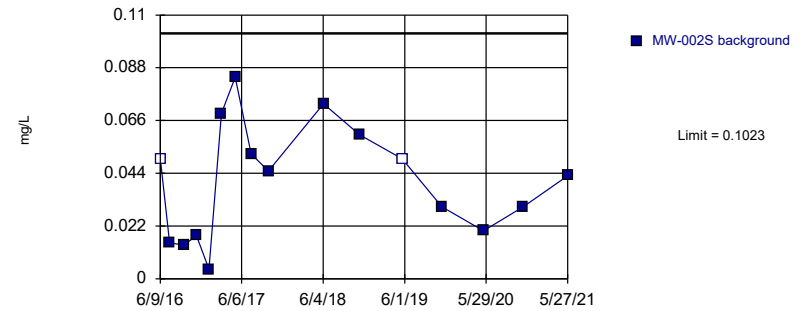
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1483, Std. Dev.=0.04294, n=18, 33.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8903, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

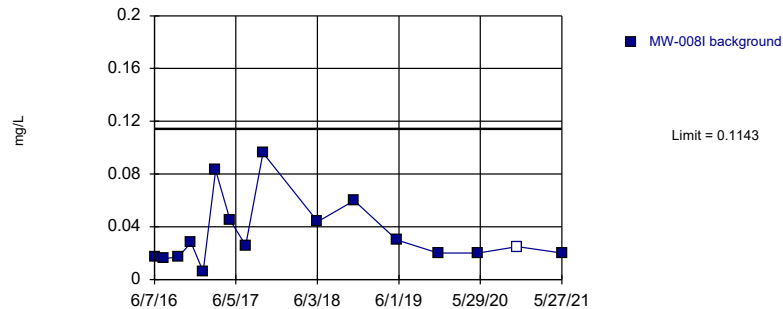
Prediction Limit
Intrawell Parametric, MW-002S



Background Data Summary: Mean=0.04106, Std. Dev.=0.02353, n=16, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9639, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

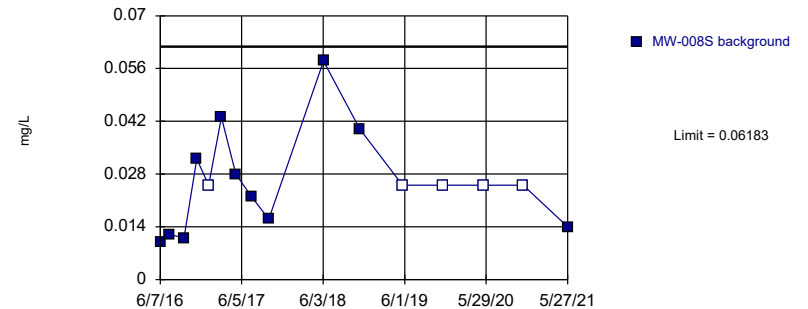
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary (based on square root transformation): Mean=0.1759, Std. Dev.=0.06229, n=16, 6.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9094, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

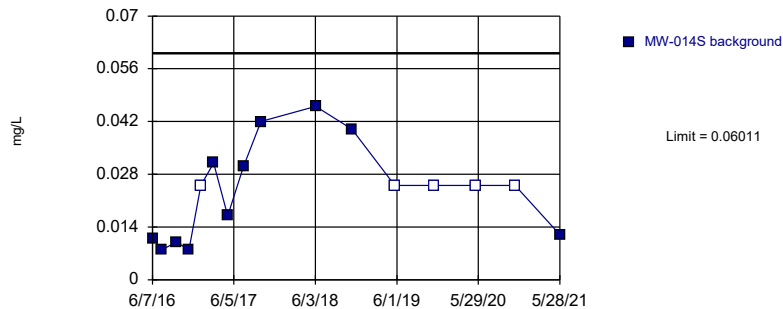
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.025, Std. Dev.=0.01414, n=16, 31.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9019, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

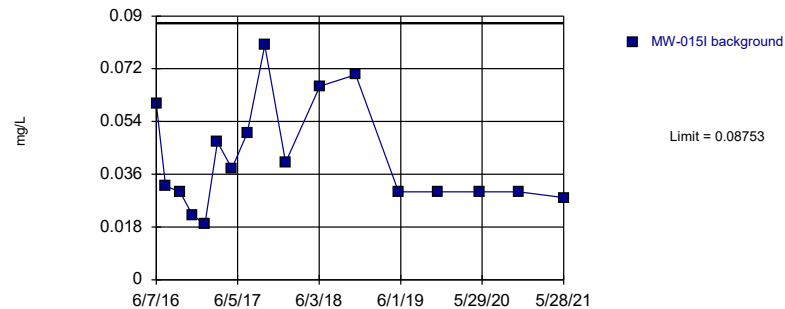
Prediction Limit
Intrawell Parametric, MW-014S (bg)



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.02318, Std. Dev.=0.01418, n=16, 31.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.921, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

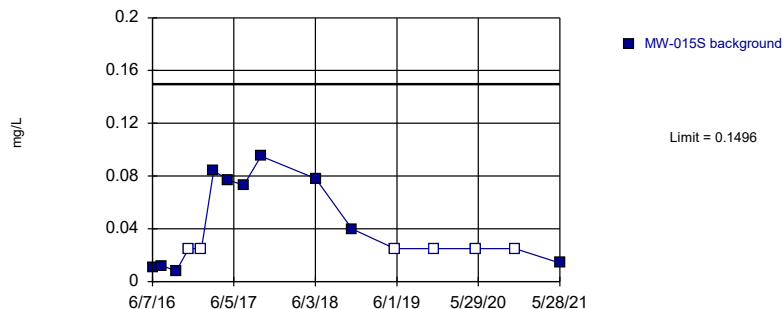
Prediction Limit
Intrawell Parametric, MW-015I



Background Data Summary: Mean=0.04129, Std. Dev.=0.01798, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8827, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

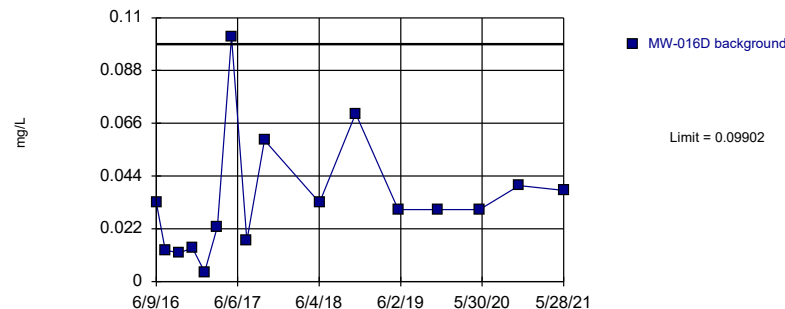
Prediction Limit
Intrawell Parametric, MW-015S



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1746, Std. Dev.=0.08146, n=16, 37.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8701, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

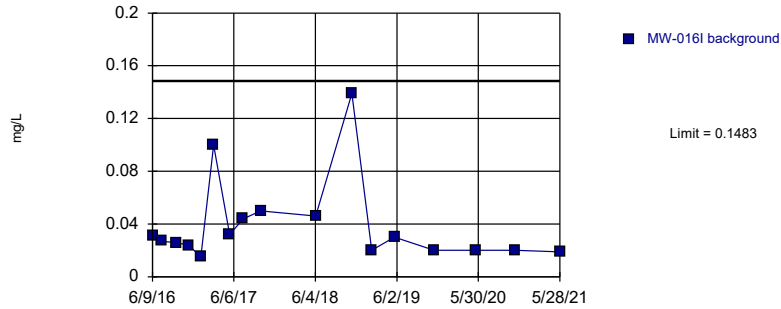
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=0.03425, Std. Dev.=0.02487, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8629, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:39 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

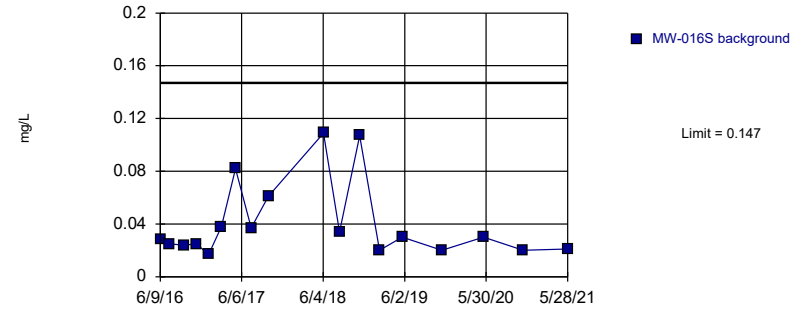
Prediction Limit
Intrawell Parametric, MW-016I



Background Data Summary (based on natural log transformation): Mean=-3.453, Std. Dev.=0.6008, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8719, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

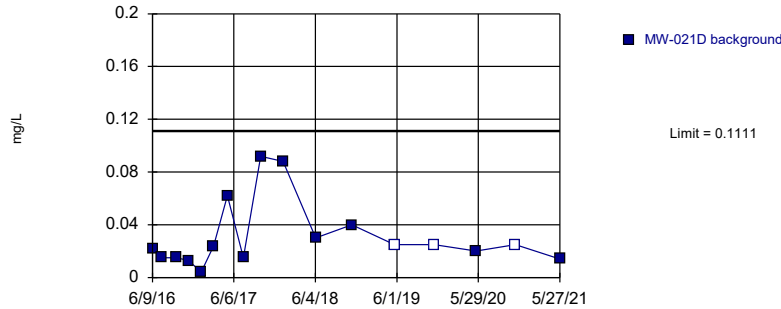
Prediction Limit
Intrawell Parametric, MW-016S



Background Data Summary (based on natural log transformation): Mean=-3.393, Std. Dev.=0.5812, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8595, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

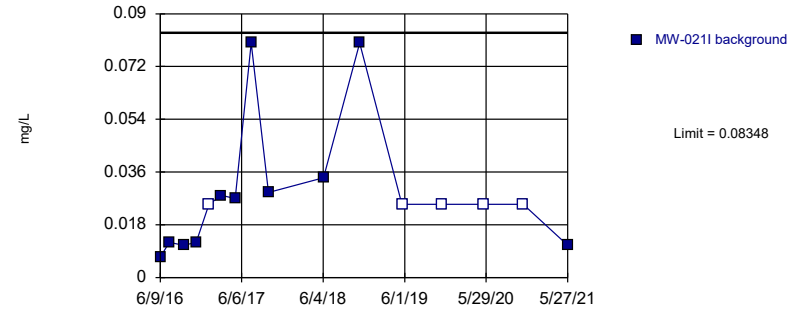
Prediction Limit
Intrawell Parametric, MW-021D



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1572, Std. Dev.=0.06848, n=17, 17.65% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8733, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

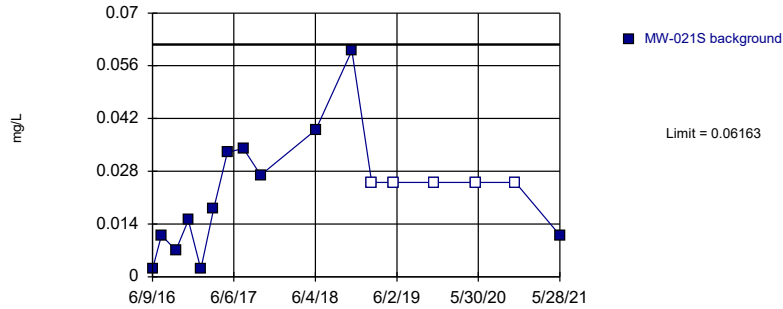
Prediction Limit
Intrawell Parametric, MW-021I



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.2634, Std. Dev.=0.06667, n=16, 31.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8645, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

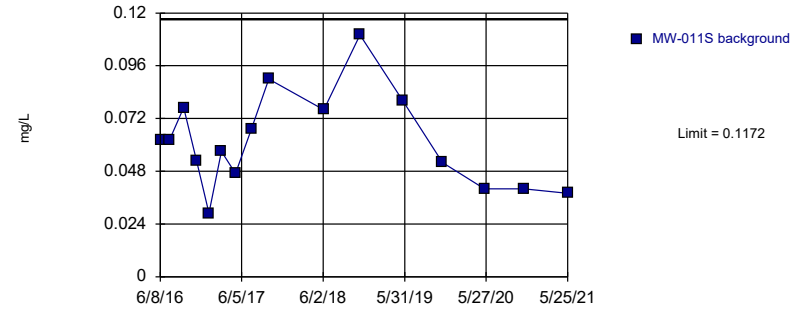
Prediction Limit
Intrawell Parametric, MW-021S



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.01993, Std. Dev.=0.01622, n=17, 29.41% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9309, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

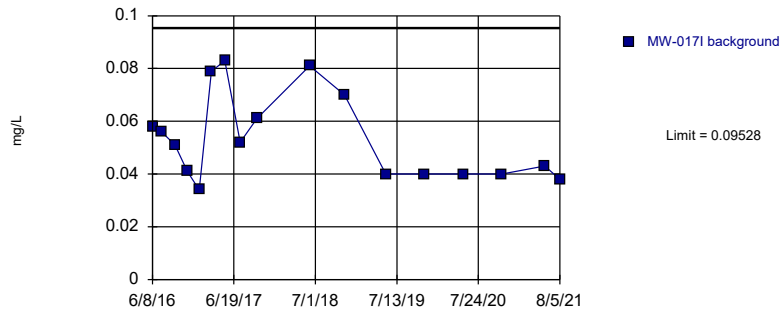
Prediction Limit
Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=0.06125, Std. Dev.=0.02147, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9645, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

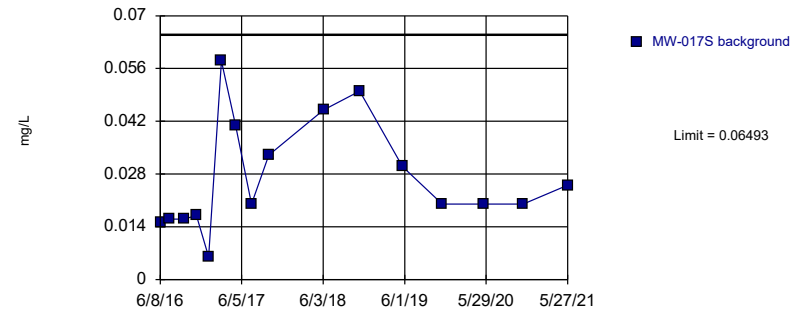
Prediction Limit
Intrawell Parametric, MW-017I



Background Data Summary: Mean=0.05335, Std. Dev.=0.01631, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8713, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

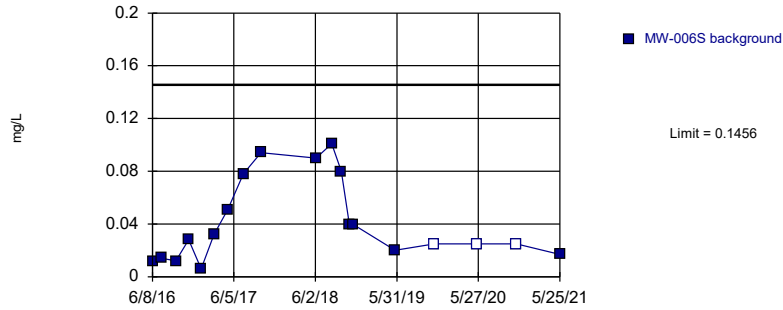
Prediction Limit
Intrawell Parametric, MW-017S



Background Data Summary: Mean=0.027, Std. Dev.=0.01456, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9022, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

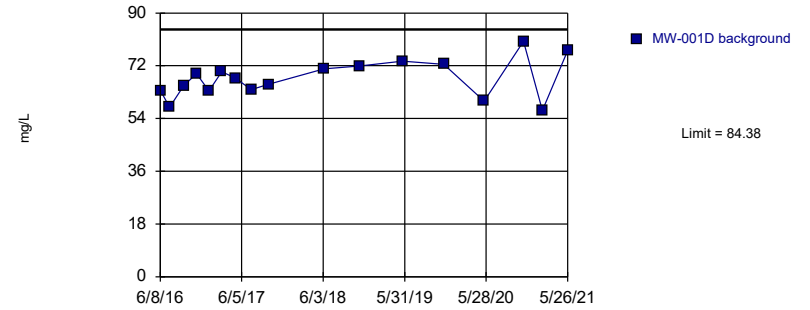
Prediction Limit
Intrawell Parametric, MW-006S (bg)



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1808, Std. Dev.=0.08015, n=19, 15.79% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.921, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Boron, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

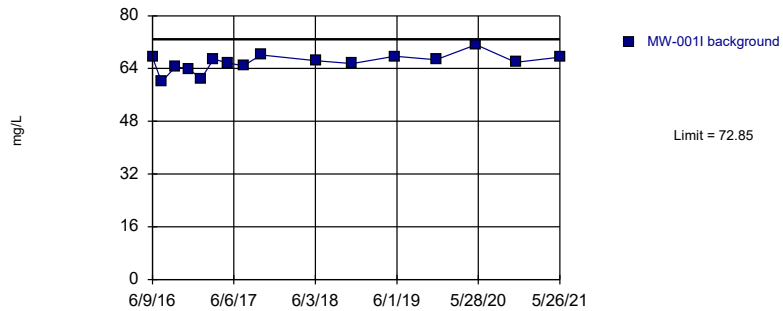
Prediction Limit
Intrawell Parametric, MW-001D



Background Data Summary: Mean=67.64, Std. Dev.=6.511, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9814, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

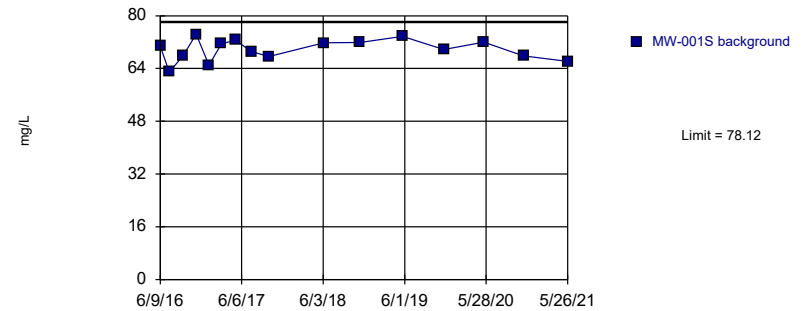
Prediction Limit
Intrawell Parametric, MW-0011



Background Data Summary: Mean=65.81, Std. Dev.=2.703, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9376, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

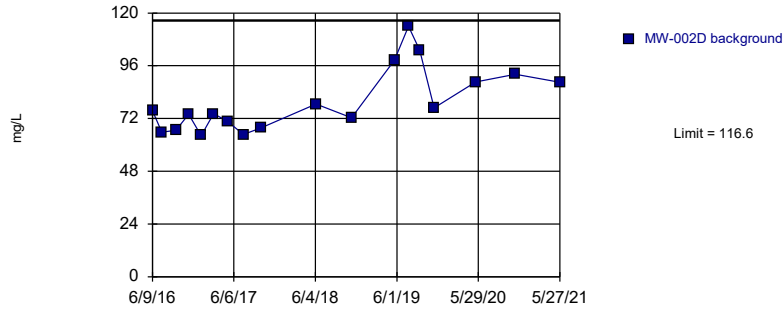
Prediction Limit
Intrawell Parametric, MW-001S



Background Data Summary: Mean=69.69, Std. Dev.=3.236, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9591, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

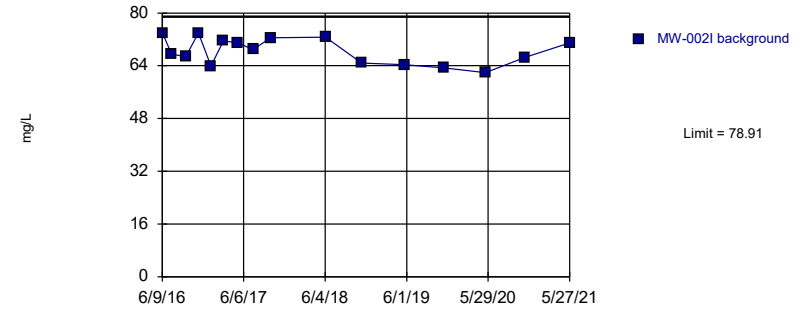
Prediction Limit
Intrawell Parametric, MW-002D



Background Data Summary: Mean=79.8, Std. Dev.=14.51, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

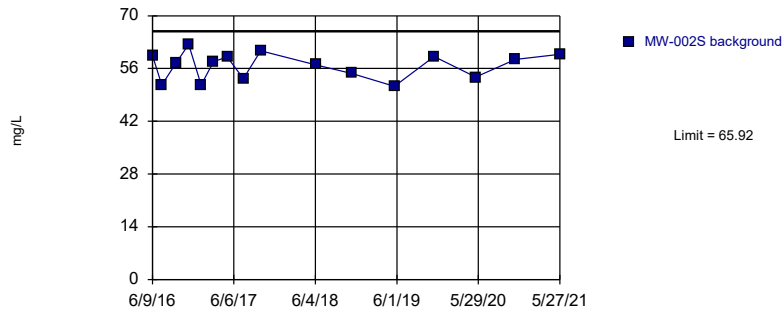
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary: Mean=68.41, Std. Dev.=4.03, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9312, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

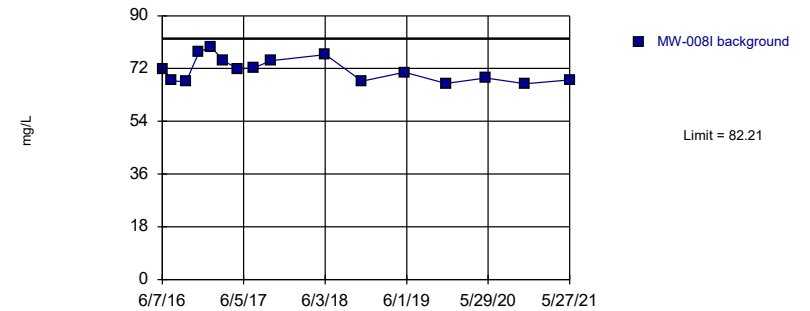
Prediction Limit
Intrawell Parametric, MW-002S



Background Data Summary: Mean=56.71, Std. Dev.=3.536, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9256, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

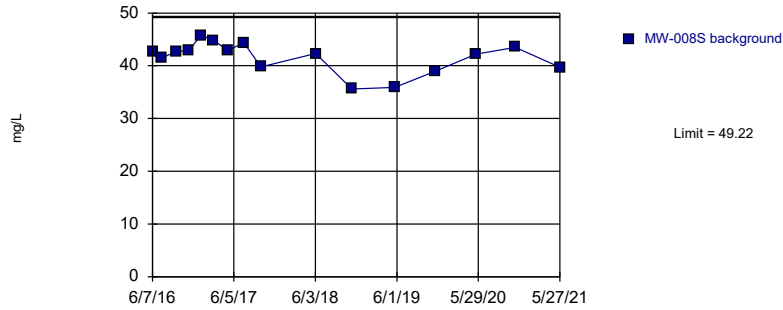
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=71.47, Std. Dev.=4.126, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9071, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

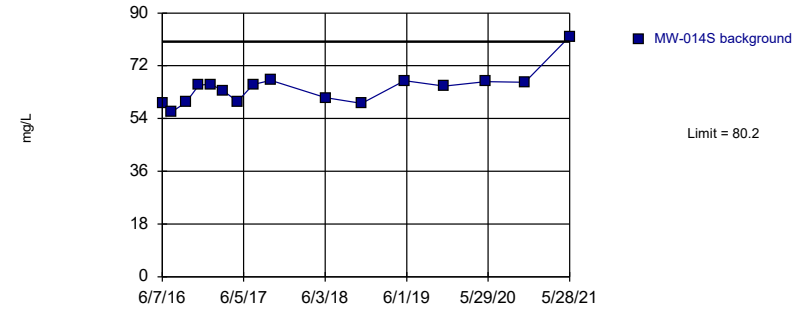
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary: Mean=41.61, Std. Dev.=2.922, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9123, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

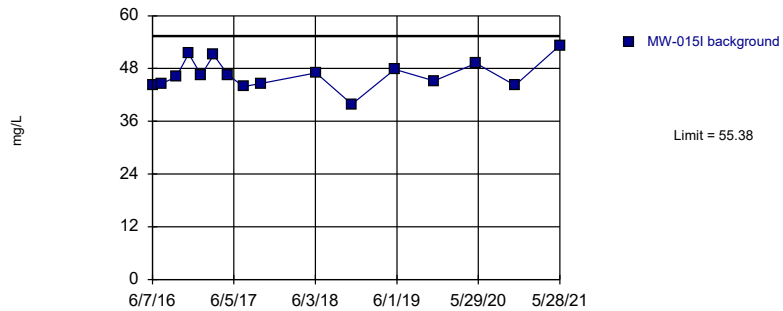
Prediction Limit
Intrawell Parametric, MW-014S (bg)



Background Data Summary (based on natural log transformation): Mean=4.16, Std. Dev.=0.0861, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8536, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

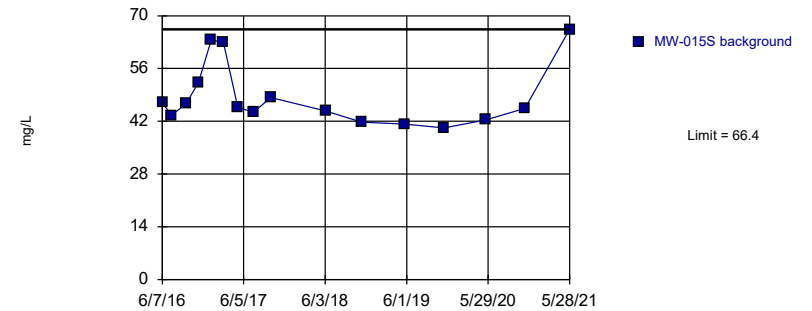
Prediction Limit
Intrawell Parametric, MW-015I



Background Data Summary: Mean=46.59, Std. Dev.=3.376, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9542, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

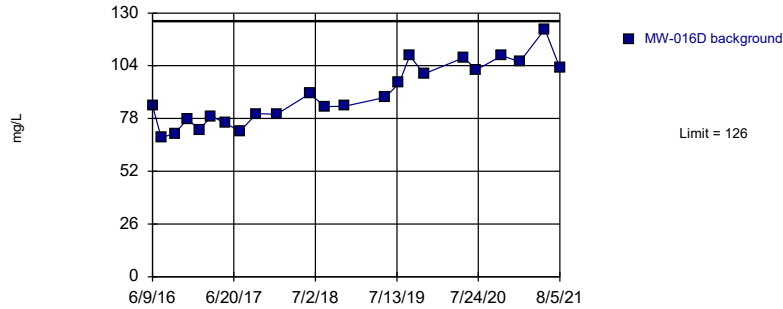
Prediction Limit
Intrawell Non-parametric, MW-015S



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

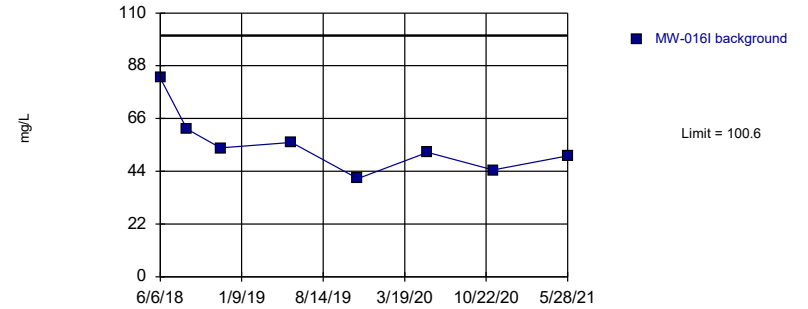
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=89.66, Std. Dev.=15.09, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.881. Kappa = 2.411 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

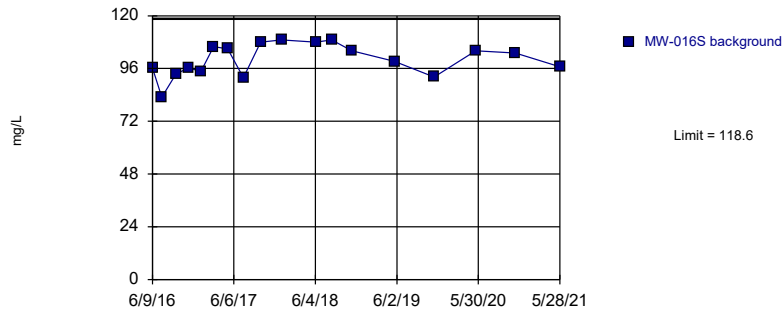
Prediction Limit
Intrawell Parametric, MW-016I



Background Data Summary: Mean=55.25, Std. Dev.=12.88, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8734, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

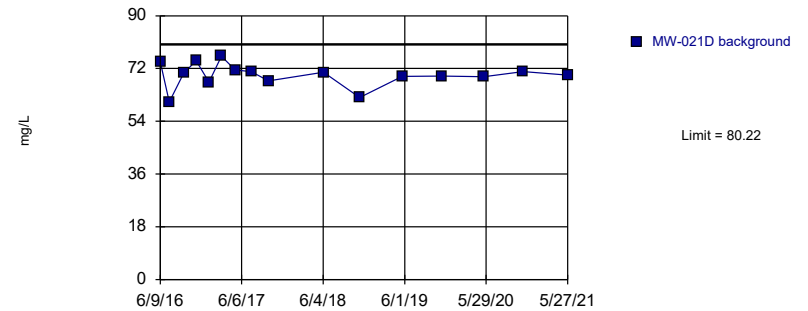
Prediction Limit
Intrawell Parametric, MW-016S



Background Data Summary: Mean=99.98, Std. Dev.=7.352, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9274, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

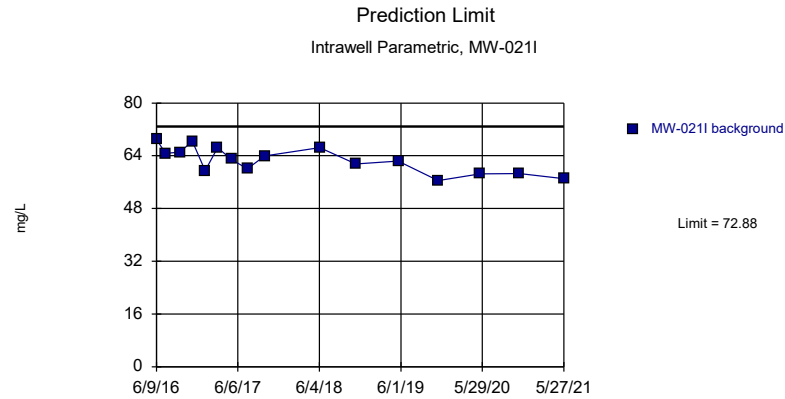
Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-021D



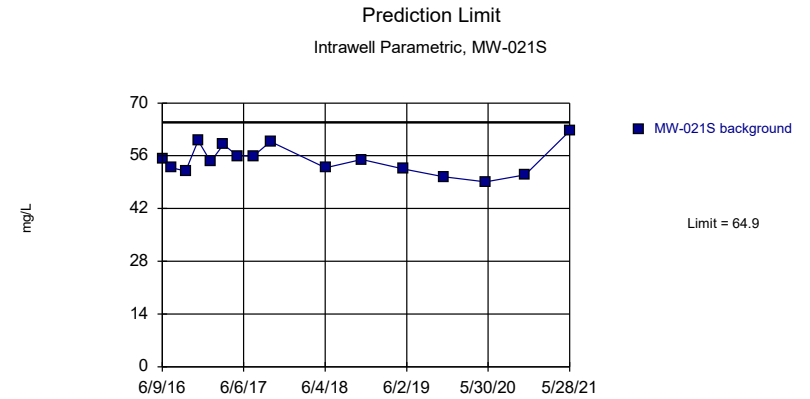
Background Data Summary: Mean=69.69, Std. Dev.=4.046, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9145, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF



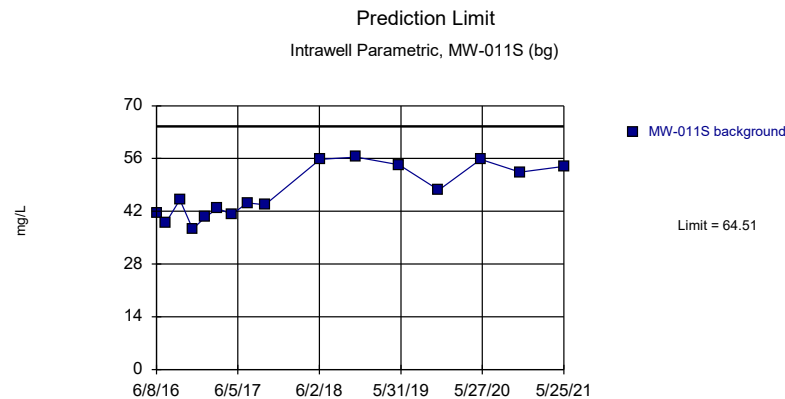
Background Data Summary: Mean=62.58, Std. Dev.=3.957, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9596, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF



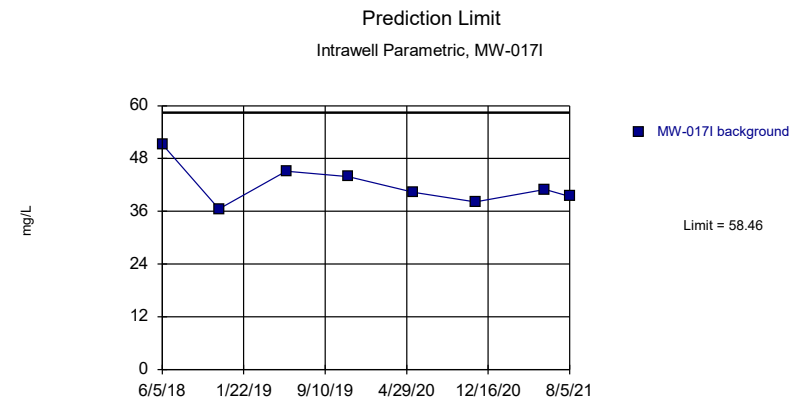
Background Data Summary: Mean=54.89, Std. Dev.=3.843, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF



Background Data Summary: Mean=46.96, Std. Dev.=6.739, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.893, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

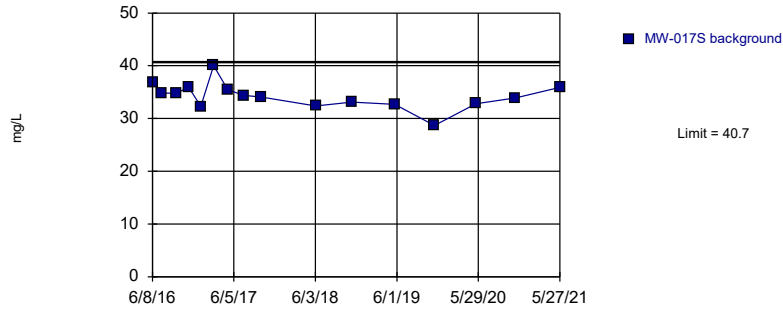
Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF



Background Data Summary: Mean=41.94, Std. Dev.=4.689, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9253, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

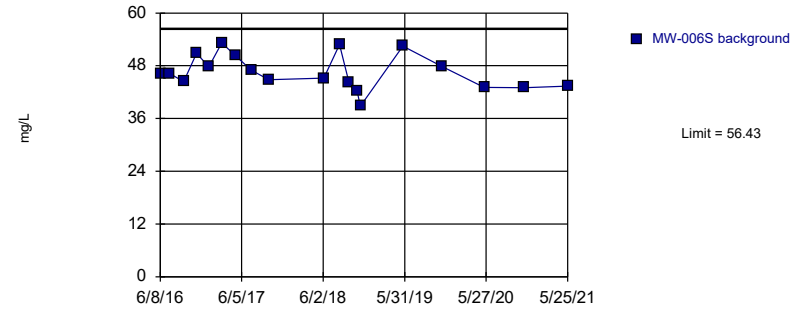
Prediction Limit Intrawell Parametric, MW-017S



Background Data Summary: Mean=34.26, Std. Dev.=2.473, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9532, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

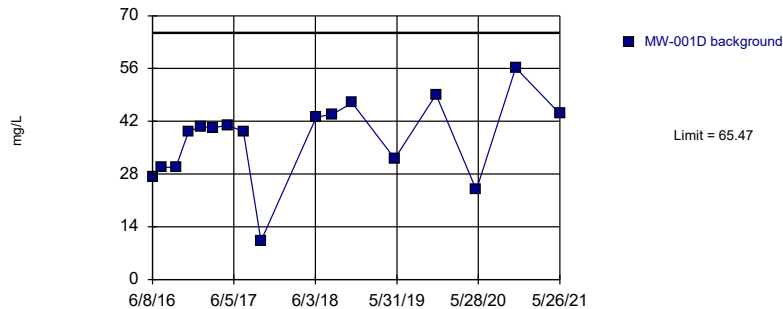
Prediction Limit Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=46.51, Std. Dev.=3.961, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9549, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Calcium, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

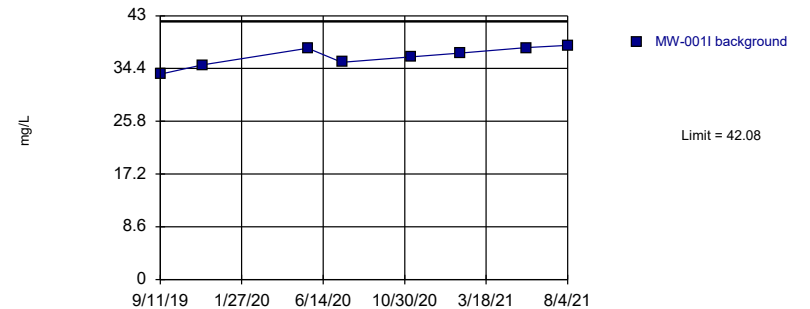
Prediction Limit Intrawell Parametric, MW-001D



Background Data Summary: Mean=37.45, Std. Dev.=10.9, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

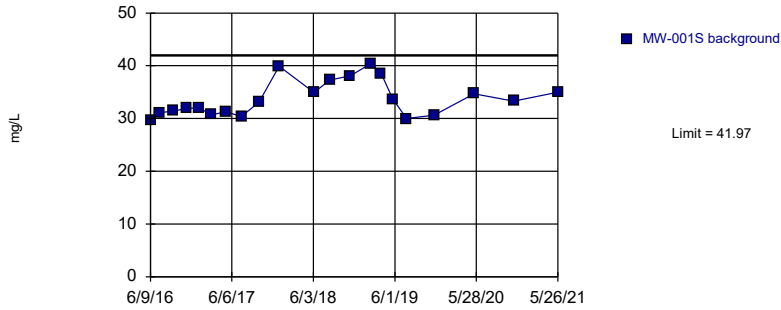
Prediction Limit Intrawell Parametric, MW-0011



Background Data Summary: Mean=36.35, Std. Dev.=1.626, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9376, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

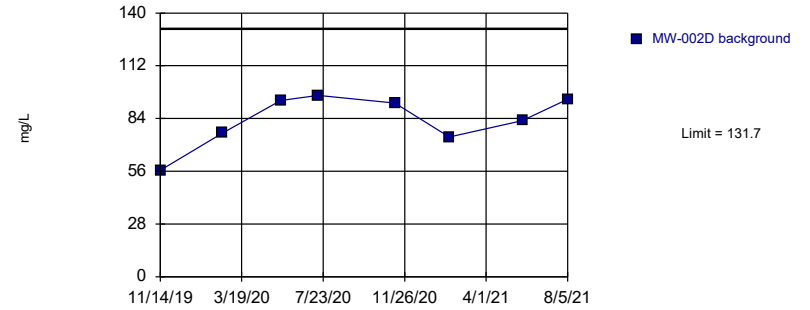
Prediction Limit
Intrawell Parametric, MW-001S



Background Data Summary: Mean=33.71, Std. Dev.=3.371, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9028, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

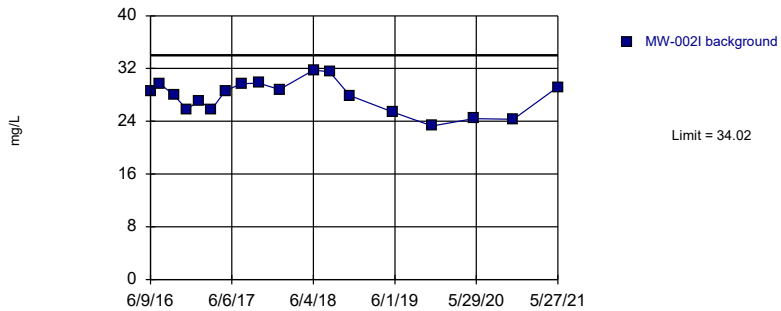
Prediction Limit
Intrawell Parametric, MW-002D



Background Data Summary: Mean=83.26, Std. Dev.=13.74, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8697, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

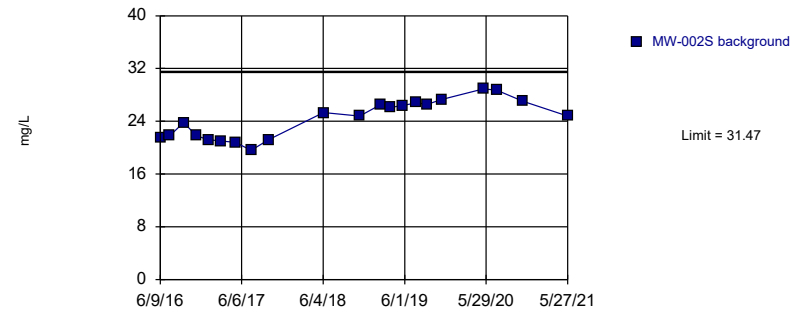
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary: Mean=27.76, Std. Dev.=2.467, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9583, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

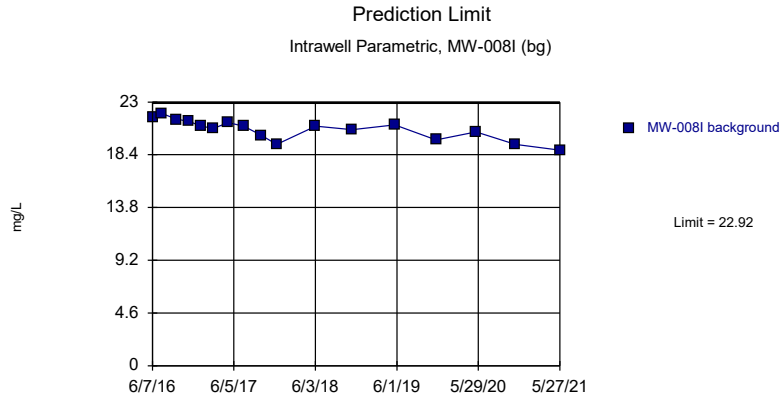
Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-002S



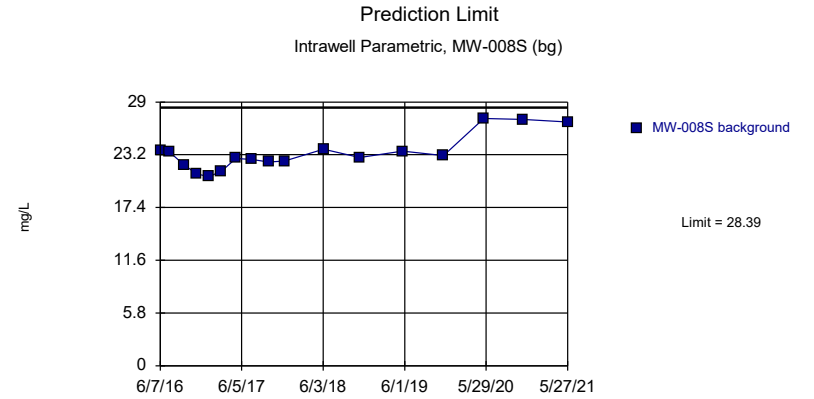
Background Data Summary: Mean=24.38, Std. Dev.=2.892, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.918, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

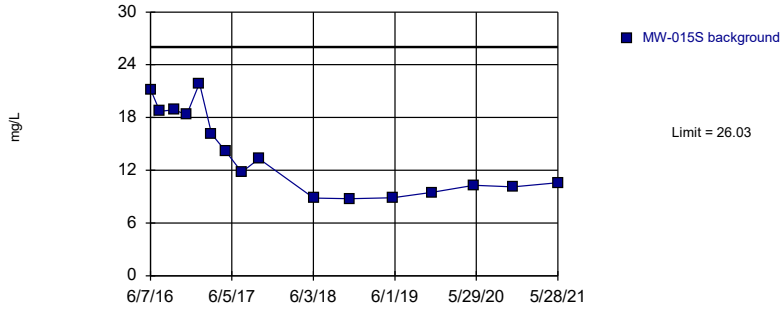


Background Data Summary: Mean=20.61, Std. Dev.=0.901, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9513, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF



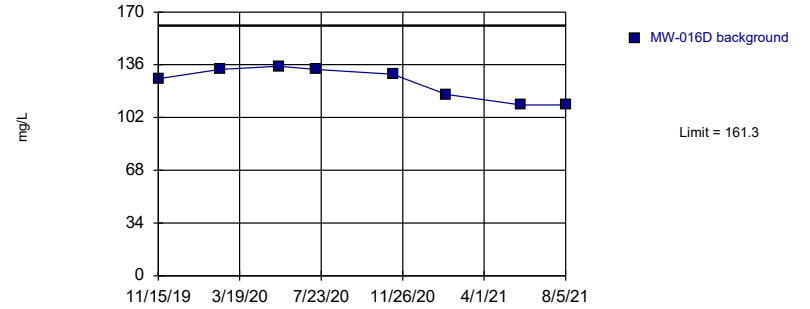
Prediction Limit
Intrawell Parametric, MW-015S



Background Data Summary: Mean=13.83, Std. Dev.=4.684, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8802, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

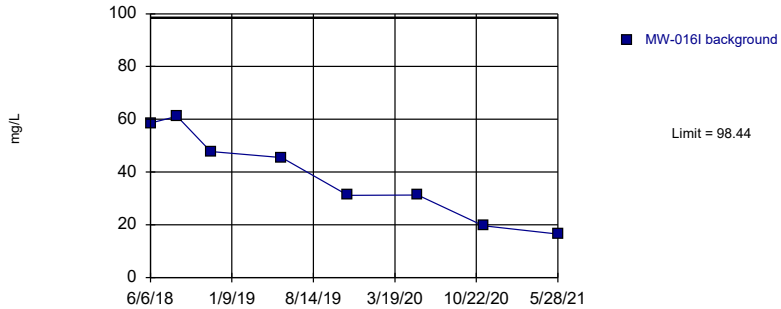
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=124.4, Std. Dev.=10.47, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8378, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

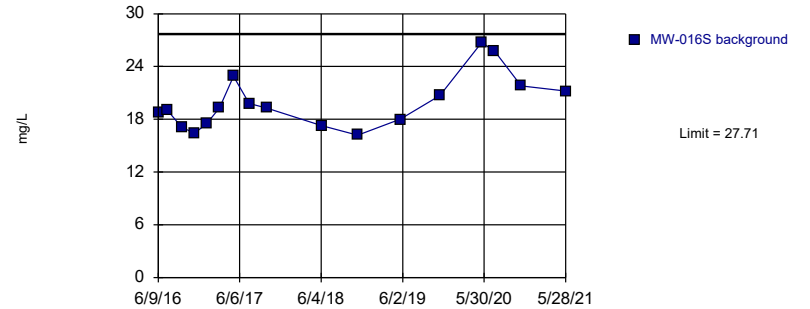
Prediction Limit
Intrawell Parametric, MW-016I



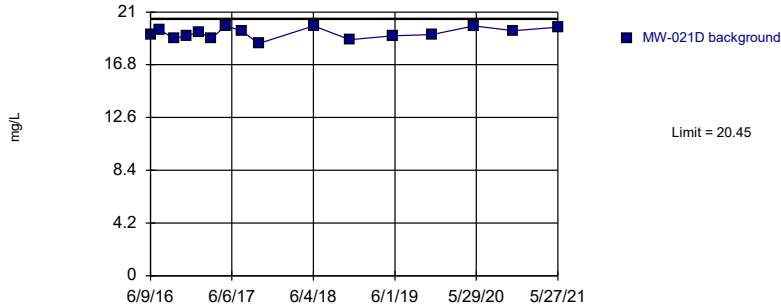
Background Data Summary: Mean=38.95, Std. Dev.=16.88, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9278, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
 Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-016S



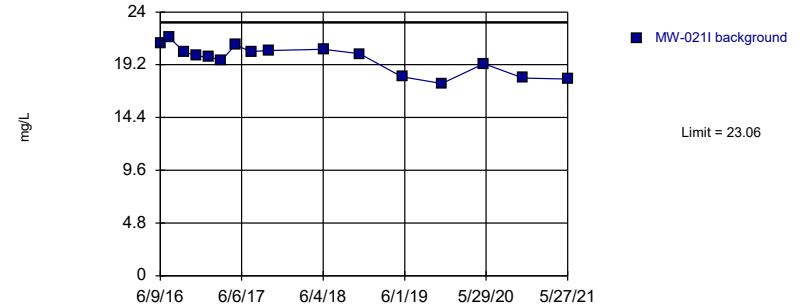
Prediction Limit
Intrawell Parametric, MW-021D



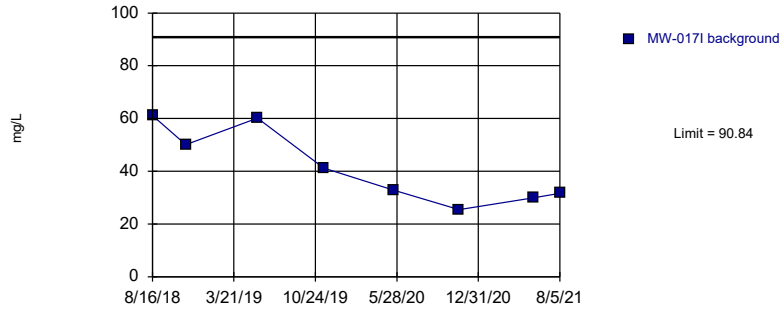
Background Data Summary: Mean=19.33, Std. Dev.=0.4328, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9462, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-0211



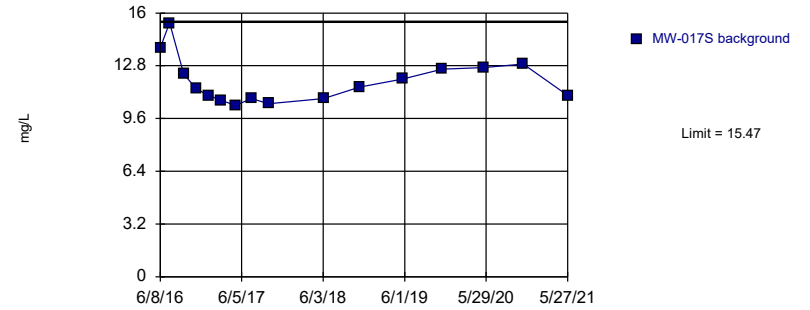
Prediction Limit
Intrawell Parametric, MW-017I



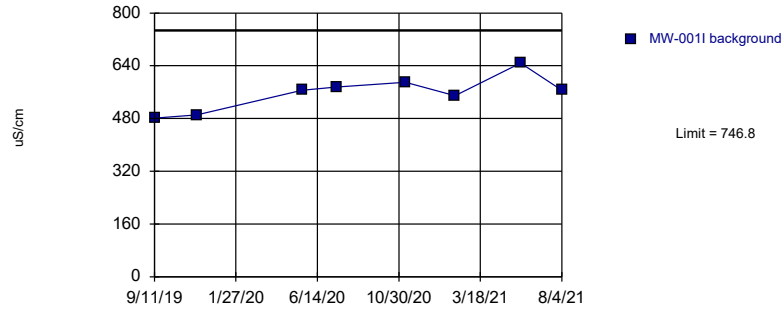
Background Data Summary: Mean=41.58, Std. Dev.=13.98, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8843, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Chloride, total Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-017S



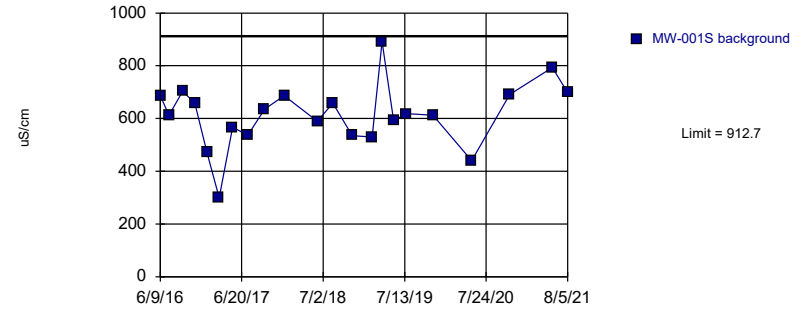
Prediction Limit
Intrawell Parametric, MW-001I



Background Data Summary: Mean=558.3, Std. Dev.=53.51, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9356, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

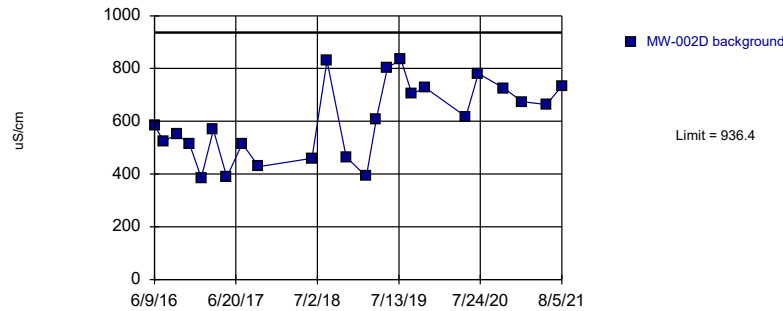
Prediction Limit
Intrawell Parametric, MW-001S



Background Data Summary: Mean=613.8, Std. Dev.=122.9, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9632, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

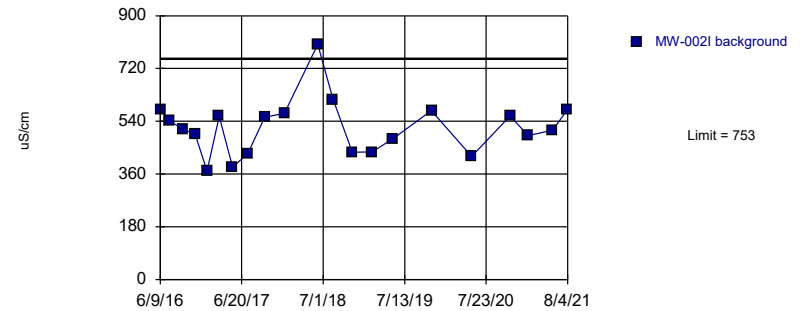
Prediction Limit
Intrawell Parametric, MW-002D



Background Data Summary: Mean=601.2, Std. Dev.=141.4, n=25. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.888. Kappa = 2.37 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

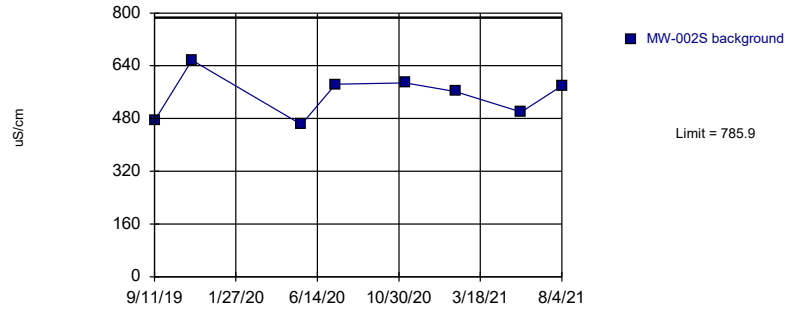
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary: Mean=518.8, Std. Dev.=95.54, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9134, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

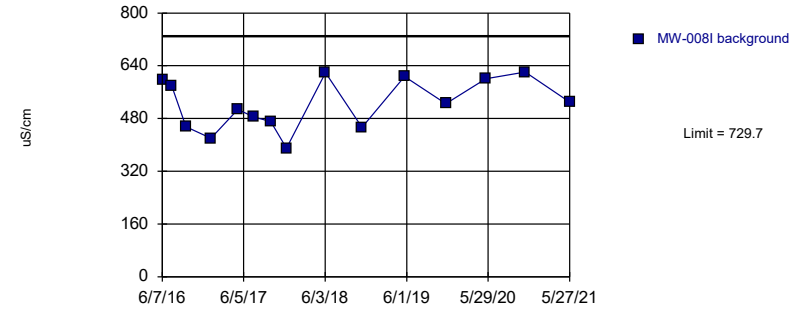
Prediction Limit
Intrawell Parametric, MW-002S



Background Data Summary: Mean=550.6, Std. Dev.=66.77, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9261, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

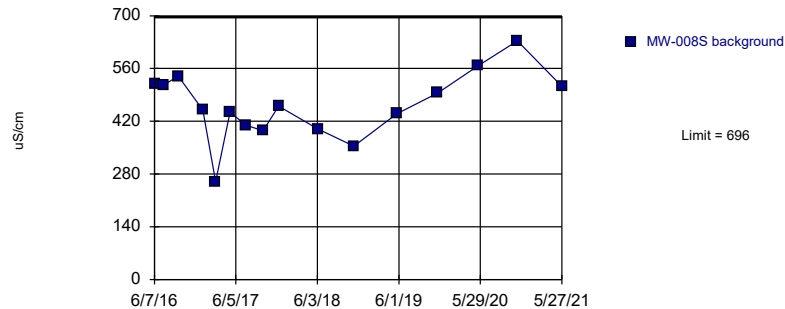
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=524.1, Std. Dev.=77.04, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9243, critical = 0.835. Kappa = 2.668 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

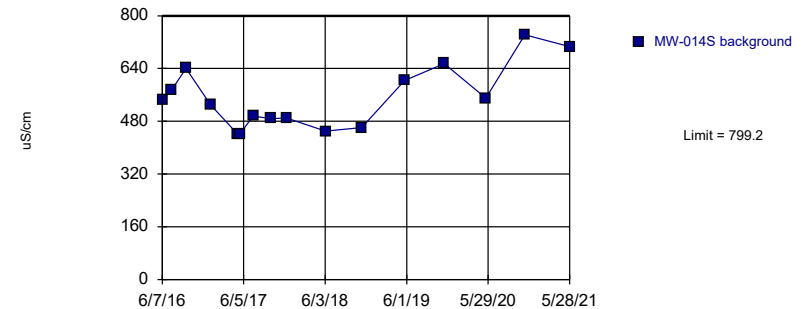
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary: Mean=462.3, Std. Dev.=89.73, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.982, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

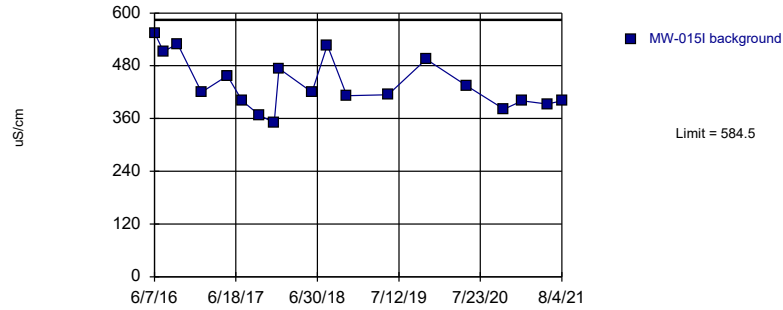
Prediction Limit
Intrawell Parametric, MW-014S (bg)



Background Data Summary: Mean=550.9, Std. Dev.=95.35, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9223, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

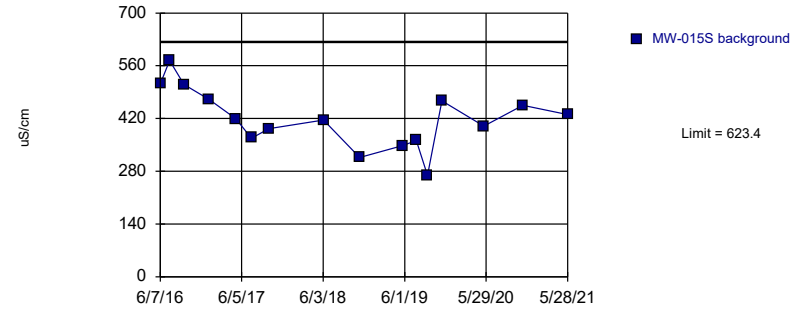
Prediction Limit
Intrawell Parametric, MW-015I



Background Data Summary: Mean=440, Std. Dev.=58.44, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9407, critical = 0.868. Kappa = 2.472 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

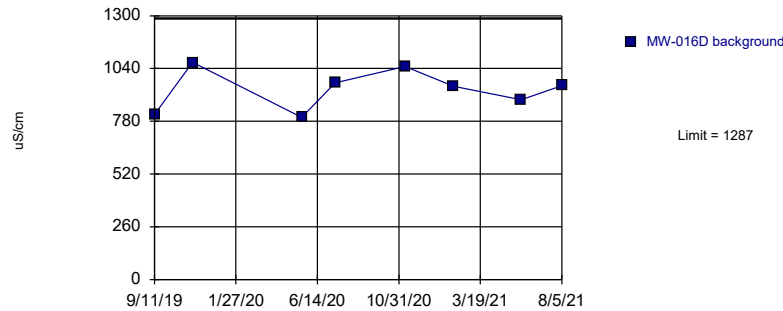
Prediction Limit
Intrawell Parametric, MW-015S



Background Data Summary: Mean=419.4, Std. Dev.=78.36, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9936, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

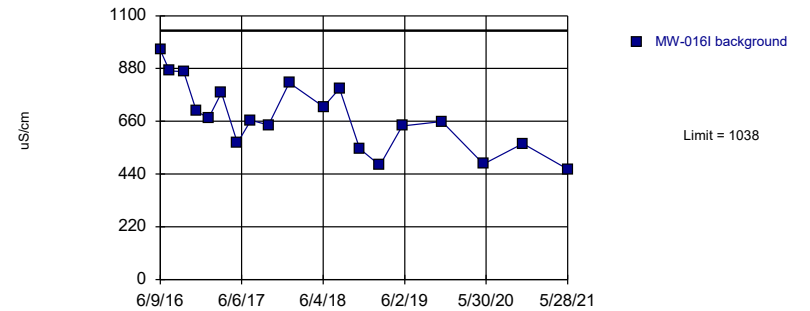
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=937, Std. Dev.=99.37, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9307, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

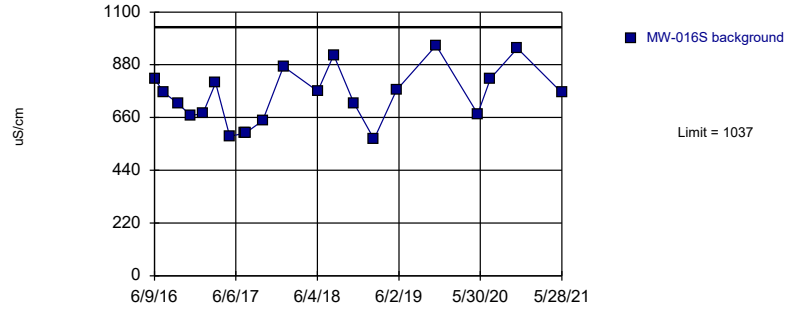
Prediction Limit
Intrawell Parametric, MW-016I



Background Data Summary: Mean=678.6, Std. Dev.=143.3, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9667, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

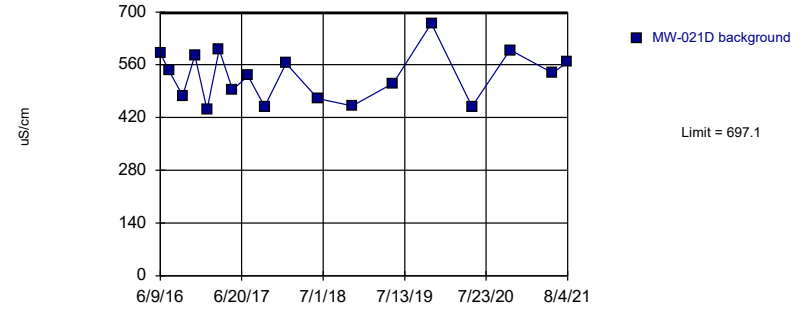
Prediction Limit Intrawell Parametric, MW-016S



Background Data Summary: Mean=746.1, Std. Dev.=118.5, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9573, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

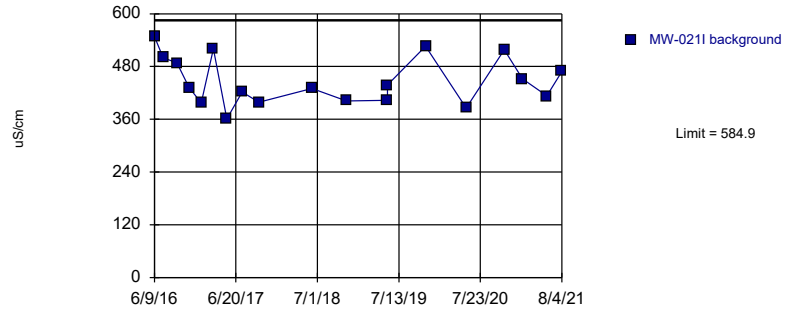
Prediction Limit Intrawell Parametric, MW-021D



Background Data Summary: Mean=529.5, Std. Dev.=66.02, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9425, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

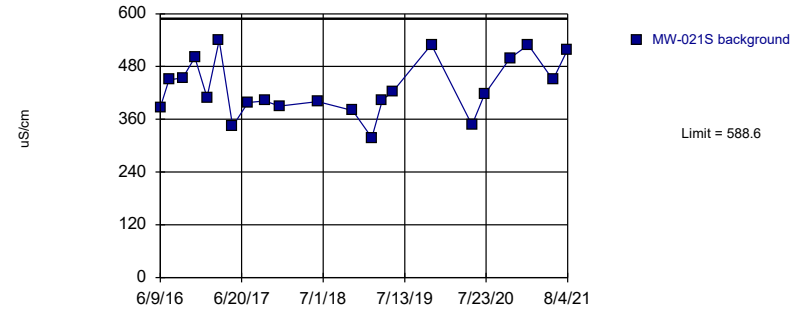
Prediction Limit Intrawell Parametric, MW-0211



Background Data Summary: Mean=447.6, Std. Dev.=54.8, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

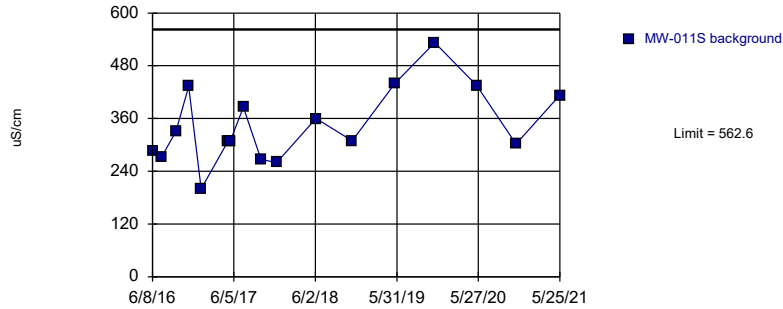
Prediction Limit Intrawell Parametric, MW-021S



Background Data Summary: Mean=431.5, Std. Dev.=64.64, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9417, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:40 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

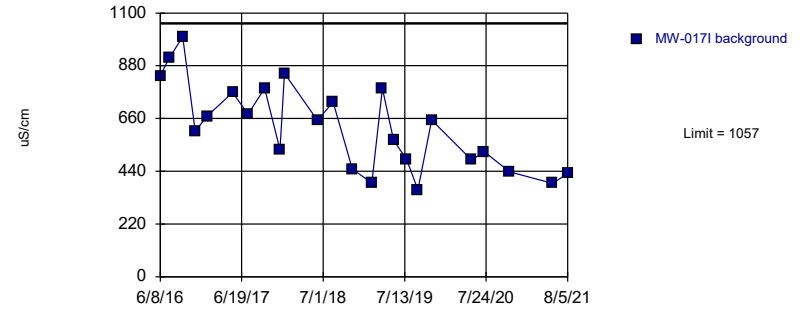
Prediction Limit
Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=343.5, Std. Dev.=85.23, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9513, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

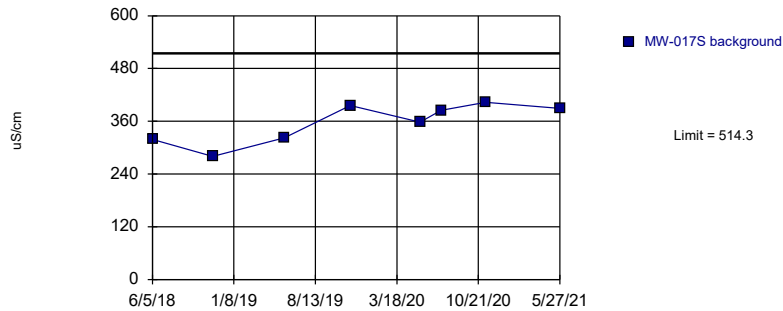
Prediction Limit
Intrawell Parametric, MW-017I



Background Data Summary: Mean=624.4, Std. Dev.=180.8, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9567, critical = 0.884. Kappa = 2.39 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

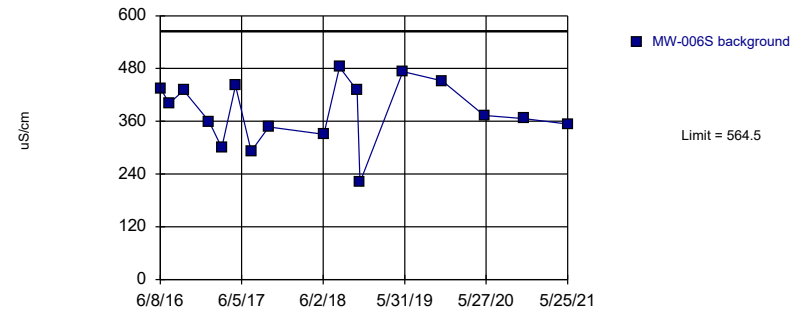
Prediction Limit
Intrawell Parametric, MW-017S



Background Data Summary: Mean=356.5, Std. Dev.=44.79, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8932, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

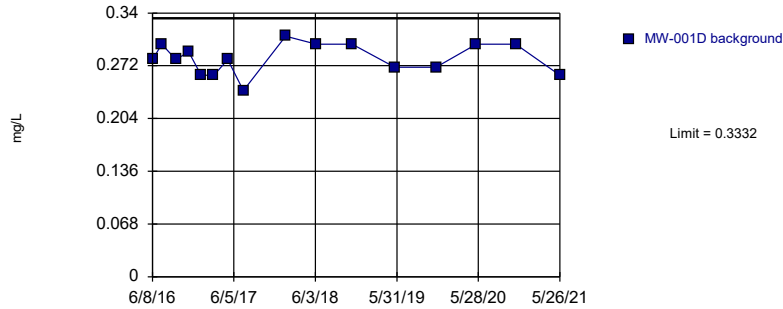
Prediction Limit
Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=381.6, Std. Dev.=71.12, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9568, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Conductivity Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

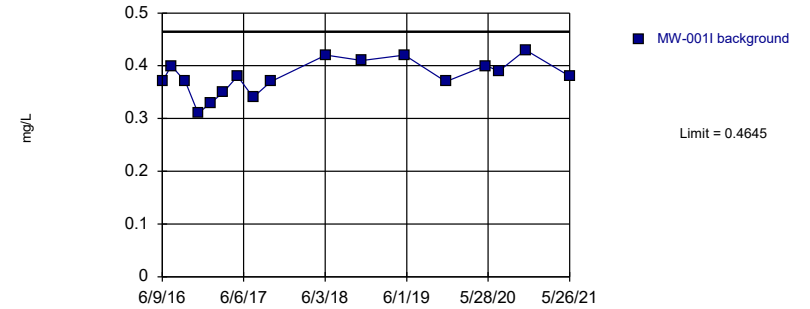
Prediction Limit
Intrawell Parametric, MW-001D



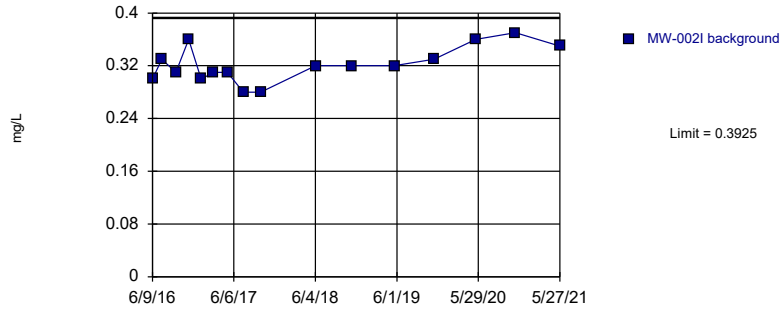
Background Data Summary: Mean=0.2813, Std. Dev.=0.01996, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.925, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-0011



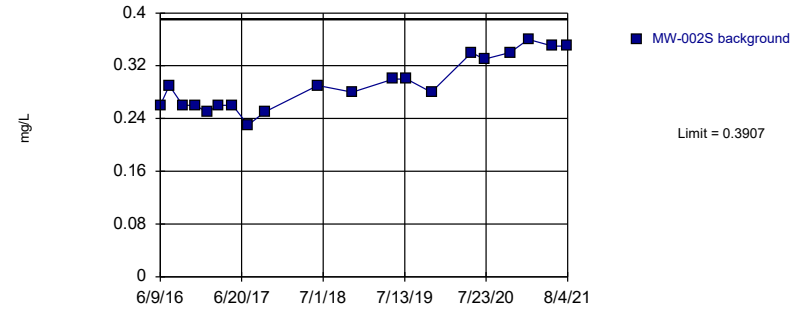
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary: Mean=0.3219, Std. Dev.=0.02713, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9447, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

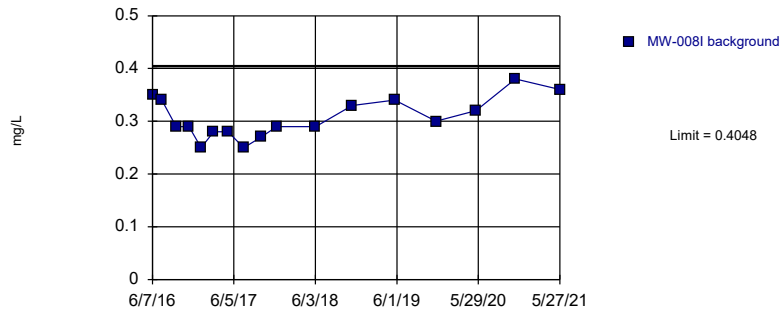
Prediction Limit
Intrawell Parametric, MW-002S



Background Data Summary: Mean=0.292, Std. Dev.=0.03995, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9118, critical = 0.868. Kappa = 2.472 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

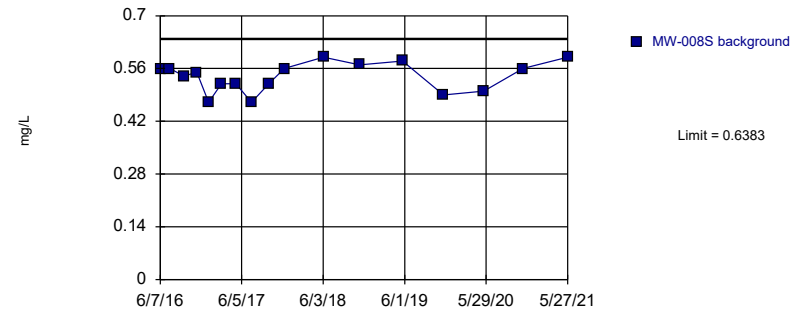
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=0.3065, Std. Dev.=0.03823, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9486, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

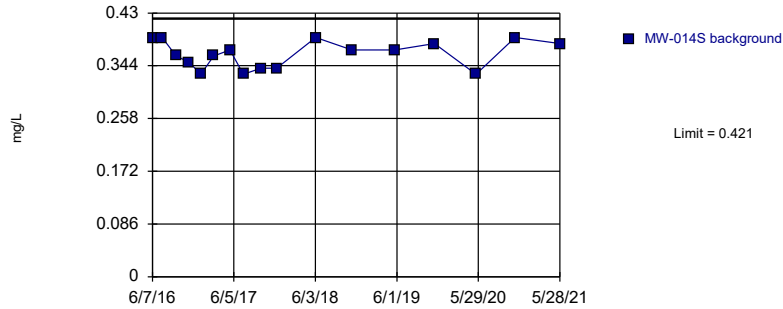
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary: Mean=0.5382, Std. Dev.=0.03893, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9257, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

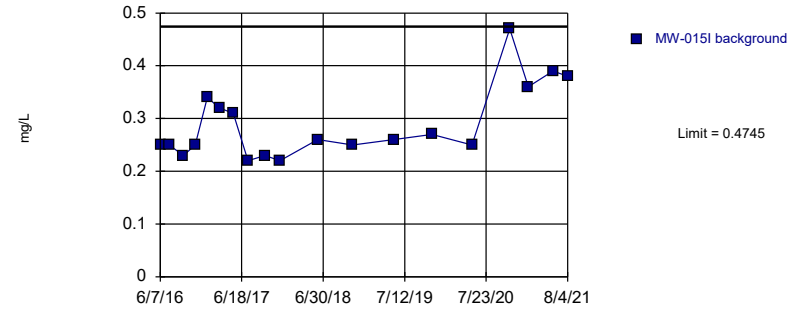
Prediction Limit
Intrawell Parametric, MW-014S (bg)



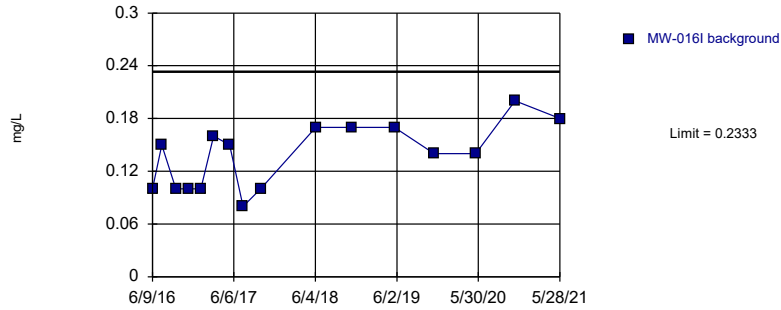
Background Data Summary: Mean=0.3629, Std. Dev.=0.02257, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.889, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-015I



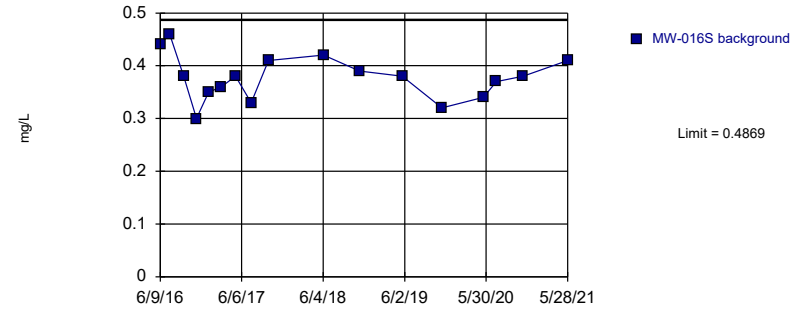
Prediction Limit
Intrawell Parametric, MW-016I



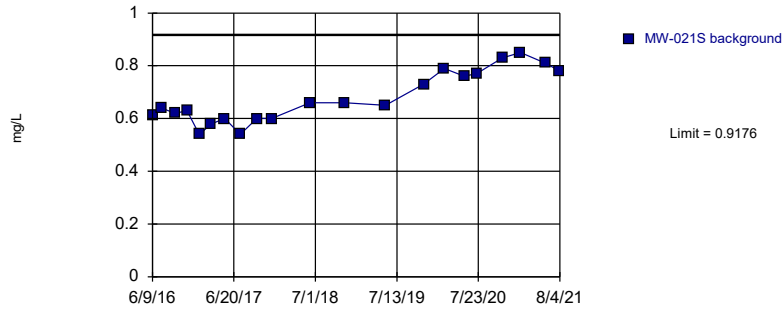
Background Data Summary: Mean=0.1381, Std. Dev.=0.03655, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9114, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-016S



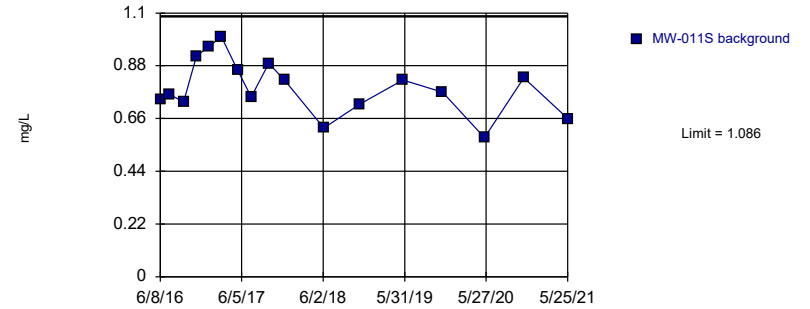
Prediction Limit
Intrawell Parametric, MW-021S



Background Data Summary: Mean=0.6786, Std. Dev.=0.09748, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9203, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

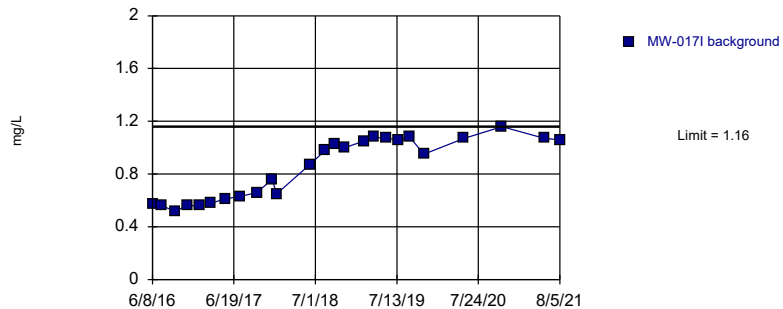
Prediction Limit
Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=0.79, Std. Dev.=0.1151, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9843, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

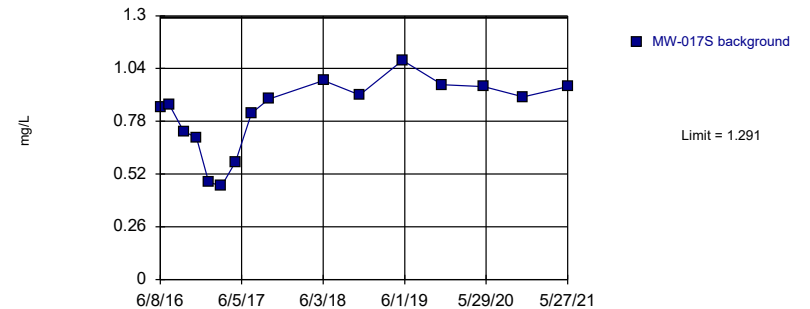
Prediction Limit
Intrawell Non-parametric, MW-017I



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 25 background values. Well-constituent pair annual alpha = 0.005656. Individual comparison alpha = 0.002832 (1 of 2). Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

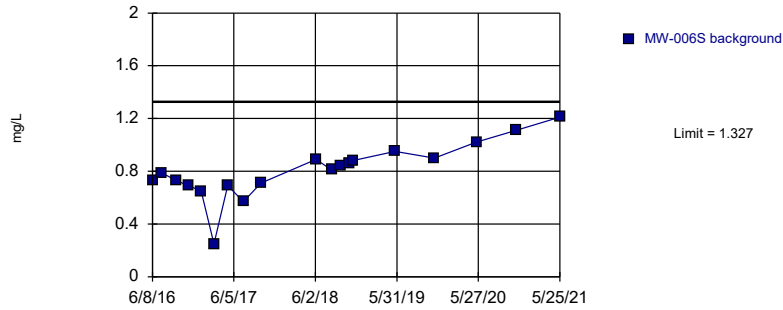
Prediction Limit
Intrawell Parametric, MW-017S



Background Data Summary: Mean=0.8188, Std. Dev.=0.1814, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9001, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

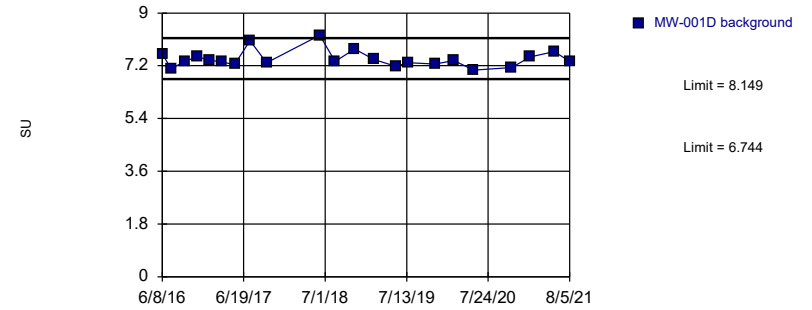
Prediction Limit
Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=0.8042, Std. Dev.=0.2088, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.954, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Fluoride, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

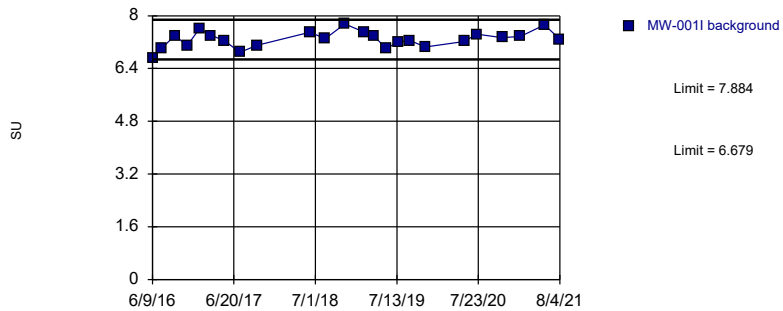
Prediction Limit
Intrawell Parametric, MW-001D



Background Data Summary (based on square root transformation): Mean=2.726, Std. Dev.=0.053, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8801, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

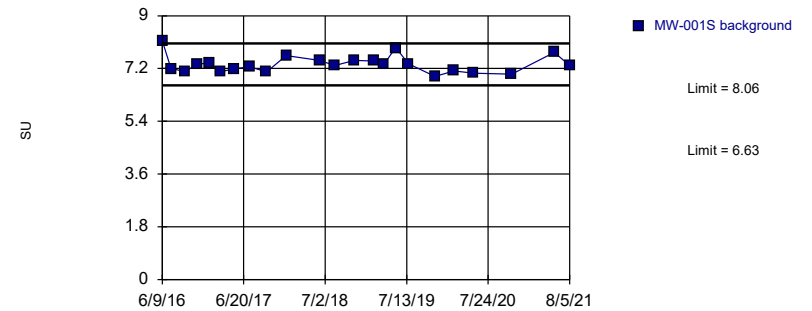
Prediction Limit
Intrawell Parametric, MW-0011



Background Data Summary: Mean=7.281, Std. Dev.=0.252, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9845, critical = 0.884. Kappa = 2.39 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

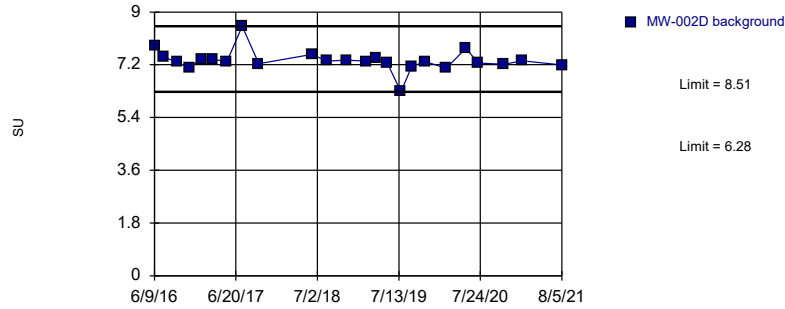
Prediction Limit
Intrawell Parametric, MW-001S



Background Data Summary: Mean=7.345, Std. Dev.=0.2966, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9216, critical = 0.881. Kappa = 2.411 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

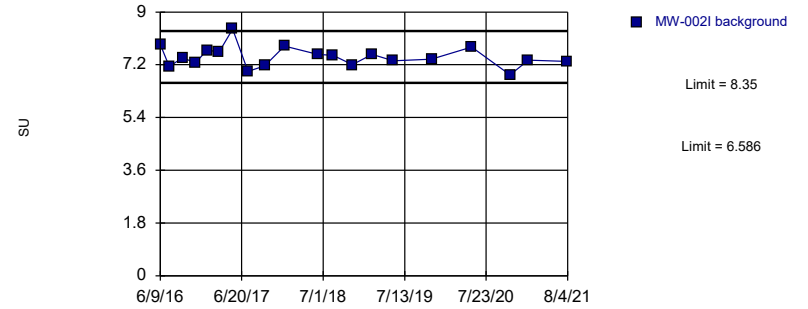
Prediction Limit
Intrawell Non-parametric, MW-002D



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 24 background values. Well-constituent pair annual alpha = 0.01248. Individual comparison alpha = 0.006247 (1 of 2). Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

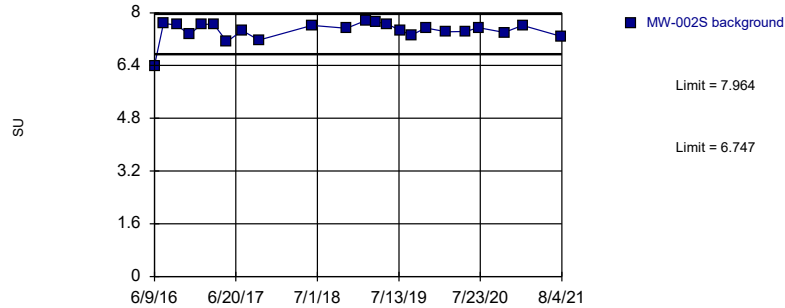
Prediction Limit
Intrawell Parametric, MW-002I



Background Data Summary: Mean=7.468, Std. Dev.=0.3567, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9627, critical = 0.868. Kappa = 2.472 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

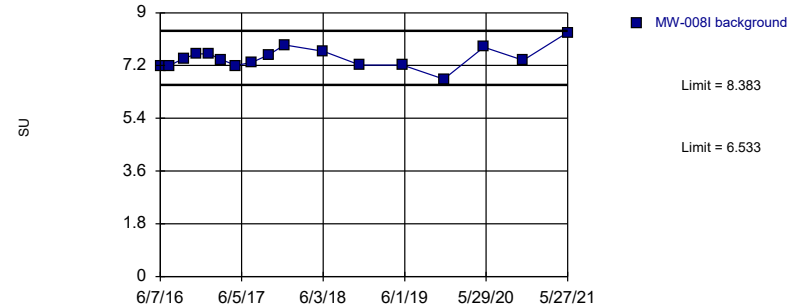
Prediction Limit
Intrawell Parametric, MW-002S



Background Data Summary (based on x^6 transformation): Mean=174755, Std. Dev.=33364, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8913, critical = 0.881. Kappa = 2.411 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

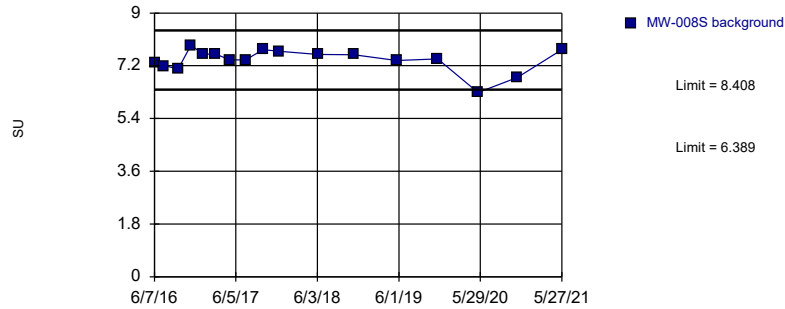
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=7.458, Std. Dev.=0.3598, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9467, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

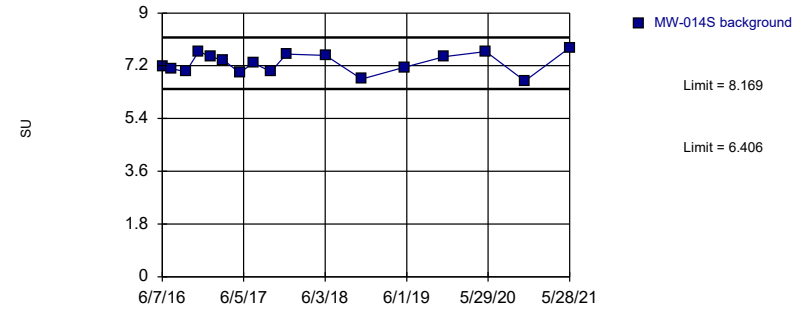
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary: Mean=7.398, Std. Dev.=0.3927, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8708, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

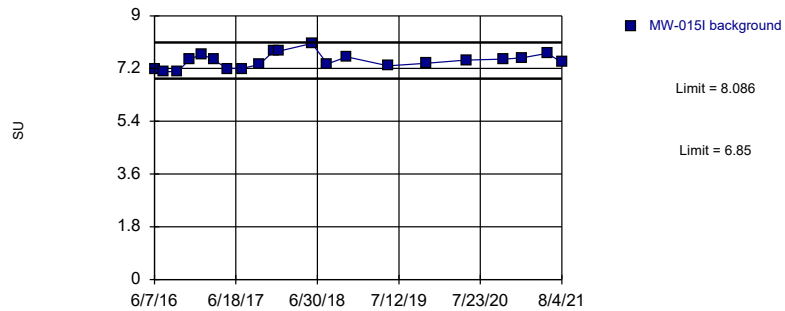
Prediction Limit
Intrawell Parametric, MW-014S (bg)



Background Data Summary: Mean=7.288, Std. Dev.=0.3428, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9602, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

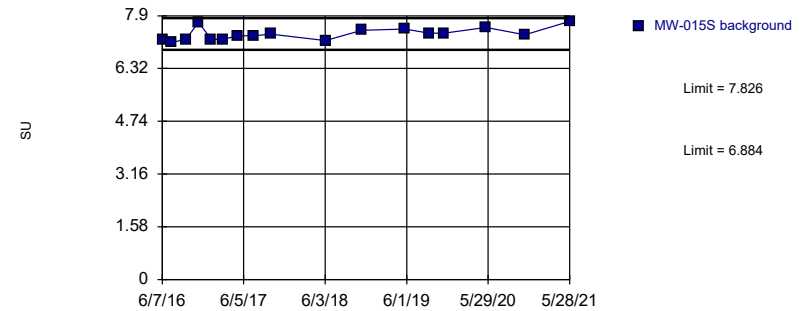
Prediction Limit
Intrawell Parametric, MW-015I



Background Data Summary: Mean=7.468, Std. Dev.=0.2522, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9649, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

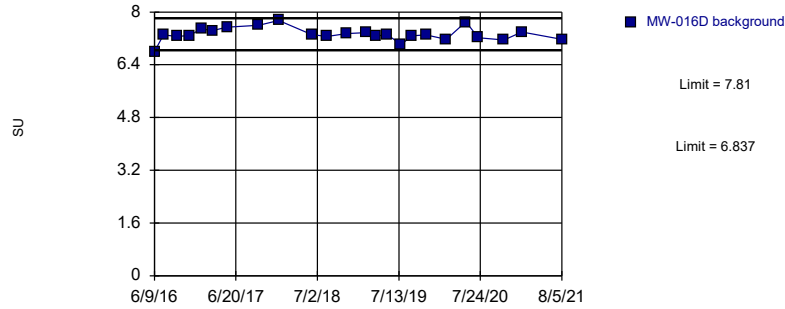
Prediction Limit
Intrawell Parametric, MW-015S



Background Data Summary: Mean=7.355, Std. Dev.=0.1832, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.927, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

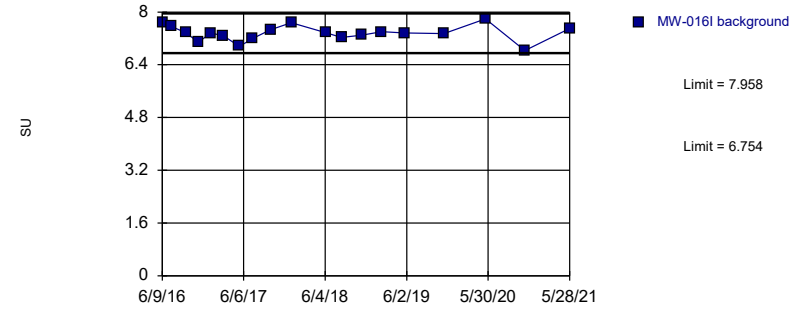
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=7.323, Std. Dev.=0.2034, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9522, critical = 0.884. Kappa = 2.39 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

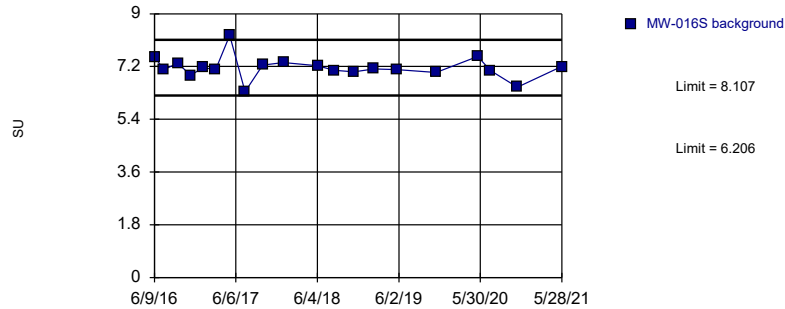
Prediction Limit
Intrawell Parametric, MW-016I



Background Data Summary: Mean=7.356, Std. Dev.=0.2403, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9686, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

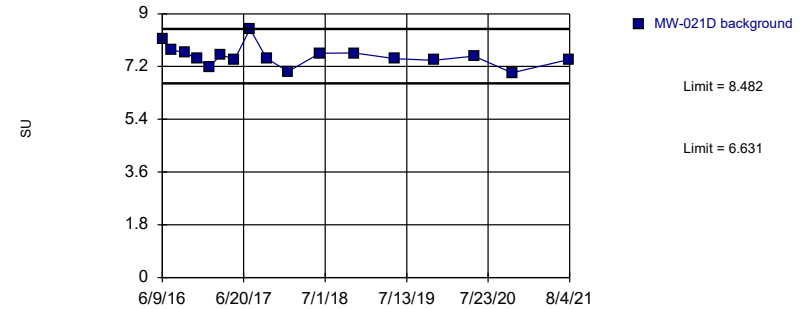
Prediction Limit
Intrawell Parametric, MW-016S



Background Data Summary: Mean=7.157, Std. Dev.=0.3847, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.883, critical = 0.868. Kappa = 2.472 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

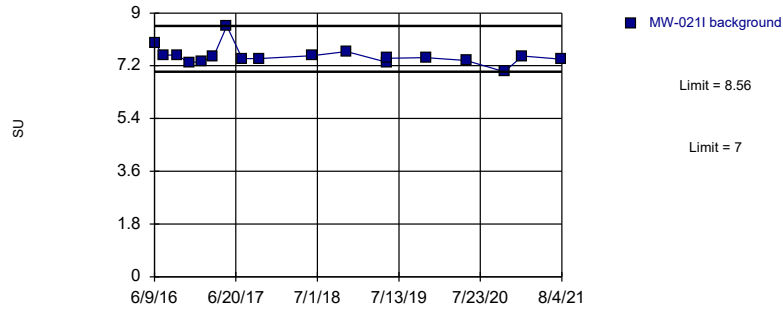
Prediction Limit
Intrawell Parametric, MW-021D



Background Data Summary: Mean=7.556, Std. Dev.=0.36, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9078, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

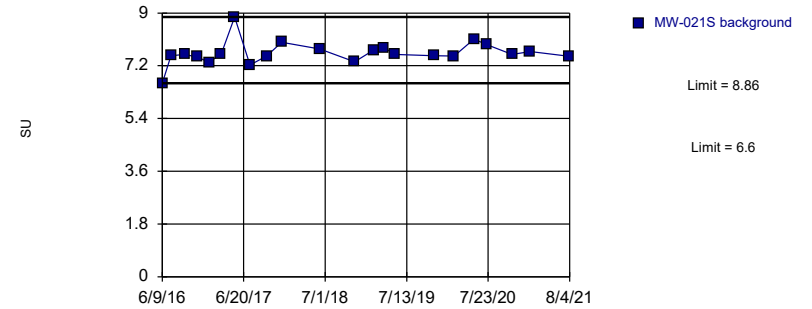
Prediction Limit
Intrawell Non-parametric, MW-0211



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 18 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01075 (1 of 2). Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

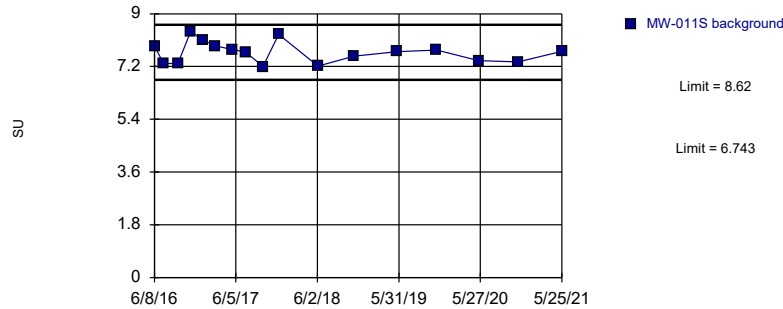
Prediction Limit
Intrawell Non-parametric, MW-021S



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 22 background values. Well-constituent pair annual alpha = 0.0148. Individual comparison alpha = 0.007415 (1 of 2). Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

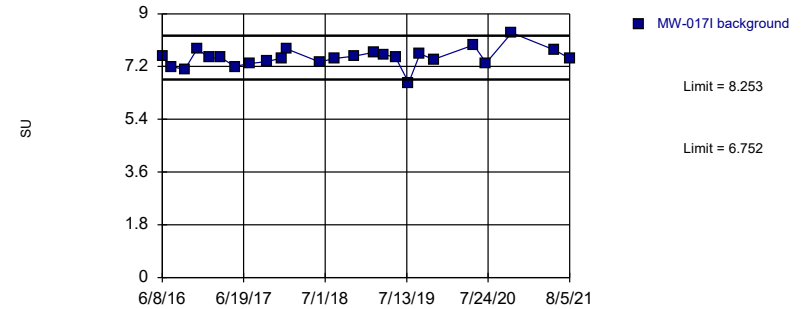
Prediction Limit
Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=7.682, Std. Dev.=0.3651, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9397, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

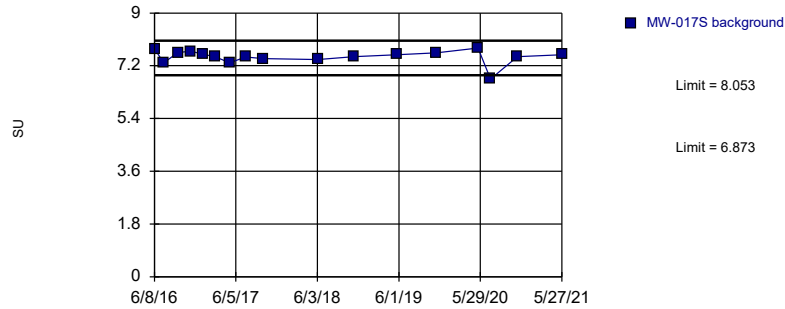
Prediction Limit
Intrawell Parametric, MW-0171



Background Data Summary: Mean=7.503, Std. Dev.=0.3166, n=25. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.947, critical = 0.888. Kappa = 2.37 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

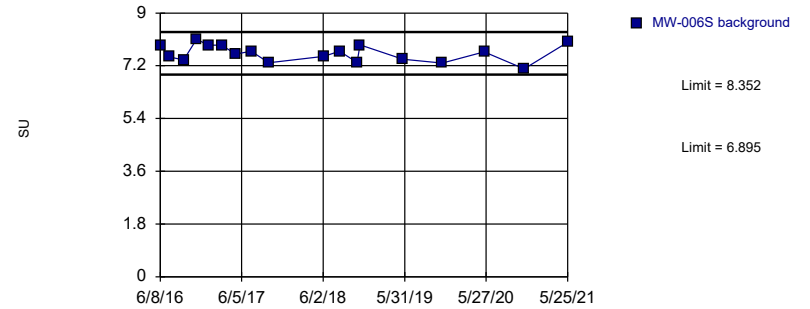
Prediction Limit Intrawell Parametric, MW-017S



Background Data Summary (based on cube transformation): Mean=423.5, Std. Dev.=38.43, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8647, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

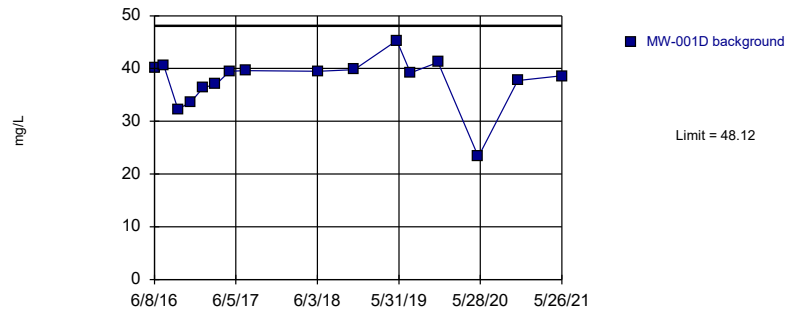
Prediction Limit Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=7.623, Std. Dev.=0.287, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9585, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: pH, field Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

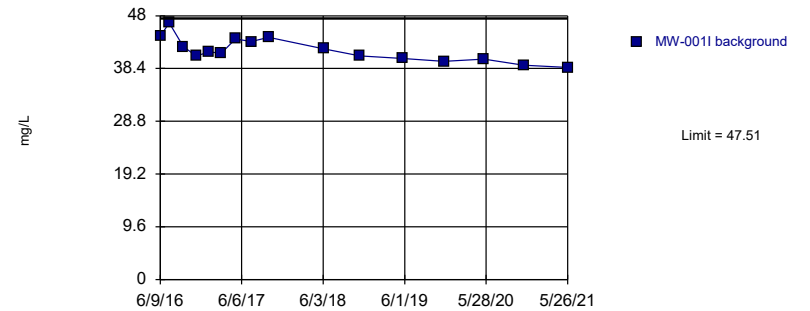
Prediction Limit Intrawell Parametric, MW-001D



Background Data Summary (based on square transformation): Mean=1446, Std. Dev.=333.7, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8856, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

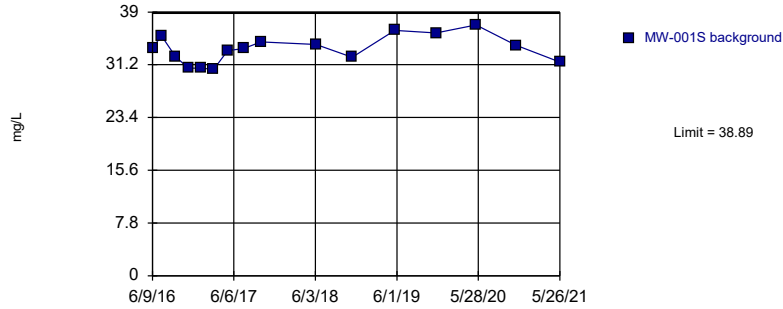
Prediction Limit Intrawell Parametric, MW-001I



Background Data Summary: Mean=41.76, Std. Dev.=2.207, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.958, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

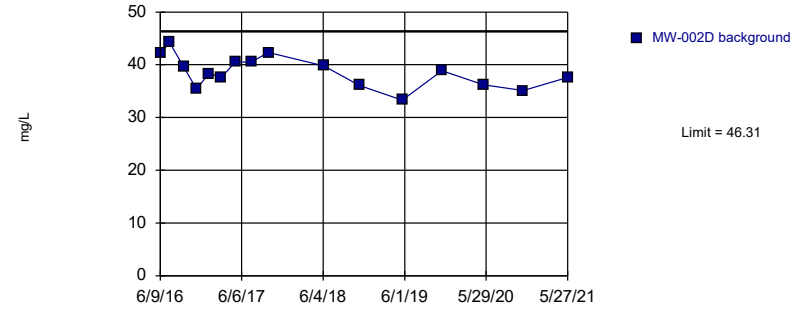
Prediction Limit Intrawell Parametric, MW-001S



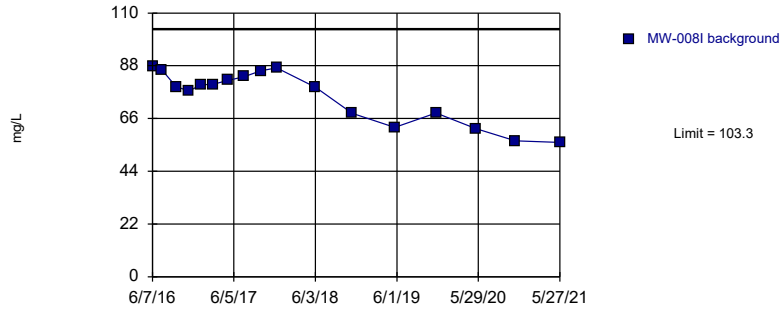
Background Data Summary: Mean=33.53, Std. Dev.=2.06, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9584, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit Intrawell Parametric, MW-002D



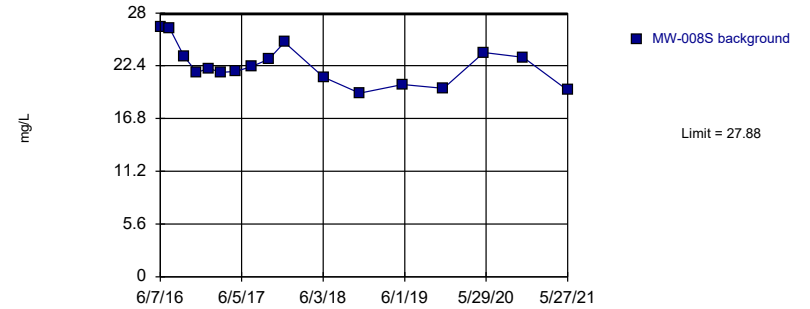
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=75.37, Std. Dev.=10.85, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8754, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

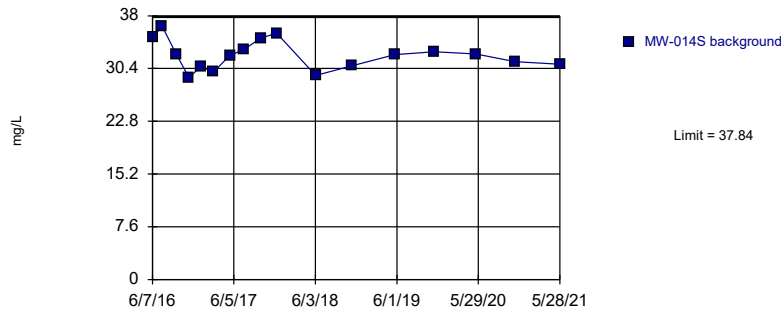
Prediction Limit
Intrawell Parametric, MW-008S (bg)



Background Data Summary: Mean=22.46, Std. Dev.=2.107, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9441, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

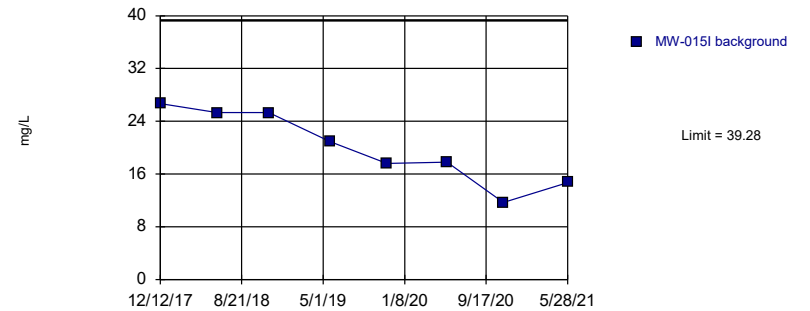
Prediction Limit
Intrawell Parametric, MW-014S (bg)



Background Data Summary: Mean=32.33, Std. Dev.=2.144, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9579, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

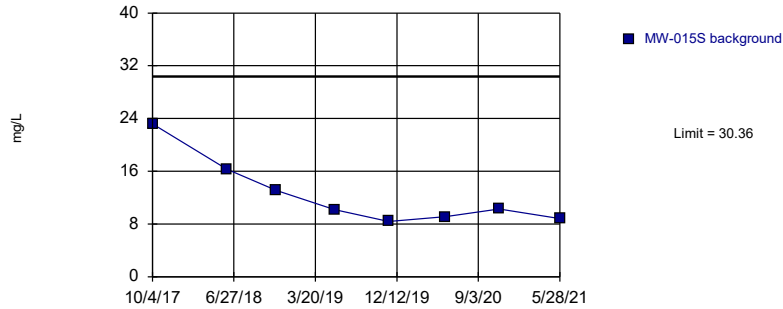
Prediction Limit
Intrawell Parametric, MW-015I



Background Data Summary: Mean=20, Std. Dev.=5.47, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9288, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

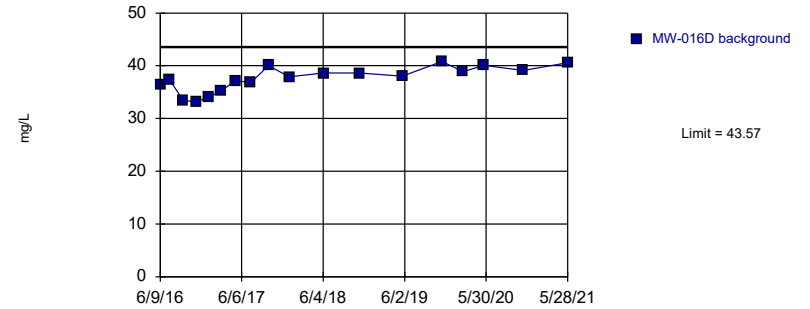
Prediction Limit Intrawell Parametric, MW-015S



Background Data Summary: Mean=12.43, Std. Dev.=5.089, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7978, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

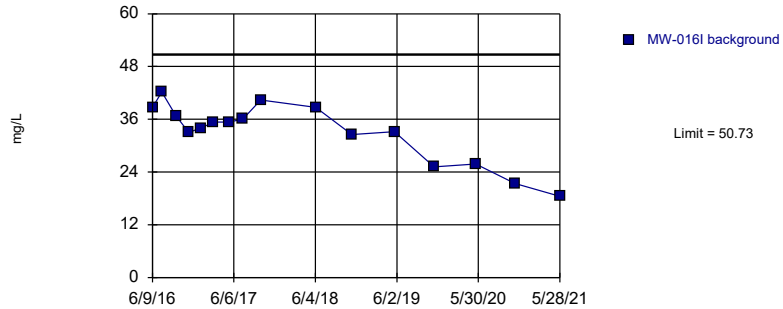
Prediction Limit Intrawell Parametric, MW-016D



Background Data Summary: Mean=37.57, Std. Dev.=2.363, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9352, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

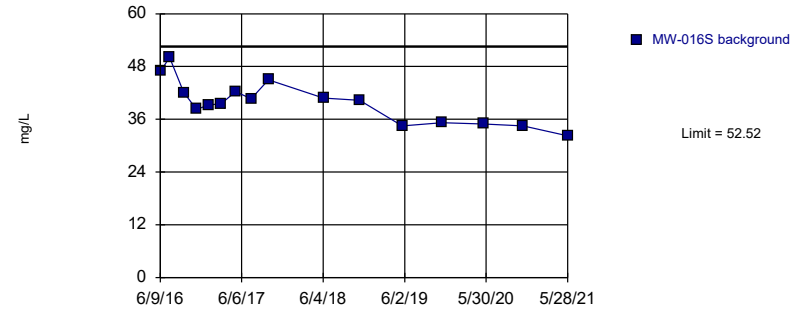
Prediction Limit Intrawell Parametric, MW-016I



Background Data Summary: Mean=32.96, Std. Dev.=6.825, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9111, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

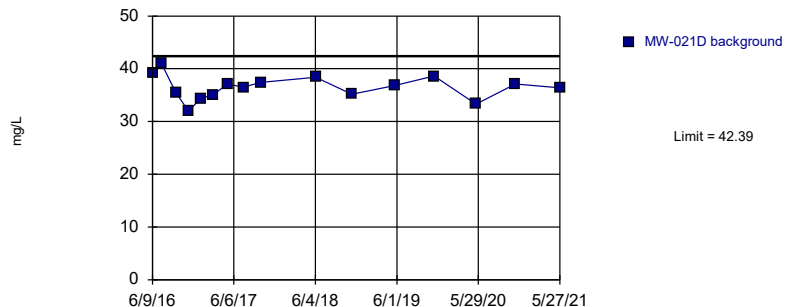
Prediction Limit Intrawell Parametric, MW-016S



Background Data Summary: Mean=39.79, Std. Dev.=4.891, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9602, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

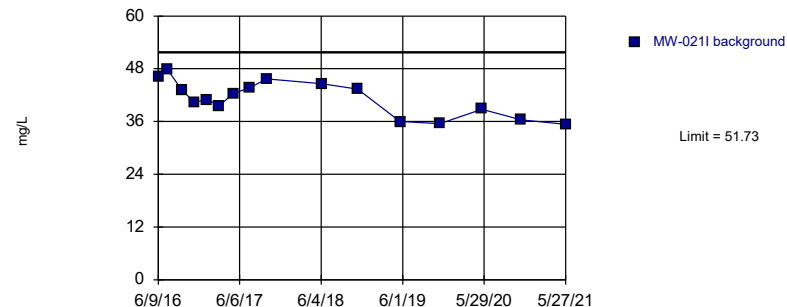
Prediction Limit
Intrawell Parametric, MW-021D



Background Data Summary: Mean=36.5, Std. Dev.=2.262, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9901, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

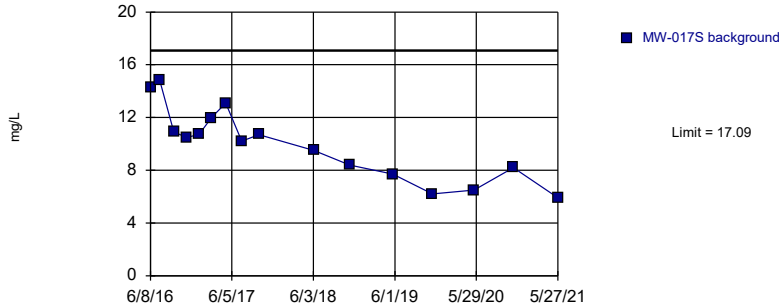
Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-0211



Background Data Summary: Mean=41.26, Std. Dev.=4.024, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.

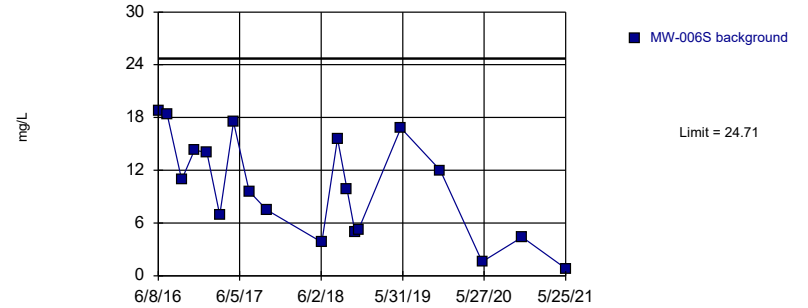
Prediction Limit
Intrawell Parametric, MW-017S



Background Data Summary: Mean=9.976, Std. Dev.=2.731, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9576, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

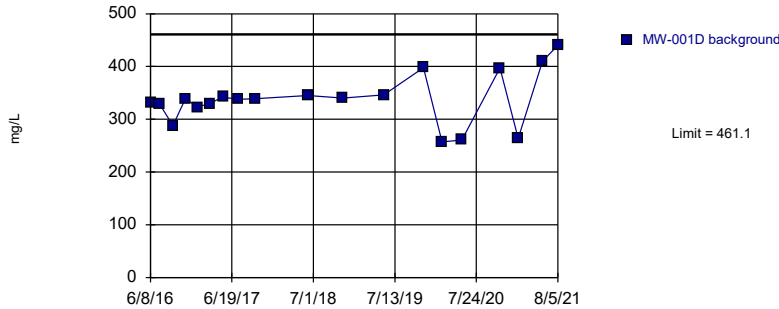
Prediction Limit
Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=10.14, Std. Dev.=5.815, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9454, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

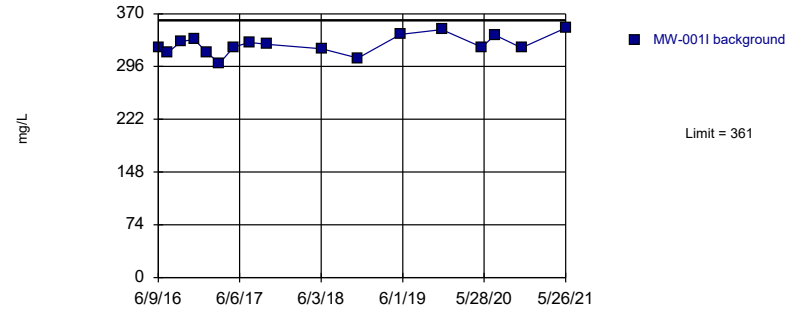
Prediction Limit
Intrawell Parametric, MW-001D



Background Data Summary: Mean=337.7, Std. Dev.=49.27, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9194, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

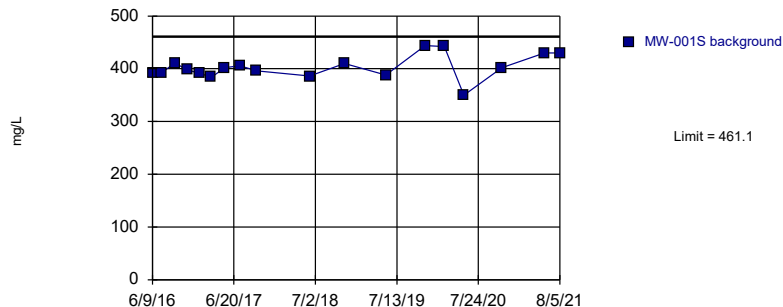
Prediction Limit
Intrawell Parametric, MW-001I



Background Data Summary: Mean=326.6, Std. Dev.=13.39, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9764, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

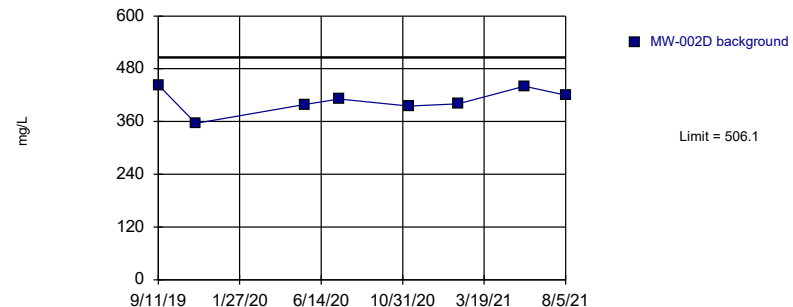
Prediction Limit Intrawell Parametric, MW-001S



Background Data Summary: Mean=403.1, Std. Dev.=22.89, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.935, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:41 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

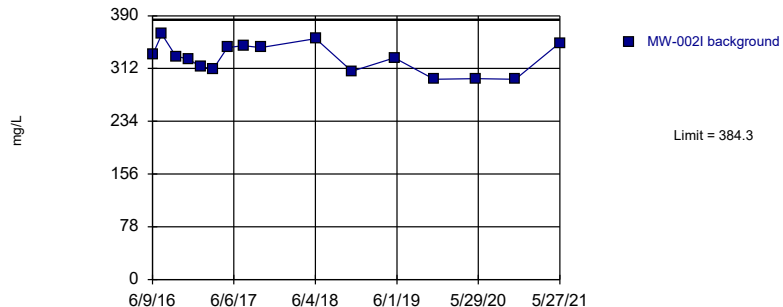
Prediction Limit Intrawell Parametric, MW-002D



Background Data Summary: Mean=408, Std. Dev.=27.83, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9345, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

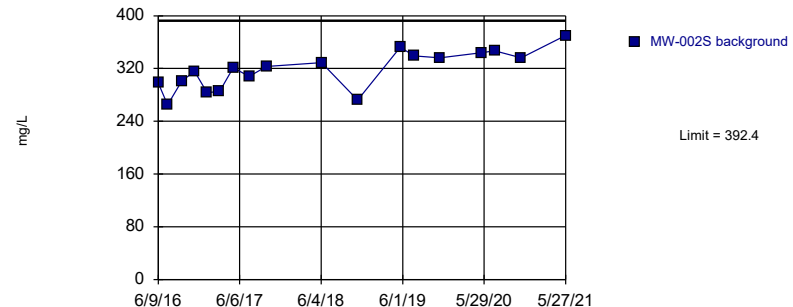
Prediction Limit Intrawell Parametric, MW-002I



Background Data Summary: Mean=327.5, Std. Dev.=21.83, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9439, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

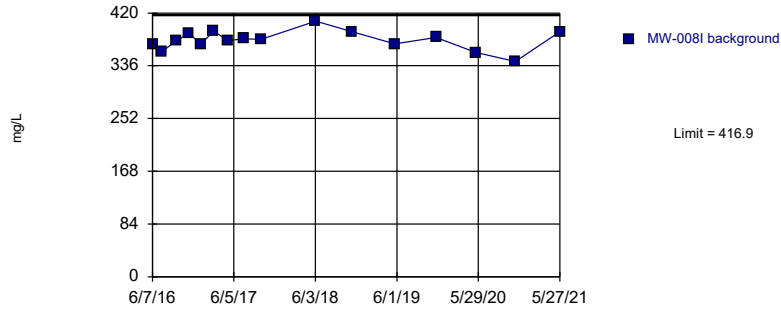
Prediction Limit Intrawell Parametric, MW-002S



Background Data Summary: Mean=318.1, Std. Dev.=29.29, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9724, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

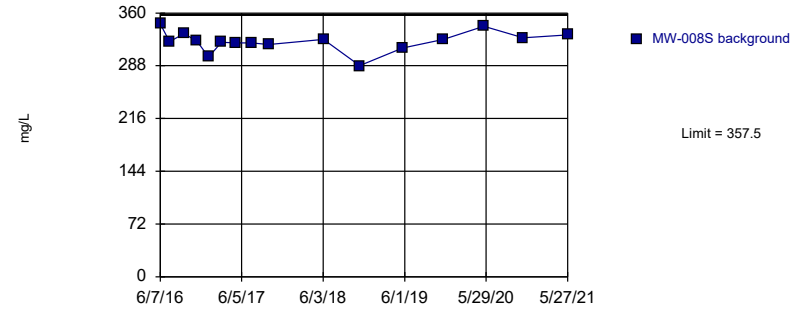
Prediction Limit
Intrawell Parametric, MW-008I (bg)



Background Data Summary: Mean=376.6, Std. Dev.=15.47, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.97, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

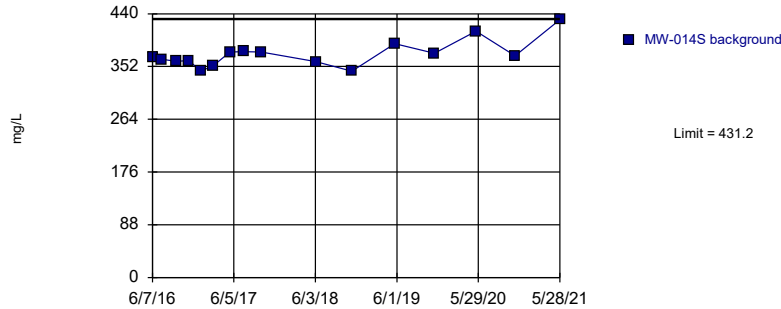
Prediction Limit
Intrawell Parametric, MW-008S (bg)



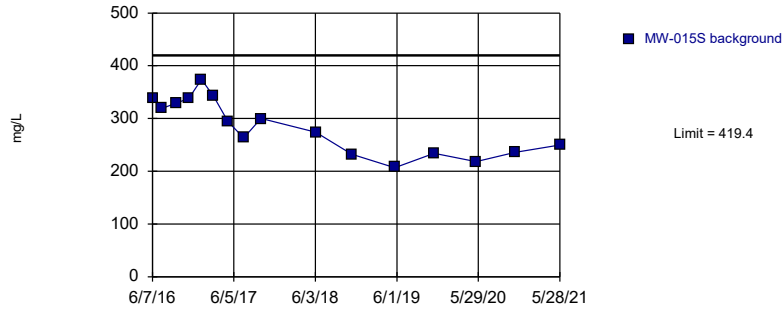
Background Data Summary: Mean=321.3, Std. Dev.=13.9, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9322, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit
Intrawell Parametric, MW-014S (bg)



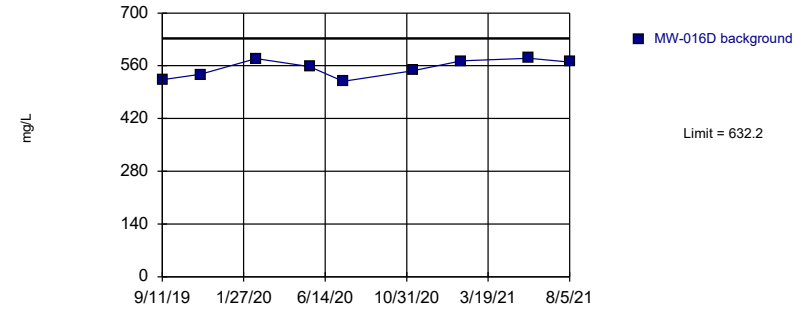
Prediction Limit
Intrawell Parametric, MW-015S



Background Data Summary: Mean=284.3, Std. Dev.=51.89, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9424, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

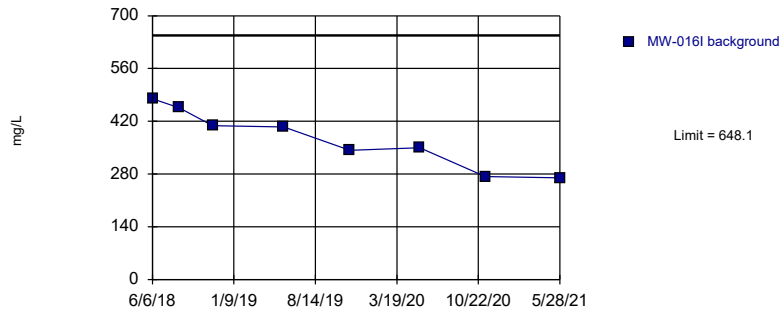
Prediction Limit
Intrawell Parametric, MW-016D



Background Data Summary: Mean=554, Std. Dev.=23.61, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9009, critical = 0.764. Kappa = 3.312 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

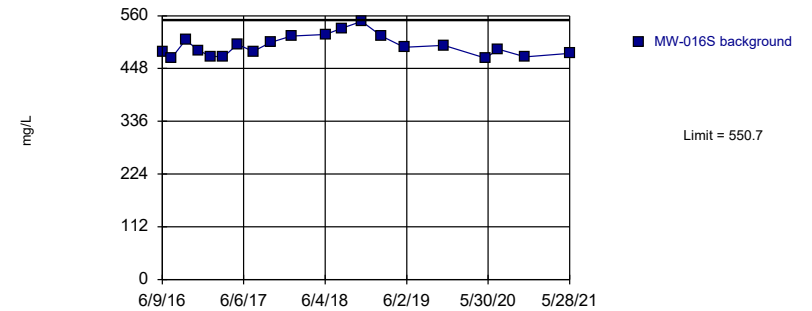
Prediction Limit
Intrawell Parametric, MW-016I



Background Data Summary: Mean=373.1, Std. Dev.=78.03, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9329, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

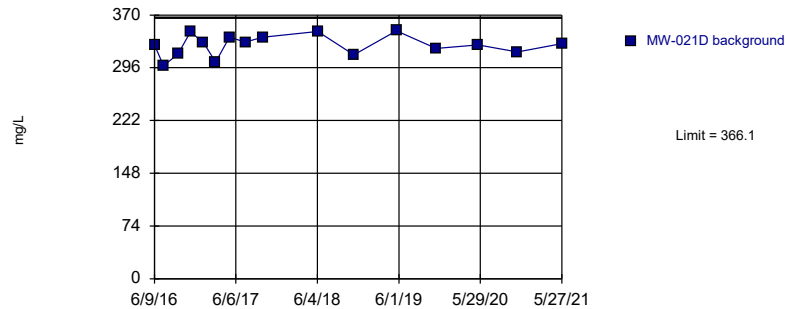
Prediction Limit
Intrawell Parametric, MW-016S



Background Data Summary: Mean=496, Std. Dev.=22.16, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.923, critical = 0.868. Kappa = 2.472 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

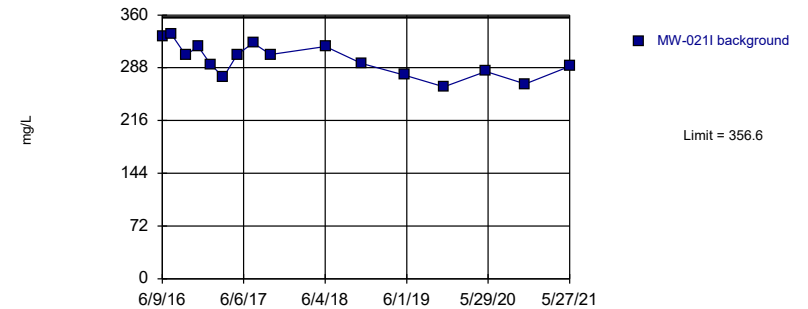
Prediction Limit
Intrawell Parametric, MW-021D



Background Data Summary: Mean=327.6, Std. Dev.=14.76, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.955, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

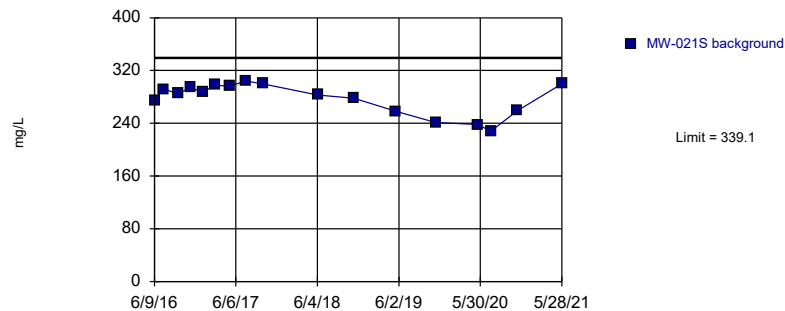
Prediction Limit
Intrawell Parametric, MW-0211



Background Data Summary: Mean=298.6, Std. Dev.=22.28, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9654, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

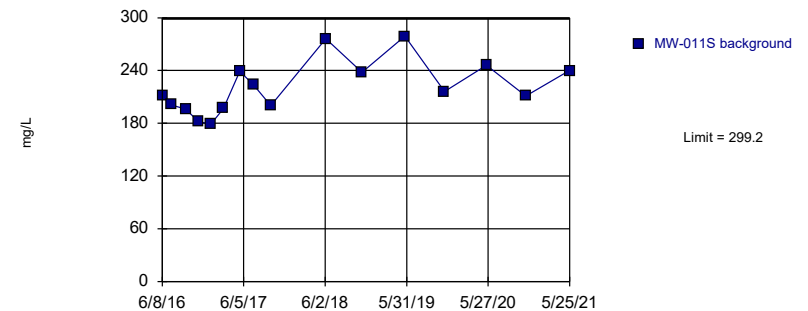
Prediction Limit
Intrawell Parametric, MW-021S



Background Data Summary: Mean=277.4, Std. Dev.=23.99, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8775, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

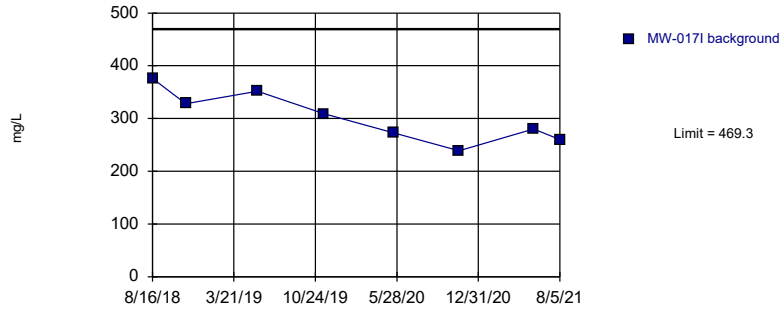
Prediction Limit
Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=221, Std. Dev.=30.03, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9377, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

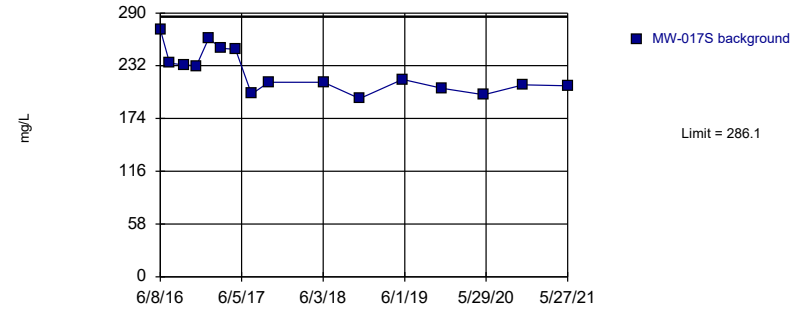
Prediction Limit
Intrawell Parametric, MW-017I



Background Data Summary: Mean=302.1, Std. Dev.=47.45, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9637, critical = 0.749. Kappa = 3.524 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

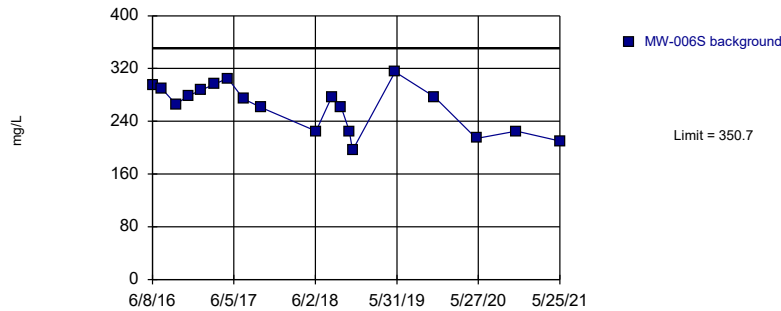
Prediction Limit
Intrawell Parametric, MW-017S



Background Data Summary: Mean=225.3, Std. Dev.=23.36, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.919, critical = 0.844. Kappa = 2.604 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

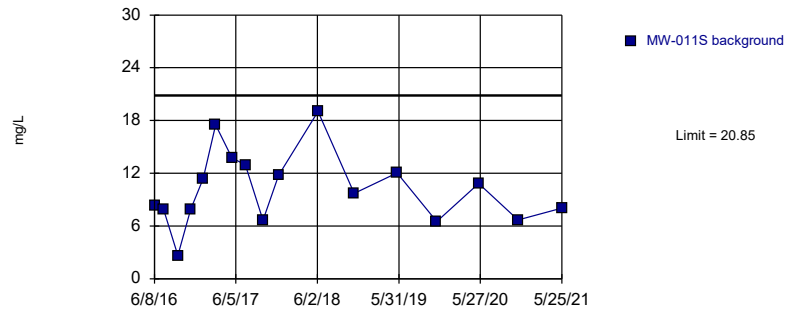
Prediction Limit
Intrawell Parametric, MW-006S (bg)



Background Data Summary: Mean=261.9, Std. Dev.=35.45, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9252, critical = 0.863. Kappa = 2.505 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Total Dissolved Solids [TDS] Analysis Run 1/12/2022 3:42 PM View: Intrawell
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Prediction Limit Intrawell Parametric, MW-011S (bg)



Background Data Summary: Mean=10.21, Std. Dev.=4.14, n=17. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9558, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115. Assumes 1 future value.

Constituent: Sulfate, total Analysis Run 1/12/2022 3:45 PM View: Deseasonalized Prediction Limits
Rockport Landfill Client: Geosyntec Data: Rockport_LF

Memorandum

Date: April 8, 2022
To: David Miller (AEP)
Copies to: Justin Jent (AEP)
From: Allison Kreinberg (Geosyntec)
Subject: Evaluation of Detection Monitoring Data at Rockport Plant's Landfill (LF)

In accordance with the United States Environmental Protection Agency's (USEPA's) regulations regarding the disposal of coal combustion residuals (CCR) in landfills and surface impoundments (40 CFR 257 Subpart D, "CCR rule") and solid waste permit (74-02) requirements through the Indiana Administrative Code (IAC) Title 329 Article 10 (329 IAC 10), the second semi-annual detection monitoring event of 2021 at the Landfill (LF), an existing CCR unit at the Rockport Power Plant located in Rockport, Indiana was completed on November 11-12, 2021. Based on the results, verification sampling was completed on February 15, 2022.

Background values for the LF were previously calculated in January 2018. After a minimum of four detection monitoring events, the results of those events were compared to the existing background and the dataset was updated as appropriate. Revised upper prediction limits (UPLs) were calculated for each Appendix III parameter to represent background values. Lower prediction limits (LPLs) were also calculated for pH. Details on the calculation of the most recent revision to the background values are described in Geosyntec's *Statistical Analysis Summary* report, dated January 17, 2022.

To achieve an acceptably high statistical power while maintaining a site-wide false-positive rate (SWFPR) of 10% per year or less, prediction limits were calculated based on a one-of-two retesting procedure. With this procedure, a statistically significant increase (SSI) is concluded only if both samples in a series of two exceed the UPL (or are below the LPL for pH). In practice, if the initial result did not exceed the UPL, a second sample was not collected or analyzed.

Detection monitoring results and the relevant background values are compared in Table 1 and noted exceedances are described in the list below.

- Chloride concentrations exceeded the intrawell UPL of 42.1 mg/L in both the initial (42.5 mg/L) and second (46.8 mg/L) samples collected at MW-001I, and the intrawell UPL of 132 mg/L in both the initial (135 mg/L) and second (159 mg/L) samples collected at MW-002D. SSIs over background are concluded for chloride at MW-001I and MW-002D.
- Conductivity exceeded the intrawell UPL of 936 $\mu\text{S}/\text{cm}$ in both the initial (943 $\mu\text{S}/\text{cm}$) and second (951 $\mu\text{S}/\text{cm}$) samples collected at MW-002D. An SSI over background is concluded for conductivity at MW-002D.

In response to the exceedances noted above, the Rockport LF CCR unit will either transition to assessment monitoring or an alternative source demonstration (ASD) for chloride and conductivity will be conducted in accordance with 40 CFR 257.94(e)(2). If the ASD is successful, the Rockport LF will remain in detection monitoring.

The statistical analysis was conducted within 90 days of completion of sampling and analysis in accordance with 40 CFR 257.93(h)(2). A certification of these statistics by a qualified professional engineer is provided in Attachment A.

**Table 1: Detection Monitoring Data Evaluation
Rockport - Landfill**

Analyte	Unit	Description	MW-001D	MW-001I		MW-001S	MW-002D		MW-002I	MW-002S	MW-015I	MW-015S
			11/12/2021	11/12/2021	2/15/2022	11/12/2021	11/11/2021	2/15/2022	11/11/2021	11/11/2021	11/11/2021	11/11/2021
Boron	mg/L	Intrawell Background Value (UPL)	0.129	0.123		0.0588	0.1		0.0662	0.102	0.0875	0.15
		Analytical Result	0.042	0.016	--	0.018	0.011	--	0.013	0.028	0.026	0.012
Calcium	mg/L	Intrawell Background Value (UPL)	84.4	72.9		78.1	117		78.9	65.9	55.4	66.4
		Analytical Result	73.7	68.2	--	65.8	96.3	--	72.1	55.2	44.4	46.3
Chloride	mg/L	Intrawell Background Value (UPL)	65.5	42.1		42	132		34	31.5	34.2	26
		Analytical Result	55.4	42.5	46.8	32.9	135	159	31.7	23	14	10.4
Conductivity	µS/cm	Intrawell Background Value (UPL)	857	747		913	936		753	786	585	623
		Analytical Result	735	598	614	687	943	951	647	588	402	500
Fluoride	mg/L	Intrawell Background Value (UPL)	0.333	0.465		0.7	0.229		0.393	0.391	0.475	1.05
		Analytical Result	0.3	0.4	--	0.65	0.2	--	0.32	0.33	0.47	0.65
pH	SU	Intrawell Background Value (UPL)	8.1	7.9		8.1	8.5		8.4	8.0	8.1	7.8
		Intrawell Background Value (LPL)	6.7	6.7		6.6	6.3		6.6	6.7	6.9	6.9
		Analytical Result	7.4	7.5	7.2	7.6	6.8	7.2	7.0	7.0	8.0	7.5
Sulfate	mg/L	Intrawell Background Value (UPL)	48.1	47.5		38.9	46.3		47.9	34.4	39.3	30.4
		Analytical Result	36	39	--	31	33.3	--	37.2	27.1	11.3	8.07
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	461	361		461	506		384	392	335	419
		Analytical Result	410	340	--	380	470	--	340	330	220	270

Analyte	Unit	Description	MW-016D	MW-016I	MW-016S	MW-017I	MW-017S	MW-021D	MW-021I	MW-021S
			11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021
Boron	mg/L	Intrawell Background Value (UPL)	0.0990	0.148	0.147	0.0953	0.0649	0.111	0.0835	0.0616
		Analytical Result	0.038	0.019	0.019	0.039	0.023	0.014	0.011	0.012
Calcium	mg/L	Intrawell Background Value (UPL)	126	101	119	58.5	40.7	80.2	72.9	64.9
		Analytical Result	105	50.0	86.7	46.4	35.2	69.7	57.2	57.1
Chloride	mg/L	Intrawell Background Value (UPL)	161	98.4	27.7	90.8	15.5	20.5	23.1	20.2
		Analytical Result	98.3	16.6	13.3	40.8	9.41	19.5	18.2	19.3
Conductivity	µS/cm	Intrawell Background Value (UPL)	1,290	1,040	1,040	1,060	514	697	585	589
		Analytical Result	1,060	538	832	500	420	555	500	585
Fluoride	mg/L	Intrawell Background Value (UPL)	0.245	0.233	0.487	1.16	1.29	0.443	0.505	0.918
		Analytical Result	0.18	0.15	0.37	0.99	0.81	0.38	0.40	0.74
pH	SU	Intrawell Background Value (UPL)	7.8	8.0	8.1	8.3	8.1	8.5	8.6	8.9
		Intrawell Background Value (LPL)	6.8	6.8	6.2	6.8	6.9	6.6	7.0	6.6
		Analytical Result	6.8	6.9	6.6	7.8	7.7	7.8	7.7	7.8
Sulfate	mg/L	Intrawell Background Value (UPL)	43.6	50.7	52.5	56.7	17.1	42.4	51.7	23.5
		Analytical Result	37.0	17.6	24.4	25.3	4.62	34.2	35.8	20.0
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	632	648	551	469	286	366	357	339
		Analytical Result	560	280	440	270	230	330	280	320

Notes:

UPL: Upper prediction limit

LPL: Lower prediction limit

Bold values exceed the background value.

Background values are shaded gray.

--: Not analyzed

ATTACHMENT A

Certification by a Qualified Professional Engineer

CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER

I certify that the selected statistical method, described above and in the January 17, 2022 *Statistical Analysis Summary* report, is appropriate for evaluating the groundwater monitoring data for the Rockport LF CCR management area and that the requirements of 40 CFR 257.93(f) and 329 IAC 10 have been met.

DAVID ANTHONY MILLER

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature

11700730

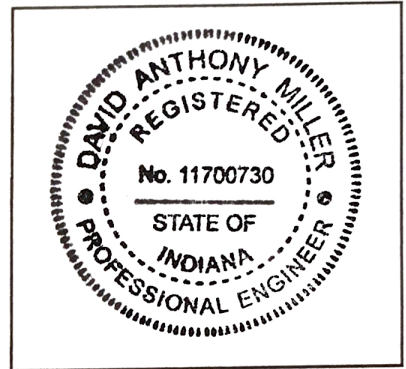
License Number

INDIANA

Licensing State

05.05.22

Date



Memorandum

Date: August 17, 2022
To: David Miller (AEP)
Copies to: Justin Jent (AEP)
From: Allison Kreinberg (Geosyntec)
Subject: Evaluation of Detection Monitoring Data at Rockport Plant's Landfill (LF)

In accordance with the United States Environmental Protection Agency's (USEPA's) regulations regarding the disposal of coal combustion residuals (CCR) in landfills and surface impoundments (40 CFR 257 Subpart D, "CCR rule") and solid waste permit (74-02) requirements through the Indiana Administrative Code (IAC) Title 329 Article 10 (329 IAC 10), the first semi-annual detection monitoring event of 2022 at the Landfill (LF), an existing CCR unit at the Rockport Power Plant located in Rockport, Indiana was completed on May 12-13, 2022. Based on the results, verification sampling was completed on July 19-20, 2022.

Background values for the LF were previously calculated in January 2018. After a minimum of four detection monitoring events, the results of those events were compared to the existing background and the dataset was updated as appropriate. Revised upper prediction limits (UPLs) were calculated for each Appendix III parameter to represent background values. Lower prediction limits (LPLs) were also calculated for pH. Details on the calculation of the most recent revision to the background values are described in Geosyntec's *Statistical Analysis Summary* report, dated January 17, 2022.

To achieve an acceptably high statistical power while maintaining a site-wide false-positive rate (SWFPR) of 10% per year or less, prediction limits were calculated based on a one-of-two retesting procedure. With this procedure, a statistically significant increase (SSI) is concluded only if both samples in a series of two exceed the UPL (or are below the LPL for pH). In practice, if the initial result did not exceed the UPL, a second sample was not collected or analyzed.

Detection monitoring results and the relevant background values are compared in Table 1 and noted exceedances are described in the list below.

- Chloride concentrations exceeded the intrawell UPL of 42.1 mg/L in both the initial (46.5 mg/L) and second (47.2 mg/L) samples collected at MW-001I, the intrawell UPL of 132 mg/L in both the initial (184 mg/L) and second (175 mg/L) samples collected at MW-002D, and the intrawell UPL of 34.0 mg/L in both the initial (51.3 mg/L) and second (58.8 mg/L) samples collected at MW-002I. SSIs over background are concluded for chloride at MW-001I, MW-002D, and MW-002I.
- Conductivity exceeded the intrawell UPL of 936 $\mu\text{S}/\text{cm}$ in both the initial (1,050 $\mu\text{S}/\text{cm}$) and second (1,050 $\mu\text{S}/\text{cm}$) samples collected at MW-002D. An SSI over background is concluded for conductivity at MW-002D.
- Total dissolved solids (TDS) exceeded the intrawell UPL of 506 mg/L in both the initial (580 mg/L) and second (650 mg/L) samples collected at MW-002D. An SSI over background is concluded for TDS at MW-002D.

In response to the exceedances noted above, the Rockport LF CCR unit will either transition to assessment monitoring or an alternative source demonstration (ASD) for chloride, conductivity, and TDS will be conducted in accordance with 40 CFR 257.94(e)(2). If the ASD is successful, the Rockport LF will remain in detection monitoring.

The statistical analysis was conducted within 90 days of completion of sampling and analysis in accordance with 40 CFR 257.93(h)(2). A certification of these statistics by a qualified professional engineer is provided in Attachment A.

**Table 1: Detection Monitoring Data Comparison
Rockport - Landfill**

Analyte	Unit	Description	MW-001D	MW-001I		MW-001S	MW-002D		MW-002I		MW-002S	MW-015I
			5/12/2022	5/12/2022	7/20/2022	5/12/2022	5/12/2022	7/20/2022	5/12/2022	7/19/2022	5/12/2022	5/12/2022
Boron	mg/L	Intrawell Background Value (UPL)	0.129	0.123		0.0588	0.100		0.0662		0.102	0.0875
		Analytical Result	0.009	0.009	--	0.009	0.009	--	0.009	--	0.009	0.019
Calcium	mg/L	Intrawell Background Value (UPL)	84.4	72.9		78.1	117		78.9		65.9	55.4
		Analytical Result	68.6	70.4	--	65.9	114	--	78	--	42.8	44.2
Chloride	mg/L	Intrawell Background Value (UPL)	65.5	42.1		42.0	132		34.0		31.5	34.2
		Analytical Result	30.9	46.5	47.2	35	184	175	51.3	58.8	16.8	19.8
Conductivity	µS/cm	Intrawell Background Value (UPL)	857	747		913	936		753		786	585
		Analytical Result	624	623	650	658	1,050	1,050	700	669	482	444
Fluoride	mg/L	Intrawell Background Value (UPL)	0.333	0.465		0.700	0.229		0.393		0.391	0.475
		Analytical Result	0.26	0.41	--	0.62	0.2	--	0.3	--	0.39	0.35
pH	SU	Intrawell Background Value (UPL)	8.1	7.9		8.1	8.5		8.4		8.0	8.1
		Intrawell Background Value (LPL)	6.7	6.7		6.6	6.3		6.6		6.7	6.9
		Analytical Result	7.2	7.3	7.5	7.4	7.3	7.1	7.5	6.9	7.6	7.5
Sulfate	mg/L	Intrawell Background Value (UPL)	48.1	47.5		38.9	46.3		47.9		34.4	39.3
		Analytical Result	45.4	43.4	--	36.8	39.1	--	41.1	--	17.9	16
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	461	361		461	506		384		392	335
		Analytical Result	350	350	--	380	580	650	380	--	280	250

Analyte	Unit	Description	MW-015S	MW-016D	MW-016I	MW-016S	MW-017I	MW-017S	MW-021D		MW-021I	MW-021S
			5/12/2022	5/12/2022	5/12/2022	5/12/2022	5/13/2022	5/13/2022	5/12/2022	7/20/2022	5/12/2022	5/12/2022
Boron	mg/L	Intrawell Background Value (UPL)	0.150	0.0990	0.148	0.147	0.0953	0.0649	0.111		0.0835	0.0616
		Analytical Result	0.009	0.026	0.009	0.009	0.050	0.050	0.009	--	0.009	0.009
Calcium	mg/L	Intrawell Background Value (UPL)	66.4	126	101	119	58.5	40.7	80.2		72.9	64.9
		Analytical Result	43.7	102	61.8	85.9	40.2	34.4	72.1	--	55.2	55.6
Chloride	mg/L	Intrawell Background Value (UPL)	26.0	161	98.4	27.7	90.8	15.5	20.5		23.1	20.2
		Analytical Result	10.2	101	25.6	13	36.6	10.2	21	19.9	19.1	19.5
Conductivity	µS/cm	Intrawell Background Value (UPL)	623	1,290	1,040	1,040	1,060	514	697		585	589
		Analytical Result	432	1,010	618	680	495	404	593	604	491	545
Fluoride	mg/L	Intrawell Background Value (UPL)	1.05	0.245	0.233	0.487	1.16	1.29	0.443		0.505	0.918
		Analytical Result	0.82	0.19	0.15	0.39	1.04	0.82	0.38	--	0.4	0.67
pH	SU	Intrawell Background Value (UPL)	7.8	7.8	8.0	8.1	8.3	8.1	8.5		8.6	8.9
		Intrawell Background Value (LPL)	6.9	6.8	6.8	6.2	6.8	6.9	6.6		7.0	6.6
		Analytical Result	7.5	7.5	7.5	7.5	7.9	7.9	7.6	7.5	7.6	7.6
Sulfate	mg/L	Intrawell Background Value (UPL)	30.4	43.6	50.7	52.5	56.7	17.1	42.4		51.7	23.5
		Analytical Result	9.34	41.4	24.2	25.6	20.5	5.24	40	--	38.5	23.1
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	419	632	648	551	469	286	366		357	339
		Analytical Result	220	550	330	400	260	230	330	--	280	320

Notes:

UPL: Upper prediction limit

LPL: Lower prediction limit

Bold values exceed the background value.

Background values are shaded gray.

--: Not sampled

ATTACHMENT A

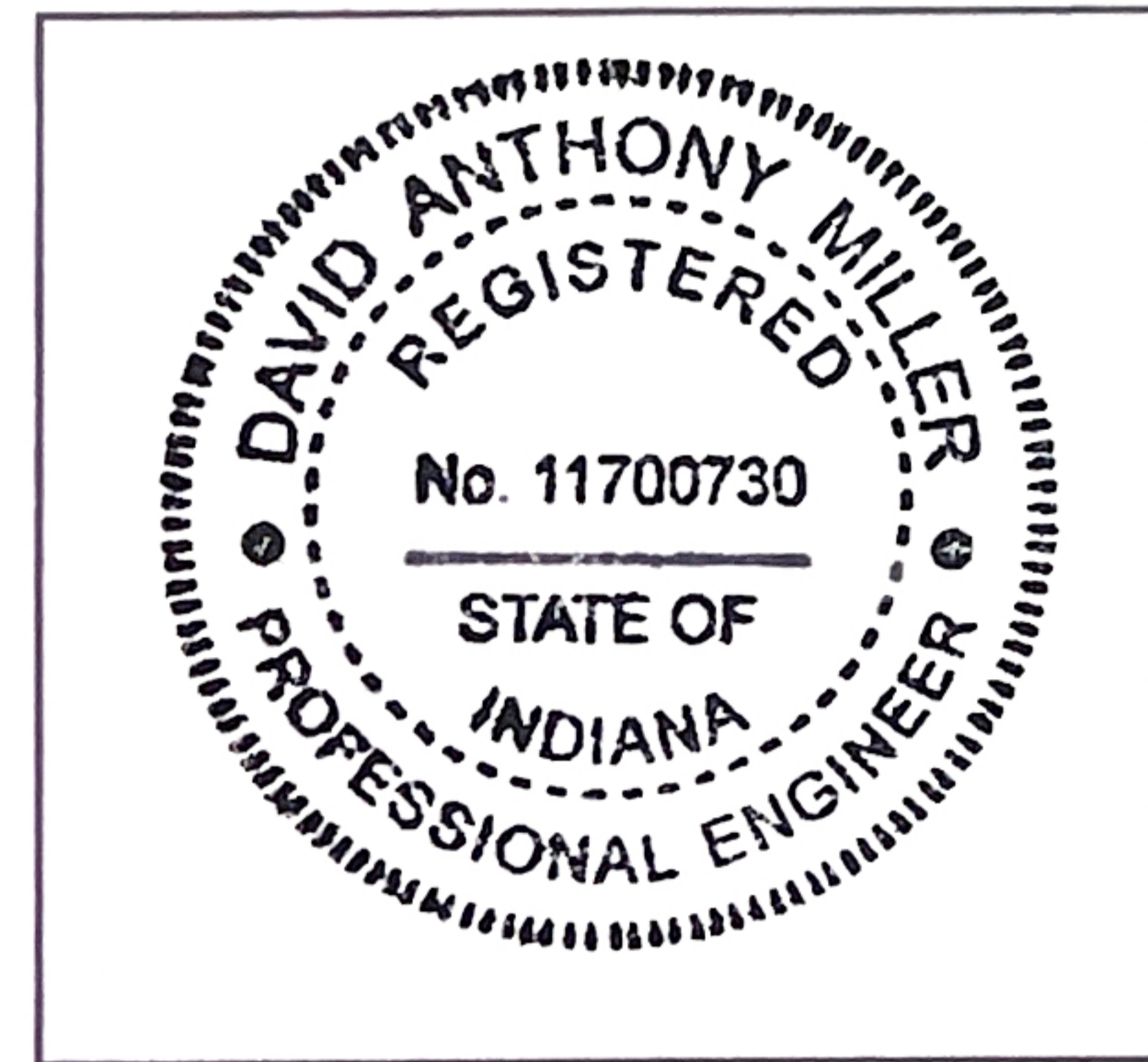
Certification by a Qualified Professional Engineer

CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER

I certify that the selected statistical method, described above and in the January 17, 2022 *Statistical Analysis Summary* report, is appropriate for evaluating the groundwater monitoring data for the Rockport LF CCR management area and that the requirements of 40 CFR 257.93(f) and 329 IAC 10 have been met.

DAVID ANTHONY MILLER

Printed Name of Licensed Professional Engineer



David Anthony Miller

Signature

11700730

License Number

INDIANA

Licensing State

08.18.22

Date

APPENDIX 3 – Alternate Source Demonstrations

Alternate source demonstrations that have been completed as of January 31, 2023 follow.



Alternative Source Demonstration for Appendix III Constituents, CCR Landfill

American Electric Power Service Corporation
Rockport Generating Station, Rockport, Spencer County, Indiana
Project # 7650202784

Prepared for:

American Electric Power Service Corporation

1 Riverside Plaza, Columbus, Ohio 43215

20 July 2022



20 July 2022

Mr. David Miller
Director, Land Environment & Remediation Services
American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215
Email: damiller@aep.com

Wood Environment & Infrastructure Solutions, Inc.
2030 Falling Waters Rd, Suite 300
Knoxville, TN 37922
USA
T: (865) 671-6774
www.woodplc.com

Dear Mr. Miller:

Wood Environment & Infrastructure Solutions, Inc. (Wood) has prepared this Alternative Source Demonstration (ASD) for the CCR Landfill located at the AEP Rockport Plant in Rockport, Indiana. As detailed in this report, the results of this ASD conclude that statistically significant increases (SSIs) identified in samples from the waste boundary monitoring wells are not caused by releases from the CCR Landfill. We are available to discuss the details of this report at your convenience should you require additional information.

We very much appreciate working with AEP on this project. If you require additional information about this report, please feel free to contact Thomas Hensel at (865) 671-6774.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Konrad W. Quast, PhD
Senior Hydrogeologist

Thomas W. Hensel, PG
Project Manager

Attachments

cc: Justin Jent, PE, American Electric Power Service Corporation



Alternative Source Demonstration for Appendix III Constituents, CCR Landfill

American Electric Power Service Corporation
Rockport Generating Station, Rockport, Spencer County, Indiana
Project # 7650202784

Prepared for:

American Electric Power Service Corporation
1 Riverside Plaza, Columbus, Ohio 43215

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
2030 Falling Waters Rd, Suite 300
Knoxville, TN 37922
USA
T: (865) 671-6774

20 July 2022

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Appendices

Appendix A	Analytical Data Tables
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Executive Summary

American Electric Power (AEP) operates two units at the Rockport Plant for management of coal combustion residuals (CCR): the bottom ash ponds (BAP), and the CCR Landfill. Both are regulated under the federal CCR Rule (40 CFR Part 257) that became effective in October 2015 and modified in July 2018.

The CCR Landfill has been in the detection phase of groundwater monitoring as part of its compliance with the rule. The most recent statistical analysis of Appendix III constituents identified two statistically significant increases (SSIs) above background for chloride in waste boundary monitoring wells MW-11 and MW-2D.

This alternative source demonstration (ASD) evaluates the occurrence of SSIs in terms of site geochemistry, hydrogeologic setting, and with respect to supplementary data collected to support the evaluation. Based on the analysis presented in this ASD, CCR Landfill leachate can be excluded as a source of Appendix III SSIs for the following reasons:

- Boron occurs naturally at low concentration in site groundwater, in similar concentrations in background and downgradient wells. Boron occurs at concentrations approximately three orders-of-magnitude in the CCR Landfill leachate as compared to site groundwater, and is a conservative ion, making it an excellent indicator for impacts from landfill leachate impacts in groundwater. If landfill leachate were impacting groundwater, boron would be expected to be detected in multiple waste boundary wells and at statistically significant concentrations above background; no SSIs for boron have ever been detected at the site. Furthermore, the boron that is present has been shown to be isotopically different.
- Sulfate is another common indicator for CCR leachate impacts, which also occurs naturally in site groundwater (at similar concentration ranges in background and downgradient wells) and is elevated in the CCR Landfill leachate at concentrations approximately three orders-of-magnitude above background monitoring wells. No SSIs for sulfate have ever been determined in any of the waste boundary well samples.
- Chloride is a naturally occurring and conservative ion, which occurs in the CCR Landfill leachate at concentrations about two orders-of-magnitude above groundwater concentrations. Spatial trends can be observed in **Exhibits 3-4** and **3-5** and indicate that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas. November 2021 data and February 2022 verification data indicated groundwater concentrations of chloride over background in MW-11 and MW-2D. However, because the SSIs indicated for chloride are not associated with SSIs for boron and sulfate, the CCR Landfill leachate is not considered a source for the chloride detected in groundwater.
- The conclusions listed above are also supported by the analytical results for isotope ratios of boron and strontium in leachate and groundwater samples from a previous sampling event. While only a single set of samples to date have been collected, the indication in downgradient wells, including wells that have shown SSIs, is that the leachate is distinctly different from that of background and downgradient groundwater, and supports no release from the landfill to groundwater.

1.0 Objective

American Electric Power (AEP) operates a coal combustion residual (CCR) Landfill that is used for the management of CCR materials. The landfill is regulated under the federal CCR Rule (40 CFR Part 257) that became effective in October 2015. During the initial phase of groundwater monitoring (detection monitoring), the CCR Rule requires the owners or operators of regulated units to collect at least eight independent samples from at least one background location and at least three waste boundary wells, analyzed for constituents listed in Appendix III and Appendix IV of the CCR rule. That sampling was completed in July 2017.

Seven rounds of detection monitoring have been conducted at the landfill. Each round consists of an initial sampling event, followed by one or two rounds of verification samples based on the results of the initial events. Following completion of the verification sampling for each event, a statistical analysis is conducted to assess whether statistically significant increases (SSIs) above background are detected in the waste boundary monitoring wells for Appendix III constituents. For each semiannual sampling round where SSIs are detected, an alternate source demonstration (ASD) has been performed to assess whether these SSIs were the result of a release of leachate from the CCR landfill.

Previous ASDs performed by Geosyntec and Wood Environment & Infrastructure Solutions, Inc. (Wood) have indicated that the source of previously identified SSIs result from natural variation in groundwater quality or potential impacts from historical oil and gas operations. The most recent ASD was completed by Wood in January 2022 for the detection monitoring event of May 2021, with verification samples taken in August 2021.

The second semiannual detection monitoring samples for 2021 were taken in November 2021, with verification samples taken in February 2022. Again, a statistical evaluation of monitoring results identified SSIs for Appendix III constituents. The objective of this ASD is to review these results, and to assess whether the findings of the previous ASDs remain valid; that is, that the SSIs detected in the waste boundary wells, from detection monitoring samples collected in November 2021 and verified in February 2022 samples, are not the result of a release from the landfill.

1.1 Scope

As stated in 40 CFR 257.94(e)(2), the CCR Rule allows 90 days after the initial identification of Appendix III SSIs for the owner or operator to demonstrate that a source other than the regulated unit is responsible for identified SSIs. The regulations allow the ASD to address several potential causes of SSIs other than a release from the regulated unit, including error[s] in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

The scope of this ASD is focused on evaluating the second 2021 semiannual detection monitoring results (including verification samples) and assessing whether the data are consistent with the assessment conducted in the most recent ASD report (Wood, January 2022). The ASD will be undertaken to assess, through multiple lines of evidence, whether an alternative source for the SSIs can be supported, following the guidelines published in October 2017 by the Electric Research Power Institute (EPRI, "Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites"). This report does not include evaluations of potential errors in sampling and analysis, or the statistical approaches which were used to identify the SSIs.

1.2 Approach

The ASD presented in this document is based on a geochemical and hydrologic evaluation of groundwater quality at the CCR Landfill. The purpose of this ASD is to evaluate the identified SSIs within

the larger geochemical context of the CCR Landfill groundwater flow system, to assess the likelihood that these SSIs are the result of releases from the CCR Landfill. In addition to the groundwater analytical data collected for compliance with the CCR rule, used to support the statistical evaluation, Wood relied on supplemental analytical data, including previous analyses of the CCR Landfill leachate and monitoring well groundwater analyses of the isotopes of boron and strontium.

1.3 Report Organization

This ASD has been prepared following the *Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites* (EPRI, 2017) to the extent applicable. **Section 2** presents a summary the CCR Landfill setting, and a summary of the results from the statistical evaluation of the Appendix III detection monitoring parameters. **Section 3** presents the primary and secondary lines of evidence developed from a geochemical evaluation of the site. **Section 4** presents the technical findings of the ASD and includes certification by an Indiana-licensed Professional Engineer (PE). References are included in **Section 5**.

2.0 Background

2.1 Site Description

The Rockport Power Plant is located in southwest Indiana in Spencer County, on property extending into three Townships: Ohio, Hammond, and Grass. Two CCR-regulated units are located on the property, two adjacent bottom ash ponds (BAP) and the CCR Landfill. The general layout of the property and the locations of the CCR units are shown on **Figure 1**. The CCR Landfill, or Landfill, is located about 8,000 feet (1.5 miles) northeast of the generating plant. **Figure 2** shows the general layout of the CCR Landfill and the monitoring well locations.

2.1.1 Landfill Operation

The CCR Landfill is an active disposal unit that primarily contains fly ash, with materials generated by the emission control systems added beginning in 2007. These materials include sodium sulfate generated by the removal of sulfur dioxide by the dry sorbent injection (DSI) system, and granular brominated activated carbon used for mercury removal. To a lesser extent, some bottom ash has also been placed within the CCR Landfill. As shown on **Figure 2**, the active portion of the CCR Landfill directly adjoins a closed portion of the landfill to the northeast.

The CCR Landfill is currently permitted by the Indiana Department of Environmental Management (IDEM) Office of Land Quality, Solid Waste Permits Section, as a Restricted Waste Site (RWS) under Indiana Administrative Code (IAC) 329 Title 10 (Solid Waste CCR Landfill Disposal Facilities) Rule 9-4. The active CCR Landfill is permitted as a RWS Type I, which requires a liner and leachate collection system. The permit was most recently renewed on 25 August 2020.

Leachate from the CCR Landfill cells is collected in lined ponds located north and west of the active CCR Landfill area. These ponds also collect storm water runoff from the CCR Landfill area. Prior to discharge, the leachate commingled with runoff is transferred to the Leachate Treatment Pond (north of the West Leachate Pond). Effluent from the Leachate Treatment Pond is discharged and monitored under National Pollution Discharge Elimination System (NPDES) Permit No. IN0051845 at Station 002.

2.1.2 Groundwater Flow

The principal groundwater flow zone underlying the CCR Landfill consists of the saturated section of the unconsolidated glaciofluvial sand and sand and gravel valley train sediments that fill the Ohio River valley

in this area. The depth to water in this zone typically ranges from 20 to 35 feet (ft) below ground surface (BGS), and the saturated thickness (which generally increases to the southeast) ranges from less than 15 ft to more than 80 ft. A generalized cross-section is presented in **Figure 3**.

Groundwater primarily occurs under unconfined conditions, or semi-confined conditions where the saturated zone is directly overlain by surficial silt and clay. Piezometric data collected from clustered monitoring wells indicate that vertical gradients within the saturated zone are minor, and groundwater flow is primarily horizontal. Groundwater flows into the plant and landfill area from the north, northwest and west, continues flowing under the property generally to the south and east, towards Honey Creek and/or the Ohio River. A potentiometric surface map from 8 November 2021 is presented on **Figure 4**.

2.1.3 Existing Groundwater Monitoring System

In 2015, when the CCR Rule took effect, a monitoring well network was already present at the CCR Landfill for groundwater monitoring under IDEM permit. While the valley train sediments are considered a single well-connected aquifer system, the saturated thickness of the sediments allowed for wells at the CCR Landfill to be installed in clusters, to monitor up to three levels (shallow – “S”, intermediate – “I”, and deep – “D”) within the principal flow zone. However, the valley train sediments that make up the flow zone thin to the north, leaving less saturated overburden upgradient of the CCR Landfill. As a result, only one or two levels could be monitored in some locations.

The official CCR groundwater monitoring network for the CCR Landfill includes five background or cross-gradient wells (MW-6S, MW-8S/I, MW-11S and MW-14S) and 16 waste boundary wells (MW-15/I/D, MW-2S/I/D, MW-15S/I, MW-16S/I/D, MW-17S/I and MW-21S/I/D). At most locations, the saturated overburden was thick enough to allow installation of screens at three different levels, with the deepest wells being completed just above bedrock at depths of 88 to 100 ft BGS. Two clusters, MW-15 and MW-17, are located just east of the CCR Landfill in an area of relatively shallow bedrock. Therefore, the deeper wells at these locations (designated “I”) have completed depths just above bedrock at 66 to 67 ft BGS. A comprehensive summary of analytical data for the groundwater monitoring network since June 2016 is presented on **Table A-1** in **Appendix A**.

2.2 Summary of Previous SSIs and ASDs

Eight baseline monitoring events and one initial detection monitoring event for the CCR Landfill were completed prior to 17 October 2017. On behalf of AEP, Geosyntec submitted these results to Groundwater Stats Consulting, LLC for statistical analysis. Oversight on the use of statistical calculations was provided by Dr. Kirk Cameron of MacStat Consulting, Ltd. According to the report (*Statistical Analysis Summary, Landfill*, Geosyntec 2018), the initial eight rounds of baseline data were used to calculate the upper prediction limits (UPLs) for each of the Appendix III constituents to represent background values. Results from each detection monitoring event conducted to date have been compared to the UPLs established from the eight baseline rounds to identify SSIs compared to background.

Following completion of the first detection monitoring event, the initial statistical evaluation identified 11 SSIs for calcium (2), chloride (7), fluoride (1) and TDS (3). On 4 January 2019, Geosyntec prepared an ASD focusing on statistical methods. Geosyntec evaluated the new data and based on multiple lines of evidence, revised the statistical approach for some monitoring wells. Initially, the statistical evaluation included a mixture of interwell (between wells) and intrawell (within one well) techniques. The interwell analysis compares data from waste boundary wells against a background data set composed of results from upgradient and cross-gradient well data. The intrawell approach compares each waste boundary well against a background composed of its own historical data and is used to detect statistically significant increases within samples from an individual well over time (Horsey, HR et. al., 2001). Spatial and temporal

variability observed in samples from the background monitoring wells caused Geosyntec to select an intrawell approach for all Appendix III constituents in all waste boundary monitoring wells.

After using an intrawell approach, the number of SSIs was reduced to eight, distributed among seven waste boundary wells. In January 2019 Geosyntec published an ASD to document changes to the statistical methodologies and attributed the observed SSIs to impacts from historic oil and gas operations. Since the statistical methods were revised, results from all subsequent detection monitoring events have been analyzed following the same approach. The most recent statistical analysis was summarized in a memorandum dated 8 April 2022. A summary of the SSIs identified in each of the detection monitoring events is presented below, in **Exhibit 2-1**.

Exhibit 2-1. Monitoring Wells and Appendix III Parameters with SSIs

Parameter	MW-1S	MW-1I	MW-1D	MW-2S	MW-2D	MW-15I	MW-16S	MW-16D	MW-17I	MW-21S	MW-21I
Calcium					◆			◆◆◆ ●			
Chloride	◆◆	◆◆ ◆◆ ●★		◆◆ ◆	◆◆◆ ◆◆◆ ●★		◆	◆◆◆ ◆◆◆ ●		◆	
Fluoride				◆●		●			◆◆ ◆	◆◆ ◆●	◆●
TDS	◆●		●		◆◆◆ ●		◆	◆◆◆ ◆◆◆ ●			

- ◆ 2018-2020 SSI, after verification
- May 2021 SSI, after verification
- ★ November 2021 SSI, after verification

As shown in **Exhibit 2-1**, only two SSIs were identified, both for chloride in MW-1I and MW-2D. Both SSIs identified in the second round of 2021 were identified in previous semi-annual sampling events. Wood has reviewed its January 2022 ASD with respect to the statistical evaluation of the new semiannual sampling event. The evaluation presented in the January 2022 ASD report remains valid. Wood has updated the geochemical analysis that forms the basis of the ASD and has included updated graphics to support the findings in this current ASD report.

3.0 Alternative Source Demonstration

The ASD presented below relies on multiple lines of evidence that the SSIs identified in the statistical analysis are not caused by releases of landfill leachate into the groundwater flow system. When taken as a whole, these lines of evidence present a compelling case that the SSIs are not a result of a release from the landfill, but a result of natural variation in groundwater quality, a result of historical oil and gas operations, or from the influence of storm water ponds on groundwater quality. This ASD follows the approach of Wood's January 2022 report, updated with data collected for the second semiannual sampling event for 2021.

To assess the potential of a release from the CCR Landfill to groundwater, Wood evaluated groundwater quality data, including isotopes, in the context of the geochemical characteristics of CCR Landfill leachate. The results of this evaluation support that CCR Landfill leachate at the Rockport site can be ruled out as a

source of the SSIs identified in waste boundary monitoring wells, through primary and supporting lines of evidence, each of which are described in more detail within this section.

Primary lines of evidence focus on the relationship between source material that could be released into the subsurface (in this case, landfill leachate) and the type and distribution of SSIs identified in groundwater. The lines of evidence supporting the conclusion of this ASD can be summarized as follows:

- SSIs are not identified for the site-specific primary indicator constituents of the Rockport CCR Landfill leachate.
- Geochemical evaluations of the CCR Landfill support that leachate has not affected water quality.
 - Conservative ion ratios and major ion chemistry do not indicate a release from the CCR Landfill.
 - Isotopes of boron and strontium do not indicate a release from the CCR Landfill.

Each of these lines of evidence are described in detail below.

3.1 SSIs Are Not Identified for Primary Indicator Constituents

The primary indicators for CCR leachate typically have much higher concentrations in leachate than in natural groundwater. They are mobile and relatively non-reactive in groundwater, so that groundwater impacted by a CCR leachate release should have elevated concentrations of the indicator constituents relative to background and with relatively similar contributions. The elevated concentrations would be expected to result in SSIs identified by statistical evaluation of the data from the downgradient waste boundary wells, and the SSIs would be expected to be generally consistent between downgradient wells. The primary lines of evidence presented below compare the occurrence of SSIs in groundwater to the composition of landfill leachate.

3.1.1 Site-Specific Leachate Analysis for Primary Indicator Constituents

The composition of landfill leachate is governed by the types of materials placed in the unit and identifying the leachate’s primary constituents is key to assessing a potential release to groundwater. Since all Appendix III constituents are naturally occurring, the best indicators of CCR impacts are those constituents that are found at concentrations much higher in the source material than are seen in natural groundwater. AEP conducted sampling of its leachate collection system to identify relative concentrations of Appendix III and IV constituents in the Rockport CCR Landfill leachate.

The leachate collection system for the Landfill discharges into the North and West Leachate Collection Ponds, shown on **Figure 2**, which then discharge to the Leachate Treatment Pond, directly north of the West Leachate Pond. Five samples were collected from both the West and North Leachate Collection Ponds between 31 October 2018 and 20 March 2019 and results are detailed on **Table A-2** in **Appendix A**. A summary of the range of Appendix III constituent results for leachate pond samples, compared to background and waste boundary well samples, is provided below in **Exhibit 3-1**.

Exhibit 3-1. Summary of Landfill Leachate Pond and Groundwater Concentrations for Appendix III Constituents

Parameter (Units in mg/L)	Range for Leachate Ponds		Range for Upgradient (Background) Wells		Range for Downgradient Waste Boundary Wells	
	Min	Max	Min	Max	Min	Max
Boron	9.18	12.3	<0.002	0.115	<0.002	0.139
Calcium	166	368	35.6	82.0	28.7	129.8
Chloride	847	1,250	1.29	30.0	8.78	214

Exhibit 3-1. Summary of Landfill Leachate Pond and Groundwater Concentrations for Appendix III Constituents

Parameter (Units in mg/L)	Range for Leachate Ponds		Range for Upgradient (Background) Wells		Range for Downgradient Waste Boundary Wells	
	Min	Max	Min	Max	Min	Max
Fluoride	<1.50	<1.50	0.25	1.21	0.064	1.31
Total Dissolved Solids (TDS)	22,100	30,900	179	430	196	760
Sulfate	14,100	19,000	0.83	87.1	4.62	62.0

Because the CCR Landfill leachate ponds also receive some storm water runoff, concentrations in at least some of these samples are likely to be diluted compared to concentrated leachate from landfilled materials (depending on the amount of recent rainfall). Nevertheless, pond samples serve as reliable indicators of the relative composition of leachate. As seen in **Exhibit 3-1**, boron and sulfate occur at concentrations as much as three orders-of-magnitude above background groundwater levels. Results for chloride and TDS are as much as two orders-of-magnitude above background concentrations. Calcium and fluoride concentrations are within the same orders-of-magnitude as those detected in background groundwater. These results indicate that boron and sulfate are the best indicator constituents of CCR impacts, followed by TDS and chloride, based on their elevated occurrence in landfill leachate compared to natural groundwater.

3.1.2 Occurrence of Primary indicator Constituents in Waste Boundary Monitoring Well Samples

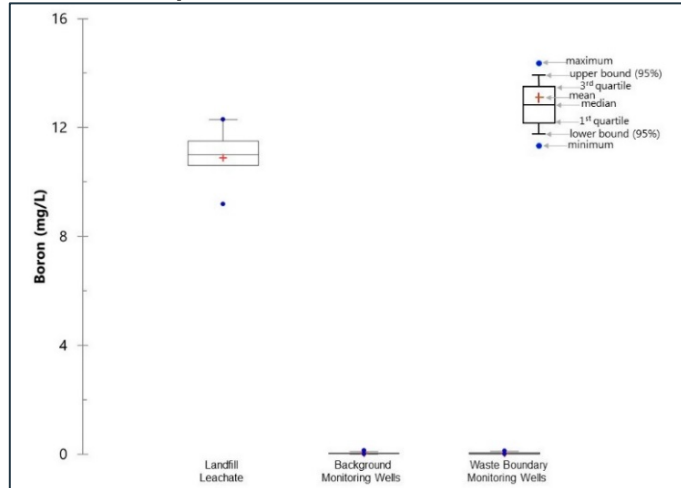
Four primary indicator constituents are identified for the Rockport CCR Landfill leachate: boron, sulfate, TDS and chloride. In the November 2021 sampling round, two SSIs were identified for chloride (MW-11 and MW-2D). However, no SSIs were identified in waste boundary wells for either boron or sulfate. Given the predominance of boron and sulfate in the CCR Landfill leachate, and that neither of these constituents are elevated above background, it is concluded that Landfill leachate is not the source of the observed SSIs. This assumption is supported by a more in-depth review of the indicator constituents, presented below.

Boron

No SSIs have been identified for boron. Boron has been identified in background wells at concentrations ranging from <0.002 to 0.115 mg/L. Concentrations in waste boundary well samples range from <0.002 to 0.139 mg/L. Landfill leachate boron concentrations are much higher and range from 9.18 to 12.3 mg/L. The boron results are plotted graphically on **Exhibit 3-2**, which illustrates the range of results for leachate (at the left of the chart) compared to and background and waste boundary groundwater samples. It should be noted that the highest concentration of boron observed in waste boundary groundwater samples (0.139 mg/L) occurred in MW-16I and did not represent an SSI for that well.

If a release of landfill leachate had occurred, boron concentrations in waste boundary well samples should be clearly higher than the range of background well results, and SSIs would likely be found in at least some of the monitoring wells with other identified SSIs.

Exhibit 3-2. CCR monitoring well and landfill leachate ponds boron concentrations

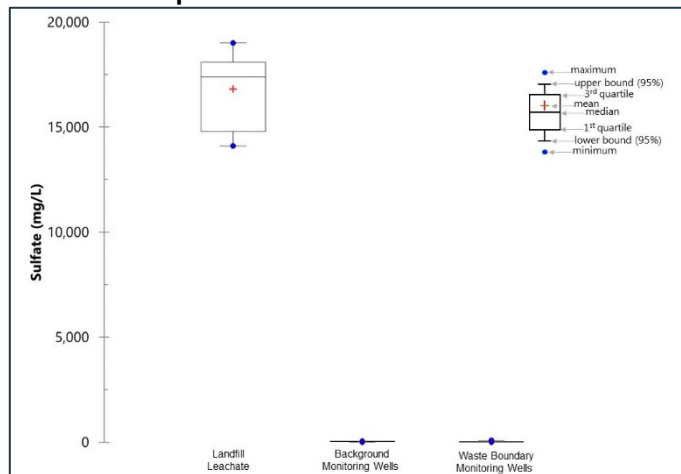


Sulfate

No SSIs have been identified for sulfate. Sulfate has been identified in background wells at concentrations ranging from 0.83 to 87.1 mg/L. Concentrations in waste boundary well samples range from 4.62 to 62.0 mg/L. Landfill leachate sulfate concentrations are orders of magnitude higher and range from 14,100 to 19,000 mg/L. The sulfate results are plotted graphically on **Exhibit 3-3**, which clearly shows that leachate concentrations of sulfate are orders-of-magnitude higher than all groundwater samples, and that no discernable difference is present between the background and waste boundary samples. Furthermore, the highest monitoring well concentrations are seen in samples from background well MW-8I (54.0 to 87.1 mg/L).

It is expected that a release of landfill leachate would elevate groundwater concentrations of all Appendix III constituents present in the leachate in relatively similar proportions. Even if all constituents were not exhibiting SSIs, a pattern of related SSIs would be observed if the increases were caused by landfill leachate. Since all SSIs occurred in absence of a boron or sulfate SSI, and the highest groundwater sulfate

Exhibit 3-3. CCR monitoring well and landfill leachate ponds sulfate concentrations



concentrations are associated with a background well, it is concluded that the reported SSIs are caused by the natural variation in groundwater quality, potentially impacted by historical oil and gas operations which are assumed to have high chloride and TDS and little to no sulfate, and not by releases from the CCR Landfill.

3.2 Geochemical Evaluations

While the CCR rule requires the use of statistical analyses of samples collected from groundwater monitoring wells to assess potential impacts from CCR units (SSIs), the approach does not consider the site specific hydrogeochemical interactions that can often be complex due to simultaneous operations and natural variation within the context of the local hydrogeologic setting. Since geochemical evaluations rely on interpretation of graphical data, the discussion includes reduced size exhibits imbedded in the text. Full size exhibits are included in **Appendix B**. The major observations and conclusions from the geochemical evaluation are summarized in the sections below.

3.2.1 Indicator Parameter Cross-Plots

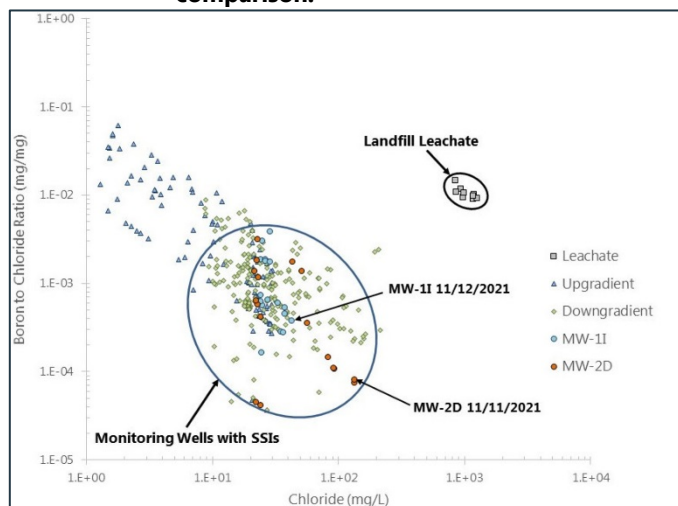
To aid in the interpretation of individual Appendix III and other potential indicator parameters for the assessment of potential releases from the CCR Landfill, ratios of selected Appendix III indicator parameters were calculated and plotted versus concentrations of the conservative ion chloride. The use of these plotting techniques typically provides groupings of end members (sources of water such as background groundwater or landfill leachate), and potential trends of mixing that are not readily identifiable by analysis of individual indicator parameters on their own.

Plots of the B/Cl and SO₄/Cl ratios versus chloride in waste boundary monitoring wells show distinct end member groupings from that of the landfill leachate and support the conclusion that there are no discernable impacts from the CCR Landfill on any of the waste boundary monitoring wells. The graphics presented here include data for all wells in the CCR Landfill system and show that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas represented by upgradient monitoring wells.

Boron to Chloride ratio Versus Chloride Concentration

The plotting of B/Cl versus chloride groundwater data shows primarily a single large cluster that trends perpendicular to the composition of leachate samples and is hypothesized as background and natural variability (**Exhibit 3-4**). The data are plotted on log-log scales due to the large range of concentrations and ratios making the separation in groupings appear closer than they are. The Landfill leachate clearly plots as a separate grouping of water quality having greater B/Cl ratios, while the monitoring well data plots along a trend of what can be described as natural variability. Background monitoring well MW-11S plots as upgradient recharge having lower chloride concentration and a higher B/Cl ratio.

Exhibit 3-4. Boron to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison.

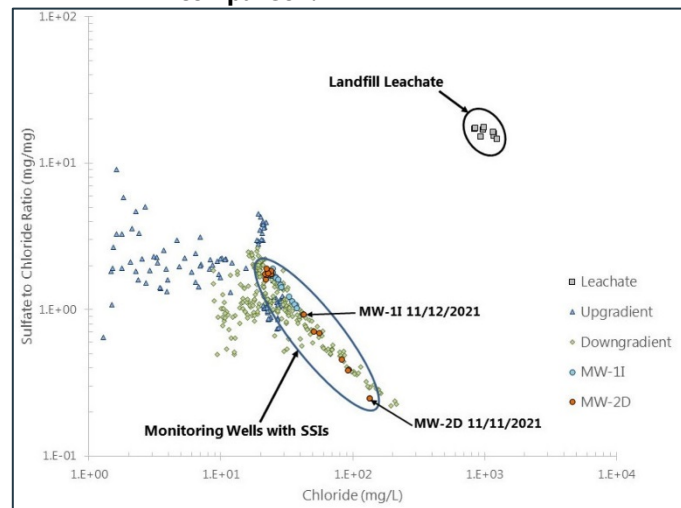


Moving along the flow path to downgradient monitoring wells, this is followed by a trend of increasing chloride concentrations and salinity with decreasing B/Cl ratios due to geochemical evolution of groundwater and potential mixing with water associated with historic oil and gas operations and or storm water ponds. While chloride increases, boron does not increase at the same rate, resulting in the decreasing trend of B/Cl ratios as chloride concentrations and residence time increases. Thus, it is hypothesized that MW-11S represents an extreme end member of recent recharge, or relatively fresh groundwater, and after flow through the shallow overburden groundwater evolves geochemically to a lower B/Cl ratio, as chloride increases, approaching the larger background cluster values that represent older more mineralized groundwater without a significant source of boron in the aquifer matrix. The extreme end of the groundwater dataset trend is represented by MW-17I, MW-16D, and MW-2D due to higher chloride concentrations, but with lower B/Cl ratios. This plot supports that these wells are not impacted by CCR Landfill leachate but could be influenced by infiltration from the storm water holding ponds or flushing of salts from water holding ponds associated with historic oil and gas operations. If there were impacts from the landfill to groundwater, one would expect a trend of B/Cl ratios versus chloride moving from the groundwater trend toward the leachate values, but this does not occur.

Sulfate to Chloride Ratio Versus Chloride Concentration

Plotting of the SO_4/Cl ratio versus chloride shows similar results to the B/Cl ratios versus chloride concentration plot supporting the conclusion that there are no discernable impacts from the CCR Landfill on groundwater (**Exhibit 3-5**). The SO_4/Cl ratios for leachate group separately and are much higher than groundwater values. The SO_4/Cl ratios for leachate are typically around 15 mg/mg or higher, while groundwater ratios are below a value of 6 mg/mg. Similar to B/Cl ratios, the SO_4/Cl ratios versus chloride plot along a trend line of decreasing ratios as chloride and residence time increases. The extreme end of the groundwater data set trend is represented by MW-17I, MW-16D, and MW-2D variability due to higher chloride concentrations that is clearly different from leachate. Additionally, there is no trend of mixing of even small quantities of leachate with groundwater which would be shown by a deviation from the groundwater trend toward leachate, and the separation is distinct between downgradient groundwater and leachate.

Exhibit 3-5. Sulfate to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison.



3.2.2 Isotope Analyses of CCR Related Water Quality and Materials

General Overview of Isotope Analyses

Water samples were collected from selected CCR Landfill monitoring wells and CCR Landfill leachate and submitted for isotope analyses of boron, strontium, and oxygen and hydrogen of water. The results of the isotope analyses serve as additional supporting lines of evidence for interpretations made using major ion

and indicator parameter concentrations and reinforce the lack of leachate impacts to groundwater at the CCR Landfill.

Boron and its isotope ratio ($\delta^{11}\text{B}$) have been successfully used to identify groundwater pollution sources versus background or naturally occurring detections of constituents of concern (Davidson and Bassett 1993; Vengosh et al. 1994; Kendall et al., 1995; Buszka et al. 2007; Ruhl et al. 2014; Harkness et al. 2017). In particular, boron isotopes have been successfully used to assess CCR related impacts in groundwater. Similarly, strontium and its isotopes ($^{87}\text{Sr}/^{86}\text{Sr}$) have also been successfully used to identify different groundwater source end members, mixing, and to determine anthropogenic versus geogenic processes associated with constituents of concern and associated with CCR impacts to groundwater (Kendall and Bullen 1995; Ruhl et al. 2014; Meredith 2016; Harkness et al. 2017; Nigroa et al. 2017).

CCR Landfill Isotope Results

Stable isotope analyses are typically performed on a pair of isotopes (e.g., ^{11}B and ^{10}B , or ^{87}Sr and ^{86}Sr) and are reported as a ratio relative to internal standards, in per mil (‰) using Greek “delta” notation (δ). Deviations based on analysis of the standard are corrected for, to provide values that can be compared between different laboratories and equipment. Isotopes commonly reported relative to a standard include boron (eq. 1), where the standard for boron is the National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) 951:

$$\delta^{11}\text{B}(\text{‰}) = \frac{\left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Sample}} - \left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Standard}}}{\left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Standard}}} \times 1000 \quad \text{eq. 1}$$

Isotope ratios of strontium can be reported relative to a standard value but are commonly reported as the actual ratio $^{87}\text{Sr}/^{86}\text{Sr}$. The values for strontium reported here are the actual ratios, but they have been corrected to the NIST SRM 987.

Background monitoring wells for the CCR Landfill show lower boron concentrations and higher $\delta^{11}\text{B}$ values compared to Landfill leachate samples (**Exhibit 3-6**). While only a limited number of background and waste boundary wells were tested (including MW-171 with a previous and current SSI, and MW-21S with a previously reported SSI), there is a clear distinction between all the CCR Landfill monitoring wells and the Landfill leachate which indicates that the wells represented are not impacted by the Landfill, and that boron in the monitoring wells is of a different source other than leachate.

In addition, while there is a variation in the leachate boron concentrations, the $\delta^{11}\text{B}$ values remain approximately equivalent. This supports the hypothesis that boron is $\delta^{11}\text{B}$ values in leachate are dominated by the CCR materials. The range of observed concentrations is related to the amount of water generating the leachate or potentially dilution by fresh water derived from stormwater runoff. The result is a range of boron concentrations having a similar $\delta^{11}\text{B}$ value distinctly different from groundwater in both background and downgradient monitoring wells.

Strontium isotope results also support the boron isotope, major ion, and indicator parameter interpretations that there are no identifiable impacts on groundwater from the landfill. There are noticeably lower strontium concentrations and ratios for all CCR Landfill monitoring wells sampled compared to Landfill leachate (**Exhibit 3-7**).

Exhibit 3-6. Boron isotope ratio ($\delta^{11}\text{B}$) versus boron concentration for CCR Landfill leachate and monitoring wells for comparison.

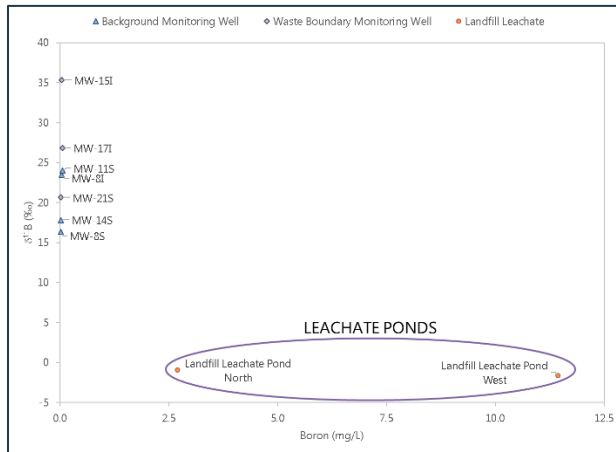
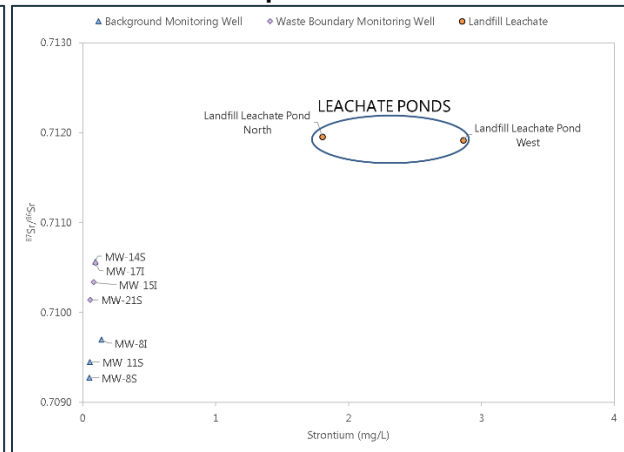


Exhibit 3-7. Strontium isotope ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) versus strontium concentration for CCR Landfill leachate and monitoring wells for comparison.



3.3 Hydraulic Connection to the Landfill

The groundwater monitoring network and the relationship of the wells to the regulated landfill are shown on **Figure 2**. Recent potentiometric flow data available for the site consistently indicate a local groundwater flow direction to the south and southeast as shown on **Figure 4**. As shown on this figure, several well clusters are downgradient from the landfill are also downgradient of the borrow area storm water ponds. Groundwater monitored by the well clusters downgradient of the storm water ponds are concluded to be unaffected by potential releases from the landfill unit but maybe impacted by the storm water ponds which likely has water with higher salinity, TDS, and chloride.

4.0 Summary

As summarized in **Exhibit 2-1** above, in the second semiannual detection monitoring event of 2021, SSIs were identified in two of 16 downgradient monitoring wells for chloride. The following statements summarize how the lines of evidence discussed above apply to each of the constituents with identified SSIs:

- Boron occurs naturally at low concentration in site groundwater, in similar concentrations in background and downgradient wells. Boron occurs at concentrations approximately three orders-of-magnitude in the CCR Landfill leachate as compared to site groundwater, and is a conservative ion, making it an excellent indicator for impacts from landfill leachate impacts in groundwater. If landfill leachate were impacting groundwater, boron would be expected to be detected in multiple waste boundary wells and at statistically significant concentrations above background; no SSIs for boron have ever been detected at the site. Furthermore, the boron that is present has been shown to be isotopically different.
- Sulfate is another common indicator for CCR leachate impacts, which also occurs naturally in site groundwater (at similar concentration ranges in background and downgradient wells) and is elevated in the CCR Landfill leachate at concentrations approximately three orders-of-magnitude above background monitoring wells. No SSIs for sulfate have ever been determined in any of the waste boundary well samples.

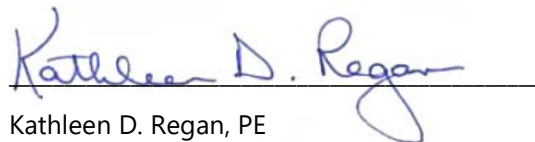
- Chloride is a naturally occurring and conservative ion, which occurs in the CCR Landfill leachate at concentrations about two orders-of-magnitude above groundwater concentrations. Spatial trends can be observed in **Exhibits 3-4** and **3-5** and indicate that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas. November 2021 data and February 2022 verification data indicated groundwater concentrations of chloride over background in MW-11 and MW-2D. However, because the SSIs indicated for chloride are not associated with SSIs for boron and sulfate, the CCR Landfill leachate is not considered a source for the chloride detected in groundwater.
- The conclusions listed above are also supported by the analytical results for isotope ratios of boron and strontium in leachate and groundwater samples from a previous sampling event. While only a single set of samples to date have been collected, the indication in downgradient wells, including wells that have shown SSIs, is that the leachate is distinctly different from that of background and downgradient groundwater, and supports no release from the landfill to groundwater.

4.1 Conclusion

This ASD has demonstrated, through multiple lines of evidence, that the SSIs identified in the statistical analysis of the second 2021 detection monitoring event data are not the result of a release of leachate from the CCR Landfill. Therefore, the unit will continue in detection monitoring.

4.2 Professional Engineer Certification

I certify that the above described Alternative Source Demonstration is appropriate for evaluating the groundwater monitoring data for the Rockport Plant CCR Landfill and that the requirements of 40 CFR 257.95(h)(8)(3)(ii) have been met.



Kathleen D. Regan, PE
Indiana Registered Engineer PE1400182

20 July 2022

Date

5.0 References

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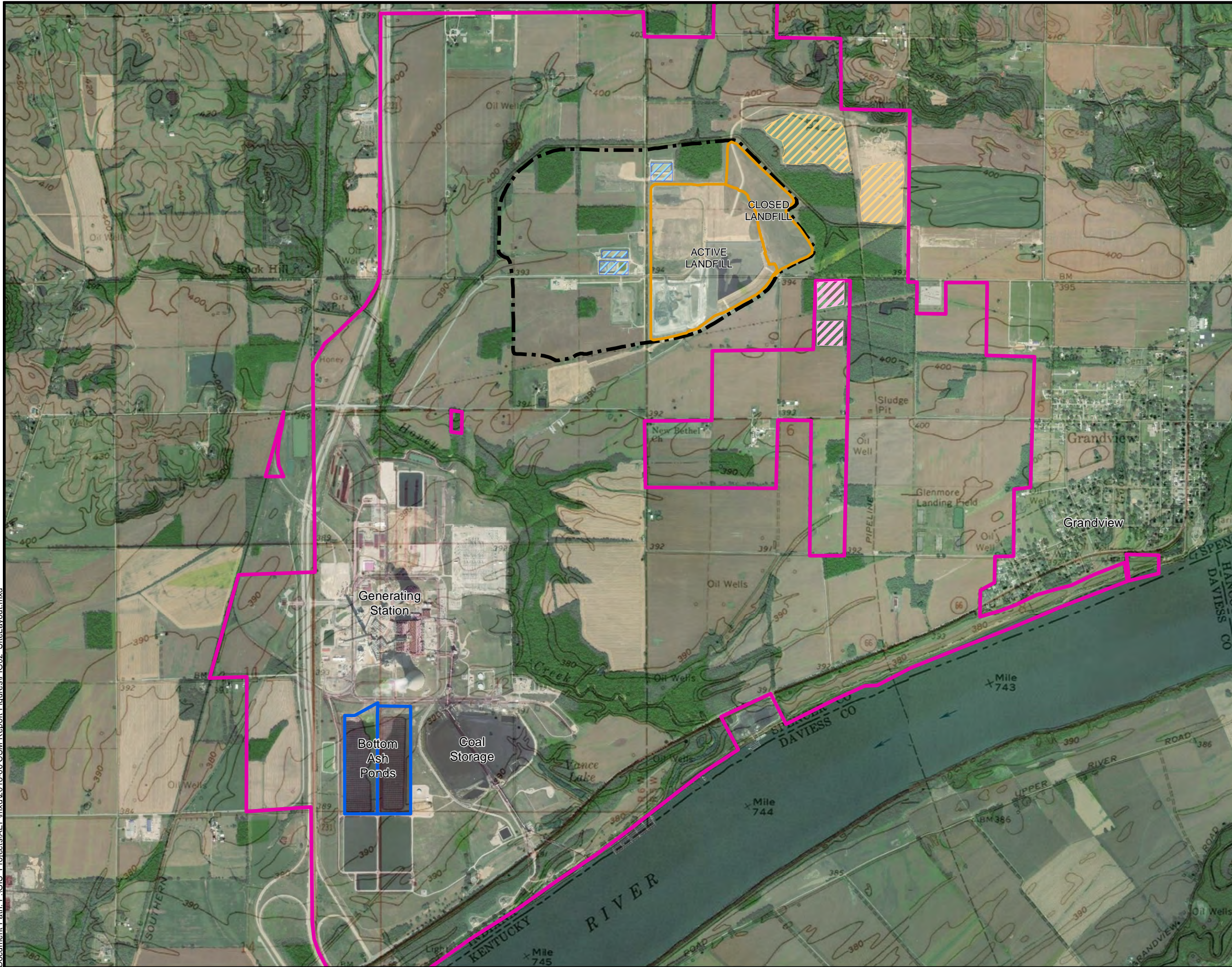
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wood.

Figures

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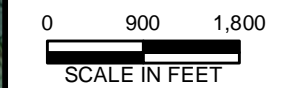
Legend

- Stormwater Ponds
- Landfill Leachate Ponds
- Grandview Wastewater Ponds
- Property Boundary
- Bottom Ash Ponds (BAP)
- Landfill Area 1A (Active and Closed)
- 1984 Landfill Permit Boundary (Area 1)

Data Sources

Date of Photography: 2016
 Source of Photography: U.S. Department of Agriculture, National Agriculture Imagery Program (NAIP)

USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps



SITE LAYOUT

AEP - ROCKPORT, IN

PROJECT NUMBER: 7362192660

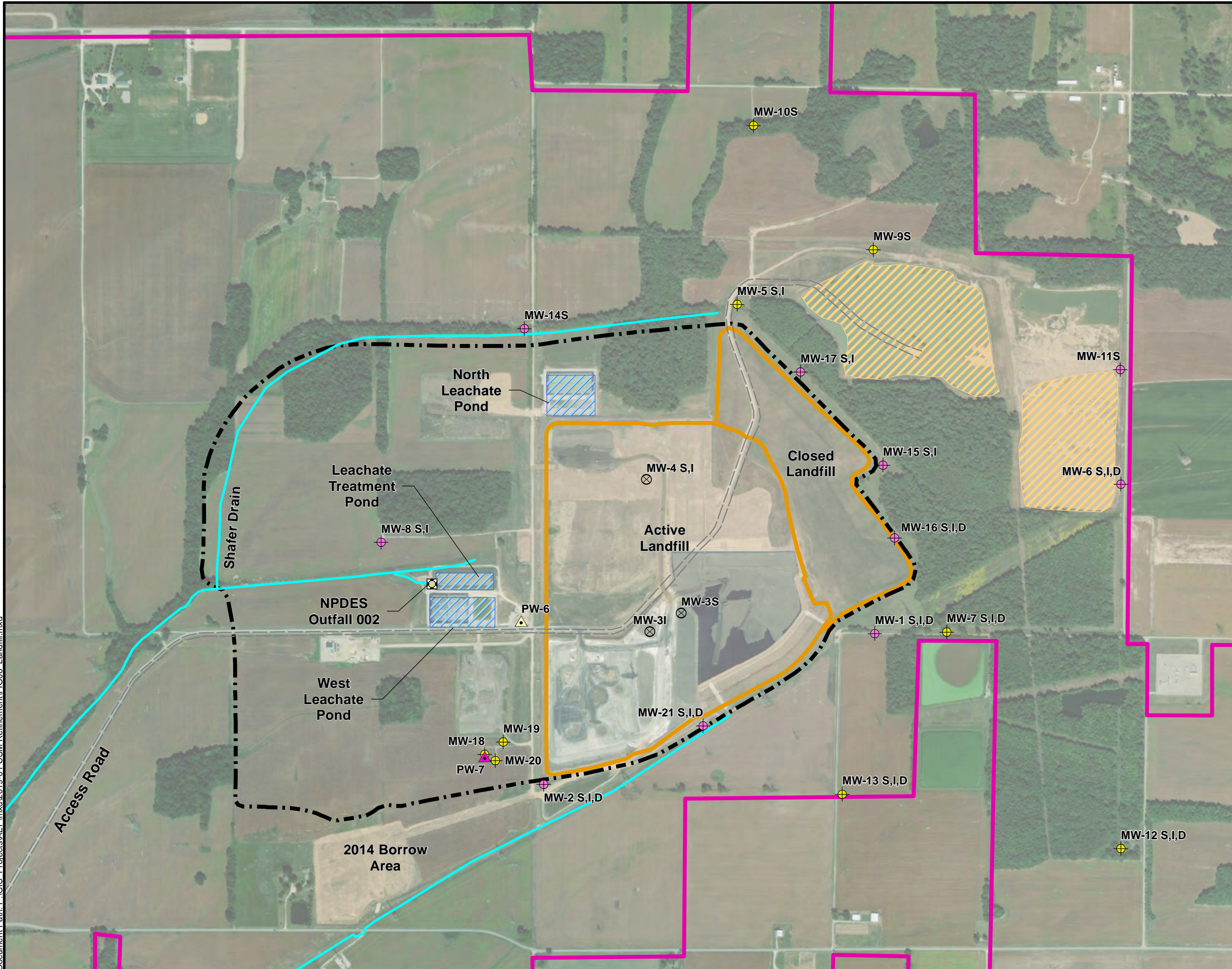
SCALE	1" = 1,800'
DATE	5/4/2021
DRAWN BY	TMR
APPROVED BY	KDR

FIG. 1

wood.

2456 Fortune Drive, Suite 100
 Lexington, Kentucky 40509
 Phone: (859) 255-3308

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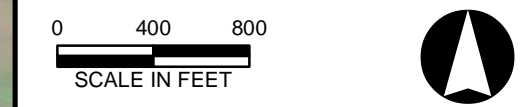


- Legend**
- Landfill - Monitoring Well
 - Landfill - CCR Monitoring Well
 - Landfill - Augmentation Water Supply Well
 - Landfill - Dust Control Water Supply Well
 - Abandoned Monitoring Well
 - NPDES Outfall 002
 - Access Road
 - Drains / Ditches
 - Stormwater Ponds
 - Landfill Leachate Ponds
 - Property Boundary
 - 1984 Landfill Permit Boundary (Area 1)
 - Landfill Area 1A (Active and Closed)

Data Sources

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps, 1964, photorevised 1982

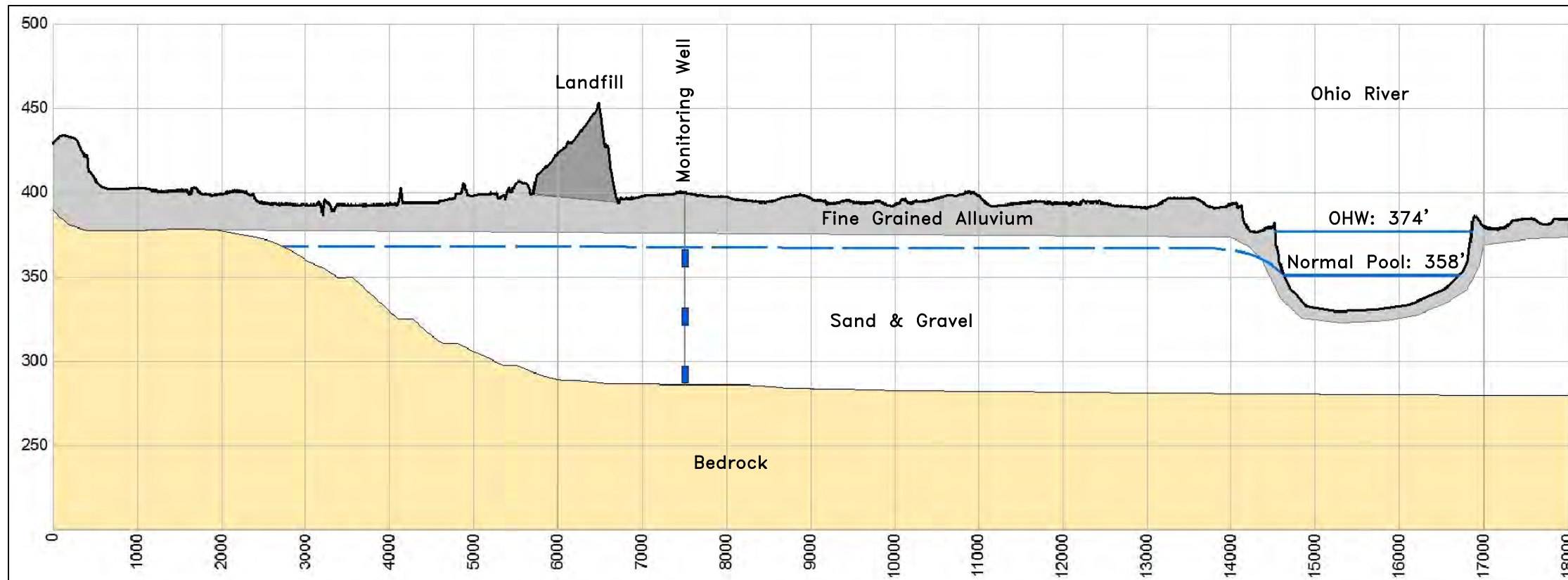
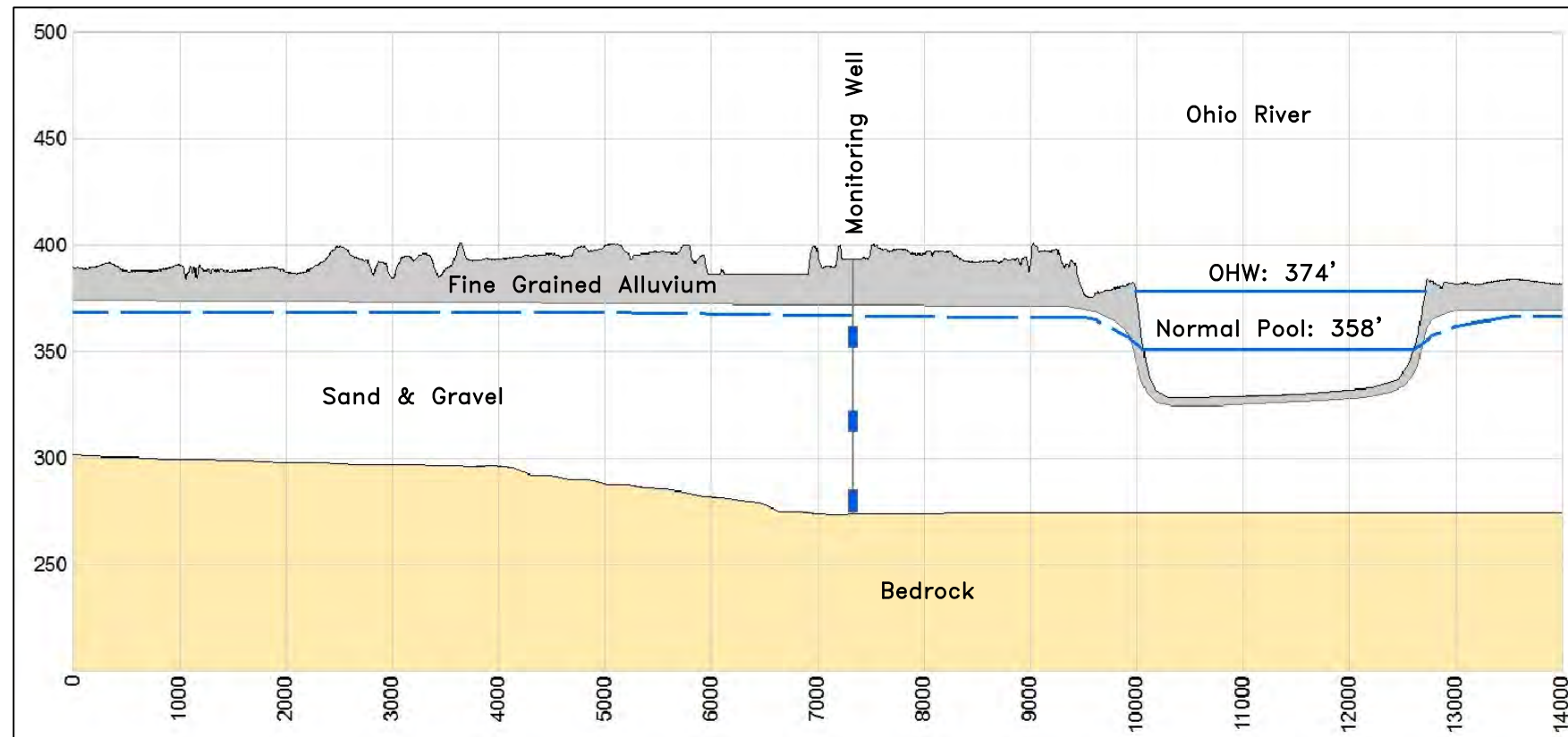


LANDFILL LAYOUT
AEP - ROCKPORT, IN
PROJECT NUMBER: 7362192660

SCALE	1" = 800'	FIG.
DATE	5/4/2021	
DRAWN BY	TMR	
APPROVED BY	KDR	

wood.

2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509
Phone: (859) 255-3308



SCALE: As Shown
VERTICAL EXAGGERATION: 4X



**BOTTOM ASH PONDS
AEP - ROCKPORT, INDIANA**

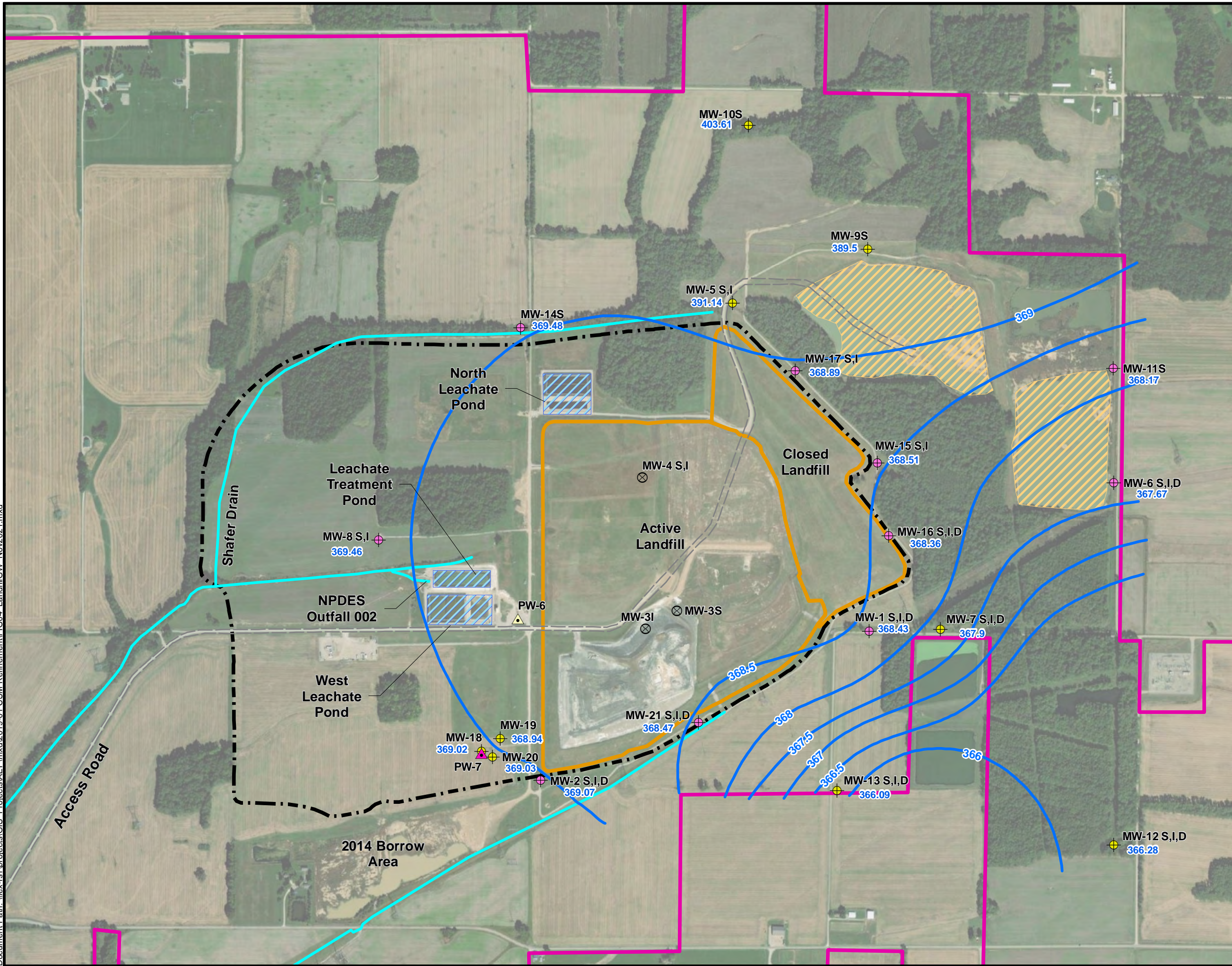
GENERALIZED CROSS-SECTIONS

PROJECT NUMBER: 7382-15-3161

SCALE	As Shown
DATE	5/4/2021
DRAWN BY	TMR
APPROVED BY	ALD

**FIG.
3**

Document Path: \\lex-fs1\projects\GIS - Projects\AEP\mxd\2019-01 CSM Refinement\FIG04 - Landfill\GW - Nov2021.mxd

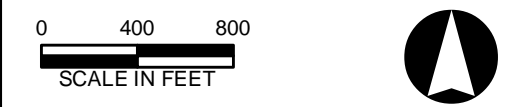


- Legend**
- Landfill - Monitoring Well
 - Landfill - CCR Monitoring Well
 - Landfill - Augmentation Water Supply Well
 - Landfill - Dust Control Water Supply Well
 - Abandoned Monitoring Well
 - Groundwater Elevation Contour Contour Interval 0.5 Feet
 - Access Road
 - Drains / Ditches
 - Stormwater Ponds
 - Landfill Leachate Ponds
 - Property Boundary
 - 1984 Landfill Permit Boundary (Area 1)
 - Landfill Area 1A (Active and Closed)

Data Sources

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Source: USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps, 1964, photorevised 1982



POTENTIOMETRIC SURFACE CONTOURS		FIG. 4
NOVEMBER 8, 2021		
AEP - ROCKPORT, IN		
PROJECT NUMBER: 7650202784		
SCALE	1" = 800'	
DATE	6/27/2022	
DRAWN BY	BIF	
APPROVED BY	KDR	

wood.

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Knoxville, TN 37922
Phone: 865-671-6774



wood.

Appendices



wood.

Appendix A
Analytical Data Tables

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	1/3/2018	6/6/2018	8/16/2018	11/14/2018	2/13/2019	4/1/2019
Field Parameters																		
Elevation	ft NGVD	--	--	369.45	369.29	368.81	368.29	367.61	367.69	367.66	368.33	368.01	366.11	369.43	369.91	368.71	369.68	370.56
pH	S.U.	--	7.09 - 8.14	8.14	7.2	7.09	7.34	7.4	7.1	7.19	7.26	7.08	7.64	7.48	7.3	7.48	7.46	7.35
Specific Conductance	µmhos/cm	--	--	687	612	703	657	470	300	567	536	635	686	590	658	535	530	892
Turbidity	NTU	--	--	0.23	1.5	0.34	0.65	1	2	0.63	0.78	0.4	1.31	1.12	0	0.56	0.8	1.15
Dissolved Oxygen	mg/L	--	--	3.37	4	2.82	3.46	5	4	2.48	2.72	3	3.06	0.61	4.59	2.3	1.1	1.09
Temperature	°C	--	--	15.04	18.9	19.09	15.17	14.8	15.7	16.81	15.81	15.63	12.81	16.23	15.38	14.7	14.9	14.6
ORP	mV	--	--	89.2	111	77.1	52.9	105	46	53.7	16.2	43.8	-20.8	-76.5	302	100.5	172	126.4
Laboratory Parameters																		
Antimony	µg/L	6	--	0.03	0.2	0.02	0.02	0.04	0.04	0.05	0.02	--	--	--	--	0.05	--	--
Arsenic	µg/L	10	--	0.43	0.69	0.38	0.38	0.43	0.76	0.5	0.39	--	--	--	--	0.34	--	--
Barium	µg/L	2000	--	18.5	21.9	17.2	17.9	17.7	36.5	22.3	17.3	--	--	--	--	17.8	--	--
Beryllium	µg/L	4	--	<0.01	0.16	<0.005	<0.005	<0.005	0.023	0.01	<0.004	--	--	--	--	0.03	--	--
Cadmium	µg/L	5	--	0.02	0.22	0.005	0.007	0.02	0.09	0.22	0.01	--	--	--	--	<0.01	--	--
Chromium	µg/L	100	--	0.3	0.7	0.3	0.207	0.72	1.38	0.552	0.255	--	--	--	--	0.25	--	--
Cobalt	µg/L	6	--	0.171	0.398	0.014	0.01	0.052	1.21	0.164	0.02	--	--	--	--	<0.02	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.15	0.74	--	0.09	--	1.3	--	--
Lead	µg/L	15	--	0.204	0.572	0.01	0.022	0.076	1.26	0.526	0.033	--	--	--	--	0.12	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	0.65	0.8	0.68	0.74	0.59	0.97	1.64	0.64	--	--	--	--	0.6	--	--
Selenium	µg/L	50	--	1.1	1.1	0.9	0.9	1	1.1	1.1	1.2	--	--	--	--	0.8	--	--
Thallium	µg/L	2	--	<0.02	0.168	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	--	--	--	--	<0.1	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	4.5	--	0.7	--	2	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	19.5	19.7	22.4	--	19.5	--	19.7	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	5.55	4.29	--	3.8	--	1	--	--
Boron	mg/L	--	0.048	0.037	0.015	0.022	0.02	0.005	0.03	0.031	0.028	0.044	--	0.046	--	0.04	--	--
Calcium	mg/L	--	(79.5) 79	70.7	62.9	68	74.4	65	71.5	72.6	69.2	67.6	--	71.8	--	71.9	--	--
Lithium	mg/L	0.04	--	0.004	0.024	0.002	0.01	0.008	0.01	0.009	0.0007	--	--	--	--	0.03	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	27.3	26.9	26.9	25.6	--	26.8	--	26.8	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0015	--	--	0.0027	--	0.0022	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.32	1.24	1.16	1.15	--	1.19	--	1.16	--	--
Sodium	mg/L	--	--	--	--	--	--	--	40.6	35.2	39.6	36.1	--	31.2	--	35	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.11	0.12	0.105	0.104	--	0.11	--	0.108	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	278	273	271	269	--	250	--	273	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.086	0.108	0.104	0.109	--	0.106	--	0.1	--	--
Chloride	mg/L	--	(29.6) 33	29.6	31.1	31.4	31.9	32	30.7	31.3	30.4	33.1	39.9	34.9	37.3	38.1	40.4	38.5
Fluoride	mg/L	4	0.677	0.59	0.65	0.6	0.54	0.57	0.59	0.63	0.58	0.57	--	0.61	--	0.63	--	--
TDS	mg/L	--	(412.7) 419	392	392	411	398	392	384	402	406	396	--	386	--	410	--	--
Sulfate	mg/L	--	(36.95) 37	33.7	35.5	32.4	30.7	30.7	30.5	33.3	33.6	34.6	--	34.2	--	32.3	--	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	--	<0.07	--	--
Radium-228	pCi/L	--	--	-0.185	0.445	0.244	-0.00464	0.447	-0.172	-0.122	0.133	--	--	--	--	-0.0731	--	--
Radium-226	pCi/L	--	--	0.0665	0.374	-0.00261	0.296	0.487	0.0407	0.0324	0.176	--	--	--	--	0.108	--	--
Radium-226/228	pCi/L	5	--	-0.1185	0.819	0.24139	0.29136	0.934	-0.1313	-0.0896	0.309	--	--	--	--	0.108	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	0.4	--	1.65	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	9	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--	0.8	--	6.24	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.049	0.014	--	<0.002	--	0.035	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0001	0.0002	<0.0001	0.0002	--	<0.0002	--	0.0026	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-1S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	5/23/2019	7/23/2019	2/18/2020	5/19/2020	11/11/2020	5/26/2021	11/12/2021
Field Parameters										
Elevation	ft NGVD	--	--	371.82	372.42	370.36	370.78	369.85	369.23	368.43
pH	S.U.	--	7.09 - 8.14	7.91	7.36	7.12	7.04	7.01	7.75	7.56
Specific Conductance	µmhos/cm	--	--	593	618	1386	440	691	793	687
Turbidity	NTU	--	--	0.05	1.6	0.47	0	0.7	0	0.55
Dissolved Oxygen	mg/L	--	--	0.87	1.5	4.6	1.68	8.97	0	3.75
Temperature	°C	--	--	15.6	18.2	12.43	15.36	14.75	15.6	14.5
ORP	mV	--	--	-28.8	57	118.1	140	100	222	239
Laboratory Parameters										
Antimony	µg/L	6	--	0.02	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.29	--	--	--	--	--	--
Barium	µg/L	2000	--	17.6	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	<0.01	--	--	--	--	--	--
Chromium	µg/L	100	--	0.2	--	--	--	--	--	--
Cobalt	µg/L	6	--	<0.02	--	--	--	--	--	--
Copper	µg/L	--	--	0.13	--	--	--	--	--	--
Lead	µg/L	15	--	0.03	--	--	--	--	--	--
Mercury	µg/L	2	--	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	1	--	--	--	--	--	--
Selenium	µg/L	50	--	0.7	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	7.8	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	<0.06	--	--	--	--	--	--
Aluminum	µg/L	--	--	2	--	--	--	--	--	--
Boron	mg/L	--	0.048	<0.02	--	--	0.02	<0.02	0.019	0.02
Calcium	mg/L	--	(79.5) 79	73.7	--	--	72	67.8	66.2	65.8
Lithium	mg/L	0.04	--	0.02	--	--	--	--	--	--
Magnesium	mg/L	--	--	26.7	--	--	--	--	--	--
Manganese	mg/L	--	--	0.001	--	--	--	--	--	--
Potassium	mg/L	--	--	1.24	--	--	--	--	--	--
Sodium	mg/L	--	--	25.8	--	--	--	--	--	--
Strontium	mg/L	--	--	0.106	--	--	--	--	--	--
Alkalinity	mg/L	--	--	303	--	--	--	--	--	--
Bromide	mg/L	--	--	0.1	--	--	--	--	0.1	--
Chloride	mg/L	--	(29.6) 33	33.7	30	--	34.7	33.3	35	66.2
Fluoride	mg/L	4	0.677	0.55	--	--	0.55	0.66	0.66	0.65
TDS	mg/L	--	(412.7) 419	388	--	442	350	402	430	380
Sulfate	mg/L	--	(36.95) 37	36.3	--	--	37.1	34.1	31.6	31
Sulfide	mg/L	--	--	<0.1	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.173	--	--	--	--	--	--
Radium-226	pCi/L	--	--	1.09	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	1.263	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.26	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0004	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	6/6/2018	8/16/2018
Field Parameters														
Elevation	ft NGVD	--	--	369.42	369.25	368.8	368.24	367.58	367.63	367.62	368.28	367.25	369.39	397.45
pH	S.U.	--	6.43 - 7.90	6.7	7	7.4	7.09	7.6	7.4	7.24	6.89	7.1	7.5	7.31
Specific Conductance	µmhos/cm	--	--	461	479	570	544	370	500	443	402	424	480	533
Turbidity	NTU	--	--	0.9	0.7	0.24	0.35	1	1	0.6	0.36	1	0.32	0
Dissolved Oxygen	mg/L	--	--	0.4	0.3	1.07	0	0.3	1	0.46	27.63	0.5	0.87	0.22
Temperature	°C	--	--	17.5	18.2	16.99	14.53	14.4	15.7	15.44	16.52	16.4	16.25	16.03
ORP	mV	--	--	-21	205	-2.1	4.4	10	36	-26.2	-118.8	-23	-102.2	253
Laboratory Parameters														
Antimony	µg/L	6	--	0.04	0.04	0.01	0.02	0.02	0.01	0.04	0.02	--	--	--
Arsenic	µg/L	10	--	0.86	0.78	0.92	0.8	0.82	0.69	0.89	0.86	--	--	--
Barium	µg/L	2000	--	85.5	86.1	84.9	93.4	90.5	76.7	85	94.3	--	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.004	<0.004	--	--	--
Cadmium	µg/L	5	--	0.08	0.1	0.02	0.02	0.02	0.05	0.01	0.007	--	--	--
Chromium	µg/L	100	--	0.2	1	0.2	0.051	0.39	0.686	0.155	0.112	--	--	--
Cobalt	µg/L	6	--	0.341	0.364	0.401	0.381	0.424	0.054	0.558	0.569	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.12	0.2	0.48	--
Lead	µg/L	15	--	0.851	1.25	0.156	0.059	0.099	0.427	0.068	0.137	--	--	--
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	2.47	2.85	2.89	3.27	3.33	1.82	2.87	2.85	--	--	--
Selenium	µg/L	50	--	<0.03	0.04	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	--	--	--
Thallium	µg/L	2	--	0.03	0.02	0.02	0.03	0.104	0.03	0.02	0.02	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	1	4.2	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	18.5	18.9	20.7	17.8	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	1	2	2.96	--
Boron	mg/L	--	0.093	0.075	0.014	0.018	0.015	0.004	0.045	0.049	0.047	0.018	0.11	0.056
Calcium	mg/L	--	(79.5) 71	67.4	60	64.5	63.9	60.9	66.9	65.7	64.8	68.1	66.4	--
Lithium	mg/L	0.04	--	0.005	0.022	0.007	0.005	0.005	0.006	0.008	0.0005	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	20.8	21.2	20.6	21.5	21	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.599	--	0.316	--
Potassium	mg/L	--	--	--	--	--	--	--	1.34	1.08	0.98	0.92	1.31	--
Sodium	mg/L	--	--	--	--	--	--	--	19.8	19.5	19.1	19.2	18.1	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0934	0.0926	0.086	0.0911	0.093	--
Alkalinity	mg/L	--	--	--	--	--	--	--	222	225	226	222	230	--
Bromide	mg/L	--	--	--	--	--	--	--	0.061	0.087	0.081	0.072	0.081	--
Chloride	mg/L	--	(29.6) 27.4	24.9	24.8	24.3	24.1	24.4	24.1	26.5	26.5	27.5	28.6	--
Fluoride	mg/L	4	0.428	0.37	0.4	0.37	0.31	0.33	0.35	0.38	0.34	0.37	0.42	--
TDS	mg/L	--	(412.7) 349	323	315	331	334	316	300	323	330	327	321	--
Sulfate	mg/L	--	(47.8) 48	44.3	46.7	42.4	40.7	41.4	41.2	43.8	43.3	44.1	42	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	--
Radium-228	pCi/L	--	--	0.0603	0.105	1.42	0.662	0.108	-0.0752	0.3	2.21	--	--	--
Radium-226	pCi/L	--	--	0.33	1.57	0.276	0.65	0.513	0.15	0.33	0.323	--	--	--
Radium-226/228	pCi/L	5	--	0.3903	1.675	1.696	1.312	0.621	0.0748	0.63	2.533	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.37	--	0.4	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.3	--	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.51	--	1	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.03	<0.0004	0.035	0.048	0.011	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.583	0.1	0.455	0.445	0.303	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/14/2018	2/13/2019	4/1/2019	5/23/2019	7/23/2019	9/11/2019	11/22/2019	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/26/2021	11/12/2021	2/15/2022
Field Parameters																	
Elevation	ft NGVD	--	--	368.74	369.73	370.51	371.86	372.45	--	370.95	370.40	370.81	369.90	368.07	369.25	368.50	--
pH	S.U.	--	6.43 - 7.90	7.75	7.5	7.37	7.01	7.21	7.25	7.05	7.22	7.44	7.34	7.37	7.72	7.53	--
Specific Conductance	µmhos/cm	--	--	425	443	802	503	493	481	491	566	575	590	549	648	598	--
Turbidity	NTU	--	--	0.61	1	1.06	0.06	2.1	0.58	1.7	0	2.96	1.38	2.8	0	1.9	--
Dissolved Oxygen	mg/L	--	--	0.19	2	1.28	0.73	0.57	0.26	2.1	0.28	1.64	0.18	0.2	0	0	--
Temperature	°C	--	--	14.68	14.7	14.6	16.79	16.4	17.5	14	15.23	17.24	15.42	14.4	18	14.66	--
ORP	mV	--	--	62.9	155	134.2	5.2	27	-35.8	-206	42	18	70	143	178	244	--
Laboratory Parameters																	
Antimony	µg/L	6	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.82	--	--	0.73	--	--	0.71	--	--	--	--	--	--	--
Barium	µg/L	2000	--	85.6	--	--	83.8	--	--	11	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.02	--	--	<0.01	--	--	0.03	--	--	--	--	--	--	--
Chromium	µg/L	100	--	<0.04	--	--	0.04	--	--	0.2	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	0.48	--	--	0.368	--	--	0.838	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.22	--	--	0.08	--	--	0.5	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.07	--	--	<0.02	--	--	0.291	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	--	--	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2.96	--	--	2.38	--	--	3.1	--	--	--	--	--	--	--
Selenium	µg/L	50	--	<0.03	--	--	<0.03	--	--	<0.03	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	--	--	--	--	--
Zinc	µg/L	--	--	1	--	--	0.9	--	--	3	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	18.2	--	--	18	--	--	17.5	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	3	--	--	<1	--	--	<5	--	--	--	--	--	--	--
Boron	mg/L	--	0.093	0.05	--	--	0.02	--	--	0.01	0.02	--	<0.02	--	0.017	0.016	--
Calcium	mg/L	--	(79.5) 71	65.5	--	--	67.7	--	--	66.7	71.2	--	65.9	--	67.4	68.2	--
Lithium	mg/L	0.04	--	0.03	--	--	<0.009	--	--	0.00355	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	20.6	--	--	20.6	--	--	20.7	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.515	--	--	0.37	--	--	0.784	--	--	--	--	--	--	--
Potassium	mg/L	--	--	0.97	--	--	0.98	--	--	0.9	--	--	--	--	--	--	--
Sodium	mg/L	--	--	18.5	--	--	18.2	--	--	18.1	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.0882	--	--	0.0912	--	--	0.0917	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	227	--	--	243	--	--	210	--	--	--	--	--	--	--
Bromide	mg/L	--	--	0.08	--	--	0.09	--	--	0.08	--	--	--	--	0.09	--	--
Chloride	mg/L	--	(29.6) 27.4	28.8	30.1	34.1	33.1	30.6	33.5	35	37.7	35.4	36.3	36.9	37.8	42.5	46.8
Fluoride	mg/L	4	0.428	0.41	--	--	0.42	--	--	0.37	0.4	0.39	0.43	--	0.38	0.4	--
TDS	mg/L	--	(412.7) 349	308	--	--	341	--	--	348	323	340	322	--	350	340	--
Sulfate	mg/L	--	(47.8) 48	40.7	--	--	40.2	--	--	39.7	40.1	--	39.0	--	38.6	39	--
Sulfide	mg/L	--	--	<0.07	--	--	<0.1	--	--	<0.2	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.415	--	--	0.71	--	--	0.546	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.288	--	--	0.37	--	--	0.421	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.703	--	--	1.08	--	--	0.967	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.12	--	--	0.43	--	--	<0.2	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.9	--	--	<0.7	--	--	1	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	--	1	--	--	<5	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.053	--	--	0.034	--	--	0.05	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.508	--	--	0.397	--	--	0.758	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.6	369.43	368.97	368.42	367.75	367.81	367.81	368.34	367.44	366.27
pH	S.U.	--	6.74 - 8.16	7.6	7.1	7.36	7.5	7.4	7.33	7.25	8.06	7.3	7.68
Specific Conductance	µmhos/cm	--	--	496	471	464	842	400	558	394	525	448	539
Turbidity	NTU	--	--	8.8	2	6.27	4	5	1.93	2.15	2.47	2	3.89
Dissolved Oxygen	mg/L	--	--	0.5	0.2	0.55	0.8	2	0.25	0.53	0.81	0.4	1.83
Temperature	°C	--	--	19.4	16.7	15.77	14.8	14.7	15.14	15.84	21.46	16.5	6.7
ORP	mV	--	--	63	220	92.8	252	182	49.6	132.7	152.8	-14	-5.3
Laboratory Parameters													
Antimony	µg/L	6	--	0.05	0.03	0.03	0.03	0.03	0.02	0.02	0.02	--	--
Arsenic	µg/L	10	--	1.29	0.73	1.07	0.65	0.77	0.58	0.75	0.59	--	--
Barium	µg/L	2000	--	255	147	160	147	162	139	142	139	--	--
Beryllium	µg/L	4	--	0.01	<0.005	0.007	<0.005	<0.005	<0.005	0.006	<0.004	--	--
Cadmium	µg/L	5	--	0.13	0.07	0.04	0.04	0.15	0.04	0.04	0.05	--	--
Chromium	µg/L	100	--	0.3	1.5	0.3	0.072	0.439	0.687	0.174	0.131	--	--
Cobalt	µg/L	6	--	3.64	0.373	0.836	0.329	0.577	0.173	0.44	0.212	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.93	1.02	--
Lead	µg/L	15	--	1.13	1.37	0.5	0.222	0.807	1.92	0.419	0.355	--	--
Mercury	µg/L	2	--	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	3.44	3.59	3.6	3.24	2.43	3.4	3.05	2.94	--	--
Selenium	µg/L	50	--	0.07	0.03	0.07	0.03	0.03	0.03	0.06	<0.03	--	--
Thallium	µg/L	2	--	0.04	0.02	0.056	0.02	0.05	0.03	0.04	0.03	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.5	4.5	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	18.9	19.4	21.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	8.08	14.6	--
Boron	mg/L	--	0.066	0.017	0.015	0.016	0.018	0.006	0.055	0.046	0.019	0.002	--
Calcium	mg/L	--	(79.5) 75	63.6	57.9	65.2	69.3	63.4	70	67.8	63.9	65.7	--
Lithium	mg/L	0.04	--	<0.0002	0.017	0.0005	0.004	0.007	0.007	0.009	0.002	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	21.9	22.2	20.7	20.9	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.511	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.13	1.13	0.89	0.89	--
Sodium	mg/L	--	--	--	--	--	--	--	19.4	19.3	18.8	18	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0985	0.101	0.0885	0.092	--
Alkalinity	mg/L	--	--	--	--	--	--	--	206	202	206	220	--
Bromide	mg/L	--	--	--	--	--	--	--	0.09	0.115	0.109	0.03	--
Chloride	mg/L	--	(29.6) 50	27.3	29.8	29.8	39.3	40.6	40.3	40.9	39.3	10.3	--
Fluoride	mg/L	4	0.321	0.28	0.3	0.28	0.29	0.26	0.26	0.28	0.24	0.85	0.31
TDS	mg/L	--	(412.7) 369	331	329	288	339	323	330	342	338	339	--
Sulfate	mg/L	--	(45.1) 45	40.2	40.6	32.3	33.6	36.4	37	39.5	39.6	10.4	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.558	0.06	0.525	0.566	0.315	0.0844	0.511	0.444	--	--
Radium-226	pCi/L	--	--	0.526	0.135	0.932	6.73	0.334	0.154	0.213	0.502	--	--
Radium-226/228	pCi/L	5	--	1.084	0.195	1.457	7.296	0.649	0.2384	0.724	0.946	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.58	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	4.2	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.052	0.012	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.553	0.62	0.486	0.616	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-1D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2018	8/16/2018	11/14/2018	2/13/2019	5/23/2019	7/23/2019	11/22/2019	2/17/2020	5/19/2020	11/11/2020	2/3/2021	5/26/2021	11/12/2021
Field Parameters																
Elevation	ft NGVD	--	--	369.56	369.94	368.73	369.71	371.84	372.45	367.22	369.34	370.40	369.91	376.09	368.95	368.22
pH	S.U.	--	6.74 - 8.16	8.24	7.35	7.77	7.41	7.18	7.3	7.26	7.38	7.05	7.14	7.5	7.68	7.35
Specific Conductance	µmhos/cm	--	--	508	568	457	317	0.504	510	609	817	454	664	467	747	735
Turbidity	NTU	--	--	1.71	0	1.03	2	0.3	1.5	2.53	0.98	0	0.43	2.9	0	1.44
Dissolved Oxygen	mg/L	--	--	0.25	0.26	0.2	10	3.68	2.1	3.57	6.09	9.13	0	4.8	0	0
Temperature	°C	--	--	15.85	16.71	14.06	14	17.02	16.7	14.31	13.25	15.71	15.84	13.2	15.9	14.75
ORP	mV	--	--	-112	200	53	188	55.9	44	51.3	211.2	152	95	145	200	239
Laboratory Parameters																
Antimony	µg/L	6	--	--	--	0.03	--	0.05	--	0.04	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.62	--	0.47	--	0.57	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	101	--	99.2	--	101	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	--	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.02	--	0.02	--	0.03	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.07	--	0.1	--	0.2	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.04	--	0.058	--	0.097	--	--	--	--	--	--
Copper	µg/L	--	--	0.55	--	0.75	--	0.83	--	0.4	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.07	--	0.138	--	0.2	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	2	--	1	--	1	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.04	--	0.09	--	0.08	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	--	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	2	--	1	--	65.9	--	2	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	17.9	--	19	--	17.8	--	18.5	--	--	--	--	--	--
Aluminum	µg/L	--	--	16.1	--	<1	--	4	--	<5	--	--	--	--	--	--
Boron	mg/L	--	0.066	0.103	0.02	0.1	<0.02	0.02	--	0.04	--	0.04	0.04	--	0.033	0.042
Calcium	mg/L	--	(79.5) 75	70.9	--	71.9	--	73.6	--	72.5	--	59.9	80.3	56.8	77.2	73.7
Lithium	mg/L	0.04	--	--	--	0.01	--	0.01	--	0.0038	--	--	--	--	--	--
Magnesium	mg/L	--	--	20.4	--	22.1	--	18.3	--	22.2	--	--	--	--	--	--
Manganese	mg/L	--	--	0.216	--	0.138	--	0.169	--	0.163	--	--	--	--	--	--
Potassium	mg/L	--	--	1.34	--	1.71	--	1.23	--	1.3	--	--	--	--	--	--
Sodium	mg/L	--	--	18.2	--	20.9	--	18.7	--	26	--	--	--	--	--	--
Strontium	mg/L	--	--	0.359	--	0.272	--	0.553	--	0.194	--	--	--	--	--	--
Alkalinity	mg/L	--	--	218	--	222	--	208	--	260	--	--	--	--	--	--
Bromide	mg/L	--	--	0.113	--	0.1	--	0.09	--	0.1	--	--	--	--	0.11	--
Chloride	mg/L	--	(29.6) 50	43.1	43.8	46.9	43.8	32.1	--	49.1	--	23.8	56.2	--	44	55.4
Fluoride	mg/L	4	0.321	0.3	--	0.3	--	0.27	--	0.27	--	0.3	0.30	--	0.26	0.3
TDS	mg/L	--	(412.7) 369	345	--	340	--	346	--	398	257	261	397	264	410	410
Sulfate	mg/L	--	(45.1) 45	39.5	--	39.8	--	45.3	39.2	41.2	--	23.3	37.7	--	38.6	36
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	--	<0.2	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.295	--	0.55	--	0.197	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0679	--	0.652	--	0.11	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.3629	--	1.202	--	0.307	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.98	--	0.78	--	0.8	--	2.19	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	11.8	--	2	--	2	--	3	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	5.05	--	3	--	<5	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.002	--	0.02	--	<0.003	--	<0.02	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0605	--	0.144	--	0.148	--	0.131	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-2S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/9/2017	5/9/2017	7/19/2017	10/4/2017	6/6/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.34	369.03	369.02	368.77	366.24	368.15	368.06	368.22	366.68	369.94
pH	S.U.	--	6.30 - 8.44	6.4	7.68	7.63	7.34	7.65	7.66	7.12	7.46	7.17	7.62
Specific Conductance	µmhos/cm	--	--	423	465	440	459	341	522	354	409	509	470
Turbidity	NTU	--	--	3.1	1.85	0.51	0.96	0.74	1.31	2.68	4.81	1.55	1.84
Dissolved Oxygen	mg/L	--	--	2.8	1.85	4.67	3.91	4.18	3.63	4.52	2.62	2.63	4.66
Temperature	°C	--	--	17.5	16.34	15.81	16.03	15.1	15.73	15.67	16.06	16.42	16.48
ORP	mV	--	--	34	64	90.4	-19	165	13.1	165.7	-5.9	26.6	59.1
Laboratory Parameters													
Antimony	µg/L	6	--	<0.02	0.02	0.04	0.02	0.02	0.02	0.04	0.12	--	--
Arsenic	µg/L	10	--	0.97	1.09	0.94	0.94	0.92	0.95	0.95	0.96	--	--
Barium	µg/L	2000	--	16	14	12.4	12.4	11	12.3	12.3	13.6	--	--
Beryllium	µg/L	4	--	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.01	0.01	0.02	0.02	0.09	0.009	0.01	0.03	--	--
Chromium	µg/L	100	--	0.4	0.6	0.3	0.337	0.329	0.67	0.37	0.41	--	--
Cobalt	µg/L	6	--	0.177	0.09	0.017	0.019	0.014	0.051	0.064	0.121	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.33	0.2	1.58
Lead	µg/L	15	--	0.158	0.105	0.101	0.022	0.063	0.042	0.047	0.243	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	2.03	2.39	2.07	1.91	2.14	1.92	1.75	1.81	--	--
Selenium	µg/L	50	--	0.3	0.3	0.2	0.3	0.4	0.3	0.2	0.3	--	--
Thallium	µg/L	2	--	<0.02	<0.01	<0.01	<0.01	0.074	<0.01	<0.01	0.03	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	3.3	5.3
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	28.6	28.8	31.9	26.7
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	36.6	14.7	15.3
Boron	mg/L	--	0.109	<0.002	0.015	0.014	0.018	0.004	0.069	0.084	0.052	0.045	0.073
Calcium	mg/L	--	(79.5) 66	59.4	51.6	57.4	62.4	51.6	57.9	59	53.3	60.7	57
Lithium	mg/L	0.04	--	0.0004	0.018	0.005	0.008	0.009	0.0007	0.002	0.005	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	21.2	21.9	19.5	22.8	21.3
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0124	--	0.0063
Potassium	mg/L	--	--	--	--	--	--	--	0.73	0.81	0.65	0.64	0.68
Sodium	mg/L	--	--	--	--	--	--	--	13.4	14	11.8	16.3	22.1
Strontium	mg/L	--	--	--	--	--	--	--	0.0837	0.0855	0.0756	0.0888	0.0906
Alkalinity	mg/L	--	--	--	--	--	--	--	174	191	188	207	215
Bromide	mg/L	--	--	--	--	--	--	--	0.02	0.071	0.116	0.06	0.063
Chloride	mg/L	--	(29.6) 24	21.5	21.8	23.8	21.8	21.2	21	20.8	19.6	21.2	25.3
Fluoride	mg/L	4	0.299	0.26	0.29	0.26	0.26	0.25	0.26	0.26	0.23	0.25	0.29
TDS	mg/L	--	(412.7) 343	298	265	301	316	284	285	321	308	323	329
Sulfate	mg/L	--	(35.08) 35	26	27.6	26.2	24.1	25.9	26.6	30.3	33.8	30	28.9
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4
Radium-228	pCi/L	--	--	-0.035	0.54	0	0.228	0.343	0.0555	-0.0726	0.631	--	--
Radium-226	pCi/L	--	--		0.12	0.172	0.143	0.311	0.465	0.434	0.0617	--	--
Radium-226/228	pCi/L	5	--	-0.035	0.66	0.172	0.371	0.654	0.5205	0.3614	0.6927	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	0.27
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	0.6
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	2
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.053	0.013	<0.002
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0001	<0.0001	<0.0001	0.0021	0.0003

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-2S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	2/13/2019	4/1/2019	5/22/2019	7/23/2019	9/11/2019	11/14/2019	5/18/2020	7/16/2020	11/11/2020	2/4/2021	5/27/2021	8/4/2021	11/11/2021
Field Parameters																	
Elevation	ft NGVD	--	--	367.91	368.87	369.97	371.02	371.37	370.52	370.86	369.39	377.69	370.64	368.33	369.35	369.45	369.07
pH	S.U.	--	6.30 - 8.44	7.53	7.77	7.72	7.66	7.45	7.33	7.54	7.43	7.55	7.4	7.62	9.5	7.3	7
Specific Conductance	µmhos/cm	--	--	425	451	491	500	486	473	657	462	584	588	562	500	579	588
Turbidity	NTU	--	--	2.15	0.8	1.51	1.08	1.7	0.83	0.2	1.64	0.53	0.56	0.3	0	7.84	0
Dissolved Oxygen	mg/L	--	--	3.7	3.1	4.7	5.77	1.3	1.78	3.59	2.3	3.24	3.98	5.1	4.8		3.97
Temperature	°C	--	--	14.51	14.6	14.5	15.93	16.2	16.4	15.18	16.64	14.96	15.54	13.8	16.36	15.32	14.67
ORP	mV	--	--	23	71	-17.9	-3.2	55	7.7	4	27	48	85	72	73	150	218
Laboratory Parameters																	
Antimony	µg/L	6	--	0.04	--	--	0.03	--	--	<0.02	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.82	--	--	0.78	--	--	0.76	--	--	--	--	--	--	--
Barium	µg/L	2000	--	16.5	--	--	18	--	--	19.3	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.11	--	--	0.08	--	--	<0.01	--	--	--	--	--	--	--
Chromium	µg/L	100	--	0.1	--	--	0.1	--	--	0.255	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	<0.02	--	--	0.02	--	--	<0.02	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.28	--	--	0.56	--	--	<0.2	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.04	--	--	0.133	--	--	<0.05	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	--	--	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2	--	--	2	--	--	1	--	--	--	--	--	--	--
Selenium	µg/L	50	--	0.2	--	--	1	--	--	1.1	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	--	--	--	--	--
Zinc	µg/L	--	--	89.4	--	--	7.5	--	--	<0.7	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	26.8	--	--	25	--	--	25.2	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	7.27	--	--	6.68	--	--	<5	--	--	--	--	--	--	--
Boron	mg/L	--	0.109	0.06	--	--	<0.02	--	--	0.03	0.02	--	0.03	--	0.043	--	0.028
Calcium	mg/L	--	(79.5) 66	54.7	--	--	51.3	--	--	59.2	53.7	--	58.4	--	59.8	--	55.2
Lithium	mg/L	0.04	--	<0.009	--	--	<0.009	--	--	0.00413	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	20.9	--	--	19	--	--	20.4	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.0025	--	--	0.0017	--	--	0.001	--	--	--	--	--	--	--
Potassium	mg/L	--	--	0.68	--	--	0.66	--	--	0.7	--	--	--	--	--	--	--
Sodium	mg/L	--	--	23.7	--	--	26	--	--	32.9	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.086	--	--	0.0803	--	--	0.0909	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	207	--	--	220	--	--	221	--	--	--	--	--	--	--
Bromide	mg/L	--	--	<0.04	--	--	<0.04	--	--	0.08	--	--	--	--	0.09	--	--
Chloride	mg/L	--	(29.6) 24	24.8	26.5	26.1	26.4	26.8	26.6	27.3	28.9	28.7	27.0	--	24.8	--	23.0
Fluoride	mg/L	4	0.299	0.28	--	--	0.3	--	--	0.28	0.34	0.33	0.34	0.36	0.35	0.35	0.33
TDS	mg/L	--	(412.7) 343	272	--	--	352	339	--	336	344	347	336	--	370	--	330
Sulfate	mg/L	--	(35.08) 35	24.7	--	--	26.2	--	--	27.8	24.9	--	25.7	--	30.8	--	27.1
Sulfide	mg/L	--	--	<0.1	--	--	<0.1	--	--	<0.2	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.146	--	--	0.54	--	--	0.161	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.0173	--	--	0.0674	--	--	0.0407	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.1633	--	--	0.6074	--	--	0.2017	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.84	--	--	0.87	--	--	1.84	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	5	--	--	4	--	--	2	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	--	--	5.16	--	--	<5	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.003	--	--	0.003	--	--	<0.02	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0005	--	--	0.0009	--	--	<0.0005	--	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-2I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	1/3/2018	6/6/2018	8/16/2018
Field Parameters															
Elevation	ft NGVD	--	--	369.26	368.97	368.94	368.7	366.31	368.06	368.01	368.16	366.64	365.54	369.85	369.32
pH	S.U.	--	6.43 - 8.69	7.89	7.14	7.45	7.26	7.7	7.64	8.42	6.98	7.16	7.84	7.55	7.52
Specific Conductance	µmhos/cm	--	--	581	542	513	495	370	557	383	431	553	568	802	614
Turbidity	NTU	--	--	2.02	1.41	0.94	1.83	3.99	16	24.3	6.25	10.3	1.3	0.91	0
Dissolved Oxygen	mg/L	--	--	1.54	7.64	1.96	3.62	--	10.86	1.97	22.85	0.71	1.12	1.1	0.06
Temperature	°C	--	--	15.88	15.93	17.11	15.97	14.38	14.74	15.42	16.34	15.68	11.06	15.3	16.03
ORP	mV	--	--	65.9	29.8	-29.6	-11.6	161.9	-52.8	156.9	-180.6	-63.4	-51.8	-55.4	-46
Laboratory Parameters															
Antimony	µg/L	6	--	0.06	0.06	0.07	0.13	0.1	0.1	0.15	0.11	--	--	--	--
Arsenic	µg/L	10	--	0.64	0.68	0.55	0.61	0.65	0.74	0.9	0.76	--	--	--	--
Barium	µg/L	2000	--	78.5	84	67.1	60.1	59.4	58.4	59.3	62.9	--	--	--	--
Beryllium	µg/L	4	--	<0.005	0.006	<0.005	<0.005	<0.005	0.01	0.022	0.02	--	--	--	--
Cadmium	µg/L	5	--	0.03	0.05	0.05	0.07	0.16	0.22	0.09	0.05	--	--	--	--
Chromium	µg/L	100	--	0.2	0.6	0.1	0.143	0.154	1.01	0.829	0.567	--	--	--	--
Cobalt	µg/L	6	--	0.606	0.76	0.415	0.26	0.28	0.581	1.28	0.995	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	2.21	1.82	--	0.2	--
Lead	µg/L	15	--	0.208	0.454	0.178	0.231	0.383	0.588	1.39	1.19	--	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	4.91	5	4.21	3.14	2.07	2.06	2.17	2.07	--	--	--	--
Selenium	µg/L	50	--	0.7	0.7	0.6	0.4	0.2	0.2	0.4	0.2	--	--	--	--
Thallium	µg/L	2	--	0.051	0.04	0.04	0.02	0.03	0.03	0.04	0.064	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.4	3.4	--	20.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	16.3	16.8	18.9	--	16.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	315	244	--	9.39	--
Boron	mg/L	--	0.043	0.019	0.009	0.025	0.013	<0.002	0.024	0.034	0.025	0.03	--	0.052	0.03
Calcium	mg/L	--	(79.5) 78	74	67.5	66.8	73.9	63.9	71.5	71	68.9	72.5	--	72.7	--
Lithium	mg/L	0.04	--	0.005	0.021	0.002	0.006	0.007	0.005	0.007	<0.0002	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	22.8	23.6	22.8	23.7	--	23.7	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.463	--	--	0.564	--
Potassium	mg/L	--	--	--	--	--	--	--	1.09	1.2	1.01	1.05	--	1.14	--
Sodium	mg/L	--	--	--	--	--	--	--	14.7	15.3	15.8	16.8	--	16.9	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0919	0.0977	0.0885	0.0946	--	0.0959	--
Alkalinity	mg/L	--	--	--	--	--	--	--	223	218	236	252	--	254	--
Bromide	mg/L	--	--	--	--	--	--	--	0.05	0.071	0.072	0.075	--	0.077	--
Chloride	mg/L	--	(29.6) 32	28.6	29.7	28	25.8	27.1	25.8	28.6	29.7	29.8	28.8	31.8	31.5
Fluoride	mg/L	4	0.371	0.3	0.33	0.31	0.36	0.3	0.31	0.31	0.28	0.28	--	0.32	--
TDS	mg/L	--	(412.7) 375	332	363	330	326	314	312	343	346	343	--	356	--
Sulfate	mg/L	--	(48.53) 49	42.9	54.7	41.1	36.9	39.2	39.2	42.4	44.1	45.5	--	43.2	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	--
Radium-228	pCi/L	--	--	-0.0463	0.62	0.241	0.137	0.648	0.146	0.163	0.195	--	--	--	--
Radium-226	pCi/L	--	--	0.398	0.342	0.267	0.288	0.197	0.289	0.328	0.341	--	--	--	--
Radium-226/228	pCi/L	5	--	0.3517	0.962	0.508	0.425	0.845	0.435	0.491	0.536	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	1.96	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.3	--	--	21.7	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	154	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.053	0.016	0.03	0.054	--	0.238	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.258	0.331	0.333	0.323	--	0.563	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-2I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	2/13/2019	5/22/2019	11/14/2019	5/18/2020	11/11/2020	5/27/2021	11/11/2021
Field Parameters											
Elevation	ft NGVD	--	--	367.97	368.87	371.17	371.18	369.44	370.65	369.39	369.17
pH	S.U.	--	6.43 - 8.69	7.2	7.55	7.34	7.39	7.8	6.86	9.66	6.99
Specific Conductance	µmhos/cm	--	--	434	435	481	576	420	558	510	647
Turbidity	NTU	--	--	17.03	2.8	0	4.1	2.08	2.72	0	0
Dissolved Oxygen	mg/L	--	--	0.13	10	0.71	0.33	5.14	7.66	0	0.06
Temperature	°C	--	--	14.25	14.3	16.09	15.93	15.94	4.84	16.6	14.51
ORP	mV	--	--	36.8	-17	-83.8	-115	-58	25	-95	-43
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	--	0.03	0.05	--	--	--	--
Arsenic	µg/L	10	--	0.49	--	0.4	0.39	--	--	--	--
Barium	µg/L	2000	--	95	--	102	90.8	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	<0.02	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.04	--	0.003	0.12	--	--	--	--
Chromium	µg/L	100	--	0.327	--	0.06	0.1	--	--	--	--
Cobalt	µg/L	6	--	0.492	--	0.347	0.141	--	--	--	--
Copper	µg/L	--	--	1.52	--	0.24	<0.2	--	--	--	--
Lead	µg/L	15	--	0.467	--	0.143	0.07	--	--	--	--
Mercury	µg/L	2	--	--	--	<0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	2	--	2.13	2.14	--	--	--	--
Selenium	µg/L	50	--	0.2	--	0.05	0.9	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	<0.1	<0.1	--	--	--	--
Zinc	µg/L	--	--	35.2	--	7.4	1	--	--	--	--
Silica (Dissolved)	mg/L	--	--	16.9	--	15.9	15	--	--	--	--
Aluminum	µg/L	--	--	91.9	--	6.25	<5	--	--	--	--
Boron	mg/L	--	0.043	0.05	<0.02	<0.02	0.01	<0.02	<0.02	0.013	0.013
Calcium	mg/L	--	(79.5) 78	64.8	--	64.3	63.4	61.9	66.6	70.9	72.1
Lithium	mg/L	0.04	--	<0.009	--	<0.009	0.00402	--	--	--	--
Magnesium	mg/L	--	--	21.2	--	20.4	19.4	--	--	--	--
Manganese	mg/L	--	--	0.576	--	0.699	0.272	--	--	--	--
Potassium	mg/L	--	--	0.89	--	0.92	0.9	--	--	--	--
Sodium	mg/L	--	--	15.3	--	13.5	13.2	--	--	--	--
Strontium	mg/L	--	--	0.0864	--	0.083	0.0803	--	--	--	--
Alkalinity	mg/L	--	--	247	--	241	208	--	--	--	--
Bromide	mg/L	--	--	0.06	--	0.05	0.04	--	--	0.06	--
Chloride	mg/L	--	(29.6) 32	27.9	31.5	25.4	23.3	24.4	24.3	29.2	31.7
Fluoride	mg/L	4	0.371	0.32	--	0.32	0.33	0.36	0.37	0.35	0.32
TDS	mg/L	--	(412.7) 375	308	--	328	296	297	296	350	340
Sulfate	mg/L	--	(48.53) 49	39	--	39.2	39.3	40.5	38.6	40.8	37.2
Sulfide	mg/L	--	--	<0.1	--	<0.1	<0.2	--	--	--	--
Radium-228	pCi/L	--	--	0.291	--	0.451	0.191	--	--	--	--
Radium-226	pCi/L	--	--	0.258	--	0.194	0.0689	--	--	--	--
Radium-226/228	pCi/L	5	--	0.549	--	0.645	0.2599	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.2	--	0.64	1.08	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	--	0.9	2	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	1	<5	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.037	--	0.02	<0.02	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.565	--	0.643	0.251	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-2D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	6/7/2018	8/16/2018
Field Parameters														
Elevation	ft NGVD	--	--	369.22	368.96	368.9	368.68	366.41	368.04	367.96	367.95	366.6	369.84	369.25
pH	S.U.	--	6.45 -8.63	7.86	7.47	7.29	7.1	7.4	7.39	7.3	8.51	7.24	7.55	7.33
Specific Conductance	µmhos/cm	--	--	586	524	551	516	386	568	388	516	428	460	830
Turbidity	NTU	--	--	2.31	3.15	3.5	0.79	3.45	2.67	2.32	1.72	1.82	5.05	0
Dissolved Oxygen	mg/L	--	--	0.45	0.31	1.77	0.31	5.47	0.79	0.87	0.45	0.84	6.83	0.74
Temperature	°C	--	--	15.8	15.79	19.32	15.58	14.22	14.45	15.65	16.06	15.71	15.35	17.83
ORP	mV	--	--	-2.7	-168.3	45	-0.7	206.9	-87.3	143.6	-24.8	-41	32.3	-24
Laboratory Parameters														
Antimony	µg/L	6	--	0.03	0.06	0.02	0.02	0.03	0.03	0.04	0.02	--	--	--
Arsenic	µg/L	10	--	0.78	0.82	0.81	0.61	0.62	0.59	0.65	0.62	--	--	--
Barium	µg/L	2000	--	185	195	180	172	157	160	159	169	--	--	--
Beryllium	µg/L	4	--	<0.005	0.006	0.007	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--
Cadmium	µg/L	5	--	0.12	0.12	0.07	0.1	0.26	0.09	0.08	0.08	--	--	--
Chromium	µg/L	100	--	0.2	0.4	0.3	0.05	0.277	0.562	0.188	0.162	--	--	--
Cobalt	µg/L	6	--	0.473	0.439	0.425	0.212	0.327	0.252	0.335	0.353	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.16	1.96	2.09	--
Lead	µg/L	15	--	0.648	0.359	0.247	0.021	0.378	0.045	0.144	0.075	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	2.11	2.16	1.97	2.09	1.8	2.13	1.9	1.89	--	--	--
Selenium	µg/L	50	--	<0.03	<0.03	0.05	0.09	0.08	0.03	0.06	0.04	--	--	--
Thallium	µg/L	2	--	0.02	0.02	0.03	0.01	0.02	0.02	0.02	0.02	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	6	3.5	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.5	17.9	20.5	17.4	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	17.5	20.7	70.5	--
Boron	mg/L	--	0.074	<0.002	0.01	0.013	0.014	<0.002	0.03	0.027	0.073	0.041	0.076	0.038
Calcium	mg/L	--	(79.5) 81	75.6	65.8	66.7	73.9	64.2	74.2	70.8	64.7	67.7	78.6	--
Lithium	mg/L	0.04	--	0.002	0.018	0.002	0.007	0.007	0.008	0.011	0.0006	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	24.3	23.9	21.9	22.6	26.4	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.657	--	0.943	--
Potassium	mg/L	--	--	--	--	--	--	--	1.17	1.21	1.32	1.1	1.28	--
Sodium	mg/L	--	--	--	--	--	--	--	17.3	16.9	16	15.8	16.4	--
Strontium	mg/L	--	--	--	--	--	--	--	0.104	0.104	0.0894	0.0952	0.111	--
Alkalinity	mg/L	--	--	--	--	--	--	--	249	248	261	248	263	--
Bromide	mg/L	--	--	--	--	--	--	--	0.06	0.079	0.156	0.083	0.073	--
Chloride	mg/L	--	(29.6) 25	24.2	24.2	22.8	22.2	22.3	21.7	23.1	23	22.4	43.1	93.0 ?
Fluoride	mg/L	4	0.222	0.19	0.21	0.2	0.19	0.19	0.2	0.21	0.18	0.2	0.22	--
TDS	mg/L	--	(412.7) 358	341	339	338	327	318	318	343	340	332	361	--
Sulfate	mg/L	--	(46.44) 46	42.1	44.2	39.6	35.4	38.3	37.6	40.5	40.5	42.3	39.8	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	--
Radium-228	pCi/L	--	--	0.0495	0.195	0.451	0.473	0.506	1.11	0.0264	0.257	--	--	--
Radium-226	pCi/L	--	--	-0.0267	0.133	-0.00345	1.77	0.772	0.185	0.429	0.115	--	--	--
Radium-226/228	pCi/L	5	--	0.0228	0.328	0.44755	2.243	1.278	1.295	0.4554	0.372	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.11	--	0.12	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.8	--	0.5	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.14	--	2.75	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.055	0.017	0.005	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.565	0.602	0.662	0.619	0.621	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-2D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/12/2018	2/13/2019	5/22/2019	7/24/2019	9/11/2019	11/14/2019	2/18/2020	5/18/2020	7/15/2020	11/11/2020	2/3/2021	5/27/2021	8/5/2021	11/11/2021	2/15/2022
Field Parameters																		
Elevation	ft NGVD	--	--	367.91	368.89	371.01	371.37	-----	371.11	-----	369.47	370.67	370.61	368.29	369.31	369.43	369.03	368.45
pH	S.U.	--	6.45 -8.63	7.36	7.32	7.25	6.28	7.15	7.3	7.08	7.76	7.26	7.22	7.34	9.45	7.2	6.83	7.17
Specific Conductance	µmhos/cm	--	--	464	391	803	834	705	726	1377	617	781	725	674	664	734	943	951
Turbidity	NTU	--	--	5.4	2.1	1.25	3	1.9	9.2	2.13	2.92	0.88	1.35	1	0	6.94	0	0
Dissolved Oxygen	mg/L	--	--	0.86	0.37	2.29	0.9	0.58	0.3	0.57	0.07	0	0	0.2	5.72		0.26	--
Temperature	°C	--	--	14.61	13.7	15.57	15.8	16.5	14.94	12.75	15.06	15.56	14.25	13.8	16.69	15.82	15.73	14
ORP	mV	--	--	-25.4	-164	-71.2	8	-109	-73	-76.4	-90	-40	-113	-145	-85	-133	-63	-100
Laboratory Parameters																		
Antimony	µg/L	6	--	0.03	--	<0.02	--	--	0.04	--	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.58	--	0.53	--	--	0.62	--	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	190	--	248	--	--	193	--	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.17	--	0.3	--	--	0.19	--	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	0.2	--	<0.04	--	--	0.334	--	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	0.5	--	0.488	--	--	0.537	--	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.22	--	0.18	--	--	0.4	--	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.14	--	0.129	--	--	0.416	--	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	<0.002	--	--	<0.002	--	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2	--	2	--	--	2.28	--	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	<0.03	--	<0.03	--	--	0.04	--	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	<0.1	--	--	<0.1	--	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	0.9	--	533	--	--	2	--	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	17.8	--	17.1	--	--	16.5	--	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	15.4	--	3	--	--	10	--	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.074	0.07	--	<0.02	--	--	0.02	--	<0.02	--	<0.02	--	0.012	--	0.011	--
Calcium	mg/L	--	(79.5) 81	72.4	--	98.5	114	103	76.9	--	88.7	--	92.2	--	88.5	--	96.3	--
Lithium	mg/L	0.04	--	<0.009	--	0.02	--	--	0.00298	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	24.5	--	32.2	--	--	24.7	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.717	--	0.941	--	--	0.855	--	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	0.99	--	1.2	--	--	1	--	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	14.8	--	20.7	--	--	16.9	--	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.102	--	0.138	--	--	0.108	--	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	247	--	261	--	--	252	--	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	<0.04	--	0.08	--	--	0.06	--	--	--	--	--	0.07	--	--	--
Chloride	mg/L	--	(29.6) 25	51.3	40.9	135	156	110	56.5	76.3	93.6	96.2	92.2	74.2	82.9	94.2	135	159
Fluoride	mg/L	4	0.222	0.2	--	0.18	--	SSI ↓	0.18	--	0.21	0.2	0.20	--	0.21	--	0.2	--
TDS	mg/L	--	(412.7) 358	348	--	531	540	443	356	--	399	411	395	400	440	420	470	--
Sulfate	mg/L	--	(46.44) 46	36.1	--	33.3	--	--	38.9	--	36.2	--	35.1	--	37.6	--	33.3	--
Sulfide	mg/L	--	--	<0.1	--	<0.1	--	--	<0.2	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.0387	--	0.553	--	--	0.803	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.245	--	0.207	--	--	0.334	--	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.2837	--	0.76	--	--	1.137	--	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.11	--	0.39	--	--	1.64	--	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	1	--	3	--	--	2	--	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	1	--	--	<5	--	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.007	--	0.009	--	--	<0.02	--	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.702	--	0.948	--	--	0.8	--	--	--	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-5S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	11/10/2020	5/27/2021	11/12/2021
Field Parameters							
Elevation	ft NGVD	--	--	392.55	391.70	393.08	391.14
pH	S.U.	--	7.56	7.56	6.77	7.59	6.64
Specific Conductance	µmhos/cm	--	--	1202	2050	826	1800
Turbidity	NTU	--	--	0.43	6.72	31.76	0
Dissolved Oxygen	mg/L	--	--	1.09	4	7.3	0.44
Temperature	°C	--	--	12.53	16.51	18.5	13.88
ORP	mV	--	--	71.3	11	-76	101
Laboratory Parameters							
Antimony	µg/L	6	--	0.1	--	--	--
Arsenic	µg/L	10	--	0.85	--	--	--
Barium	µg/L	2000	--	158	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	--
Cadmium	µg/L	5	--	0.08	--	--	--
Chromium	µg/L	100	--	<0.04	--	--	--
Cobalt	µg/L	6	--	8.15	--	--	--
Copper	µg/L	--	--	0.43	--	--	--
Lead	µg/L	15	--	0.05	--	--	--
Mercury	µg/L	2	--	--	--	--	--
Molybdenum	µg/L	100	--	1	--	--	--
Selenium	µg/L	50	--	0.8	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	--
Zinc	µg/L	--	--	5	--	--	--
Silica (Dissolved)	mg/L	--	--	21.5	--	--	--
Aluminum	µg/L	--	--	2	--	--	--
Boron	mg/L	--	0.102	0.102	0.057	0.07	0.059
Calcium	mg/L	--	86.3	86.3	93.5	71.5	96.9
Lithium	mg/L	0.04	--	<0.009	--	--	--
Magnesium	mg/L	--	--	22.2	--	--	--
Manganese	mg/L	--	--	0.522	--	--	--
Potassium	mg/L	--	--	1.78	--	--	--
Sodium	mg/L	--	--	188	--	--	--
Strontium	mg/L	--	--	0.3	--	--	--
Alkalinity	mg/L	--	--	229	--	--	--
Bromide	mg/L	--	--	1.05	--	0.38	--
Chloride	mg/L	--	364	364	451	147	420
Fluoride	mg/L	4	0.21	0.21	0.23	0.24	0.19
TDS	mg/L	--	840	840	1030	580	970
Sulfate	mg/L	--	41.2	41.2	47.1	52.6	46.4
Sulfide	mg/L	--	--	<0.1	--	--	--
Radium-228	pCi/L	--	--	0.915	--	--	--
Radium-226	pCi/L	--	--	0.799	--	--	--
Radium-226/228	pCi/L	5	--	1.714	--	--	--
Copper (Dissolved)	µg/L	--	--	0.11	--	--	--
Zinc (Dissolved)	µg/L	--	--	6.1	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	--	--
Iron (Dissolved)	mg/L	--	--	0.01	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.555	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-6S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/18/2016	9/20/2016	11/16/2016	1/10/2017	3/8/2017	5/8/2017	7/18/2017	10/3/2017	6/5/2018	8/15/2018	9/26/2018
Field Parameters														
Elevation	ft NGVD	--	--	369.59	368.99	368.14	367.39	367.54	367.81	368.48	367.6	369.94	370.04	368.35
pH	S.U.	--	7.9	7.5	7.4	8.1	7.9	7.9	7.6	7.7	7.3	7.52	7.7	7.9
Specific Conductance	µmhos/cm	--	--	401	430	741	360	300	441	292	347	330	483	321
Turbidity	NTU	--	--	1	0.5	1	2	1	1	1	1	0.47	0	8
Dissolved Oxygen	mg/L	--	--	7.1	5.7	1	6	5	5	7	7	5.82	8.1	5.1
Temperature	°C	--	--	16.8	19	15	14.8	14.7	15.5	15.2	16.4	16.28	16	15.5
ORP	mV	--	--	53	71	258	146	36	49	74	0.3	-9.3	155	133
Laboratory Parameters														
Antimony	µg/L	6	--	0.03	0.03	0.03	0.03	0.03	0.03	0.02	--	--	0.03	0.03
Arsenic	µg/L	10	--	0.26	0.26	0.26	0.28	0.26	0.28	0.27	--	--	0.25	0.25
Barium	µg/L	2000	--	13.6	13.6	14.1	14.8	15.8	15.4	14.3	--	--	14.8	13.5
Beryllium	µg/L	4	--	0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	<0.004	<0.02
Cadmium	µg/L	5	--	0.25	0.02	0.02	0.008	0.05	0.009	0.04	--	--	0.06	0.04
Chromium	µg/L	100	--	0.4	0.3	0.2	0.599	1.37	0.583	0.291	--	--	0.42	0.265
Cobalt	µg/L	6	--	0.052	0.019	0.027	0.045	0.049	0.061	0.026	--	--	0.039	<0.02
Copper	µg/L	--	--	--	--	--	--	--	--	0.37	0.31	0.46	0.42	0.29
Lead	µg/L	15	--	0.074	0.034	0.05	0.032	0.113	0.083	0.056	--	--	0.247	0.03
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	3.28	3.34	2.8	2.93	3.29	2.73	4.36	--	--	2.22	2.37
Selenium	µg/L	50	--	0.3	0.2	0.3	0.4	0.7	0.8	0.4	--	--	0.4	0.2
Thallium	µg/L	2	--	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	--	--	0.01	<0.1
Zinc	µg/L	--	--	--	--	--	--	--	--	1	0.5	2.5	1	0.7
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	14.4	14.6	16.9	15.4	15.2	16.8
Aluminum	µg/L	--	--	--	--	--	--	--	--	8.57	17.8	10.4	13.8	3
Boron	mg/L	--	0.012	0.014	0.012	0.028	0.006	0.032	0.051	0.078	0.094	0.09	0.101	0.08
Calcium	mg/L	--	46.1	46.3	44.4	50.8	47.8	53.2	50.3	47	44.8	45.2	52.8	44.1
Lithium	mg/L	0.04	--	0.015	0.004	0.006	0.014	0.009	0.011	<0.0002	--	--	0.005	0.02
Magnesium	mg/L	--	--	--	--	--	--	23.3	23.5	20.9	19.8	19.3	24	18.8
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0007	--	0.0024	0.0021	<0.0002
Potassium	mg/L	--	--	--	--	--	--	0.7	0.75	0.82	0.78	0.57	0.91	0.71
Sodium	mg/L	--	--	--	--	--	--	38.9	34.9	26.3	23.2	15.6	25.6	26.1
Strontium	mg/L	--	--	--	--	--	--	0.0661	0.067	0.0574	0.0548	0.0555	0.065	0.051
Alkalinity	mg/L	--	--	--	--	--	--	260	272	241	249	237	267	241
Bromide	mg/L	--	--	--	--	--	--	<0.02	0.072	<0.05	0.04	0.03	0.04	<0.04
Chloride	mg/L	--	8.44	8.35	6.04	7.04	7.03	3.32	8.68	4.88	3.28	2.38	11.9	6.83
Fluoride	mg/L	4	0.73	0.79	0.73	0.69	0.65	0.25	0.69	0.57	0.71	0.89	0.81	0.84
TDS	mg/L	--	294	290	266	279	287	296	305	274	261	225	277	261
Sulfate	mg/L	--	18.8	18.3	10.9	14.3	14	6.9	17.5	9.6	7.5	3.8	15.6	9.8
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.4	<0.1
Radium-228	pCi/L	--	--	0.101	0.798	-0.249	0.501	0.297	-0.337	0.954	--	--	0.328	0.367
Radium-226	pCi/L	--	--	0	0.0671	0.202	0.0815	-0.00471	0.12	-0.0229	--	--	0.0553	0.089
Radium-226/228	pCi/L	5	--	0.101	0.8651	-0.047	0.5825	0.29229	-0.217	0.954	--	--	0.3833	0.456
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	1.85	--	0.4	2.17	1.86
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.2	--	0.9	3.1	3
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	4.34	--	1	2.51	109
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.023	<0.002	0.003	0.163
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	<0.0001	0.0002	0.0007	0.0015	<0.0002	0.0121

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-6S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/1/2018	11/14/2018	12/12/2018	5/23/2019	11/14/2019	5/19/2020	11/12/2020	5/25/2021
Field Parameters											
Elevation	ft NGVD	--	--	368.89	368.72	368.4	372.52	370.42	370.70	369.42	368.82
pH	S.U.	--	7.9	7.31	7.91	7.46	7.42	7.29	7.67	7.1	8
Specific Conductance	µmhos/cm	--	--	430	221	464	473	452	373	366	354
Turbidity	NTU	--	--	0.51	0.4	0.53	1.4	0.21	5.46	1.72	2.9
Dissolved Oxygen	mg/L	--	--	7.53	5.5	4.42	6.4	5.85	7.17	8.47	3.5
Temperature	°C	--	--	15.04	14.4	14.71	16.6	14.4	15.47	17.96	16.8
ORP	mV	--	--	115.3	126	196	70	291.1	150	84	219
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	0.03	0.03	0.03	0.03	--	--	--
Arsenic	µg/L	10	--	0.23	0.23	0.24	0.22	0.23	--	--	--
Barium	µg/L	2000	--	12.1	11.8	13.4	15.9	15	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	0.01	<0.01	<0.01	0.03	<0.01	--	--	--
Chromium	µg/L	100	--	0.221	0.218	0.212	0.285	0.284	--	--	--
Cobalt	µg/L	6	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Copper	µg/L	--	--	0.17	0.18	0.26	0.51	<0.2	--	--	--
Lead	µg/L	15	--	<0.02	0.02	<0.02	0.04	<0.05	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	2.38	2.18	2.2	2	2	--	--	--
Selenium	µg/L	50	--	0.2	0.2	0.4	0.6	0.4	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	<0.7	1	2	<0.7	<0.7	--	--	--
Silica (Dissolved)	mg/L	--	--	15.3	15.2	15.9	15.8	15	--	--	--
Aluminum	µg/L	--	--	2	5.28	3	2	<5	--	--	--
Boron	mg/L	--	0.012	0.04	0.04	0.102	0.02	0.01	<0.02	<0.02	0.017
Calcium	mg/L	--	46.1	42.3	38.8	46.8	52.5	47.8	43.1	43.0	43.4
Lithium	mg/L	0.04	--	<0.009	0.01	<0.009	0.02	0.00645	--	--	--
Magnesium	mg/L	--	--	19.3	17.5	20.8	22.9	20	--	--	--
Manganese	mg/L	--	--	0.0007	0.0002	0.0003	0.0003	<0.0005	--	--	--
Potassium	mg/L	--	--	0.5	0.92	0.86	0.62	0.4	--	--	--
Sodium	mg/L	--	--	22	20.2	23.3	25.5	29.6	--	--	--
Strontium	mg/L	--	--	0.0519	0.0524	0.0595	0.691	0.0627	--	--	--
Alkalinity	mg/L	--	--	230	242	247	264	262	--	--	--
Bromide	mg/L	--	--	<0.04	<0.04	<0.04	<0.04	<0.04	--	--	--
Chloride	mg/L	--	8.44	3.52	3.91	6.48	9.64	5.36	1.49	2.07	1.29
Fluoride	mg/L	4	0.73	0.86	0.88	0.88	0.95	0.9	1.02	1.11	1.21
TDS	mg/L	--	294	225	196	240	315	277	214	225	210
Sulfate	mg/L	--	18.8	4.9	5.2	10	16.8	12	1.6	4.4	0.83
Sulfide	mg/L	--	--	<0.1	<0.07	<0.07	<0.1	<0.2	--	--	--
Radium-228	pCi/L	--	--	0.354	0.387	-0.368	0.343	-0.011	--	--	--
Radium-226	pCi/L	--	--	0.0398	0.0239	0.0533	0.0431	0.0416	--	--	--
Radium-226/228	pCi/L	5	--	0.3938	0.4109	0.0533	0.3861	0.0416	--	--	--
Copper (Dissolved)	µg/L	--	--	0.14	0.53	0.17	1.22	0.4	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	<0.7	2	1	0.9	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	2	8.1	1	<5	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	0.005	0.01	<0.003	<0.02	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0003	<0.0002	0.0007	0.0002	<0.0005	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-6I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/25/2018	10/31/2018	11/15/2018	12/12/2018	5/23/2019	11/14/2019	5/20/2020	11/11/2020	5/25/2021
Field Parameters												
Elevation	ft NGVD	--	--	369.18	368.75	368.62	368.48	372.32	370.28	370.42	369.32	368.71
pH	S.U.	--	7.6	7.8	7.25	7.35	7.44	7.66	7.32	7.49	7.58	8.03
Specific Conductance	µmhos/cm	--	--	332	467	344	458	453	374	431	310	385
Turbidity	NTU	--	--	6.5	0.76	0.74	0.25	0.36	0.46	0.4	2.3	9.9
Dissolved Oxygen	mg/L	--	--	1.7	0.27	2.78	0.79	1.02	2.15	2.34	10	0
Temperature	°C	--	--	16.4	15.9	14.2	14.71	16.5	14.4	14.57	15.1	17.2
ORP	mV	--	--	149	24.9	140.5	163	168.8	301.7	188	111	102
Laboratory Parameters												
Antimony	µg/L	6	--	0.25	0.25	0.25	0.23	0.23	0.2	--	--	--
Arsenic	µg/L	10	--	0.2	0.2	0.19	0.19	0.19	0.19	--	--	--
Barium	µg/L	2000	--	31.9	32.2	31.9	30.5	35.8	28.5	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	0.11	0.01	0.01	0.01	0.01	0.02	--	--	--
Chromium	µg/L	100	--	0.05	0.1	<0.04	0.05	0.07	0.222	--	--	--
Cobalt	µg/L	6	--	0.313	0.452	0.42	0.362	0.436	0.525	--	--	--
Copper	µg/L	--	--	2.36	0.78	0.92	1.21	0.6	0.7	--	--	--
Lead	µg/L	15	--	0.05	0.118	<0.02	<0.02	<0.02	<0.05	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	5.31	4.7	4.46	4.17	4.4	4.43	--	--	--
Selenium	µg/L	50	--	0.6	0.7	0.8	0.6	0.6	0.4	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	--	--	--
Zinc	µg/L	--	--	3	<0.7	0.7	2	1	1	--	--	--
Silica (Dissolved)	mg/L	--	--	19.9	18.1	18.8	18.6	18.1	16.6	--	--	--
Aluminum	µg/L	--	--	6.57	5.88	5.54	3	4	<5	--	--	--
Boron	mg/L	--	0.06	0.06	0.04	0.03	0.06	<0.02	0.01	<0.02	<0.02	0.016
Calcium	mg/L	--	42.2	43.1	42.4	43.1	47.2	47.4	44.7	50.8	46.3	43.5
Lithium	mg/L	0.04	--	0.01	<0.009	0.034	<0.009	0.01	0.0054	--	--	--
Magnesium	mg/L	--	--	13.9	15.1	14.6	16.1	15.7	14	--	--	--
Manganese	mg/L	--	--	0.185	0.24	0.247	0.249	0.272	0.276	--	--	--
Potassium	mg/L	--	--	0.93	0.76	0.78	0.88	1.13	0.8	--	--	--
Sodium	mg/L	--	--	35.7	35.9	32.9	32.7	29.9	26.6	--	--	--
Strontium	mg/L	--	--	0.0482	0.0528	0.0549	0.061	0.0622	0.0582	--	--	--
Alkalinity	mg/L	--	--	267	259	246	257	278	227	--	--	--
Bromide	mg/L	--	--	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	--	--	--
Chloride	mg/L	--	5.18	2.91	3.47	3.94	3.84	2.7	2.26	3.09	2.52	1.77
Fluoride	mg/L	4	0.89	0.88	0.86	0.86	0.86	0.85	0.89	0.94	1.04	1.05
TDS	mg/L	--	281	274	245	248	245	268	224	229	211	220
Sulfate	mg/L	--	9.9	5.4	4.9	6.3	7.3	4.1	4.1	7.1	5.6	3.38
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	<0.2	--	--	--
Radium-228	pCi/L	--	--	0.218	0.216	0.675	0.488	0.496	0.296	--	--	--
Radium-226	pCi/L	--	--	0.35	0.323	0.638	0.489	0.557	0.215	--	--	--
Radium-226/228	pCi/L	5	--	0.568	0.539	1.313	0.977	1.053	0.511	--	--	--
Copper (Dissolved)	µg/L	--	--	2.79	1.09	0.86	0.74	2.58	0.5	--	--	--
Zinc (Dissolved)	µg/L	--	--	4	1	<0.7	<0.7	3	0.9	--	--	--
Aluminum (Dissolved)	µg/L	--	--	30.9	1	8.05	4	4	<5	--	--	--
Iron (Dissolved)	mg/L	--	--	0.064	<0.003	0.003	0.004	0.003	<0.02	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.254	0.232	0.246	0.231	0.256	0.238	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

9/25/2018	10/31/2018	11/14/2018	12/12/2018	5/23/2019	11/14/2019	5/18/2020	11/11/2020	5/25/2021
369.15	368.72	369.6	368.44	372.31	370.23	370.6	369.29	368.74
7.7	7.21	7.54	7.4	7.55	7.73	7.34	7.49	7.95
369	521	365	513	681	730	539	416	536
9	0	8.4	0.25	1.2	1.2	0.44	1.5	1.9
0.4	0.34	0.42	0.15	0.9	2.19	9.55	6.4	0
16.2	16	13.5	15.07	18.6	14.1	14.64	15.2	19.4
155	54.3	131	110	145	126.6	127	109	108
0.02	0.03	0.03	0.02	<0.02	0.05	--	--	--
0.89	1.3	1.05	0.93	0.94	1.08	--	--	--
77.1	75.7	73.6	76.5	112	76	--	--	--
<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
0.03	0.01	0.02	0.01	0.01	0.01	--	--	--
0.04	0.346	0.2	0.05	0.08	0.09	--	--	--
0.392	0.806	0.598	0.404	0.578	0.429	--	--	--
0.45	1.18	1.6	1.64	0.17	0.5	--	--	--
<0.02	0.205	0.167	<0.02	<0.02	<0.05	--	--	--
--	--	--	--	0.002	<0.002	--	--	--
3.23	2.79	2.83	3.02	2.81	3.13	--	--	--
7.3	8.5	8.2	4.3	0.09	9.3	--	--	--
<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
<0.7	2	73.1	2	<0.7	<0.7	--	--	--
19.5	17.5	17.6	18	18.2	16.5	--	--	--
2	142	70.3	3	1	6	--	--	--
0.05	0.03	0.05	0.115	0.03	0.02	<0.02	<0.02	0.019
61.7	57.2	53.1	60.1	78.9	62	62.4	61.7	59.5
0.02	0.009	0.01	<0.009	0.01	0.00722	--	--	--
16.8	16.9	15.2	17.1	22.1	17.4	--	--	--
0.147	0.145	0.156	0.144	0.278	0.12	--	--	--
1.2	1.04	1.43	1.47	1.29	1.05	--	--	--
29	27.8	26.5	29	35.5	30	--	--	--
0.0919	0.093	0.0927	0.102	0.14	0.0949	--	--	--
260	260	266	271	305	265	--	--	--
<0.04	<0.04	<0.04	<0.04	0.07	<0.04	--	--	--
10.9	10.2	10	10.8	25.1	12.2	15.6	9.36	6.44
0.41	0.41	0.42	0.42	0.36	0.41	0.43	0.46	0.47
310	295	276	296	408	310	311	286	300
24.1	23	22.2	23.6	39.5	25.4	29.8	20.1	15.6
<0.1	<0.1	<0.07	<0.07	<0.1	<0.2	--	--	--
0.29	0.21	0.275	-0.0272	0.586	0.179	--	--	--
0.295	0.122	0.102	0.423	0.543	0.108	--	--	--
0.585	0.332	0.377	0.423	0.423	0.423	--	--	--
1.27	0.44	0.7	0.5	0.53	0.4	--	--	--
2	0.9	2	2	1	2	--	--	--
31.6	3	2	45.3	15.6	10	--	--	--
0.082	<0.003	0.004	0.117	0.007	<0.02	--	--	--
0.127	0.137	0.135	0.142	0.263	0.123	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-7S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/14/2018	12/12/2018	5/22/2019	11/12/2020	5/25/2021
Field Parameters										
Elevation	ft NGVD	--	--	369.5	368.76	368.68	368.47	371.91	369.63	368.59
pH	S.U.	--	7.4	7.4	7.33	7.31	7.3	8.39	6.72	7.72
Specific Conductance	µmhos/cm	--	--	417	611	455	629	527	678	725
Turbidity	NTU	--	--	106	104	42.6	44	4.77	9.78	7.7
Dissolved Oxygen	mg/L	--	--	0.4	0.32	0.7	0.23	0.65	0.4	0
Temperature	°C	--	--	15.4	15.01	13.9	14.43	14.69	14.47	15.2
ORP	mV	--	--	106	85.4	48.2	92	0.1	135	227
Laboratory Parameters										
Antimony	µg/L	6	--	0.14	0.15	0.06	0.09	0.02	--	--
Arsenic	µg/L	10	--	1.48	2.01	0.7	1.06	0.11	--	--
Barium	µg/L	2000	--	18.7	24.3	12.9	15.4	8.42	--	--
Beryllium	µg/L	4	--	0.101	0.127	0.05	0.07	<0.02	--	--
Cadmium	µg/L	5	--	0.05	0.06	0.02	0.05	0.02	--	--
Chromium	µg/L	100	--	2.08	2.45	0.831	1.48	0.1	--	--
Cobalt	µg/L	6	--	6.48	9.82	3.47	4.98	0.255	--	--
Copper	µg/L	--	--	4.4	5.36	1.91	2.76	0.51	--	--
Lead	µg/L	15	--	4.69	6.69	2.38	3.56	0.205	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	<0.4	<0.4	<0.4	<0.4	<0.4	--	--
Selenium	µg/L	50	--	0.6	0.8	0.3	0.4	0.2	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	7.9	9.5	14	5	39.1	--	--
Silica (Dissolved)	mg/L	--	--	20.8	18.7	18.6	19.3	18.4	--	--
Aluminum	µg/L	--	--	1520	1850	681	1170	39.3	--	--
Boron	mg/L	--	0.079	0.04	0.07	0.135	0.08	0.03	<0.02	0.015
Calcium	mg/L	--	70.2	73.7	68.3	66.2	67.1	62.4	68.5	78.2
Lithium	mg/L	0.04	--	0.02	0.01	<0.009	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	25.4	25.7	24.3	24.6	21.7	--	--
Manganese	mg/L	--	--	0.334	0.49	0.182	0.248	0.0145	--	--
Potassium	mg/L	--	--	1.33	1.39	1.81	1.3	0.87	--	--
Sodium	mg/L	--	--	17.9	19.1	18.9	18.7	17	--	--
Strontium	mg/L	--	--	0.083	0.0857	0.0883	0.0874	0.0803	--	--
Alkalinity	mg/L	--	--	256	261	255	261	242	--	--
Bromide	mg/L	--	--	0.09	0.09	0.09	0.09	0.1	--	--
Chloride	mg/L	--	32.8	32.2	33.5	33.2	33.6	35.4	27.7	19.5
Fluoride	mg/L	4	0.52	0.54	0.53	0.54	0.55	0.55	0.60	0.59
TDS	mg/L	--	358	370	358	354	353	353	346	380
Sulfate	mg/L	--	32	32.2	33.1	33.1	33.7	34.1	36.1	34.8
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	0.48	0.601	0.254	0.191	0.27	--	--
Radium-226	pCi/L	--	--	0.271	0.245	0.211	0.507	0.0334	--	--
Radium-226/228	pCi/L	5	--	0.751	0.846	0.465	0.698	0.3034	--	--
Copper (Dissolved)	µg/L	--	--	1.01	0.07	1.62	0.2	0.17	--	--
Zinc (Dissolved)	µg/L	--	--	2	<0.7	3	<0.7	<0.7	--	--
Aluminum (Dissolved)	µg/L	--	--	311	3	2	3	2	--	--
Iron (Dissolved)	mg/L	--	--	0.618	0.004	0.005	0.007	<0.003	--	--
Manganese (Dissolved)	mg/L	--	--	0.0797	0.0021	0.0012	0.0026	0.0009	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-7I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/15/2018	12/12/2018	5/22/2019	11/12/2020	5/26/2021
Field Parameters										
Elevation	ft NGVD	--	--	369.01	368.51	368.5	368.27	371.73	369.44	368.59
pH	S.U.	--	7.4	7.5	7.3	7.03	7.27	8.4	6.72	7.71
Specific Conductance	µmhos/cm	--	--	419	613	460	645	573	712	744
Turbidity	NTU	--	--	19	14.4	7.05	19.9	1.6	1.43	6.3
Dissolved Oxygen	mg/L	--	--	0.3	0.36	0.95	0.21	0.7	0.29	0
Temperature	°C	--	--	15.5	15.17	13.78	14.46	15.1	15.02	14.9
ORP	mV	--	--	57	-19.2	68.4	44	-71.2	-57	-7
Laboratory Parameters										
Antimony	µg/L	6	--	0.02	0.03	<0.02	<0.02	0.02	--	--
Arsenic	µg/L	10	--	0.28	0.43	0.24	0.26	0.23	--	--
Barium	µg/L	2000	--	175	230	162	147	116	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	0.05	0.06	0.03	0.03	0.35	--	--
Chromium	µg/L	100	--	0.2	0.315	0.09	0.07	0.09	--	--
Cobalt	µg/L	6	--	3.07	8.34	1.11	1.67	1.1	--	--
Copper	µg/L	--	--	0.55	1.45	0.59	0.76	0.4	--	--
Lead	µg/L	15	--	0.45	0.6	0.05	0.145	0.228	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	4.2	4.31	<0.4	3.45	3.63	--	--
Selenium	µg/L	50	--	0.05	0.09	0.05	0.05	0.04	--	--
Thallium	µg/L	2	--	<0.1	0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	2	15.1	1	2	3	--	--
Silica (Dissolved)	mg/L	--	--	20.5	18.1	18.5	18.8	18.4	--	--
Aluminum	µg/L	--	--	74.1	304	69.9	39.5	27.7	--	--
Boron	mg/L	--	0.07	0.04	0.06	0.09	0.08	0.03	<0.02	0.017
Calcium	mg/L	--	75.3	75.4	68.8	68.8	73.7	73.7	71.4	75
Lithium	mg/L	0.04	--	0.01	<0.009	<0.009	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	21.9	21.7	21.4	22.8	21.5	--	--
Manganese	mg/L	--	--	2.76	4	1.08	2.89	0.821	--	--
Potassium	mg/L	--	--	1.22	0.97	1.57	1.19	1.08	--	--
Sodium	mg/L	--	--	19.8	20.1	21.5	21.3	18.1	--	--
Strontium	mg/L	--	--	0.0928	0.0932	0.1	0.103	0.11	--	--
Alkalinity	mg/L	--	--	236	237	233	229	232	--	--
Bromide	mg/L	--	--	0.1	0.1	0.1	0.1	0.1	--	0.16
Chloride	mg/L	--	45	45.8	48.2	47.6	48.8	49	53.3	56.6
Fluoride	mg/L	4	0.33	0.34	0.34	0.35	0.35	0.33	0.36	0.34
TDS	mg/L	--	312	348	338	354	347	376	357	380
Sulfate	mg/L	--	38.4	38.9	38.9	39	39.1	43.1	42.6	42
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	-0.0705	0.369	0.123	0.089	0.643	--	--
Radium-226	pCi/L	--	--	4.16	0.513	0.605	0.934	0.155	--	--
Radium-226/228	pCi/L	5	--	4.16	0.882	0.728	1.023	0.798	--	--
Copper (Dissolved)	µg/L	--	--	0.93	0.24	1.56	0.72	0.15	--	--
Zinc (Dissolved)	µg/L	--	--	2	0.9	3	2	2	--	--
Aluminum (Dissolved)	µg/L	--	--	1	10.6	2	137	2	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	0.01	0.006	0.128	<0.003	--	--
Manganese (Dissolved)	mg/L	--	--	0.172	0.51	0.243	3.9	0.121	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-7D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/12/2018	5/22/2019	11/12/2020	5/26/2021
Field Parameters										
Elevation	ft NGVD	--	--	369.08	368.65	368.57	368.35	371.82	369.50	368.68
pH	S.U.	--	7.2	7.5	6.91	7.26	7.18	7.91	6.64	7.47
Specific Conductance	µmhos/cm	--	--	419	617	444	622	549	1760	1870
Turbidity	NTU	--	--	10.8	1.02	5.96	0	0.01	0.07	0.4
Dissolved Oxygen	mg/L	--	--	0.7	3.72	11.3	0.52	2	0	0
Temperature	°C	--	--	15.2	14.79	13.32	15.23	16.25	15.17	14.9
ORP	mV	--	--	57	26.4	26.4	-5	-40.4	-11	86
Laboratory Parameters										
Antimony	µg/L	6	--	0.04	0.03	0.04	0.06	0.02	--	--
Arsenic	µg/L	10	--	0.91	0.8	0.87	0.85	0.72	--	--
Barium	µg/L	2000	--	286	283	268	320	284	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	0.02	0.02	0.04	<0.01	<0.01	--	--
Chromium	µg/L	100	--	0.2	0.334	0.1	0.1	0.07	--	--
Cobalt	µg/L	6	--	2.52	2.46	2.24	2.24	1.88	--	--
Copper	µg/L	--	--	0.34	0.44	0.57	1.59	0.08	--	--
Lead	µg/L	15	--	0.1	0.164	0.101	0.144	<0.02	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	4.09	9.76	7.38	5.43	3.49	--	--
Selenium	µg/L	50	--	0.05	0.05	0.03	<0.03	<0.03	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	1	2	4	3	5.1	--	--
Silica (Dissolved)	mg/L	--	--	216	19.2	19.9	19.8	19.2	--	--
Aluminum	µg/L	--	--	31.4	56.7	16.5	<1	1	--	--
Boron	mg/L	--	0.06	0.04	0.05	0.07	0.04	0.02	<0.02	0.019
Calcium	mg/L	--	80.1	79.2	75	62.8	77.4	76.7	153	168
Lithium	mg/L	0.04	--	<0.009	0.01	0.02	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	25	25.8	21	25.7	24.3	--	--
Manganese	mg/L	--	--	1.89	1.66	1.34	1.51	1.49	--	--
Potassium	mg/L	--	--	1.22	1.07	1.39	1.25	0.94	--	--
Sodium	mg/L	--	--	14.2	15.4	12.9	15.3	13.9	--	--
Strontium	mg/L	--	--	0.137	0.141	0.125	0.146	0.138	--	--
Alkalinity	mg/L	--	--	273	293	296	300	296	--	--
Bromide	mg/L	--	--	0.09	0.08	0.08	0.08	0.009	--	1.16
Chloride	mg/L	--	17.3	17.5	17.2	16.9	17.2	19.1	360	420
Fluoride	mg/L	4	0.27	0.26	0.26	0.26	0.27	0.26	0.25	0.23
TDS	mg/L	--	359	358	3.46	340	344	371	899	990
Sulfate	mg/L	--	36.9	36.3	36	35.4	35.5	35.2	33.8	33
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	0.36	0.202	0.548	0.159	0.89	--	--
Radium-226	pCi/L	--	--	0.983	0.107	0.45	0.717	0.265	--	--
Radium-226/228	pCi/L	5	--	1.343	0.309	0.998	0.876	1.155	--	--
Copper (Dissolved)	µg/L	--	--	0.55	0.17	2.01	0.18	0.77	--	--
Zinc (Dissolved)	µg/L	--	--	2	2	4	1	3	--	--
Aluminum (Dissolved)	µg/L	--	--	6.36	6.44	2	3	2	--	--
Iron (Dissolved)	mg/L	--	--	0.103	0.081	0.08	0.093	0.072	--	--
Manganese (Dissolved)	mg/L	--	--	1.76	1.6	1.47	1.35	1.5	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-8S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/19/2016	9/21/2016	11/17/2016	1/9/2017	3/7/2017	5/9/2017	7/18/2017	10/4/2017	12/12/2017	6/5/2018	11/13/2018	5/23/2019	11/21/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.78	369.44	369.25	368.53	368.39	368.39	368.81	367.5	366.59	369.59	368.9	371.48	371.51	370.01
pH	S.U.	--	7.3	7.2	7.1	7.9	7.6	7.6	7.4	7.4	7.75	7.7	7.59	7.58	7.38	7.43	6.29
Specific Conductance	µmhos/cm	--	--	516	540	811	450	260	444	410	395	460	400	354	440	495	567
Turbidity	NTU	--	--	1.1	2	2	3	4	8	1	2.46	6	3.48	2.6	0.69	53.7	0
Dissolved Oxygen	mg/L	--	--	3.2	3.6	1	2	4	2	3.2	3.12	0.8	2.1	3.8	6.54	6.51	4.63
Temperature	°C	--	--	20.7	21.6	16.2	14	14.2	15.6	15.8	16.57	14.1	15.05	14.4	16.17	12.82	14.81
ORP	mV	--	--	29	18	275	131	50	50	65	29.9	-17	-33.7	158	54.2	110.9	164
Laboratory Parameters																	
Antimony	µg/L	6	--	0.3	0.02	0.03	0.02	0.04	0.03	0.02	--	--	--	0.05	<0.02	0.04	--
Arsenic	µg/L	10	--	1.78	1.33	1.26	1.56	1.53	2.09	1.19	--	--	--	1.61	1.52	1.97	--
Barium	µg/L	2000	--	13.1	12.2	10.9	13.8	14.5	16.9	10.9	--	--	--	10.4	9.22	16.6	--
Beryllium	µg/L	4	--	0.232	<0.005	<0.005	0.006	0.009	0.01	<0.004	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.31	0.02	0.05	0.01	0.26	0.09	0.13	--	--	--	0.03	<0.01	0.03	--
Chromium	µg/L	100	--	0.6	0.4	0.156	1.04	0.881	0.423	0.277	--	--	--	0.578	0.235	0.378	--
Cobalt	µg/L	6	--	0.453	0.125	0.113	0.447	0.433	0.981	0.052	--	--	--	0.207	0.058	0.669	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.18	0.12	--	0.25	1.7	0.13	0.5	--
Lead	µg/L	15	--	0.364	0.066	0.065	0.19	0.278	0.389	0.038	--	--	--	0.152	0.03	0.33	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.015	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	1.1	0.8	0.71	0.77	1.56	0.75	0.83	--	--	--	0.9	0.9	0.5	--
Selenium	µg/L	50	--	0.6	0.2	0.2	0.2	0.2	0.3	0.2	--	--	--	0.5	0.6	1	--
Thallium	µg/L	2	--	0.276	0.03	<0.01	0.01	0.17	<0.01	<0.01	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	0.7	0.6	--	1	3	2	2	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	21.5	21.2	24.7	--	21.7	21.4	<0.06	20.9	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	7.37	10.6	--	53	31	8.03	164	--
Boron	mg/L	--	0.01	0.012	0.011	0.032	<0.002	0.043	0.028	0.022	0.016	--	0.058	0.04	<0.02	0.01	<0.02
Calcium	mg/L	--	42.7	41.5	42.7	42.9	45.8	44.8	42.9	44.4	39.8	--	42.3	35.6	35.9	39	42.2
Lithium	mg/L	0.04	--	0.025	0.001	0.002	0.002	0.006	0.006	0.001	--	--	--	<0.009	0.02	0.00311	--
Magnesium	mg/L	--	--	--	--	--	--	19.6	20	20	17.6	--	18.8	16	16.1	16.9	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0021	--	--	0.0323	0.0154	0.0033	0.0413	--
Potassium	mg/L	--	--	--	--	--	--	0.91	0.89	0.77	0.65	--	0.82	0.88	0.76	1	--
Sodium	mg/L	--	--	--	--	--	--	41.2	40.5	42.1	43.2	--	40.1	34.6	37.4	39.7	--
Strontium	mg/L	--	--	--	--	--	--	0.0562	0.0564	0.0543	0.0494	--	0.0555	0.0464	0.0458	0.0478	--
Alkalinity	mg/L	--	--	--	--	--	--	162	181	167	171	--	181	159	150	173	--
Bromide	mg/L	--	--	--	--	--	--	0.03	0.062	0.04	0.06	--	<0.02	<0.04	<0.04	0.1	--
Chloride	mg/L	--	23.7	23.5	22.1	21.1	20.8	21.4	22.8	22.7	22.4	22.5	23.8	22.9	23.6	23.1	27.2
Fluoride	mg/L	4	0.56	0.56	0.54	0.55	0.47	0.52	0.52	0.47	0.52	0.56	0.59	0.57	0.58	0.49	0.5
TDS	mg/L	--	345	321	332	322	300	320	319	319	317	--	324	288	312	324	342
Sulfate	mg/L	--	26.5	26.4	23.4	21.7	22.1	21.7	21.8	22.3	23.1	24.9	21.2	19.5	20.4	20	23.8
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.455	1.16	0.343	0.394	0.26	-0.175	1.5	--	--	--	0.346	0.113	0.0252	--
Radium-226	pCi/L	--	--	0.122	0.131	0.147	0.282	0.0561	0.127	0.153	--	--	--	0.137	0.0183	0.296	--
Radium-226/228	pCi/L	5	--	0.577	1.291	0.49	0.676	0.3161	-0.048	1.653	--	--	--	0.483	0.1313	0.3212	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.96	--	--	0.44	0.29	0.48	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.5	--	--	0.7	2	2	0.7	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2	--	--	1	1	7.36	10	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.004	<0.0004	<0.0004	0.014	--	0.002	0.003	0.007	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	0.0002	0.0004	0.0002	0.0004	--	0.0012	0.0006	0.0007	<0.0005	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-8S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/12/2021
Field Parameters						
Elevation	ft NGVD	--	--	370.96	369.67	369.46
pH	S.U.	--	7.3	6.8	7.75	6.94
Specific Conductance	µmhos/cm	--	--	633	513	559
Turbidity	NTU	--	--	5.16	3.62	0.08
Dissolved Oxygen	mg/L	--	--	3.21	0.86	3.78
Temperature	°C	--	--	17.04	17.54	13.25
ORP	mV	--	--	94	132	156
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.01	<0.02	0.014	0.015
Calcium	mg/L	--	42.7	43.5	39.7	40
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--
Chloride	mg/L	--	23.7	27.1	26.8	27.3
Fluoride	mg/L	4	0.56	0.56	0.59	0.55
TDS	mg/L	--	345	326	330	310
Sulfate	mg/L	--	26.5	23.3	19.8	20.3
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-8I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/19/2016	9/21/2016	11/17/2016	1/9/2017	3/6/2017	5/9/2017	7/18/2017	10/4/2017	12/12/2017	6/4/2018	11/14/2018	5/23/2019	11/22/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.06	369.7	369.51	368.84	368.68	368.68	369.07	367.78	366.87	369.85	367.78	371.38	371.37	369.87
pH	S.U.	--	7.2	7.2	7.44	7.6	7.6	7.4	7.2	7.3	7.56	7.9	7.68	7.22	7.22	6.73	7.83
Specific Conductance	µmhos/cm	--	--	580	455	968	420	80	507	485	471	390	619	453	607	525	601
Turbidity	NTU	--	--	9	3.29	1	5	10	2	1	6.26	1	3.18	9	2.4	8	0
Dissolved Oxygen	mg/L	--	--	0.6	0.17	0.8	1	4.5	0.3	0.2	0.31	9.7	2.46	0.37	2.53	1.3	0
Temperature	°C	--	--	21	15.39	17.1	14	14.4	15	16.2	15.51	14.4	17.42	13.8	19.41	13.6	15.09
ORP	mV	--	--	-60	-63.9	-1	29	25	52	-15	-67.4	111	-75.3	190	-8.1	-185	21
Laboratory Parameters																	
Antimony	µg/L	6	--	0.27	0.07	0.1	0.08	0.08	0.08	0.07	--	--	--	0.17	0.17	0.16	--
Arsenic	µg/L	10	--	11.5	2.08	1.39	2.58	2.78	2.09	1.31	--	--	--	3.41	1.07	1.6	--
Barium	µg/L	2000	--	70.1	57	58.4	54.9	56.9	57.8	60.4	--	--	--	57.9	63.8	58.5	--
Beryllium	µg/L	4	--	0.119	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.28	0.02	0.04	0.02	0.04	0.05	0.02	--	--	--	0.15	0.02	0.08	--
Chromium	µg/L	100	--	0.5	0.1	0.055	0.817	0.511	0.23	0.077	--	--	--	0.07	0.05	0.1	--
Cobalt	µg/L	6	--	0.961	0.643	0.646	0.671	0.656	0.77	0.672	--	--	--	1.01	0.55	0.741	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.11	0.13	--	0.42	1.45	0.2	0.5	--
Lead	µg/L	15	--	0.242	0.02	0.032	0.025	0.032	0.054	0.01	--	--	--	0.111	<0.02	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	3	2.34	2.47	2.31	2.73	2.29	2.58	--	--	--	2.7	2.72	2.43	--
Selenium	µg/L	50	--	7.5	2.7	3	2.3	2.9	4.5	4.7	--	--	--	2.5	3.7	1.4	--
Thallium	µg/L	2	--	0.166	0.03	0.03	0.04	0.05	0.03	0.03	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	0.7	0.9	--	3.2	9.2	21.9	3	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	14.6	14.7	17.1	--	16.4	14.1	<0.06	13.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	2	1	--	0.8	8.7	<1	<5	--
Boron	mg/L	--	0.017	0.016	0.017	0.028	0.006	0.083	0.045	0.026	0.096	--	0.044	0.06	0.03	0.02	0.02
Calcium	mg/L	--	72	67.9	67.4	77.5	79.5	74.7	71.9	72.2	74.7	--	76.7	67.7	70.7	66.9	68.8
Lithium	mg/L	0.04	--	0.007	0.008	0.009	0.005	0.01	0.001	<0.0002	--	--	--	0.02	0.02	0.00419	--
Magnesium	mg/L	--	--	--	--	--	--	22.3	22.9	22.2	22.5	--	23.5	21.4	22.4	20.7	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.357	--	--	0.32	0.509	0.407	0.443	--
Potassium	mg/L	--	--	--	--	--	--	1.84	1.73	1.48	2.02	--	1.6	2.28	1.76	1.76	--
Sodium	mg/L	--	--	--	--	--	--	29.4	28.5	29.7	28.6	--	32.5	31.5	31.6	29.2	--
Strontium	mg/L	--	--	--	--	--	--	0.146	0.148	0.14	0.146	--	0.152	0.139	0.138	0.129	--
Alkalinity	mg/L	--	--	--	--	--	--	245	246	247	237	--	268	250	250	268	--
Bromide	mg/L	--	--	--	--	--	--	0.04	0.065	0.062	0.064	--	0.05	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	21.7	22	21.5	21.3	20.9	20.7	21.2	20.9	20.1	19.3	20.9	20.6	21	19.7	20.4
Fluoride	mg/L	4	0.35	0.34	0.29	0.29	0.25	0.28	0.28	0.25	0.27	0.29	0.29	0.33	0.34	0.3	0.32
TDS	mg/L	--	370	358	376	387	371	391	376	379	378	--	407	390	371	381	357
Sulfate	mg/L	--	87.5	86.3	79.2	77.5	80	80.3	81.9	83.4	85.9	87.1	79	68.2	62.3	68.3	61.7
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.4275	0.157	0.42	1.1	0.372	0.45	0.616	--	--	--	0.354	0.43	0.479	--
Radium-226	pCi/L	--	--	0.824	0.521	0.746	0.725	0.643	0.561	0.463	--	--	--	0.676	0.663	0.723	--
Radium-226/228	pCi/L	5	--	1.2515	0.678	1.166	1.825	1.015	1.011	1.079	--	--	--	1.03	1.093	1.202	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.52	--	--	0.27	0.17	0.45	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.4	--	--	16.8	<0.7	2	0.9	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.46	--	--	<0.8	<1	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	0.36	0.405	0.35	0.515	--	1.08	0.213	0.334	0.333	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	0.349	0.39	0.324	0.363	--	0.31	0.358	0.368	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-8I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/12/2021
Field Parameters						
Elevation	ft NGVD	--	--	370.84	369.5	369.37
pH	S.U.	--	7.2	7.38	8.33	6.8
Specific Conductance	µmhos/cm	--	--	621	530	643
Turbidity	NTU	--	--	6.98	33.42	0.08
Dissolved Oxygen	mg/L	--	--	0.48	5.35	0
Temperature	°C	--	--	17.23	20.33	13.61
ORP	mV	--	--	-8	143	100
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.017	<0.02	0.02	0.02
Calcium	mg/L	--	72	66.8	68.1	67.6
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--
Chloride	mg/L	--	21.7	19.3	18.8	19.3
Fluoride	mg/L	4	0.35	0.38	0.36	0.34
TDS	mg/L	--	370	343	390	350
Sulfate	mg/L	--	87.5	56.7	56	54
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-11S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/18/2016	9/20/2016	11/16/2016	1/9/2017	3/7/2017	5/19/2017	7/18/2017	10/3/2017	12/12/2017	6/5/2018	11/14/2018	5/23/2019	11/15/2019	5/20/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.93	369.4	368.47	367.7	367.51	367.92	368.57	367.86	366.6	369.69	369.27	373.25	371.21	
pH	S.U.	--	7.9	7.3	7.3	8.4	8.1	7.9	7.78	7.7	7.2	8.3	7.21	7.55	7.71	7.76	7.4
Specific Conductance	µmhos/cm	--	--	272	330	433	200	70	307	386	267	260	360	309	440	533	435
Turbidity	NTU	--	--	0.81	0.4	1	0.8	0.3	2.64	0.4	0.5	0.6	0.39	0.2	1	1.97	0.18
Dissolved Oxygen	mg/L	--	--	9.3	7.4	2	7	7	6.99	6.1	8	19.4	6.94	6.9	9	5.53	8.95
Temperature	°C	--	--	16.1	22.4	14.7	14.8	15	15.7	17.1	15.4	13.4	14.97	13.25	17.3	15.3	13.75
ORP	mV	--	--	24	167	227	126	47	75.6	73	-13	73	-2.7	152	240	114.7	216
Laboratory Parameters																	
Antimony	µg/L	6	--	0.04	0.04	0.05	0.04	0.04	0.04	<0.05	--	--	--	0.05	0.05	0.04	--
Arsenic	µg/L	10	--	0.53	0.42	0.45	0.52	0.52	0.48	0.5	--	--	--	0.38	0.36	0.43	--
Barium	µg/L	2000	--	9.79	11.3	7.91	6.52	7.09	7.73	8.16	--	--	--	12.5	13.7	10.8	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.02	--	--	--	<0.02	0.03	<0.02	--
Cadmium	µg/L	5	--	0.03	0.03	0.02	0.01	0.007	0.03	<0.02	--	--	--	0.03	0.02	<0.01	--
Chromium	µg/L	100	--	0.5	0.8	0.416	0.725	1.25	0.567	0.568	--	--	--	0.384	0.483	0.468	--
Cobalt	µg/L	6	--	0.043	0.029	0.027	0.022	0.027	0.03	0.02	--	--	--	<0.02	0.03	<0.02	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.44	0.26	--	0.25	0.44	2.07	0.3	--
Lead	µg/L	15	--	0.02	0.046	0.027	0.02	0.02	0.023	0.06	--	--	--	0.03	<0.02	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	0.002	0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	4.36	3.37	4.71	6.09	6.03	4.86	4.69	--	--	--	2.4	2.04	2.15	--
Selenium	µg/L	50	--	0.08	0.1	0.07	0.05	0.2	0.2	0.3	--	--	--	0.04	<0.03	0.06	--
Thallium	µg/L	2	--	0.01	0.01	0.02	0.01	0.01	0.01	0.2	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	7	<0.4	--	2	<0.7	<0.7	0.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	24.9	24.4	27.3	--	25.8	26.6	24.5	25	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	10	3.63	--	2	3	3	<5	--
Boron	mg/L	--	0.062	0.062	0.077	0.053	0.029	0.057	0.047	0.067	0.09	--	0.076	0.11	0.08	0.052	0.04
Calcium	mg/L	--	41.6	38.8	45.1	37.3	40.4	42.8	41.2	44.2	43.7	--	55.8	56.4	54.3	47.6	55.8
Lithium	mg/L	0.04	--	0.024	0.004	0.005	0.003	0.013	0.009	0.002	--	--	--	0.01	0.01	0.00669	--
Magnesium	mg/L	--	--	--	--	--	--	17.2	17.7	18.8	17.6	--	24.8	19.5	17.7	17	--
Manganese	mg/L	--	--	--	--	--	--	--	--	<0.0001	--	--	<0.0002	0.0004	<0.0002	0.0006	--
Potassium	mg/L	--	--	--	--	--	--	0.42	0.42	0.42	0.48	--	0.37	0.88	0.4	0.5	--
Sodium	mg/L	--	--	--	--	--	--	5.72	5.58	6.82	7.26	--	7.11	5.35	4.43	4.47	--
Strontium	mg/L	--	--	--	--	--	--	0.0508	0.0535	0.0532	0.0537	--	0.0706	0.0774	0.0707	0.0638	--
Alkalinity	mg/L	--	--	--	--	--	--	153	175	187	167	--	226	246	235	223	--
Bromide	mg/L	--	--	--	--	--	--	<0.02	<0.06	<0.02	<0.02	--	<0.02	<0.04	<0.4	<0.04	--
Chloride	mg/L	--	1.82	1.83	1.62	1.54	2.12	4.63	9.87	8.19	3.68	2.4	6.98	1.79	1.62	1.48	2.68
Fluoride	mg/L	4	0.74	0.76	0.73	0.92	0.96	1	0.86	0.75	0.89	0.82	0.62	0.72	0.82	0.77	0.58
TDS	mg/L	--	212	201	196	182	179	197	239	224	200	--	276	238	279	216	246
Sulfate	mg/L	--	10.9	10.6	5.3	4.1	7.6	13.7	16.4	15.6	9.3	8	21.7	5.9	14.7	2.7	13.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.231	0.741	0.179	1.96	0.0959	0.0337	0.771	--	--	--	0.419	0.805	1.72	--
Radium-226	pCi/L	--	--	0.584	-0.0127	0.109	0.141	0.0906	0.091	0.0225	--	--	--	0.217	0.0772	0.0737	--
Radium-226/228	pCi/L	5	--	0.815	0.7283	0.288	2.101	0.1865	0.1247	0.7935	--	--	--	0.636	0.8822	1.7937	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.82	--	--	0.63	0.71	0.26	0.3	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	9	--	--	2	1	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	66.5	--	--	2.92	3	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.014	--	0.008	0.04	0.004	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	0.0002	0.0001	<0.0002	--	<0.002	0.0005	<0.0002	<0.0005	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-11S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	5/25/2021
Field Parameters					
Elevation	ft NGVD	--	--	370.17	369.24
pH	S.U.	--	7.9	7.36	7.72
Specific Conductance	µmhos/cm	--	--	302	413
Turbidity	NTU	--	--	1.7	2.5
Dissolved Oxygen	mg/L	--	--	8.2	4.4
Temperature	°C	--	--	14.4	15.3
ORP	mV	--	--	173	112
Laboratory Parameters					
Antimony	µg/L	6	--	--	--
Arsenic	µg/L	10	--	--	--
Barium	µg/L	2000	--	--	--
Beryllium	µg/L	4	--	--	--
Cadmium	µg/L	5	--	--	--
Chromium	µg/L	100	--	--	--
Cobalt	µg/L	6	--	--	--
Copper	µg/L	--	--	--	--
Lead	µg/L	15	--	--	--
Mercury	µg/L	2	--	--	--
Molybdenum	µg/L	100	--	--	--
Selenium	µg/L	50	--	--	--
Thallium	µg/L	2	--	--	--
Zinc	µg/L	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--
Aluminum	µg/L	--	--	--	--
Boron	mg/L	--	0.062	0.04	0.038
Calcium	mg/L	--	41.6	52.4	53.9
Lithium	mg/L	0.04	--	--	--
Magnesium	mg/L	--	--	--	--
Manganese	mg/L	--	--	--	--
Potassium	mg/L	--	--	--	--
Sodium	mg/L	--	--	--	--
Strontium	mg/L	--	--	--	--
Alkalinity	mg/L	--	--	--	--
Bromide	mg/L	--	--	--	--
Chloride	mg/L	--	1.82	1.52	2.28
Fluoride	mg/L	4	0.74	0.83	0.66
TDS	mg/L	--	212	211	240
Sulfate	mg/L	--	10.9	2.9	10.7
Sulfide	mg/L	--	--	--	--
Radium-228	pCi/L	--	--	--	--
Radium-226	pCi/L	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-12S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	11/1/2018	11/14/2008	12/11/2018	5/22/2019	11/21/2019	11/11/2020	5/28/2021
Field Parameters											
Elevation	ft NGVD	--	--	367.81	367.96	367.93	368.21	372.14	368.42	367.68	368.12
pH	S.U.	--	7.2	5.9	7.6	6.83	7.12	7.31	7.52	7.19	7.65
Specific Conductance	µmhos/cm	--	--	522	551	517	816	757	728	712	806
Turbidity	NTU	--	--	9	1.14	2.14	23.7	13.8	5.1	3.13	0
Dissolved Oxygen	mg/L	--	--	0.2	3.13	0.36	0.29	0	10.83	1.93	0
Temperature	°C	--	--	14.5	14.05	13.16	13.36	14.8	12.81	13.23	15.3
ORP	mV	--	--	68	-34.8	184.2	-10	9	144.1	81	106
Laboratory Parameters											
Antimony	µg/L	6	--	0.06	0.03	0.17	0.06	0.07	0.19	--	--
Arsenic	µg/L	10	--	0.3	0.27	0.25	0.61	0.45	0.44	--	--
Barium	µg/L	2000	--	26.8	26.3	25.3	31	29.7	28.8	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	0.06	0.05	0.13	0.04	0.09	0.09	--	--
Chromium	µg/L	100	--	0.276	0.1	0.1	0.639	0.476	0.315	--	--
Cobalt	µg/L	6	--	0.642	0.4783	0.439	1.23	0.924	0.955	--	--
Copper	µg/L	--	--	0.5	0.36	0.55	1.08	1.59	1.2	--	--
Lead	µg/L	15	--	0.34	0.08	0.08	0.904	0.538	0.526	--	--
Mercury	µg/L	2	--	--	--	--	--	0.002	<0.002	--	--
Molybdenum	µg/L	100	--	2	2	2	2	1	1	--	--
Selenium	µg/L	50	--	0.2	0.07	0.1	0.2	0.09	0.3	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	1	0.8	2	2	19.3	8.2	--	--
Silica (Dissolved)	mg/L	--	--	21.5	20	20	20.3	19.3	18.8	--	--
Aluminum	µg/L	--	--	45.2	8.53	3	291	119	106	--	--
Boron	mg/L	--	0.067	0.04	0.07	0.03	0.12	0.02	0.03	<0.02	0.02
Calcium	mg/L	--	86.3	87	86.4	80.2	89.3	84.9	88.7	83.4	91.9
Lithium	mg/L	0.04	--	0.01	0.01	0.01	<0.009	0.01	0.00591	--	--
Magnesium	mg/L	--	--	31.6	33.7	30.5	33	30.3	32.3	--	--
Manganese	mg/L	--	--	0.0864	0.0758	0.0811	0.106	0.163	0.116	--	--
Potassium	mg/L	--	--	1.18	1.26	1.57	1.87	1.19	1.49	--	--
Sodium	mg/L	--	--	30.2	33.9	32.1	32.4	30.5	29.6	--	--
Strontium	mg/L	--	--	0.103	0.111	0.114	0.119	0.114	0.114	--	--
Alkalinity	mg/L	--	--	392	358	374	361	354	348	--	--
Bromide	mg/L	--	--	0.1	0.1	0.1	0.1	0.1	0.2	--	--
Chloride	mg/L	--	30.1	30.1	29.9	29.4	29.5	29.7	28.7	27.4	26.8
Fluoride	mg/L	4	0.35	0.36	0.36	0.37	0.36	0.38	0.32	0.39	0.41
TDS	mg/L	--	445	446	434	422	437	455	456	420	430
Sulfate	mg/L	--	37.2	37.1	37.1	36.4	36.7	37.4	37.8	37.5	38.2
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.1	<0.1	<0.2	--	--
Radium-228	pCi/L	--	--	0.562	0.306	0.941	0.569	0.568	0.613	--	--
Radium-226	pCi/L	--	--	0.5	0.202	0.244	0.314	0.379	0.226	--	--
Radium-226/228	pCi/L	5	--	1.062	0.508	1.185	0.883	0.947	0.839	--	--
Copper (Dissolved)	µg/L	--	--	0.66	0.38	1.41	0.7	0.33	1.96	--	--
Zinc (Dissolved)	µg/L	--	--	3	2	3	4	7.5	5	--	--
Aluminum (Dissolved)	µg/L	--	--	2	1	1	76.2	2	<5	--	--
Iron (Dissolved)	mg/L	--	--	0.025	0.01	0.006	0.238	0.05	<0.02	--	--
Manganese (Dissolved)	mg/L	--	--	0.0847	0.0797	0.0677	0.103	0.144	0.0388	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-12I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	11/1/2018	11/14/2018	12/11/2018	5/22/2019	11/14/2019	11/12/2020	5/28/2021
Field Parameters											
Elevation	ft NGVD	--	--	369.85	367.84	367.81	368.16	371.95	368.3	367.52	368.06
pH	S.U.	--	0	7.15	7.74	7.01	7.12	7.27	7.33	7.05	7.6
Specific Conductance	µmhos/cm	--	--	662	622	579	901	882	811	870	921
Turbidity	NTU	--	--	1.48	8.76	2.54	2.3	39.5	3	0.97	0
Dissolved Oxygen	mg/L	--	--	1.2	2.68	9.27	1.99	0.2	2.59	0.27	0
Temperature	°C	--	--	15.21	13.94	12.9	12.92	14.8	13.7	12.29	14.8
ORP	mV	--	--	-35.1	-87.8	-54.9	-52	-57	-10.1	-59	4
Laboratory Parameters											
Antimony	µg/L	6	--	<0.01	<0.02	<0.02	<0.02	0.12	0.03	--	--
Arsenic	µg/L	10	--	10.1	9.24	8.79	9.32	12.6	10.3	--	--
Barium	µg/L	2000	--	370	374	365	377	395	393	--	--
Beryllium	µg/L	4	--	0.006	<0.02	0.02	<0.02	0.04	<0.02	--	--
Cadmium	µg/L	5	--	<0.005	0.02	<0.01	0.17	0.16	0.02	--	--
Chromium	µg/L	100	--	0.101	0.289	0.05	0.2	1.32	0.2	--	--
Cobalt	µg/L	6	--	1.5	1.67	1.42	1.58	2.7	1.54	--	--
Copper	µg/L	--	--	1.15	1.23	0.44	0.56	8.39	1	--	--
Lead	µg/L	15	--	0.063	0.21	0.03	0.07	1.47	0.07	--	--
Mercury	µg/L	2	--	--	--	--	--	0.002	<0.002	--	--
Molybdenum	µg/L	100	--	2.92	2.87	2.87	3.13	2.8	3.01	--	--
Selenium	µg/L	50	--	0.04	0.06	<0.003	<0.03	0.1	<0.03	--	--
Thallium	µg/L	2	--	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	1	2	1	3	6.3	17.5	--	--
Silica (Dissolved)	mg/L	--	--	20.9	18.8	19.2	12.6	19	17.8	--	--
Aluminum	µg/L	--	--	48.8	64.6	5.87	5.67	581	10	--	--
Boron	mg/L	--	0.115	0.062	0.115	0.03	0.05	0.03	0.02	<0.02	0.018
Calcium	mg/L	--	94.1	100	94.8	90.9	95.6	99.2	93.9	93.2	111
Lithium	mg/L	0.04	--	0.009	<0.009	0.03	0.01	0.01	0.00469	--	--
Magnesium	mg/L	--	--	32.5	32.6	30.5	31	31.5	29.9	--	--
Manganese	mg/L	--	--	1.17	1.2	1.08	1.12	2.13	1.08	--	--
Potassium	mg/L	--	--	2.03	2.43	2.28	2.26	2.13	1.9	--	--
Sodium	mg/L	--	--	43.2	45	43.9	42	45.7	49.4	--	--
Strontium	mg/L	--	--	0.134	0.138	0.144	0.142	0.15	0.14	--	--
Alkalinity	mg/L	--	--	433	448	433	441	458	431	--	--
Bromide	mg/L	--	--	0.139	0.1	0.1	0.1	0.1	0.1	--	--
Chloride	mg/L	--	33	34	33.9	33.7	33.1	33.4	32.8	33.3	33.4
Fluoride	mg/L	4	0.24	0.25	0.25	0.25	0.23	0.25	0.22	0.27	0.29
TDS	mg/L	--	499	506	493	484	485	532	484	497	520
Sulfate	mg/L	--	31.5	30.9	31	30.7	31	32.5	32.3	32.3	31.8
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.1	<0.1	<0.2	--	--
Radium-228	pCi/L	--	--	-0.0683	0.788	1.19	1.04	1.17	0.863	--	--
Radium-226	pCi/L	--	--	0.463	0.516	0.51	0.83	0.565	0.578	--	--
Radium-226/228	pCi/L	5	--	0.463	1.304	1.7	1.87	1.735	1.441	--	--
Copper (Dissolved)	µg/L	--	--	0.19	0.35	0.42	1.08	0.64	1.68	--	--
Zinc (Dissolved)	µg/L	--	--	1	10.2	2	8.1	1	3	--	--
Aluminum (Dissolved)	µg/L	--	--	2.36	5.95	2	3	16.6	<5	--	--
Iron (Dissolved)	mg/L	--	--	1.15	1.18	1.09	1.16	1.51	1.15	--	--
Manganese (Dissolved)	mg/L	--	--	1.12	1.16	1.06	1.16	1.11	1.14	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-12D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/14/2018	12/11/2018	5/22/2019	11/15/2019	11/12/2020	5/27/2021
Field Parameters											
Elevation	ft NGVD	--	--	367.91	367.91	367.86	368.25	372.03	368.34	367.59	368.18
pH	S.U.	--	7.3	7.16	8.06	7.08	7.17	7.41	7.42	7.06	7.78
Specific Conductance	µmhos/cm	--	--	530	510	449	717	686	850	684	746
Turbidity	NTU	--	--	9.68	12.7	5.25	2.2	1.4	7.41	1.51	0
Dissolved Oxygen	mg/L	--	--	1.68	1.41	4.9	1.4	0.7	7.97	0.31	0
Temperature	°C	--	--	15.56	15.16	12	12.56	15.1	13.4	12.79	16.4
ORP	mV	--	--	-52.6	-90.9	-40.8	-69	-56	89.2	-77	-22
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	0.06	<0.02	<0.02	0.02	0.25	--	--
Arsenic	µg/L	10	--	11.9	9.78	9.95	9.64	13.3	7.64	--	--
Barium	µg/L	2000	--	282	268	272	271	282	273	--	--
Beryllium	µg/L	4	--	0.006	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	<0.005	0.05	<0.01	0.01	0.04	0.08	--	--
Chromium	µg/L	100	--	0.108	0.266	0.1	0.2	0.06	0.453	--	--
Cobalt	µg/L	6	--	0.462	0.538	0.378	0.4	0.554	0.679	--	--
Copper	µg/L	--	--	0.51	41	0.64	0.24	0.46	2.74	--	--
Lead	µg/L	15	--	0.127	0.329	0.111	0.05	0.02	0.502	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	3.09	2.96	2.94	3.13	3.57	4.24	--	--
Selenium	µg/L	50	--	<0.03	0.07	<0.03	<0.03	<0.03	0.06	--	--
Thallium	µg/L	2	--	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	1	3	2	0.8	1	11.5	--	--
Silica (Dissolved)	mg/L	--	--	21.1	18.9	19.5	19.5	18.8	17.8	--	--
Aluminum	µg/L	--	--	14	53.9	26.1	5.83	3	105	--	--
Boron	mg/L	--	0.098	0.112	0.09	0.03	0.09	<0.02	<0.02	<0.02	0.016
Calcium	mg/L	--	90.8	95.1	86.9	86.1	82.9	84.5	80.3	91.1	91.1
Lithium	mg/L	0.04	--	0.013	<0.009	<0.009	<0.009	0.02	0.00169	--	--
Magnesium	mg/L	--	--	30.3	29.6	28.5	26.7	26.5	27.2	--	--
Manganese	mg/L	--	--	0.989	0.902	0.878	0.743	0.979	0.933	--	--
Potassium	mg/L	--	--	1.16	0.89	1.34	1.45	0.76	0.8	--	--
Sodium	mg/L	--	--	10.5	11.3	11	10.2	9.06	9.66	--	--
Strontium	mg/L	--	--	0.161	0.161	0.171	0.158	0.147	0.142	--	--
Alkalinity	mg/L	--	--	373	353	371	384	368	347	--	--
Bromide	mg/L	--	--	0.081	0.08	0.07	0.07	0.07	0.1	--	0.08
Chloride	mg/L	--	16.1	17.2	17	16.6	16.7	15.9	16.1	17.9	18.2
Fluoride	mg/L	4	0.27	0.26	0.26	0.26	0.26	0.26	0.23	0.30	0.28
TDS	mg/L	--	328	386	381	374	380	393	376	389	410
Sulfate	mg/L	--	15.6	14.2	14.2	13.8	13.9	14.8	15.9	16.4	14.8
Sulfide	mg/L	--	--	<0.04	<0.1	<0.07	<0.1	<0.1	<0.2	--	--
Radium-228	pCi/L	--	--	0.643	0.405	0.589	1.69	0.698	0.529	--	--
Radium-226	pCi/L	--	--	0.702	0.454	0.608	0.766	0.548	0.574	--	--
Radium-226/228	pCi/L	5	--	1.345	0.859	1.197	2.456	1.246	1.103	--	--
Copper (Dissolved)	µg/L	--	--	0.35	0.21	0.12	0.44	0.25	<0.2	--	--
Zinc (Dissolved)	µg/L	--	--	3.3	2	1	1	0.7	4	--	--
Aluminum (Dissolved)	µg/L	--	--	7.24	2	2	5.13	1	<5	--	--
Iron (Dissolved)	mg/L	--	--	1.29	0.965	0.996	1.12	1.62	0.616	--	--
Manganese (Dissolved)	mg/L	--	--	0.994	0.88	0.801	0.832	1.03	0.906	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-13I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/11/2018	5/21/2019	11/12/2020	5/27/2021
Field Parameters										
Elevation	ft NGVD	--	--	368.83	368.45	368.41	368.31	371.99	369.21	368.73
pH	S.U.	--	7.5	7.36	8.12	7.21	7.36	7.54	7.33	8.05
Specific Conductance	µmhos/cm	--	--	411	397	451	555	522	494	549
Turbidity	NTU	--	--	2.14	0.93	0.31	0.45	1.4	2.53	0
Dissolved Oxygen	mg/L	--	--	0.37	1.15	8.64	0.57	0.4	3.21	0
Temperature	°C	--	--	15.71	15.25	13.17	14.13	16.5	13.4	17.9
ORP	mV	--	--	-15.8	-74.3	44.5	-72	-30	87	173
Laboratory Parameters										
Antimony	µg/L	6	--	0.02	<0.02	<0.02	0.04	<0.2	--	--
Arsenic	µg/L	10	--	1.74	1.66	1.6	1.84	2.41	--	--
Barium	µg/L	2000	--	149	139	141	144	151	--	--
Beryllium	µg/L	4	--	0.006	<0.02	<0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	<0.005	<0.01	<0.01	<0.01	<0.01	--	--
Chromium	µg/L	100	--	0.04	0.1	0.06	0.07	<0.04	--	--
Cobalt	µg/L	6	--	0.5	0.554	0.477	0.574	0.577	--	--
Copper	µg/L	--	--	0.39	0.62	0.1	0.58	0.09	--	--
Lead	µg/L	15	--	0.01	0.04	<0.02	<0.02	<0.02	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	4.49	4.23	4.09	4.29	4.11	--	--
Selenium	µg/L	50	--	<0.03	<0.03	<0.03	<0.03	<0.03	--	--
Thallium	µg/L	2	--	0.04	<0.1	<0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	20.1	61.3	<0.7	2	<0.7	--	--
Silica (Dissolved)	mg/L	--	--	19.6	17.9	17.9	18.4	17.6	--	--
Aluminum	µg/L	--	--	2.54	10.6	2	<1	1	--	--
Boron	mg/L	--	0.042	0.09	0.05	<0.02	0.04	0.02	<0.02	0.011
Calcium	mg/L	--	67.5	66	58.1	59.7	65.6	67.9	59.1	57.2
Lithium	mg/L	0.04	--	0.018	0.01	<0.009	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	20.4	19.1	19.2	20.9	19.4	--	--
Manganese	mg/L	--	--	0.491	0.448	0.447	0.523	0.469	--	--
Potassium	mg/L	--	--	1.23	0.93	1.32	1.24	0.99	--	--
Sodium	mg/L	--	--	15.2	15.4	15.6	16.4	15.7	--	--
Strontium	mg/L	--	--	0.0781	0.0744	0.0834	0.0879	0.0831	--	--
Alkalinity	mg/L	--	--	231	228	231	241	235	--	--
Bromide	mg/L	--	--	0.04	<0.04	<0.04	<0.04	<0.04	--	0.02
Chloride	mg/L	--	20	20.6	20.5	20.3	20.4	20.1	19.1	18.7
Fluoride	mg/L	4	0.38	0.38	0.38	0.38	0.38	0.37	0.46	0.45
TDS	mg/L	--	297	319	305	310	310	318	292	300
Sulfate	mg/L	--	40.6	41.6	41.5	41.3	40.7	41.6	39.8	37.2
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	-0.268	0.658	0.682	0.3	0.76	--	--
Radium-226	pCi/L	--	--	0.456	0.509	0.669	0.589	0.646	--	--
Radium-226/228	pCi/L	5	--	0.456	1.167	1.351	0.889	1.406	--	--
Copper (Dissolved)	µg/L	--	--	0.11	0.39	0.2	0.2	0.15	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	6.3	<0.7	3	<0.7	--	--
Aluminum (Dissolved)	µg/L	--	--	1	1	1	5	<1	--	--
Iron (Dissolved)	mg/L	--	--	0.185	0.189	0.193	0.26	0.278	--	--
Manganese (Dissolved)	mg/L	--	--	0.493	0.467	0.461	0.483	0.418	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-13D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/11/2018	5/21/2019	11/12/2020	5/27/2021
Field Parameters										
Elevation	ft NGVD	--	--	368.79	368.43	368.39	368.29	371.95	369.16	368.71
pH	S.U.	--	7.4	7.03	8.11	7.17	7.29	7.45	7.29	7.73
Specific Conductance	µmhos/cm	--	--	406	382	427	540	524	521	586
Turbidity	NTU	--	--	5.34	10.6	4.66	3.22	2	31.2	21
Dissolved Oxygen	mg/L	--	--	1.34	1.4	5.45	0.51	1.7	1.34	0
Temperature	°C	--	--	16.29	14.99	12.18	14.06	18.7	15.2	17.6
ORP	mV	--	--	-71.4	-95.1	-48.5	-94	-48	-51	26
Laboratory Parameters										
Antimony	µg/L	6	--	0.01	0.02	0.05	0.03	0.07	--	--
Arsenic	µg/L	10	--	6.44	5.62	7.55	5.3	20.8	--	--
Barium	µg/L	2000	--	206	204	198	219	265	--	--
Beryllium	µg/L	4	--	0.007	<0.02	<0.02	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	<0.005	0.04	<0.01	<0.01	<0.01	--	--
Chromium	µg/L	100	--	0.071	0.353	0.209	0.06	0.2	--	--
Cobalt	µg/L	6	--	1.15	1.31	1.05	0.935	1.1	--	--
Copper	µg/L	--	--	0.26	1.02	0.55	0.28	1.11	--	--
Lead	µg/L	15	--	0.071	0.438	0.173	<0.02	0.07	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	2.88	2.59	2.77	3.23	3.21	--	--
Selenium	µg/L	50	--	<0.03	0.1	0.07	<0.03	0.04	--	--
Thallium	µg/L	2	--	0.02	<0.1	>0.1	<0.1	<0.1	--	--
Zinc	µg/L	--	--	0.6	2	1	2	1	--	--
Silica (Dissolved)	mg/L	--	--	19.3	17.6	17.9	17.9	17.4	--	--
Aluminum	µg/L	--	--	21.8	162	58.8	2	12.4	--	--
Boron	mg/L	--	0.037	0.071	0.111	119	0.03	0.02	<0.02	0.012
Calcium	mg/L	--	65.9	68.9	63.4	60.8	67.4	66.2	64.6	66.6
Lithium	mg/L	0.04	--	0.016	<0.009	<0.009	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	21.8	21.7	20.1	22.5	19.7	--	--
Manganese	mg/L	--	--	0.762	0.669	0.648	0.677	0.997	--	--
Potassium	mg/L	--	--	1.06	1.14	1.45	1.16	0.82	--	--
Sodium	mg/L	--	--	11.2	11.6	11.4	11.2	9.25	--	--
Strontium	mg/L	--	--	0.0852	0.0867	0.0913	0.098	0.0882	--	--
Alkalinity	mg/L	--	--	231	243	223	252	237	--	--
Bromide	mg/L	--	--	0.05	<0.04	<0.04	<0.04	<0.04	--	0.03
Chloride	mg/L	--	16.3	17	16.9	16.6	16.5	15.9	18.2	18
Fluoride	mg/L	4	0.28	0.27	0.27	0.28	0.27	0.26	0.30	0.29
TDS	mg/L	--	287	296	299	296	305	303	311	320
Sulfate	mg/L	--	35.5	34.8	34.7	34.1	33.3	33.9	38.8	37.4
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	0.141	-0.293	-0.157	0.226	0.844	--	--
Radium-226	pCi/L	--	--	0.501	0.356	0.242	0.389	0.586	--	--
Radium-226/228	pCi/L	5	--	0.642	0.356	0.242	0.615	1.43	--	--
Copper (Dissolved)	µg/L	--	--	0.07	0.11	0.09	0.21	0.56	--	--
Zinc (Dissolved)	µg/L	--	--	0.5	1	<0.7	1	<0.7	--	--
Aluminum (Dissolved)	µg/L	--	--	11	3	2	20.5	1	--	--
Iron (Dissolved)	mg/L	--	--	1.29	0.915	0.995	1.13	0.866	--	--
Manganese (Dissolved)	mg/L	--	--	0.74	0.625	0.702	0.612	0.777	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-14S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/20/2016	9/21/2016	11/17/2016	1/9/2017	3/7/2017	5/19/2017	7/18/2017	10/4/2017	12/12/2017	6/5/2018	11/13/2018	5/23/2019	11/16/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.07	369.7	369.34	368.92	368.49	368.63	369.88	368.43	368.41	368.94	369.27	371.36	371.63	369.98
pH	S.U.	--	7.2	7.1	7	7.7	7.5	7.4	6.95	7.3	7	7.6	7.55	7.55	7.15	7.51	7.68
Specific Conductance	µmhos/cm	--	--	576	640	955	530	80	441	496	488	490	450	309	604	655	550
Turbidity	NTU	--	--	3.9	6	1	2	0.7	2.07	1	0.5	1	0.6	0.2	0.61	9.8	0.52
Dissolved Oxygen	mg/L	--	--	3.8	3.3	1	3.4	3	3.82	3.7	4	10.2	5.42	6.9	2.57	0.455	3.22
Temperature	°C	--	--	18.7	22.6	15.2	14.4	13.9	14.54	15.9	15.3	13.5	14.98	13.25	17.01	12.4	15.74
ORP	mV	--	--	43	53	282	147	75	55.6	67	-23	133	-7.9	152	-203.7	-9	150
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	0.02	0.03	0.02	0.02	0.06	<0.05	--	--	--	<0.02	<0.02	0.03	--
Arsenic	µg/L	10	--	1.54	1.29	0.75	0.91	0.76	0.75	0.7	--	--	--	0.64	0.62	0.62	--
Barium	µg/L	2000	--	31	27.8	26.3	27	26.3	25	27	--	--	--	27	28.9	32.9	--
Beryllium	µg/L	4	--	0.008	0.005	<0.005	<0.005	<0.005	<0.004	<0.02	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.21	0.07	0.03	0.05	0.01	0.08	<0.02	--	--	--	0.05	0.01	<0.01	--
Chromium	µg/L	100	--	0.3	0.3	0.162	0.575	0.66	0.301	0.258	--	--	--	0.2	0.2	0.438	--
Cobalt	µg/L	6	--	0.573	0.333	0.088	0.187	0.083	0.065	0.03	--	--	--	0.03	0.03	0.04	--
Copper	µg/L	--	--	--	--	--	--	--	--	2.38	0.15	--	0.38	0.24	0.25	<0.2	--
Lead	µg/L	15	--	0.307	0.31	0.549	0.115	0.061	0.071	0.116	--	--	--	0.05	0.04	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	1.51	1.43	1.26	1.62	1.84	1.35	1.67	--	--	--	1	1	1	--
Selenium	µg/L	50	--	1.4	1.2	1.2	1.1	1.1	1.2	1.3	--	--	--	1.1	0.9	0.9	--
Thallium	µg/L	2	--	<0.01	<0.01	0.02	0.054	0.055	0.01	0.07	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	9	0.8	--	1	1	<0.7	<0.7	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	20.3	20.2	23.3	--	20.4	20.2	<0.06	19.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	11.4	2	--	5.75	7.32	4	5	--
Boron	mg/L	--	0.011	0.008	0.01	0.008	<0.002	0.031	0.017	0.03	0.042	--	0.046	0.04	<0.02	0.01	<0.02
Calcium	mg/L	--	59.2	56.3	59.5	65.4	65.7	63.4	59.8	65.6	67	--	61.1	59.2	66.9	65.1	66.6
Lithium	mg/L	0.04	--	0.018	0.006	0.004	0.006	0.005	0.001	<0.0002	--	--	--	<0.009	0.01	0.00367	--
Magnesium	mg/L	--	--	--	--	--	--	27.6	28.1	29.3	29.9	--	27.4	26.4	30	29.8	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0006	--	--	0.0014	0.0015	0.0008	0.002	--
Potassium	mg/L	--	--	--	--	--	--	0.5	0.54	0.49	0.59	--	0.51	0.55	0.53	0.5	--
Sodium	mg/L	--	--	--	--	--	--	33	29.4	30.1	29.9	--	29.2	24.9	23.3	23.7	--
Strontium	mg/L	--	--	--	--	--	--	0.101	0.102	0.103	0.106	--	0.101	0.0954	0.109	0.111	--
Alkalinity	mg/L	--	--	--	--	--	--	232	258	257	249	--	260	259	275	252	--
Bromide	mg/L	--	--	--	--	--	--	<0.02	<0.06	0.03	0.04	--	<0.02	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	28.6	29.4	28.1	27.8	27.2	26.8	29.4	29.6	29.9	30	27.1	29	28.6	28.9	28.6
Fluoride	mg/L	4	0.39	0.39	0.36	0.35	0.33	0.36	0.37	0.33	0.34	0.34	0.39	0.37	0.37	0.38	0.33
TDS	mg/L	--	368	364	361	362	344	354	376	377	376	--	360	344	390	374	411
Sulfate	mg/L	--	34.9	36.5	32.5	29.1	30.7	29.9	32.3	33.1	34.8	35.5	29.4	30.8	32.4	32.8	32.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	-0.343	0.769	0.693	0.601	-0.193	-0.019	1.73	--	--	--	0.334	0.271	1.1	--
Radium-226	pCi/L	--	--	0.594	0.131	0.413	0.179	0.0525	0.0316	0.153	--	--	--	0.0534	0.0483	0.112	--
Radium-226/228	pCi/L	5	--	0.251	0.9	1.106	0.78	-0.1405	0.0126	1.883	--	--	--	0.3874	0.3193	1.212	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.94	--	--	0.43	0.64	0.31	0.6	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	7	--	--	5.7	3	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	11.3	--	--	1	<1	1	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.016	--	0.002	<0.003	<0.003	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	0.0021	0.0001	<0.0002	--	<0.0002	0.0005	<0.0002	<0.0005	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-14S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/28/2021
Field Parameters					
Elevation	ft NGVD	--	--	370.99	369.36
pH	S.U.	--	7.2	6.68	7.82
Specific Conductance	µmhos/cm	--	--	742	706
Turbidity	NTU	--	--	3.29	1.1
Dissolved Oxygen	mg/L	--	--	2.77	2.61
Temperature	°C	--	--	15.64	15
ORP	mV	--	--	101	97
Laboratory Parameters					
Antimony	µg/L	6	--	--	--
Arsenic	µg/L	10	--	--	--
Barium	µg/L	2000	--	--	--
Beryllium	µg/L	4	--	--	--
Cadmium	µg/L	5	--	--	--
Chromium	µg/L	100	--	--	--
Cobalt	µg/L	6	--	--	--
Copper	µg/L	--	--	--	--
Lead	µg/L	15	--	--	--
Mercury	µg/L	2	--	--	--
Molybdenum	µg/L	100	--	--	--
Selenium	µg/L	50	--	--	--
Thallium	µg/L	2	--	--	--
Zinc	µg/L	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--
Aluminum	µg/L	--	--	--	--
Boron	mg/L	--	0.011	<0.02	0.012
Calcium	mg/L	--	59.2	66.4	82
Lithium	mg/L	0.04	--	--	--
Magnesium	mg/L	--	--	--	--
Manganese	mg/L	--	--	--	--
Potassium	mg/L	--	--	--	--
Sodium	mg/L	--	--	--	--
Strontium	mg/L	--	--	--	--
Alkalinity	mg/L	--	--	--	--
Bromide	mg/L	--	--	--	--
Chloride	mg/L	--	28.6	26.3	25.4
Fluoride	mg/L	4	0.39	0.39	0.38
TDS	mg/L	--	368	370	430
Sulfate	mg/L	--	34.9	31.4	31
Sulfide	mg/L	--	--	--	--
Radium-228	pCi/L	--	--	--	--
Radium-226	pCi/L	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-15S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/7/2017	5/10/2017	7/19/2017	10/4/2017	6/5/2018	11/13/2018	5/23/2019	7/23/2019	9/11/2019	11/15/2019
Field Parameters																		
Elevation	ft NGVD	--	--	370	369.87	369.49	368.87	367.92	367.84	367.86	368.75	367.84	396.63	368.96	371.96	372.79	372.26	371.11
pH	S.U.	--	7.1 - 7.7	7.2	7.1	7.2	7.7	7.2	7.2	7.3	7.3	7.35	7.16	7.46	7.5	5.74	7.38	7.38
Specific Conductance	µmhos/cm	--	--	512	512	510	904	470	60	419	368	393	416	317	348	362	269	467
Turbidity	NTU	--	--	7.6	2.2	1	1	1	0.5	2	2	2.34	0.33	0.41	1.51	8.3	3	10
Dissolved Oxygen	mg/L	--	--	0.5	0.5	1	1	1	6	0.4	0.3	0.07	1.9	0.77	0.4	1	0	0
Temperature	°C	--	--	16.5	17.7	19.1	15.5	13.8	13.9	14.6	15.7	14.7	14.96	12.94	15.21	15.8	16.55	13.4
ORP	mV	--	--	57	124	181	-10	179	64	65	24	18.1	-37.7	19.3	-218	47	63	64
Laboratory Parameters																		
Antimony	µg/L	6	--	0.04	0.04	0.02	0.04	0.04	0.03	0.04	0.02	--	--	<0.02	0.02	--	--	0.03
Arsenic	µg/L	10	--	0.32	0.24	0.21	0.18	0.26	0.21	0.21	0.23	--	--	0.13	0.12	--	--	0.16
Barium	µg/L	2000	--	4.71	5.85	3.21	3.27	6.05	4.98	3.54	3.11	--	--	2.46	2.54	--	--	3.17
Beryllium	µg/L	4	--	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.004	--	--	<0.02	<0.02	--	--	<0.02
Cadmium	µg/L	5	--	0.14	0.25	0.05	0.05	0.06	0.04	0.05	0.05	--	--	0.04	0.1	--	--	0.06
Chromium	µg/L	100	--	0.2	1.7	0.5	0.058	0.493	0.934	0.198	0.096	--	--	0.05	0.08	--	--	0.1
Cobalt	µg/L	6	--	3.03	1.17	1.09	0.794	1.75	1.26	1.2	1.25	--	--	0.74	0.775	--	--	2.15
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.4	0.26	0.24	0.37	0.32	--	--	0.2
Lead	µg/L	15	--	0.286	0.101	0.098	0.037	0.039	0.024	0.062	0.083	--	--	0.03	0.05	--	--	0.1
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	<0.002	--	--	<0.002
Molybdenum	µg/L	100	--	2.52	2.89	2.54	1.57	0.78	1.17	2.08	2.87	--	--	2.54	3.47	--	--	2.18
Selenium	µg/L	50	--	0.4	0.7	0.5	0.3	0.3	0.5	0.5	0.2	--	--	0.1	0.06	--	--	0.2
Thallium	µg/L	2	--	0.03	<0.01	0.02	0.02	0.03	0.04	0.02	0.02	--	--	<0.1	<0.1	--	--	<0.1
Zinc	µg/L	--	--	--	--	--	--	--	--	--	3.5	1	21	2	2	--	--	2
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	13.1	12.7	15.8	13.1	12.4	<0.06	--	--	11.9
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	15.9	6.68	4.42	6.41	11.7	--	--	10
Boron	mg/L	--	0.15	0.011	0.012	0.008	<0.002	<0.002	0.084	0.077	0.073	0.095	0.078	0.04	<0.02	--	--	0.01
Calcium	mg/L	--	(79.5) 71	46.9	43.6	46.6	52.3	63.6	62.9	45.7	44.4	48.3	44.7	41.8	41.3	--	--	40.2
Lithium	mg/L	0.04	--	0.007	0.022	0.005	0.005	0.008	0.008	0.003	0.0009	--	--	<0.009	<0.009	--	--	0.00357
Magnesium	mg/L	--	--	--	--	--	--	--	28.2	19.3	17.2	18.5	16.9	15.1	13.9	--	--	15.1
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.489	--	0.391	0.444	0.452	--	--	0.743
Potassium	mg/L	--	--	--	--	--	--	--	1.07	1.11	1.03	1.27	0.93	1.16	0.68	--	--	0.8
Sodium	mg/L	--	--	--	--	--	--	--	35.5	44.7	39.2	42.3	35.9	27.2	17.3	--	--	19.7
Strontium	mg/L	--	--	--	--	--	--	--	0.0903	0.0711	0.061	0.0662	0.0638	0.0574	0.0502	--	--	0.0522
Alkalinity	mg/L	--	--	--	--	--	--	--	294	257	235	267	239	226	197	--	--	209
Bromide	mg/L	--	--	--	--	--	--	--	0.04	0.062	0.05	0.074	0.03	<0.04	<0.04	--	--	<0.04
Chloride	mg/L	--	(29.6) 26	21.2	18.7	18.9	18.3	21.9	16.1	14.1	11.8	13.3	8.84	8.78	8.88	--	--	9.48
Fluoride	mg/L	4	0.86	0.65	0.65	0.63	0.5	0.36	0.42	0.65	0.66	0.62	0.69	0.72	0.88	0.87	0.81	0.7
TDS	mg/L	--	(412.7) 407	338	319	329	338	374	342	294	263	300	274	232	207	--	--	234
Sulfate	mg/L	--	(33.67) 34	30.3	27.7	25.1	23.2	28.3	23.4	21	20.3	23.2	16.3	13.1	10.2	--	--	8.4
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.07	<0.1	--	--	<0.2
Radium-228	pCi/L	--	--	0.0335	-0.092	0.302	1.11	-0.0122	-0.108	0.106	-0.0928	--	--	0.482	0.439	--	--	1.47
Radium-226	pCi/L	--	--	0.384	--	0.116	0.139	0.189	0.0973	0.135	0.0916	--	--	-0.0262	0.282	--	--	0.0996
Radium-226/228	pCi/L	5	--	0.4175	-0.092	0.418	1.249	0.1768	-0.0107	0.241	0.0916	--	--	0.482	0.721	--	--	1.5696
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.37	--	0.51	1.59	0.53	--	--	2.06
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.6	--	1	2	<0.7	--	--	2
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	3.7	--	2	3	2	--	--	<5
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.014	<0.002	0.004	<0.003	--	--	<0.02
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.448	0.361	0.284	0.379	0.349	0.332	0.289	--	--	0.257

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-15S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	5/19/2020
Field Parameters				
Elevation	ft NGVD	--	--	370.36
pH	S.U.	--	7.1 - 7.7	7.55
Specific Conductance	µmhos/cm	--	--	400
Turbidity	NTU	--	--	0
Dissolved Oxygen	mg/L	--	--	0
Temperature	°C	--	--	14.71
ORP	mV	--	--	135
Laboratory Parameters				
Antimony	µg/L	6	--	--
Arsenic	µg/L	10	--	--
Barium	µg/L	2000	--	--
Beryllium	µg/L	4	--	--
Cadmium	µg/L	5	--	--
Chromium	µg/L	100	--	--
Cobalt	µg/L	6	--	--
Copper	µg/L	--	--	--
Lead	µg/L	15	--	--
Mercury	µg/L	2	--	--
Molybdenum	µg/L	100	--	--
Selenium	µg/L	50	--	--
Thallium	µg/L	2	--	--
Zinc	µg/L	--	--	--
Silica (Dissolved)	mg/L	--	--	--
Aluminum	µg/L	--	--	--
Boron	mg/L	--	0.15	<0.02
Calcium	mg/L	--	(79.5) 71	42.4
Lithium	mg/L	0.04	--	--
Magnesium	mg/L	--	--	--
Manganese	mg/L	--	--	--
Potassium	mg/L	--	--	--
Sodium	mg/L	--	--	--
Strontium	mg/L	--	--	--
Alkalinity	mg/L	--	--	--
Bromide	mg/L	--	--	--
Chloride	mg/L	--	(29.6) 26	10.3
Fluoride	mg/L	4	0.86	0.86
TDS	mg/L	--	(412.7) 407	218
Sulfate	mg/L	--	(33.67) 34	9.1
Sulfide	mg/L	--	--	--
Radium-228	pCi/L	--	--	--
Radium-226	pCi/L	--	--	--
Radium-226/228	pCi/L	5	--	--
Copper (Dissolved)	µg/L	--	--	--
Zinc (Dissolved)	µg/L	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--
Iron (Dissolved)	mg/L	--	--	--
Manganese (Dissolved)	mg/L	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-15S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/28/2021	11/11/2021
Field Parameters						
Elevation	ft NGVD	--	--	370.24	369.11	368.51
pH	S.U.	--	7.1 - 7.7	7.33	7.73	7.48
Specific Conductance	µmhos/cm	--	--	455	430	500
Turbidity	NTU	--	--	8.91	1.8	0
Dissolved Oxygen	mg/L	--	--	0.12	0	0
Temperature	°C	--	--	15.34	14.91	13.71
ORP	mV	--	--	22	110	182
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.15	<0.02	0.014	0.012
Calcium	mg/L	--	(79.5) 71	45.4	66.4	46.3
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--
Chloride	mg/L	--	(29.6) 26	10.1	10.6	10.4
Fluoride	mg/L	4	0.86	0.78	0.81	0.65
TDS	mg/L	--	(412.7) 407	236	250	270
Sulfate	mg/L	--	(33.67) 34	10.3	8.82	8.07
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-15I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2016	7/19/2016	9/21/2016	11/16/2016	1/10/2017	3/7/2017	5/10/2017	7/18/2017	10/4/2017	12/12/2017	1/3/2018
Field Parameters														
Elevation	ft NGVD	--	--	370	369.88	369.51	368.86	368.12	368.07	368.27	368.74	367.82	366.73	366.49
pH	S.U.	--	6.77 - 7.86	7.2	7.1	7.1	7.5	7.7	7.5	7.2	7.2	7.34	7.8	7.79
Specific Conductance	µmhos/cm	--	--	555	574	530	874	420	60	457	400	368	350	474
Turbidity	NTU	--	--	0.9	0.6	0.7	0.2	1	2	1	1	1.09	1	1.12
Dissolved Oxygen	mg/L	--	--	0.2	0.4	0.4	1.3	0.2	2	0.3	0.3	0.49	0.9	0.41
Temperature	°C	--	--	15.1	18.2	17.6	15.6	13.9	13.6	14.8	16.3	14.68	12.8	12.38
ORP	mV	--	--	52.5	-86	-54	259	-87	-42	51	-50	-79.7	-52	-77.2
Laboratory Parameters														
Antimony	µg/L	6	--	0.01	0.25	0.01	0.04	0.01	0.02	0.02	0.02	--	--	--
Arsenic	µg/L	10	--	25.2	27.9	21.1	23.6	20.2	20.4	20.2	23.6	--	--	--
Barium	µg/L	2000	--	118	132	119	107	91.2	88.9	86.1	94.8	--	--	--
Beryllium	µg/L	4	--	<0.005	0.165	<0.005	0.005	<0.005	<0.005	<0.004	<0.004	--	--	--
Cadmium	µg/L	5	--	0.02	0.23	0.009	0.06	0.005	0.03	0.03	0.02	--	--	--
Chromium	µg/L	100	--	0.2	0.5	0.1	0.132	0.35	0.7	0.134	0.089	--	--	--
Cobalt	µg/L	6	--	1.24	1.66	1.32	1.03	1	0.903	1.02	1.25	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.26	0.1	--	--
Lead	µg/L	15	--	0.026	0.254	0.026	0.213	0.01	0.065	0.09	0.082	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	5.76	6.74	5.75	6.73	7.63	7.91	6.52	5.58	--	--	--
Selenium	µg/L	50	--	<0.03	0.2	<0.03	<0.03	<0.03	0.07	0.04	<0.03	--	--	--
Thallium	µg/L	2	--	0.04	0.273	0.03	0.04	0.04	0.112	0.03	0.04	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	0.7	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	15	14	16.1	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	9.25	6.63	--	--
Boron	mg/L	--	0.072	0.06	0.032	0.03	0.022	0.019	0.047	0.038	0.05	0.08	--	0.04
Calcium	mg/L	--	(79.5) 54	44.1	44.6	46.1	51.4	46.5	51.1	46.6	43.9	44.6	--	--
Lithium	mg/L	0.04	--	0.005	0.018	0.004	0.004	0.011	0.006	0.002	<0.0002	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	13.3	12.7	11.1	11.2	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.134	--	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.01	1.02	0.94	1.05	--	--
Sodium	mg/L	--	--	--	--	--	--	--	62.3	56.1	51.8	45.4	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0865	0.088	0.0841	0.0871	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	229	239	224	202	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.084	0.101	0.081	0.067	--	--
Chloride	mg/L	--	(29.6) 70	59.3	53.8	43.4	44.9	48.3	38.5	32.7	27.1	23.7	22.8	--
Fluoride	mg/L	4	0.382	0.25	0.25	0.23	0.25	0.34	0.32	0.31	0.22	0.23	0.22	--
TDS	mg/L	--	(412.7) 398	380	356	334	340	351	331	322	300	287	--	--
Sulfate	mg/L	--	(47.44) 47	42.5	41	34	33.6	35.4	31.1	29.7	26.6	27.3	26.7	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	--
Radium-228	pCi/L	--	--	0.254	0.455	0.076	1.23	0.682	0.155	-0.367	1.49	--	--	--
Radium-226	pCi/L	--	--	0.609	0.636	0.428	0.517	0.187	0.71	0.189	0.153	--	--	--
Radium-226/228	pCi/L	5	--	0.863	1.091	0.504	1.747	0.869	0.865	-0.178	1.643	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.1	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.19	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.742	0.709	0.789	0.949	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.138	0.139	0.112	0.119	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-15I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2016	11/13/2018	5/23/2019	11/15/2019	5/19/2020	11/10/2020	2/3/2021	5/28/2021	11/11/2021
Field Parameters													
Elevation	ft NGVD	--	--	369.64	370.28	369.01	372.01	371.09	370.42	370.28	368.37	369.35	368.56
pH	S.U.	--	6.77 - 7.86	8.06	7.36	7.6	7.29	7.38	7.49	7.52	7.57	7.72	7.95
Specific Conductance	µmhos/cm	--	--	420	527	412	414	495	435	381	400	393	402
Turbidity	NTU	--	--	0.88	0	0.18	0.95	7	0	1.35	0.4	2.96	0
Dissolved Oxygen	mg/L	--	--	1.89	0.25	0.31	1.61	0	0	6.34	0.1	0	0
Temperature	°C	--	--	14.9	17.77	12.52	18.94	13.7	14.47	16.12	13.6	14.92	13.47
ORP	mV	--	--	-94	-63	-63.7	-207.7	-85	-39	-70	-84	-106	87
Laboratory Parameters													
Antimony	µg/L	6	--	--	--	<0.02	<0.02	0.04	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	23.8	25.8	26.5	--	--	--	--	--
Barium	µg/L	2000	--	--	--	93.3	95	88.9	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	<0.02	<0.02	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	<0.01	0.01	0.05	--	--	--	--	--
Chromium	µg/L	100	--	--	--	<0.04	0.06	0.1	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	1.12	1.12	1.07	--	--	--	--	--
Copper	µg/L	--	--	0.15	--	0.12	0.1	0.6	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.03	<0.02	0.2	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	<0.002	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	5.03	5.63	5.95	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.04	<0.03	0.04	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	<0.1	<0.1	--	--	--	--	--
Zinc	µg/L	--	--	2.5	--	0.8	7.9	2	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	13.9	--	13.8	<0.06	12.5	--	--	--	--	--
Aluminum	µg/L	--	--	4.24	--	7.01	3	21.2	--	--	--	--	--
Boron	mg/L	--	0.072	0.066	--	0.07	0.03	0.03	0.03	0.03	--	0.028	0.026
Calcium	mg/L	--	(79.5) 54	47	--	39.9	47.8	45.2	49.2	44.2	--	53.3	44.4
Lithium	mg/L	0.04	--	--	--	<0.009	0.01	0.00289	--	--	--	--	--
Magnesium	mg/L	--	--	11.8	--	9.98	11.7	11	--	--	--	--	--
Manganese	mg/L	--	--	0.13	--	0.106	0.128	0.116	--	--	--	--	--
Potassium	mg/L	--	--	0.96	--	1.21	0.9	0.9	--	--	--	--	--
Sodium	mg/L	--	--	42	--	29.9	29.9	24.2	--	--	--	--	--
Strontium	mg/L	--	--	0.0955	--	0.0827	0.0942	0.0887	--	--	--	--	--
Alkalinity	mg/L	--	--	226	--	199	208	198	--	--	--	--	--
Bromide	mg/L	--	--	0.071	--	0.06	0.04	<0.04	--	--	--	--	--
Chloride	mg/L	--	(29.6) 70	25.1	--	23.7	18	16.9	19	12.8	--	16	14
Fluoride	mg/L	4	0.382	0.26	--	0.25	0.26	0.27	0.25	0.47	0.36	0.39	0.47
TDS	mg/L	--	(412.7) 398	279	--	248	260	248	253	213	--	240	220
Sulfate	mg/L	--	(47.44) 47	25.3	--	25.3	20.9	17.6	17.8	11.7	--	14.7	11.3
Sulfide	mg/L	--	--	<0.4	--	<0.07	<0.1	<0.2	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.283	0.423	1.63	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0962	0.557	0.194	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.3792	0.98	1.824	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.36	--	0.2	0.83	<0.2	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	--	0.8	1	1	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	--	1	2	<5	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.879	--	0.848	0.826	0.623	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.126	--	0.121	0.116	0.118	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/10/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.7	369.61	369.16	368.56	367.84	367.87	367.88	368.53	367.58	366.38
pH	S.U.	--	5.88 - 8.55	7.53	7.1	7.31	6.9	7.16	7.1	8.26	6.34	7.25	7.34
Specific Conductance	µmhos/cm	--	--	0.822	764	719	669	677	804	581	595	647	872
Turbidity	NTU	--	--	0.74	0.34	5.21	0.5	0.25	0.42	1.78	0.57	0.72	0.54
Dissolved Oxygen	mg/L	--	--	0.34	0.4	7.29	0.62	0.55	0.18	0.69	22.45	0.31	0.82
Temperature	°C	--	--	15.7	16.39	17.48	16.91	14.47	18.48	16.01	15.63	15.99	14.46
ORP	mV	--	--	112.4	56.2	153.4	233.5	83	56.1	177.3	-118.9	13.6	-12.2
Laboratory Parameters													
Antimony	µg/L	6	--	0.03	0.03	0.25	0.02	0.02	0.02	0.02	0.02	--	--
Arsenic	µg/L	10	--	0.37	0.37	0.38	0.34	0.42	0.31	0.39	0.33	--	--
Barium	µg/L	2000	--	32.3	29.9	29.5	25.3	25.1	25.7	29.8	25.6	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.03	0.03	0.1	0.006	0.008	0.004	0.01	0.04	--	--
Chromium	µg/L	100	--	0.2	0.5	0.3	1.03	0.081	0.463	0.196	0.101	--	--
Cobalt	µg/L	6	--	0.073	0.025	0.07	0.028	0.014	0.012	0.063	0.01	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.1	0.19	--
Lead	µg/L	15	--	0.074	0.057	0.182	<0.004	0.039	0.006	0.027	0.01	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	1.15	1.21	1.11	1.19	1.21	1.32	1.14	0.98	--	--
Selenium	µg/L	50	--	0.6	0.6	0.8	0.4	0.4	0.4	0.3	0.4	--	--
Thallium	µg/L	2	--	0.01	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	2	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	24	24.1	27.6	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	2.1	7.43	--
Boron	mg/L	--	0.088	0.028	0.025	0.024	0.025	0.017	0.038	0.082	0.037	0.061	--
Calcium	mg/L	--	(79.5) 114	96.2	83	93.5	96.4	94.6	106	105	91.8	108	109
Lithium	mg/L	0.04	--	0.007	0.031	0.005	0.018	0.013	0.013	0.008	0.01	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	36.4	36.6	31.4	38.2	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0028	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.01	1.3	0.97	1.03	--
Sodium	mg/L	--	--	--	--	--	--	--	36.9	36.7	28.7	35.7	--
Strontium	mg/L	--	--	--	--	--	--	--	0.129	0.132	0.108	0.133	--
Alkalinity	mg/L	--	--	--	--	--	--	--	423	431	436	438	--
Bromide	mg/L	--	--	--	--	--	--	--	0.1	0.158	0.162	0.206	--
Chloride	mg/L	--	(29.6) 24	18.7	19	17.1	16.4	17.5	19.3	22.9	19.8	19.3	--
Fluoride	mg/L	4	0.506	0.44	0.46	0.38	0.3	0.35	0.36	0.38	0.33	0.41	--
TDS	mg/L	--	(412.7) 517	483	471	509	486	474	473	499	484	503	517
Sulfate	mg/L	--	(52.4) 52	46.9	50.1	42.1	38.3	39.2	39.6	42.3	40.7	45	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	-0.0274	0.34	-0.131	0.0963	1.8	0.169	-0.045	2.76	--	--
Radium-226	pCi/L	--	--	0.163	0.707	0.0255	0.198	0.193	0.113	0.145	0.0933	--	--
Radium-226/228	pCi/L	5	--	0.1356	1.047	-0.1055	0.2943	1.993	0.282	0.1	2.8533	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.1	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.9	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.051	0.015	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0013	0.0145	0.0007	0.0127	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2018	11/14/2018	2/11/2019	5/22/2019	11/15/2019	5/19/2020	7/15/2020	11/11/2020	5/28/2021	11/11/2021
Field Parameters														
Elevation	ft NGVD	--	--	369.62	370.12	368.86	369.84	371.94	370.84	370.40	370.95	392.06	369.06	368.36
pH	S.U.	--	5.88 - 8.55	7.23	7.07	7.02	7.12	7.1	7	7.54	7.06	6.5	7.2	6.62
Specific Conductance	µmhos/cm	--	--	770	920	720	570	774	961	675	823	948	763	832
Turbidity	NTU	--	--	2.2	0	0.3	1.3	0.18	4.2	1.54	2.35	2.28	12.87	0
Dissolved Oxygen	mg/L	--	--	7.8	0	1.35	0.41	0.34	0.39	0.48	1.63	0.11	0.56	0
Temperature	°C	--	--	15.73	17.04	14.2	14.4	14.54	12.05	15.03	18.03	14.73	15.35	13.88
ORP	mV	--	--	-36.9	147	142	183	-211.4	121	110	57	137	66	47
Laboratory Parameters														
Antimony	µg/L	6	--	--	--	0.05	--	0.03	0.03	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.34	--	0.26	0.3	--	--	--	--	--
Barium	µg/L	2000	--	--	--	29.9	--	21.9	27.2	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	<0.02	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.08	--	0.01	0.05	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.07	--	0.1	0.09	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	<0.02	--	<0.02	0.059	--	--	--	--	--
Copper	µg/L	--	--	1.19	--	1.46	--	0.66	0.3	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.112	--	<0.02	0.07	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	0.9	--	0.9	0.8	--	--	--	--	--
Selenium	µg/L	50	--	--	--	3.2	--	0.6	1	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	<0.1	--	--	--	--	--
Zinc	µg/L	--	--	5	--	31.6	--	<0.7	0.8	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	24.9	--	24.9	--	23.3	22.3	--	--	--	--	--
Aluminum	µg/L	--	--	5.68	--	3	--	1	<5	--	--	--	--	--
Boron	mg/L	--	0.088	0.109	0.034	0.107	0.02	0.03	0.02	0.03	--	0.02	0.021	0.019
Calcium	mg/L	--	(79.5) 114	108	109	104	--	99.2	92.2	104	--	103	96.8	86.7
Lithium	mg/L	0.04	--	--	--	0.02	--	0.01	0.00639	--	--	--	--	--
Magnesium	mg/L	--	--	38.8	--	37.4	--	34.5	35.5	--	--	--	--	--
Manganese	mg/L	--	--	0.0062	--	0.004	--	0.0035	0.0115	--	--	--	--	--
Potassium	mg/L	--	--	1.1	--	1.28	--	0.95	0.9	--	--	--	--	--
Sodium	mg/L	--	--	38	--	44.4	--	29.4	29.6	--	--	--	--	--
Strontium	mg/L	--	--	0.137	--	0.138	--	0.21	0.118	--	--	--	--	--
Alkalinity	mg/L	--	--	463	--	510	--	478	445	--	--	--	--	--
Bromide	mg/L	--	--	0.118	--	0.1	--	0.08	0.1	--	--	--	--	--
Chloride	mg/L	--	(29.6) 24	17.3	--	16.2	--	18	20.7	26.7	25.8	21.8	21.2	13.3
Fluoride	mg/L	4	0.506	0.42	--	0.39	--	0.38	0.32	0.34	0.37	0.38	0.41	0.37
TDS	mg/L	--	(412.7) 517	520	533	548	517	493	497	470	489	473	480	440
Sulfate	mg/L	--	(52.4) 52	40.8	--	40.3	--	34.5	35.2	34.9	--	34.5	32.2	24.4
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	<0.2	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.0697	--	0.299	0.179	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0503	--	0.0904	0.0453	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.12	--	0.3894	0.2243	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.21	--	2.59	--	0.38	1.7	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	5.2	--	4	--	<0.7	2	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	--	1	--	3	<5	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.004	--	<0.003	--	<0.003	<0.02	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0047	--	0.0023	--	<0.0027	0.0009	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/19/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.79	369.62	369.18	368.57	367.84	367.87	367.87	368.58	367.58	366.39
pH	S.U.	--	6.73 - 7.90	7.69	7.56	7.37	7.08	7.36	7.28	6.96	7.2	7.46	7.68
Specific Conductance	µmhos/cm	--	--	957	870	867	702	674	779	569	665	644	821
Turbidity	NTU	--	--	0.42	0.46	1.37	1.4	0.18	1.41	2.27	3.15	0.7	1.9
Dissolved Oxygen	mg/L	--	--	0.29	8.08	0.68	0.53	0.46	0.34	0.21	0.29	0.28	0.38
Temperature	°C	--	--	16.2	16.86	15.43	15.64	14.71	15.19	15.48	15.99	15.71	13.08
ORP	mV	--	--	224.4	-158.9	54.7	242.3	86.1	53.5	49.8	-3.1	4.1	-25.6
Laboratory Parameters													
Antimony	µg/L	6	--	0.02	0.01	0.01	0.05	0.01	0.02	0.06	0.02	--	--
Arsenic	µg/L	10	--	0.71	0.75	0.75	0.67	0.72	0.68	0.7	0.73	--	--
Barium	µg/L	2000	--	267	267	262	234	220	221	206	238	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.06	0.03	0.03	0.05	0.04	0.03	0.08	0.03	--	--
Chromium	µg/L	100	--	0.1	0.2	0.1	0.082	0.085	0.422	0.204	0.118	--	--
Cobalt	µg/L	6	--	0.602	0.627	0.576	0.546	0.514	0.58	0.56	0.599	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.56	0.46	--
Lead	µg/L	15	--	0.023	0.025	0.023	0.053	0.01	0.034	0.153	0.065	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	1.02	1.02	1.03	0.93	1	1.17	0.91	1.07	--	--
Selenium	µg/L	50	--	0.2	0.2	0.1	0.2	0.1	0.2	0.4	0.2	--	--
Thallium	µg/L	2	--	0.085	0.06	0.074	0.069	0.071	0.075	0.075	0.07	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2.7	0.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	19.9	20	22.8	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	15.5	14	--
Boron	mg/L	--	0.107	0.031	0.027	0.026	0.024	0.015	0.1	0.032	0.044	0.05	--
Calcium	mg/L	--	(79.5) 114	110	93.9	95.9	96.2	89.3	101	86.7	91.3	84	71.9
Lithium	mg/L	0.04	--	0.005	0.005	0.006	0.013	0.01	0.013	0.01	0.003	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	27.6	24.7	25.6	23	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	1.03	--	--
Potassium	mg/L	--	--	--	--	--	--	--	2.9	2.47	2.62	3.21	--
Sodium	mg/L	--	--	--	--	--	--	--	46.2	41.4	50	69.2	--
Strontium	mg/L	--	--	--	--	--	--	--	0.155	0.139	0.14	0.135	--
Alkalinity	mg/L	--	--	--	--	--	--	--	368	376	369	359	--
Bromide	mg/L	--	--	--	--	--	--	--	0.1	0.152	0.154	0.206	--
Chloride	mg/L	--	(29.6) 114	80.4	86.8	90.2	59.1	44.1	39.3	37.9	50.2	70.8	71.2
Fluoride	mg/L	4	0.192	0.1	0.15	0.1	0.1	0.1	0.16	0.1	0.08	0.1	--
TDS	mg/L	--	(412.7) 589	539	532	544	508	481	460	461	465	495	487
Sulfate	mg/L	--	(43.51) 44	38.7	42.2	36.8	33	34	35.4	35.1	36.1	40.4	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.357	1	0.977	0.174	2.27	0.182	0.427	0.513	--	--
Radium-226	pCi/L	--	--	0.235	0.576	0.248	0.413	0.362	0.399	0.511	0.274	--	--
Radium-226/228	pCi/L	5	--	0.592	1.576	1.225	0.587	2.632	0.581	0.938	0.787	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.14	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.051	0.014	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	1.03	1.06	1.04	0.873	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2018	11/14/2018	2/11/2019	5/22/2019	11/15/2019	5/19/2020	11/10/2020	5/28/2021	11/11/2021
Field Parameters													
Elevation	ft NGVD	--	--	369.62	370.06	368.78	369.77	371.86	370.76	370.89	370.03	368.99	368.31
pH	S.U.	--	6.73 - 7.90	7.37	7.23	7.3	7.4	7.31	7.35	7.79	6.83	7.5	6.92
Specific Conductance	µmhos/cm	--	--	720	797	545	476	641	659	481	567	460	538
Turbidity	NTU	--	--	0.89	0	0.41	0.8	0.2	1.1	1.22	2.56	5.86	0
Dissolved Oxygen	mg/L	--	--	0.46	0	0.95	0.36	0.25	0.01	0.12	0.2	1.95	0
Temperature	°C	--	--	15.93	15.56	14.42	14.5	14.58	12	14.85	16.03	15.32	14.09
ORP	mV	--	--	-68.4	120	148	122	-21107	137	114	48	19	96
Laboratory Parameters													
Antimony	µg/L	6	--	--	--	<0.02	--	<0.02	0.03	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.66	--	0.64	0.72	--	--	--	--
Barium	µg/L	2000	--	--	--	153	--	151	126	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	<0.02	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.02	--	0.02	0.04	--	--	--	--
Chromium	µg/L	100	--	--	--	0.05	--	<0.04	0.1	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.336	--	0.346	0.58	--	--	--	--
Copper	µg/L	--	--	0.62	--	0.45	--	0.46	1.34	--	--	--	--
Lead	µg/L	15	--	--	--	<0.02	--	0.02	0.1	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	--	--	1	--	1	1	--	--	--	--
Selenium	µg/L	50	--	--	--	0.2	--	0.1	0.4	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	<0.1	--	--	--	--
Zinc	µg/L	--	--	0.6	--	0.8	--	<0.7	1	--	--	--	--
Silica (Dissolved)	mg/L	--	--	19.8	--	18.5	--	18	17.2	--	--	--	--
Aluminum	µg/L	--	--	10.2	--	5	--	4	10	--	--	--	--
Boron	mg/L	--	0.107	0.046	--	0.139	0.02	0.03	0.02	0.02	0.02	0.019	0.019
Calcium	mg/L	--	(79.5) 114	82.9	61.6	53.7	--	56	41	51.9	44.5	50.4	50
Lithium	mg/L	0.04	--	--	--	<0.009	--	0.02	0.00427	--	--	--	--
Magnesium	mg/L	--	--	23.1	--	14.8	--	15.1	11.4	--	--	--	--
Manganese	mg/L	--	--	0.902	--	0.613	--	0.626	0.685	--	--	--	--
Potassium	mg/L	--	--	3.05	--	3.16	--	2.55	2.2	--	--	--	--
Sodium	mg/L	--	--	66	--	74.4	--	68.4	58.9	--	--	--	--
Strontium	mg/L	--	--	0.136	--	0.09	--	0.0898	0.0688	--	--	--	--
Alkalinity	mg/L	--	--	359	--	300	--	261	252	--	--	--	--
Bromide	mg/L	--	--	0.168	--	0.1	--	0.1	0.1	--	--	--	--
Chloride	mg/L	--	(29.6) 114	58.6	61.1	47.8	--	45.5	31.2	31.3	19.6	16.5	16.6
Fluoride	mg/L	4	0.192	0.17	--	0.17	--	0.17	0.14	0.14	0.20	0.18	0.15
TDS	mg/L	--	(412.7) 589	480	456	408	--	405	343	350	273	270	280
Sulfate	mg/L	--	(43.51) 44	38.7	--	32.5	--	33.2	25.2	25.8	21.4	18.5	17.6
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	<0.2	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.483	--	0.269	0.482	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.162	--	0.156	0.212	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.645	--	0.425	0.694	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.57	--	1.43	--	1.14	0.3	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	--	2	--	<0.7	1	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	0.8	--	1	--	1	<5	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.024	--	0.004	--	<0.003	<0.02	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.849	--	0.616	--	0.615	0.447	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/17/2016	1/11/2017	3/8/2017	5/10/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.85	369.68	369.23	368.64	367.91	367.94	367.96	368.64	367.68	366.47
pH	S.U.	--	6.04 - 9.13	6.8	7.31	7.26	7.29	7.48	7.44	7.54	9.03	7.6	7.74
Specific Conductance	µmhos/cm	--	--	519	582	538	613	525	614	436	597	516	692
Turbidity	NTU	--	--	1.8	0.24	0.31	0.55	0.4	0.81	1.74	0.41	2.95	1.85
Dissolved Oxygen	mg/L	--	--	0.4	--	1.33	0.55	0.49	0.11	0.29	0.32	0.21	0.47
Temperature	°C	--	--	16.8	16.96	16.04	15.1	14.55	15.2	15.46	15.62	15.77	13.14
ORP	mV	--	--	-19	23.5	35.7	108	14.6	2.1	36.6	108.9	-26.4	-36.7
Laboratory Parameters													
Antimony	µg/L	6	--	0.02	0.02	0.02	0.02	0.01	0.02	0.03	0.03	--	--
Arsenic	µg/L	10	--	0.48	0.4	0.31	0.32	0.34	0.31	0.33	0.39	--	--
Barium	µg/L	2000	--	240	246	221	217	210	224	212	247	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.08	0.08	0.02	0.05	0.02	0.01	0.07	0.1	--	--
Chromium	µg/L	100	--	0.3	0.4	0.1	1.21	0.112	0.188	0.151	0.141	--	--
Cobalt	µg/L	6	--	0.617	0.547	0.418	0.452	0.354	0.401	0.466	0.571	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	2.21	0.11	--
Lead	µg/L	15	--	0.078	0.04	0.021	0.066	0.008	0.022	0.07	0.103	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	2.06	2.31	1.96	1.98	1.99	2.27	1.9	2.03	--	--
Selenium	µg/L	50	--	0.04	0.04	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	--	--
Thallium	µg/L	2	--	0.03	0.069	0.02	0.02	0.02	0.04	0.02	0.02	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	12.8	52.4	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.1	17.6	20.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	6.2	3.72	--
Boron	mg/L	--	0.113	0.033	0.013	0.012	0.014	0.004	0.023	0.102	0.017	0.059	--
Calcium	mg/L	--	(79.5) 88	84.3	68.7	70.5	77.9	72.4	79.2	75.8	71.7	80.4	80.1
Lithium	mg/L	0.04	--	0.001	0.013	0.003	0.006	0.013	0.007	0.008	0.0006	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	22.4	22.2	21	23.3	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.975	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.12	1.54	0.97	1.33	--
Sodium	mg/L	--	--	--	--	--	--	--	22.3	21.6	22.1	24.7	--
Strontium	mg/L	--	--	--	--	--	--	--	0.142	0.143	0.128	0.146	--
Alkalinity	mg/L	--	--	--	--	--	--	--	202	210	215	195	--
Bromide	mg/L	--	--	--	--	--	--	--	0.15	0.204	<0.05	0.233	--
Chloride	mg/L	--	(29.6) 73	68.7	69.6	67.6	63.6	67.9	65.4	69.9	69.6	81.5	86
Fluoride	mg/L	4	0.251	0.2	0.22	0.22	0.17	0.21	0.22	0.22	0.17	0.22	--
TDS	mg/L	--	(412.7) 384	350	321	342	356	343	347	367	363	383	--
Sulfate	mg/L	--	(39.69) 40	36.4	37.4	33.4	33.2	34	35.3	37.2	36.8	40	37.9
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	-0.173	0.294	1.1	0.285	0.92	0.583	-0.121	0.222	--	--
Radium-226	pCi/L	--	--	0.0514	--	0.248	0.624	0.796	0.228	0.151	0.292	--	--
Radium-226/228	pCi/L	5	--	-0.1216	0.294	1.348	0.909	1.716	0.811	0.03	0.514	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.18	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.004	0.002	0.098	0.051	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.862	0.948	0.989	0.947	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2018	11/14/2018	2/11/2019	4/1/2019	5/22/2019	7/23/2019	9/11/2019	11/15/2019	2/18/2020	5/19/2020	7/15/2020	11/11/2020	2/2/2021	5/28/2021
Field Parameters																		
Elevation	ft NGVD	--	--	369.69	370.13	368.87	369.84	370.82	371.96	372.67	-----	370.78	369.44	370.44	370.98	370.05	368.20	369.11
pH	S.U.	--	6.04 - 9.13	7.32	7.26	7.35	7.37	7.28	7.31	7.02	7.28	7.31	7.17	7.7	7.22	7.15	7.39	9.64
Specific Conductance	µmhos/cm	--	--	690	782	607	510	945	755	731	813	1070	1869	799	969	1050	953	886
Turbidity	NTU	--	--	0.9	0	0.35	1.4	0.91	0.3	1.9	0.43	0.3	0.2	0.39	0.41	0.35	0.7	0
Dissolved Oxygen	mg/L	--	--	0.44	0	0.94	1.48	0.64	0.26	0.5	0.36	0.01	0.42	0.18	0	0.29	3.5	0
Temperature	°C	--	--	15.94	15.88	14.45	13.2	13.5	14.43	15.9	17.5	14.4	11.76	14.81	17.56	14.67	13.2	15.97
ORP	mV	--	--	-70.7	-11	62.8	60	-16.7	-216.5	50	-52.5	45	109.3	-22	-3	91	85	40
Laboratory Parameters																		
Antimony	µg/L	6	--	--	--	<0.02	--	--	0.02	--	--	0.02	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.32	--	--	0.39	--	--	0.35	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	270	--	--	286	--	--	348	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.04	--	--	<0.01	--	--	0.05	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.05	--	--	0.25	--	--	0.1	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.472	--	--	0.64	--	--	0.632	--	--	--	--	--	--
Copper	µg/L	--	--	0.07	--	0.23	--	--	0.17	--	--	<0.2	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.03	--	--	0.02	--	--	<0.05	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	--	<0.002	--	--	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	2	--	--	2	--	--	2	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.03	--	--	<0.03	--	--	<0.03	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	7.1	--	15.4	--	--	1	--	--	2	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	18.5	--	18.2	--	--	17.9	--	--	17.1	--	--	--	--	--	--
Aluminum	µg/L	--	--	2.86	--	1	--	--	2	--	--	<5	--	--	--	--	--	--
Boron	mg/L	--	0.113	0.033	--	0.07	--	--	0.03	--	--	0.03	--	0.03	--	0.04	--	0.038
Calcium	mg/L	--	(79.5) 88	90.2	83.8	84.1	--	--	88.5	95.6	109	100	--	108	102	109	106	122
Lithium	mg/L	0.04	--	--	--	<0.009	--	--	0.02	--	--	0.00427	--	--	--	--	--	--
Magnesium	mg/L	--	--	27.1	--	24.3	--	--	25.4	--	--	28.3	--	--	--	--	--	--
Manganese	mg/L	--	--	1.2	--	1	--	--	1.17	--	--	1.04	--	--	--	--	--	--
Potassium	mg/L	--	--	1.22	--	1.27	--	--	1.27	--	--	1.57	--	--	--	--	--	--
Sodium	mg/L	--	--	26.7	--	30	--	--	30.8	--	--	44.6	--	--	--	--	--	--
Strontium	mg/L	--	--	0.18	--	0.166	--	--	0.176	--	--	0.203	--	--	--	--	--	--
Alkalinity	mg/L	--	--	235	--	238	--	--	249	--	--	304	--	--	--	--	--	--
Bromide	mg/L	--	--	0.303	--	0.275	--	--	0.344	--	--	0.425	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 73	108	99.7	102	109	107	104	106	125	127	133	135	133	130	117	110
Fluoride	mg/L	4	0.251	0.22	--	0.21	--	--	0.2	--	--	0.17	--	0.17	0.2	0.21	--	0.23
TDS	mg/L	--	(412.7) 384	434	447	434	439	429	460	457	523	537	579	558	519	547	573	580
Sulfate	mg/L	--	(39.69) 40	38.6	--	38.6	--	--	38	--	--	40.8	38.9	40.1	--	39.1	--	40.6
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	--	<0.1	--	--	<0.2	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.138	--	--	0.688	--	--	0.411	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.179	--	--	0.551	--	--	0.158	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.317	--	--	1.239	--	--	0.569	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.35	--	1.5	--	--	0.25	--	--	1.98	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	1	--	3	--	--	<0.7	--	--	3	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	2	--	--	<1	--	--	<5	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.058	--	0.023	--	--	0.067	--	--	<0.02	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	1.19	--	1	--	--	1.23	--	--	1.07	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-16D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	8/5/2021	11/11/2021
Field Parameters					
Elevation	ft NGVD	--	--	369.08	368.38
pH	S.U.	--	6.04 - 9.13	7.2	6.8
Specific Conductance	µmhos/cm	--	--	956	1060
Turbidity	NTU	--	--	2.9	0
Dissolved Oxygen	mg/L	--	--		0.07
Temperature	°C	--	--	16.5	14.4
ORP	mV	--	--	-36	15
Laboratory Parameters					
Antimony	µg/L	6	--	--	--
Arsenic	µg/L	10	--	--	--
Barium	µg/L	2000	--	--	--
Beryllium	µg/L	4	--	--	--
Cadmium	µg/L	5	--	--	--
Chromium	µg/L	100	--	--	--
Cobalt	µg/L	6	--	--	--
Copper	µg/L	--	--	--	--
Lead	µg/L	15	--	--	--
Mercury	µg/L	2	--	--	--
Molybdenum	µg/L	100	--	--	--
Selenium	µg/L	50	--	--	--
Thallium	µg/L	2	--	--	--
Zinc	µg/L	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--
Aluminum	µg/L	--	--	--	--
Boron	mg/L	--	0.113	--	0.038
Calcium	mg/L	--	(79.5) 88	103	105
Lithium	mg/L	0.04	--	--	--
Magnesium	mg/L	--	--	--	--
Manganese	mg/L	--	--	--	--
Potassium	mg/L	--	--	--	--
Sodium	mg/L	--	--	--	--
Strontium	mg/L	--	--	--	--
Alkalinity	mg/L	--	--	--	--
Bromide	mg/L	--	--	--	--
Chloride	mg/L	--	(29.6) 73	110	98.3
Fluoride	mg/L	4	0.251	0.2	0.18
TDS	mg/L	--	(412.7) 384	570	560
Sulfate	mg/L	--	(39.69) 40	--	37
Sulfide	mg/L	--	--	--	--
Radium-228	pCi/L	--	--	--	--
Radium-226	pCi/L	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-17S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/20/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/19/2017	10/4/2017	6/5/2018	11/13/2018	5/23/2019	11/15/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.14	370.11	369.81	369.37	368.47	368.21	368.24	368.89	373.03	369.48	368.74	371.85	371.44	370.99
pH	S.U.	--	7.11 - 7.97	7.77	7.3	7.65	7.7	7.6	7.5	7.3	7.5	7.44	7.41	7.51	7.58	7.64	7.8
Specific Conductance	µmhos/cm	--	--	350	373	344	146	310	60	357	287	351	319	280	322	396	358
Turbidity	NTU	--	--	0.6	0.7	0.79	1	1	1	3	1	0.47	0.4	0.89	0	4	0.7
Dissolved Oxygen	mg/L	--	--	0.6	1.2	0.37	0.1	0.2	1	0.2	0.2	0.38	10.12	1.07	1.56	1.3	0
Temperature	°C	--	--	14.7	17.9	14.55	14.7	13.8	13.5	14.9	14.3	16.82	14.39	13.45	15	13.4	14.43
ORP	mV	--	--	80	44	49.4	-40	62	47	45	30	-50.3	-84.3	121	-48.2	38	23
Laboratory Parameters																	
Antimony	µg/L	6	--	0.01	0.03	0.02	0.03	0.03	0.04	0.04	0.02	--	--	0.02	0.02	0.02	--
Arsenic	µg/L	10	--	0.24	0.26	0.22	0.2	0.21	0.2	0.22	0.22	--	--	0.17	0.18	0.24	--
Barium	µg/L	2000	--	2.12	2.74	2.24	2.4	3.45	3.94	4.37	2.25	--	--	2.11	2.3	2.2	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.08	0.01	0.02	0.02	0.09	0.02	0.06	--	--	0.02	0.03	0.03	--
Chromium	µg/L	100	--	0.5	0.2	0.1	0.066	0.489	0.776	0.233	0.124	--	--	0.07	0.06	0.1	--
Cobalt	µg/L	6	--	0.047	0.105	0.034	0.029	0.04	0.076	0.138	0.053	--	--	0.05	0.04	0.157	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.38	0.69	0.23	0.21	0.39	0.5	--
Lead	µg/L	15	--	0.024	0.098	0.025	0.02	0.02	0.079	0.108	0.038	--	--	0.03	0.05	0.1	--
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	3.98	4.2	4.08	3.39	0.44	0.7	1.14	4.38	--	--	3.73	4.78	4.67	--
Selenium	µg/L	50	--	0.07	0.06	0.08	0.1	0.2	0.1	0.1	0.08	--	--	0.3	0.2	0.4	--
Thallium	µg/L	2	--	0.01	0.01	0.01	0.053	0.02	0.02	<0.01	0.03	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	5.7	0.7	<0.7	14.4	1	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	14	13.7	15.8	13.5	13.2	<0.06	12.2	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	9.55	10.2	4.01	2	17.4	21.3	--
Boron	mg/L	--	0.065	0.015	0.016	0.016	0.017	0.006	0.058	0.041	0.02	0.033	0.045	0.05	0.03	0.02	0.02
Calcium	mg/L	--	(79.5) 41	36.9	34.8	34.8	35.9	32.3	40	35.5	34.4	34.1	32.4	33.1	32.7	28.7	32.8
Lithium	mg/L	0.04	--	<0.0002	0.02	0.003	0.004	0.003	0.008	0.003	<0.0002	--	--	<0.009	0.01	0.00355	--
Magnesium	mg/L	--	--	--	--	--	--	--	19.2	17.5	13.7	12.9	13	13.7	12.9	11.2	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0428	--	0.0311	0.0418	0.0377	0.179	--
Potassium	mg/L	--	--	--	--	--	--	--	0.88	0.79	0.49	0.47	0.5	0.59	0.62	0.6	--
Sodium	mg/L	--	--	--	--	--	--	--	42.5	35.3	31.9	27.7	24.5	25.8	26.5	26.8	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0566	0.0529	0.0363	0.0345	0.0357	0.0374	0.0347	0.031	--
Alkalinity	mg/L	--	--	--	--	--	--	--	231	221	196	189	188	202	193	174	--
Bromide	mg/L	--	--	--	--	--	--	--	0.02	0.05	<0.02	<0.02	0.04	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	(29.6) 16	13.9	15.4	12.3	11.4	11	10.7	10.4	10.8	10.5	10.8	11.5	12	12.6	12.7
Fluoride	mg/L	4	1.08	0.85	0.86	0.73	0.7	0.48	0.46	0.58	0.82	0.89	0.98	0.91	1.08	0.96	0.95
TDS	mg/L	--	(412.7) 269	272	235	233	232	262	251	250	201	214	214	196	217	207	200
Sulfate	mg/L	--	(16.46) 16.5	14.3	14.8	10.9	10.5	10.7	12	13.1	10.2	10.7	9.5	8.4	7.7	6.2	6.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.783	-0.0129	0.027	0.791	-0.155	0.36	0.315	1.07	--	--	-0.0735	0.34	1.03	--
Radium-226	pCi/L	--	--	0.253	0.0439	0.0489	0.803	0.17	0.11	0.118	0.678	--	--	0.0202	0.0449	0.0579	--
Radium-226/228	pCi/L	5	--	1.036	0.031	0.0759	1.594	0.015	0.47	0.433	1.748	--	--	0.0202	0.0202	1.0879	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.35	--	0.56	0.7	2.05	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	1	1	<0.7	0.9	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.2	--	6.2	2	1	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.026	0.004	0.004	0.01	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0028	0.0013	0.0322	0.0881	0.0304	0.041	0.0332	0.0662	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-17S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/11/2021
Field Parameters						
Elevation	ft NGVD	--	--	370.67	369.24	368.89
pH	S.U.	--	7.11 - 7.97	7.51	7.58	7.72
Specific Conductance	µmhos/cm	--	--	403	389	420
Turbidity	NTU	--	--	0.95	24.31	0
Dissolved Oxygen	mg/L	--	--	8.47	0	3.44
Temperature	°C	--	--	16.15	20.2	13.24
ORP	mV	--	--	71	-53	88
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.065	0.02	0.025	0.023
Calcium	mg/L	--	(79.5) 41	33.9	35.9	35.2
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--
Chloride	mg/L	--	(29.6) 16	12.9	11	9.41
Fluoride	mg/L	4	1.08	0.90	0.95	0.81
TDS	mg/L	--	(412.7) 269	211	210	230
Sulfate	mg/L	--	(16.46) 16.5	8.2	5.92	4.62
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-171

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/20/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/19/2017	10/4/2017	12/12/2017	1/3/2018	6/5/2018	8/16/2018	9/26/2018
Field Parameters																	
Elevation	ft NGVD	--	--	370.09	370.13	369.82	369.12	368.47	368.23	368.25	368.89	368.07	367.23	366.84	369.46	370.64	370.06
pH	S.U.	--	6.82 - 7.96	7.55	7.2	7.1	7.8	7.5	7.5	7.2	7.3	7.37	7.49	7.8	7.36	7.48	7.48
Specific Conductance	µmhos/cm	--	--	839	914	1000	607	670	60	768	678	786	530	848	652	728	453
Turbidity	NTU	--	--	13.4	9.8	--	0.1	2	9	2	1	74.99	1.74	12	1.28	0	0.58
Dissolved Oxygen	mg/L	--	--	0.8	0.8	0.9	1.3	0.3	1	0.3	0.2	0.26	0.1	2.34	0.2	0.17	0.37
Temperature	°C	--	--	14.1	16.4	18.3	14.4	13.7	13.8	14.7	14.7	17.05	8.97	7.25	15.11	17.06	14.18
ORP	mV	--	--	116	-73	-40	204	-52	8	46	-59	-90.8	-54	-40.5	-99.8	-69	-77.9
Laboratory Parameters																	
Antimony	µg/L	6	--	0.07	0.05	0.04	0.03	0.02	0.02	0.02	0.02	--	--	--	--	--	--
Arsenic	µg/L	10	--	7.14	7.41	6.45	3.38	3.94	4.61	3.61	3.76	--	--	--	--	--	--
Barium	µg/L	2000	--	168	190	198	149	148	159	133	140	--	--	--	--	--	--
Beryllium	µg/L	4	--	0.02	0.006	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.12	0.13	0.04	0.04	0.008	0.007	0.03	0.02	--	--	--	--	--	--
Chromium	µg/L	100	--	0.6	2.1	0.1	0.059	0.254	0.776	0.196	0.127	--	--	--	--	--	--
Cobalt	µg/L	6	--	1.24	0.778	0.472	0.37	0.391	0.406	0.394	0.372	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.26	0.24	--	--	0.52	--	--
Lead	µg/L	15	--	1.19	0.284	0.133	0.049	0.02	0.026	0.115	0.02	--	--	--	--	--	--
Mercury	µg/L	2	--	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	3.6	3.66	3.08	3.37	3.2	3.62	3.26	3.42	--	--	--	--	--	--
Selenium	µg/L	50	--	0.1	0.05	0.05	<0.03	<0.03	0.05	0.03	<0.03	--	--	--	--	--	--
Thallium	µg/L	2	--	0.03	0.02	0.02	0.056	0.02	0.02	0.01	0.05	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.3	30.8	--	--	2.4	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.1	17	19.8	--	--	16.5	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	3.39	21.5	--	--	5.91	--	--
Boron	mg/L	--	0.098	0.058	0.056	0.051	0.041	0.034	0.079	0.083	0.052	0.061	--	--	0.081	--	--
Calcium	mg/L	--	(79.5) 96	73.7	83.1	88.9	80	72.3	81.4	69.6	64.4	63	--	--	51.2	--	--
Lithium	mg/L	0.04	--	<0.0002	0.004	0.005	0.006	0.009	0.008	0.005	<0.0002	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	21	19.6	17.4	16.5	--	--	13.4	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.155	--	--	--	0.122	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.28	1.36	1.04	1.12	--	--	0.94	--	--
Sodium	mg/L	--	--	--	--	--	--	--	101	93.6	95.4	94.6	--	--	89.1	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.153	0.14	0.119	0.12	--	--	0.104	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	221	226	229	245	--	--	238	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.347	0.396	0.372	0.283	--	--	0.213	--	--
Chloride	mg/L	--	(29.6) 241	195	209	214	164	159	158	151	145	115	86	110	80.2	61.1	--
Fluoride	mg/L	4	0.656	0.57	0.56	0.52	0.56	0.56	0.58	0.61	0.63	0.66	0.76	0.65	0.87	0.98	1.03
TDS	mg/L	--	(412.7) 657	609	569	620	540	513	549	528	509	486	--	471	418	376	--
Sulfate	mg/L	--	(50.8) 51	43.1	49.3	48.1	44.1	43.2	44.9	43.5	44.7	46.6	44.8	--	41	--	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.615	0.386	1	0.499	0.531	0.33	0.191	0.791	--	--	--	--	--	--
Radium-226	pCi/L	--	--	1.31	0.781	0.587	0.263	0.979	0.693	0.816	0.0231	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	1.925	1.167	1.587	0.762	1.51	1.023	1.007	0.8141	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.33	--	--	--	0.57	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.2	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	--	2.64	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.896	0.909	0.741	0.603	--	--	0.546	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.185	0.188	0.141	0.144	--	--	0.113	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-17I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	2/11/2019	4/1/2019	5/23/2019	7/23/2019	9/11/2019	11/15/2019	5/19/2020	11/10/2020	5/27/2021	11/11/2021
Field Parameters														
Elevation	ft NGVD	--	--	369.35	369.89	369.89	372.03	373.11	-----	371.60	370.47	370.86	369.38	369.09
pH	S.U.	--	6.82 - 7.96	7.55	7.68	7.68	7.51	6.65	7.63	7.44	7.94	7.59	7.76	7.78
Specific Conductance	µmhos/cm	--	--	450	391	391	570	488	363	654	487	437	389	500
Turbidity	NTU	--	--	7.42	6.9	6.9	3.67	6.4	5	7	1.02	8.35	14.91	0
Dissolved Oxygen	mg/L	--	--	0.76	0.47	0.47	0.91	1.1	0	0	0	0.42	0	0
Temperature	°C	--	--	12.6	13.5	13.5	17.85	14.8	15.49	13	14.72	17.14	20.46	13.35
ORP	mV	--	--	-77.4	-55	-55	-94.3	-5.3	-112	-87	-56	-70	-55	49
Laboratory Parameters														
Antimony	µg/L	6	--	0.02	--	--	0.02	--	--	0.06	--	--	--	--
Arsenic	µg/L	10	--	3.65	--	--	3.72	--	--	4.5	--	--	--	--
Barium	µg/L	2000	--	86.8	--	--	91.8	--	--	87.9	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.03	--	--	<0.01	--	--	0.05	--	--	--	--
Chromium	µg/L	100	--	<0.04	--	--	<0.04	--	--	0.1	--	--	--	--
Cobalt	µg/L	6	--	0.186	--	--	0.22	--	--	0.306	--	--	--	--
Copper	µg/L	--	--	0.26	--	--	0.07	--	--	0.5	--	--	--	--
Lead	µg/L	15	--	0.03	--	--	0.02	--	--	0.2	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	--	--	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	4.09	--	--	3.01	--	--	2.4	--	--	--	--
Selenium	µg/L	50	--	<0.03	--	--	<0.03	--	--	0.03	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	--	--
Zinc	µg/L	--	--	2	--	--	15.1	--	--	2	--	--	--	--
Silica (Dissolved)	mg/L	--	--	15.8	--	--	<0.06	--	--	14	--	--	--	--
Aluminum	µg/L	--	--	2	--	--	1	--	--	7	--	--	--	--
Boron	mg/L	--	0.098	0.07	--	--	0.04	--	--	0.04	0.04	0.04	0.043	0.039
Calcium	mg/L	--	(79.5) 96	36.5	--	--	45.1	--	--	43.9	40.3	38.1	41	46.4
Lithium	mg/L	0.04	--	<0.009	--	--	0.01	--	--	0.00504	--	--	--	--
Magnesium	mg/L	--	--	9.44	--	--	11.8	--	--	12	--	--	--	--
Manganese	mg/L	--	--	0.0779	--	--	0.112	--	--	0.121	--	--	--	--
Potassium	mg/L	--	--	0.83	--	--	0.84	--	--	0.9	--	--	--	--
Sodium	mg/L	--	--	74.7	--	--	60.5	--	--	49.7	--	--	--	--
Strontium	mg/L	--	--	0.0796	--	--	0.098	--	--	0.103	--	--	--	--
Alkalinity	mg/L	--	--	231	--	--	201	--	--	205	--	--	--	--
Bromide	mg/L	--	--	0.1	--	--	0.2	--	--	2	--	--	0.08	--
Chloride	mg/L	--	(29.6) 241	50.1	--	--	60.2	--	--	41.2	32.8	25.5	30	40.08
Fluoride	mg/L	4	0.656	1.00	1.05	1.08	1.07	1.06	1.08	0.95	1.07	1.16	1.07	0.99
TDS	mg/L	--	(412.7) 657	328	--	--	352	--	--	309	273	239	280	270
Sulfate	mg/L	--	(50.8) 51	29.6	--	--	32.8	--	--	23.2	20.7	16.8	15.5	25.3
Sulfide	mg/L	--	--	<0.1	--	--	<0.1	--	--	<0.02	--	--	--	--
Radium-228	pCi/L	--	--	0.275	--	--	-0.107	--	--	1.33	--	--	--	--
Radium-226	pCi/L	--	--	0.351	--	--	0.403	--	--	0.184	--	--	--	--
Radium-226/228	pCi/L	5	--	0.626	--	--	0.403	--	--	1.514	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.62	--	--	1.24	--	--	2.03	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	3	--	--	3	--	--	3	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	3	--	--	5.77	--	--	<5	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.348	--	--	0.418	--	--	0.364	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0765	--	--	0.106	--	--	0.114	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	12/12/2017	6/6/2018
Field Parameters														
Elevation	ft NGVD	--	--	369.38	369.28	368.85	368.52	367.76	366.84	367.86	368.72	367.13	366.24	369.54
pH	S.U.	--	5.99 - 9.07	6.6	7.54	7.59	7.5	7.32	7.6	8.86	7.23	7.53	8	7.77
Specific Conductance	µmhos/cm	--	--	387	450	454	501	410	540	344	398	402	390	400
Turbidity	NTU	--	--	2.5	0.91	0.78	0.46	1.03	2.6	0.71	2.28	3.31	6	2.1
Dissolved Oxygen	mg/L	--	--	2.3	4.37	5.67	4.46	6.66	4.2	3.36	32.59	4.01	6.2	3.36
Temperature	°C	--	--	16.4	17.49	18.53	18.78	15.15	14.9	16.27	18.01	16.21	14.9	16.2
ORP	mV	--	--	36	13.1	48.9	46.9	198.4	150	160.1	-167.7	76.7	56	43
Laboratory Parameters														
Antimony	µg/L	6	--	0.03	0.02	0.02	0.02	0.03	0.03	0.04	0.05	--	--	0.04
Arsenic	µg/L	10	--	0.53	0.47	0.46	0.43	0.47	0.49	0.47	0.42	--	--	0.45
Barium	µg/L	2000	--	18.5	19.6	19.4	19.1	19.3	21.9	17.7	21.9	--	--	18.5
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.004	<0.04	--	--	<0.004
Cadmium	µg/L	5	--	0.02	0.02	0.006	0.02	0.01	0.01	0.01	0.01	--	--	0.01
Chromium	µg/L	100	--	0.4	0.7	0.3	0.292	0.401	0.536	0.3	0.272	--	--	0.233
Cobalt	µg/L	6	--	0.104	0.033	0.03	0.023	0.022	0.053	0.027	0.006	--	--	0.02
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.27	0.35	--	0.52
Lead	µg/L	15	--	0.095	0.042	0.025	0.023	0.024	0.095	0.023	0.024	--	--	0.024
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	1.78	1.85	1.74	1.63	1.74	2	1.62	2.31	--	--	2.04
Selenium	µg/L	50	--	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.2	--	--	0.3
Thallium	µg/L	2	--	0.01	0.01	<0.01	<0.01	0.058	<0.01	<0.01	<0.01	--	--	<0.01
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	214	--	3.7
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	23.5	22.8	26.2	--	22.5
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	1	16.5	--	6.55
Boron	mg/L	--	0.046	0.002	0.011	0.007	0.015	0.002	0.018	0.033	0.034	0.027	--	0.039
Calcium	mg/L	--	(79.5) 62	55.1	52.8	52	60	54.4	59	56	55.9	59.8	--	52.8
Lithium	mg/L	0.04	--	0.003	0.013	0.003	0.009	0.007	0.002	0.005	<0.0002	--	--	0.005
Magnesium	mg/L	--	--	--	--	--	--	--	21.3	20.5	20.7	21.8	--	19.2
Manganese	mg/L	--	--	--	--	--	--	--	--	--	<0.0001	--	--	0.0008
Potassium	mg/L	--	--	--	--	--	--	--	0.6	0.69	0.57	0.61	--	0.58
Sodium	mg/L	--	--	--	--	--	--	--	18.9	16.6	20.6	19.3	--	15.5
Strontium	mg/L	--	--	--	--	--	--	--	0.0604	0.0601	0.58	0.061	--	0.0554
Alkalinity	mg/L	--	--	--	--	--	--	--	202	195	212	210	--	183
Bromide	mg/L	--	--	--	--	--	--	--	<0.02	0.03	0.061	<0.02	--	0.02
Chloride	mg/L	--	(29.6) 16	15	15.1	14.7	14.7	14.4	14.8	15.7	15.9	17.7	18	17.5
Fluoride	mg/L	4	0.689	0.61	0.064	0.62	0.63	0.54	0.58	0.6	0.54	0.6	0.6	0.66
TDS	mg/L	--	(412.7) 313	275	292	285	294	287	298	296	304	300	--	283
Sulfate	mg/L	--	23.6	21.2	21.1	17.4	14.9	15.9	16.5	17.6	18.8	20.1	21.1	18.7
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4
Radium-228	pCi/L	--	--	0.129	0.0598	0.213	0.14	1.71	-0.0315	0.0831	0.989	--	--	--
Radium-226	pCi/L	--	--	0.0309	0.513	0.239	0.344	0.357	0.0305	0.152	0.109	--	--	--
Radium-226/228	pCi/L	5	--	0.1599	0.5728	0.452	0.484	2.067	-0.001	0.2351	1.098	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.2	--	--	0.29
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	5.1	--	--	1
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	18.3	--	--	1
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.008	0.017	--	0.005
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0001	0.0001	0.0029	<0.0002	--	<0.0002

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-21S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/14/2018	2/12/2019	4/1/2019	5/21/2019	11/14/2019	2/18/2020	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/28/2021	8/5/2021	11/11/2021
Field Parameters																
Elevation	ft NGVD	--	--	368.42	370.37	371.3	371.43	370.65	369.05	369.92	400.27	370.10	367.97	369.07	369.07	368.47
pH	S.U.	--	5.99 - 9.07	7.34	7.74	7.8	7.59	7.54	7.53	8.11	7.93	7.59	7.68	10.28	7.5	7.83
Specific Conductance	µmhos/cm	--	--	380	318	404	424	530	856	347	416	499	529	450	519	585
Turbidity	NTU	--	--	1.67	2.8	2.45	0.29	2.8	8.71	0.65	0.46	1.9	1.3	0	5.95	0
Dissolved Oxygen	mg/L	--	--	9.55	7.1	3.89	5.26	7	6.64	5.6	7.8	6.95	6.5	5.78		5.6
Temperature	°C	--	--	14.14	15.2	14.3	15.98	15.5	11.8	12.23	15.6	15.76	13.4	17	16.49	14.7
ORP	mV	--	--	165.5	189	21.1	-194.8	121	132.4	136	141	148	178	86	111	178
Laboratory Parameters																
Antimony	µg/L	6	--	0.02	--	--	<0.02	0.03	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.44	--	--	0.44	0.46	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	17.8	--	--	15.9	16.2	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	<0.02	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.01	--	--	0.01	0.01	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	0.232	--	--	0.287	0.418	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	0.06	--	--	0.02	0.03	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.53	--	--	0.13	0.4	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.07	--	--	0.02	<0.05	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	<0.002	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2	--	--	2	2	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	0.3	--	--	0.1	0.1	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	<0.1	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	0.8	--	--	<0.7	<0.7	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	23.2	--	--	21.3	18.8	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	17	--	--	5.26	10	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.046	0.06	<0.02	--	<0.02	0.01	--	<0.02	--	<0.02	--	0.011	--	0.012
Calcium	mg/L	--	(79.5) 62	55	--	--	52.5	50.4	--	49.1	--	50.9	--	62.6	--	57.1
Lithium	mg/L	0.04	--	0.03	--	--	<0.009	0.00321	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	19.6	--	--	17	17.3	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.0041	--	--	0.0009	0.002	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	0.88	--	--	0.55	0.3	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	17.1	--	--	13	15.3	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.0553	--	--	0.0506	0.0508	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	193	--	--	167	171	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	<0.04	--	--	<0.04	<0.04	--	--	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 16	17.9	17.9	17.5	16	17.4	--	18	16.1	18.1	--	19.1	--	19.3
Fluoride	mg/L	4	0.689	0.66	--	--	0.65	0.73	0.79	0.76	0.77	0.83	0.85	0.81	0.78	0.74
TDS	mg/L	--	(412.7) 313	278	--	--	258	241	--	238	228	259	--	300	--	320
Sulfate	mg/L	--	23.6	17.0	--	--	14.1	15.8	--	15.1	--	16.4	--	18.4	--	20
Sulfide	mg/L	--	--	<0.07	--	--	<0.1	<0.2	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.0549	--	--	0.366	0.39	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.0246	--	--	-0.0257	0.0413	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.0795	--	--	0.366	0.4313	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.13	--	--	0.27	<0.2	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	<0.7	--	--	<0.7	0.8	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	--	5	<5	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	--	--	<0.003	<0.02	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	<0.0002	--	--	<0.0002	<0.0005	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-211

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	6/6/2018	11/13/2018	5/21/2019	11/14/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.3	369.19	368.77	368.43	367.68	367.8	368.03	368.24	367	369.44	368.39	371.41	370.62	369.92
pH	S.U.	--	6.63 - 8.69	7.99	7.56	7.56	7.3	7.35	7.5	8.56	7.44	7.44	7.54	7.69	7.31	7.48	7.38
Specific Conductance	µmhos/cm	--	--	548	500	488	432	397	520	361	422	399	430	402	403	526	386
Turbidity	NTU	--	--	0.73	0.65	1.04	0.97	2.82	2.5	1.34	1.02	3.21	1.71	1.18	0	4	1.08
Dissolved Oxygen	mg/L	--	--	0.5	1.63	1.49	1.88	1.53	0.3	0.55	0.76	0.2	0.17	0.22	0.36	0.4	2.47
Temperature	°C	--	--	16.88	17.39	16.17	16.95	13.68	15.1	16.39	17.11	15.47	15.55	14.87	16.34	15.6	14.95
ORP	mV	--	--	-9.2	-185.2	-16.7	105.2	21.1	-3	160.7	2.1	-10.3	-13.4	8.7	67.5	31	109
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	0.02	0.02	0.02	0.02	0.03	0.05	0.03	--	0.02	<0.02	<0.02	0.05	--
Arsenic	µg/L	10	--	1.55	1.67	1.55	1.41	1.39	1.08	1.19	1.38	--	0.98	1.63	0.65	1.12	--
Barium	µg/L	2000	--	127	136	121	126	126	123	116	123	--	121	120	106	110	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.004	<0.004	--	<0.004	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.02	0.02	0.04	0.02	0.01	0.01	0.01	--	0.03	0.01	0.07	--	
Chromium	µg/L	100	--	0.1	0.2	0.1	0.386	1.04	0.349	0.125	0.143	--	0.061	0.1	0.1	0.2	--
Cobalt	µg/L	6	--	0.514	0.558	0.422	0.524	0.437	0.437	0.412	0.517	--	0.398	0.685	0.275	0.664	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.07	0.09	0.11	0.51	0.77	0.3	--
Lead	µg/L	15	--	0.02	0.021	0.046	0.035	<0.004	0.01	0.022	0.033	--	0.026	0.181	0.02	0.08	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	4.92	5.25	4.46	4.4	4.63	4.31	4.06	4.18	--	4.69	5.13	5.01	4.85	--
Selenium	µg/L	50	--	<0.03	0.05	0.03	0.09	0.07	0.07	0.05	0.05	--	<0.03	<0.03	<0.03	0.1	--
Thallium	µg/L	2	--	0.03	0.03	0.02	0.02	0.04	0.02	0.03	0.03	--	0.03	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	0.6	0.9	1	11.1	1	1	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.8	18.1	19.7	17.6	17.7	16.6	15.4	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	4.55	2.56	3.39	17.2	6.03	10	--
Boron	mg/L	--	0.092	0.007	0.012	0.011	0.012	<0.002	0.028	0.027	0.08	0.029	0.034	0.08	<0.02	0.01	<0.02
Calcium	mg/L	--	(979.5) 73	69	64.7	65.1	68.4	59.5	66.5	62.9	60.1	63.9	66.5	61.5	62.4	56.5	58.5
Lithium	mg/L	0.04	--	<0.0002	0.019	0.004	0.006	0.005	0.007	0.008	0.004	--	0.007	<0.009	<0.009	0.00335	--
Magnesium	mg/L	--	--	--	--	--	--	--	20.9	20.1	18.4	20	21.2	19.3	17.5	16.8	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.428	--	0.476	0.535	0.371	0.582	--
Potassium	mg/L	--	--	--	--	--	--	--	0.92	1.08	1.26	0.8	0.9	1.21	0.82	0.7	--
Sodium	mg/L	--	--	--	--	--	--	--	16	15.4	13	15	15.5	14.7	13.3	14.4	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0931	0.0922	0.0805	0.0889	0.096	0.0887	0.0829	0.0797	--
Alkalinity	mg/L	--	--	--	--	--	--	--	212	222	221	215	230	224	199	199	--
Bromide	mg/L	--	--	--	--	--	--	--	0.03	0.05	<0.02	0.04	0.04	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	(79.5) 22	21.1	21.7	20.4	20	19.9	19.6	21	20.4	20.5	20.6	20.2	18.1	17.5	19.3
Fluoride	mg/L	4	0.38	0.33	0.36	0.34	0.34	0.3	0.32	0.34	0.3	0.31	0.38	0.36	0.36	0.38	0.35
TDS	mg/L	--	(412.7) 359	331	334	305	317	292	275	306	322	306	317	294	278	262	283
Sulfate	mg/L	--	50	46.2	47.9	43.2	40.4	41	39.6	42.4	43.6	45.7	44.6	43.4	36	35.5	38.8
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.126	0.036	0.676	0.0796	1.78	0.281	0.108	0.45	--	--	0.638	0.458	0.113	--
Radium-226	pCi/L	--	--	0.223	1.37	0.305	0.576	0.953	0.601	0.483	0.775	--	--	0.315	0.284	0.579	--
Radium-226/228	pCi/L	5	--	0.349	1.406	0.981	0.6556	2.733	0.882	0.591	1.225	--	--	0.953	0.742	0.692	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.09	--	0.11	0.23	0.21	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.7	--	1	1	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	<0.8	<1	4	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.019	<0.0004	0.078	0.062	0.024	0.028	<0.003	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.37	0.427	0.425	0.441	0.427	0.441	0.346	0.315	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-211

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	2/3/2021	5/27/2021	8/4/2021	11/11/2021
Field Parameters								
Elevation	ft NGVD	--	--	370.10	368.10	369.06	368.9	368.48
pH	S.U.	--	6.63 - 8.69	7	7.53	9.72	7.4	7.71
Specific Conductance	µmhos/cm	--	--	518	452	413	469	500
Turbidity	NTU	--	--	3.55	0.3	0	1.63	0
Dissolved Oxygen	mg/L	--	--	0.02	0.2	0		0
Temperature	°C	--	--	15.73	14.7	16.98	16.15	14.21
ORP	mV	--	--	61	75	-10	7	171
Laboratory Parameters								
Antimony	µg/L	6	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--	--
Boron	mg/L	--	0.092	<0.02	--	0.011	--	0.011
Calcium	mg/L	--	(979.5) 73	58.6	--	57.1	--	57.2
Lithium	mg/L	0.04	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	<0.02	--	--
Chloride	mg/L	--	(79.5) 22	18.0	--	17.9	--	18.2
Fluoride	mg/L	4	0.38	0.45	0.46	0.48	0.43	0.4
TDS	mg/L	--	(412.7) 359	266	--	290	--	280
Sulfate	mg/L	--	50	36.4	--	35.4	--	35.8
Sulfide	mg/L	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-21D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	1/3-11/18	6/6/2018	11/13/2018	5/22/2019	11/14/2019	5/19/2020
Field Parameters																		
Elevation	ft NGVD	--	--	369.44	369.34	368.92	368.59	367.86	368.07	367.86	368.42	367.17	366.66	369.58	368.38	371.4	370.64	
pH	S.U.	--	6.71 - 8.73	8.14	7.76	7.69	7.47	7.19	7.6	7.44	8.48	7.48	7.03	7.65	7.66	7.47	7.41	7.55
Specific Conductance	µmhos/cm	--	--	591	544	478	585	441	60	493	531	449	564	470	451	511	670	449
Turbidity	NTU	--	--	2.82	0.48	1.93	0.33	3.09	1.9	1.42	0.55	1.01	1.11	2.43	1.87	0.87	11	1.18
Dissolved Oxygen	mg/L	--	--	0.53	0.17	0.49	0	1.82	0.2	0.22	0.47	0.31	18.7	0.18	0.33	1.88	0	0.66
Temperature	°C	--	--	15.24	16.81	15.93	15.25	12.99	15	16.7	17.58	16.26	14.93	15.45	14.15	15.44	16.2	14.87
ORP	mV	--	--	80.4	26.3	78.1	51.1	141.4	51	40	168.3	21.3	170.4	25.1	23.2	37.3	56	35
Laboratory Parameters																		
Antimony	µg/L	6	--	0.08	0.08	0.06	0.06	0.07	0.07	0.08	0.12	--	--	0.11	0.07	0.08	0.19	--
Arsenic	µg/L	10	--	1.07	1.06	0.95	0.86	0.99	0.92	0.97	1.04	--	--	0.84	0.89	1.04	1.08	--
Barium	µg/L	2000	--	241	240	226	206	220	220	216	226	--	--	218	201	202	203	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.004	<0.004	--	--	0.005	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.03	0.02	0.03	0.02	0.02	0.04	0.02	--	--	0.13	0.02	0.03	0.16	--
Chromium	µg/L	100	--	0.2	0.3	0.1	0.05	0.124	0.433	0.165	0.11	--	--	0.091	0.06	<0.04	0.759	--
Cobalt	µg/L	6	--	0.216	0.21	0.195	0.171	0.202	0.182	0.208	0.203	--	--	0.196	0.224	0.234	0.397	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.11	2.7	--	1.16	0.16	0.16	1.02	--
Lead	µg/L	15	--	0.107	0.075	0.066	0.056	0.091	0.092	0.118	0.089	--	--	0.229	0.1	0.09	0.776	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	6.31	6.66	6.13	5.33	6.09	5.68	5.07	5.29	--	--	5.17	4.76	5.37	5.29	--
Selenium	µg/L	50	--	0.2	0.2	0.3	0.3	0.2	0.5	0.6	0.5	--	--	0.2	0.05	0.04	0.08	--
Thallium	µg/L	2	--	0.03	0.02	0.03	0.02	0.04	0.02	0.02	0.03	--	--	0.03	<0.1	<0.1	0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	187	--	6.5	1	1	4	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.5	17.6	19.6	--	17.6	17	16.9	16	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	6.79	14.1	--	17.2	9.86	5	65.5	--
Boron	mg/L	--	0.071	0.022	0.015	0.015	0.013	0.004	0.024	0.107	0.015	0.092	0.088	0.03	0.04	<0.02	0.01	0.02
Calcium	mg/L	--	(79.5) 83	74.2	60.6	70.4	74.7	67.3	76.2	71.5	70.9	67.8	--	70.7	62.1	69.3	69.4	69.2
Lithium	mg/L	0.04	--	0.002	0.025	0.005	0.007	0.009	0.005	0.013	0.0005	--	--	0.006	0.01	<0.009	0.0044	--
Magnesium	mg/L	--	--	--	--	--	--	--	25	24.3	23.9	22.7	--	23.6	21.3	23.1	22.3	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.592	--	--	0.596	0.634	0.717	0.803	--
Potassium	mg/L	--	--	--	--	--	--	--	2.11	2.41	2.44	3.91	--	1.97	3.95	2.81	3.49	--
Sodium	mg/L	--	--	--	--	--	--	--	18.1	17.2	19.7	20.8	--	15.7	17.7	15.1	17.2	--
Strontium	mg/L	--	--	--	--	--	--	--	0.144	0.142	0.144	0.168	--	0.147	0.191	0.189	0.21	--
Alkalinity	mg/L	--	--	--	--	--	--	--	247	271	277	262	--	268	268	286	266	--
Bromide	mg/L	--	--	--	--	--	--	--	<0.05	0.08	0.07	<0.05	--	0.05	0.05	0.04	0.05	--
Chloride	mg/L	--	(29.6) 20	19.2	19.6	18.9	19.1	19.4	18.9	19.9	19.5	18.5	--	19.9	18.8	19.1	19.2	19.9
Fluoride	mg/L	4	0.407	0.36	0.38	0.36	0.33	0.36	0.33	0.35	0.3	0.32	--	0.4	0.34	0.36	0.32	0.26
TDS	mg/L	--	(412.7) 365	328	299	315	346	332	304	339	332	339	--	347	314	348	323	328
Sulfate	mg/L	--	43.22	39.2	41	35.5	32	34.4	35.1	37.1	36.5	37.4	--	38.4	35.2	36.8	38.6	33.3
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.441	0.77	0.604	0.688	0.722	0.518	0.0415	0.501	--	--	--	1.47	0.59	0.525	--
Radium-226	pCi/L	--	--	0.126	0.658	0.23	0.39	0.422	0.42	0.408	0.355	--	--	--	0.469	0.669	0.403	--
Radium-226/228	pCi/L	5	--	0.567	1.428	0.834	1.078	1.144	0.938	0.4495	0.856	--	--	--	1.939	1.259	0.928	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.39	--	--	0.08	1.33	0.85	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.4	--	--	0.7	3	3	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.16	--	--	2	1	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.053	0.016	--	<0.002	0.007	0.005	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.616	0.625	0.62	0.646	--	0.567	0.657	0.684	0.611	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-21D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	5/27/2021	11/11/2021
Field Parameters						
Elevation	ft NGVD	--	--	370.09	369.05	368.46
pH	S.U.	--	6.71 - 8.73	6.99	9.68	7.82
Specific Conductance	µmhos/cm	--	--	599	538	555
Turbidity	NTU	--	--	1.65	0	0
Dissolved Oxygen	mg/L	--	--	0.36	0	6.48
Temperature	°C	--	--	15.31	19.48	13.77
ORP	mV	--	--	120	-6	176
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.071	<0.02	0.014	0.014
Calcium	mg/L	--	(79.5) 83	70.9	69.8	69.7
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	0.04	--
Chloride	mg/L	--	(29.6) 20	19.5	19.8	19.5
Fluoride	mg/L	4	0.407	0.38	0.4	0.38
TDS	mg/L	--	(412.7) 365	318	330	330
Sulfate	mg/L	--	43.22	37.1	36.4	34.2
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

Notes:

GWPS - Groundwater Protection Standard
MCL - USEPA Maximum Contaminant Levels
RSL - USEPA Generic Tables for Residential Tapwater, May 2018, TR=1E-06, THQ=1.0
Field Parameter Units
ft NGVD - Feet, National Geodetic Vertical Datum of 1929 (also known as mean sea level (MSL))
°C - degrees Celcius
S.U. - Standard Units
µmhos/cm - micromhos per centimeter
mg/L - milligrams per liter
ORP - milliVolts (mV)
NTU - Nephelometric Turbidity Units
Laboratory Parameter Units
pCi/L picoCuries per Liter

Prepared by: kdr 6/1/2022
Checked by: twh 6/22/2022

Table A-2
Summary of Leachate Pond Data
CCR Landfill
Rockport Plant, Rockport, Indiana

Source: American Electric Power

Parameter	Unit	Combined North/West Leachate Pond			North Leachate Pond					West Leachate Pond
		7/13/2016	7/19/2016	1/24/2017	7/13/2016	7/19/2016	9/14/2016	1/24/2017	9/29/2017	9/29/2017
Boron	mg/L	1.19	2.17	2.77	0.634	0.684	0.818	2.07	2.7	11.44
Calcium	mg/L	22.8	41.3	149	19.9	22.5	21.8	80.8	-	-
Chloride	mg/L	38.5	63.7	191	17.3	19.7	9.31	18.4	-	-
Fluoride	mg/L	0.27	0.41	0.32	0.25	0.2	0.57	0.23	-	-
Total Dissolved Solids	mg/L	918	1870	1870	332	434	310	656	-	-
Sulfate	mg/L	617	1180	1020	168	254	97.6	365	-	-
pH	SU	-	-	-	-	-	-	-	-	-

Notes:

mg/L: milligrams per liter

SU: standard unit

-: Not sampled

Laboratory data reports incorrectly identified Combined North/West Leachate Pond as North/South Leachate Pond. There is no South Leachate Pond.

Prepared by: kdr 6/1/2020

Checked by: tmr 6/1/2020

Table A-3
Summary of Isotope Data
CCR Landfill
Rockport Plant, Rockport, Indiana

Sample Identifier	B (mg/L)	$\delta^{11}\text{B}$	Sr (mg/L)	$^{87}\text{Sr}/^{86}\text{Sr}$
Landfill Leachate Pond North	2.7	-0.93	1.80	0.711955
Landfill Leachate Pond West	11.4	-1.64	2.86	0.711919
MW-17I	0.058	26.86	0.093	0.710547
MW-8I	0.037	23.51	0.140	0.709697
MW-8S	0.020	16.33	0.048	0.709272
MW-11S	0.060	24.01	0.052	0.709447
MW-14S	0.017	17.78	0.094	0.710566
MW-15I	0.042	35.32	0.082	0.710333
MW-21S	0.016	20.66	0.055	0.710142

Note: monitoring well boron concentrations are averages of first eight rounds of sampling.



wood.

Appendix B
Full Size Geochemical Exhibits

Exhibit 3-4. Boron to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison.

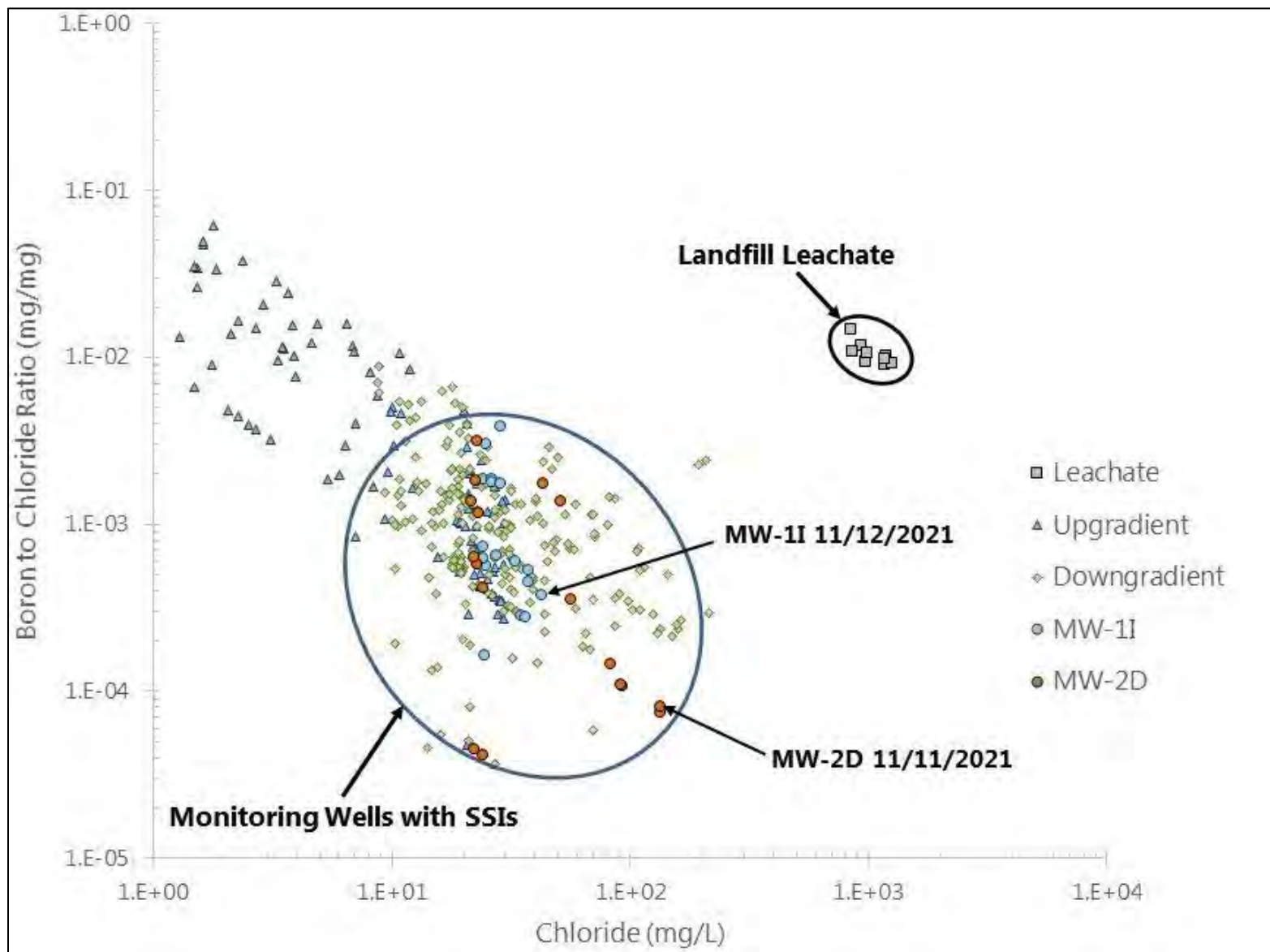


Exhibit 3-5. Sulfate to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison.

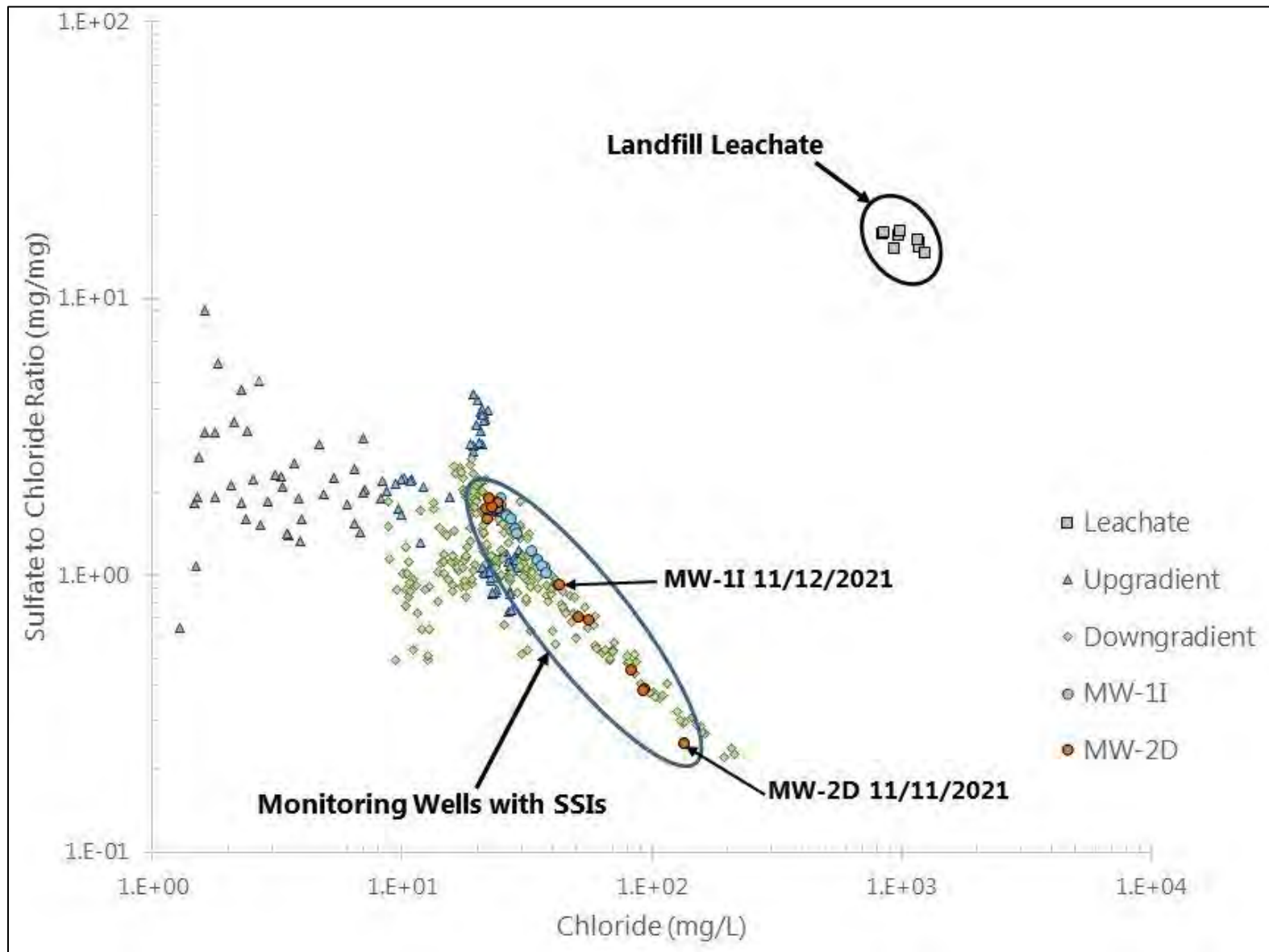


Exhibit 3-6. Boron isotope ratio ($\delta^{11}\text{B}$) versus boron concentration for CCR Landfill leachate and monitoring wells for comparison.

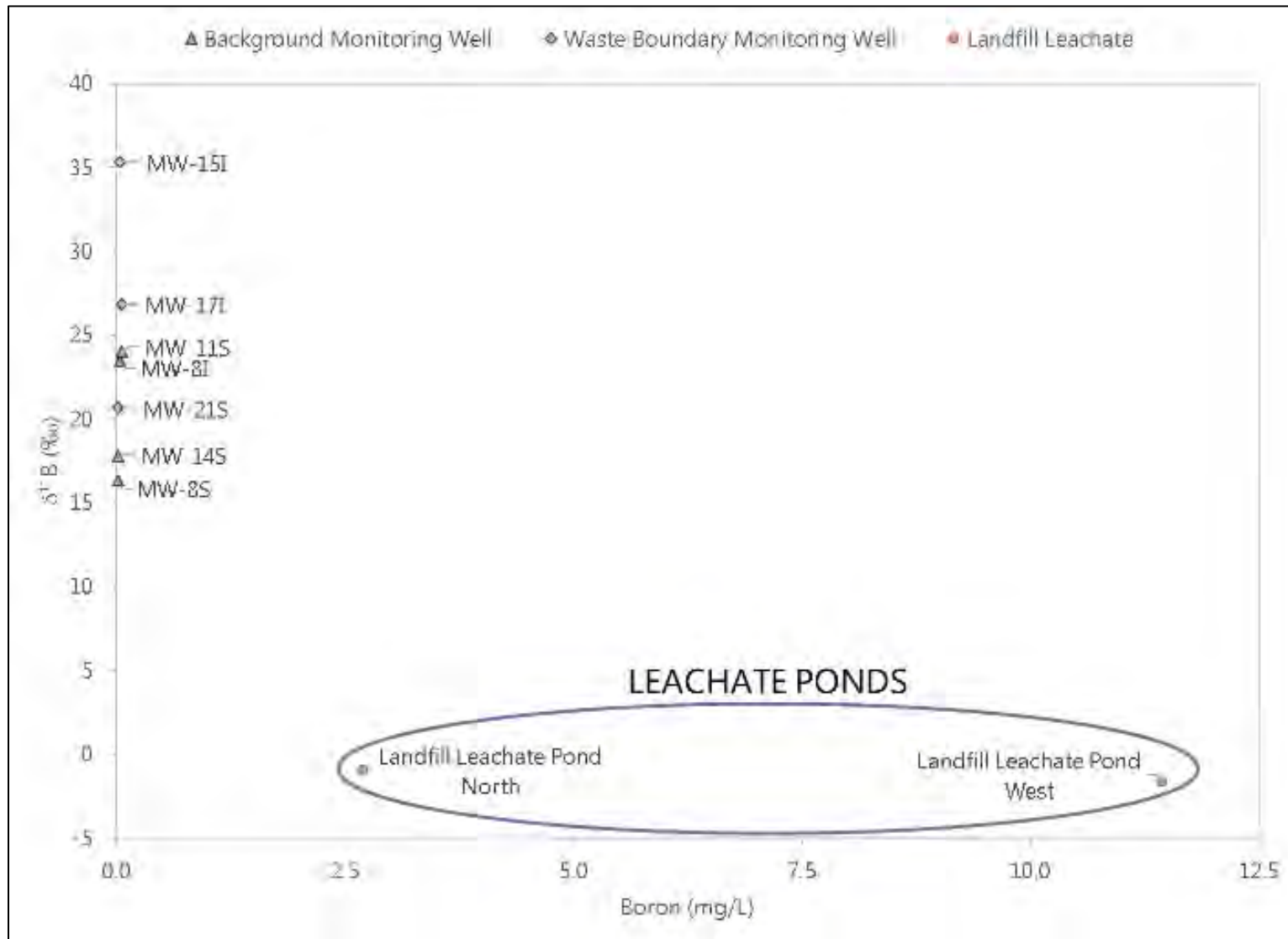
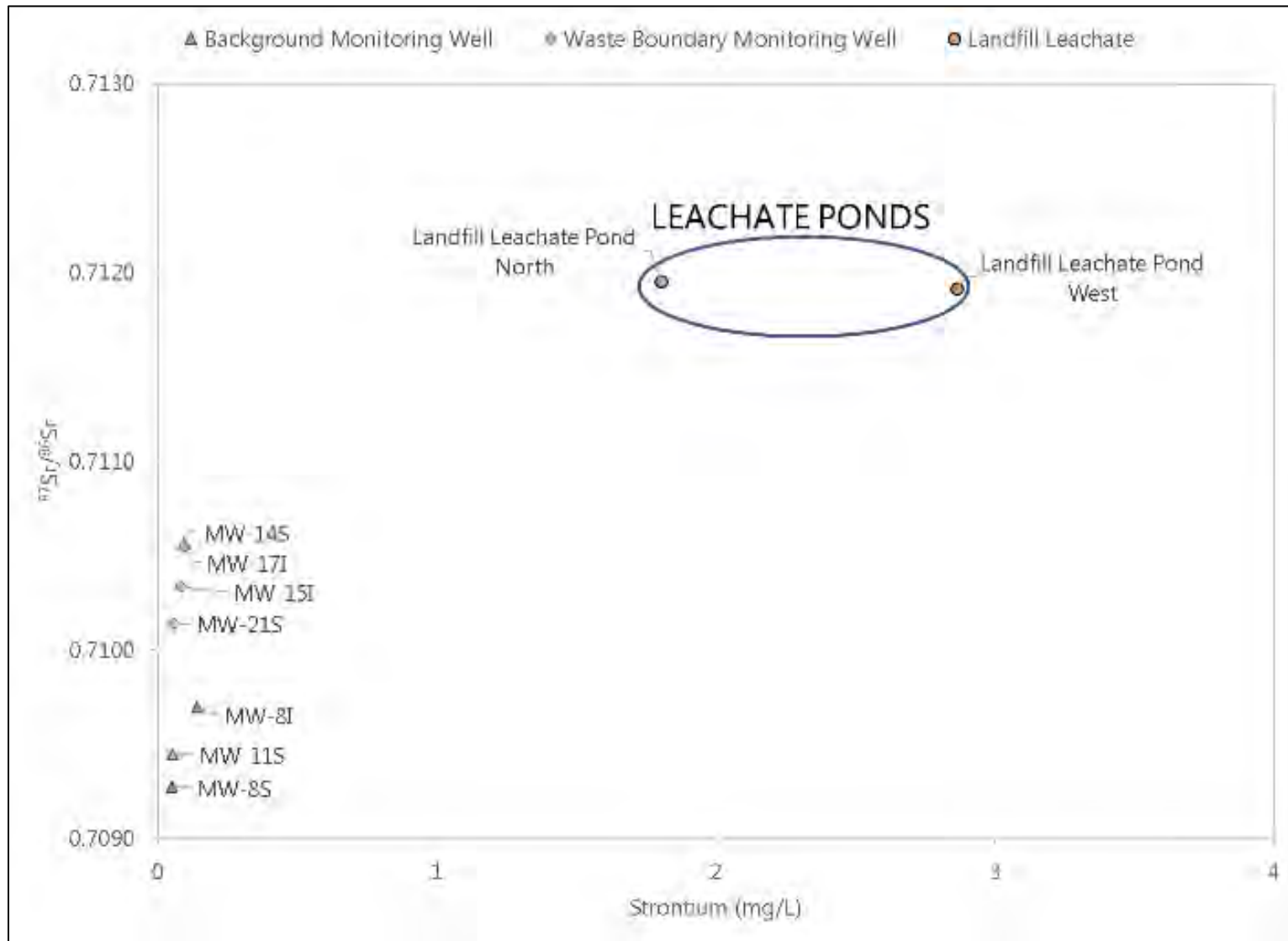


Exhibit 3-7. Strontium isotope ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) versus strontium concentration for CCR Landfill leachate and monitoring wells for comparison.





Alternative Source Demonstration for Appendix III Constituents, CCR Landfill

American Electric Power Service Corporation
Rockport Generating Station, Rockport, Spencer County, Indiana
Project # 7650202784

Prepared for:

American Electric Power Service Corporation

1 Riverside Plaza, Columbus, Ohio 43215

28 October 2022



28 October 2022

Mr. David Miller
Director, Land Environment & Remediation Services
American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215
Email: damiller@aep.com

Wood Environment & Infrastructure Solutions, Inc.
2030 Falling Waters Rd, Suite 300
Knoxville, TN 37922
USA
T: (865) 671-6774
www.woodplc.com

Dear Mr. Miller:

Wood Environment & Infrastructure Solutions, Inc. (Wood) has prepared this Alternative Source Demonstration (ASD) for the CCR Landfill located at the AEP Rockport Plant in Rockport, Indiana. As detailed in this report, the results of this ASD conclude that statistically significant increases (SSIs) identified in samples from the waste boundary monitoring wells are not caused by releases from the CCR Landfill. We are available to discuss the details of this report at your convenience should you require additional information.

We very much appreciate working with AEP on this project. If you require additional information about this report, please feel free to contact Thomas Hensel at (865) 671-6774.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Konrad W. Quast, PhD
Senior Hydrogeologist

Thomas W. Hensel, PG
Senior Project Manager

Attachments

cc: Justin Jent, PE, American Electric Power Service Corporation



Alternative Source Demonstration for Appendix III Constituents, CCR Landfill

American Electric Power Service Corporation
Rockport Generating Station, Rockport, Spencer County, Indiana
Project # 7650202784

Prepared for:

American Electric Power Service Corporation
1 Riverside Plaza, Columbus, Ohio 43215

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
2030 Falling Waters Rd, Suite 300
Knoxville, TN 37922
USA
T: (865) 671-6774

28 October 2022

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Appendices

Appendix A	Analytical Data Tables
Appendix B	Full Size Geochemical Exhibits

Executive Summary

American Electric Power (AEP) operates two units at the Rockport Plant for management of coal combustion residuals (CCR): the bottom ash ponds (BAP), and the CCR Landfill. Both are regulated under the federal CCR Rule (40 CFR Part 257) that became effective in October 2015 and modified in July 2018.

The CCR Landfill has been in the detection phase of groundwater monitoring as part of its compliance with the rule. The most recent statistical analysis of Appendix III constituents identified statistically significant increases (SSIs) above background for chloride in waste boundary monitoring wells MW-1I and MW-2I, and chloride and total dissolved solids (TDS) at MW-2D.

This alternative source demonstration (ASD) evaluates the occurrence of SSIs in terms of site geochemistry, hydrogeologic setting, and with respect to supplementary data collected to support the evaluation. Based on the analysis presented in this ASD, CCR Landfill leachate can be excluded as a source of Appendix III SSIs for the following reasons:

- Boron occurs naturally at low concentration in site groundwater, in similar concentrations in background and downgradient wells. Boron occurs at concentrations approximately three orders-of-magnitude greater in the CCR Landfill leachate as compared to site groundwater, and is a conservative ion, making it an excellent indicator for impacts from landfill leachate impacts in groundwater. If landfill leachate were impacting groundwater, boron would be expected to be detected in multiple waste boundary wells and at statistically significant concentrations above background; no SSIs for boron have ever been detected at the site. Furthermore, the boron that is present has been shown to be isotopically different.
- Sulfate is another common indicator for CCR leachate impacts and occurs naturally in site groundwater (at similar concentration ranges in background and downgradient wells) and is elevated in the CCR Landfill leachate at concentrations approximately three orders-of-magnitude above background monitoring wells. No SSIs for sulfate have ever been determined in any of the waste boundary well samples.
- Chloride is a naturally occurring and conservative ion, which occurs in the CCR Landfill leachate at concentrations about two orders-of-magnitude above groundwater concentrations. Spatial trends can be observed in **Exhibits 3-4** and **3-5** and indicate that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas. May 2022 data and July 2022 verification data indicated groundwater concentrations of chloride over background in MW-1I, MW-2I, and MW-2D. However, because the SSIs indicated for chloride are not associated with SSIs for boron and sulfate, the CCR Landfill leachate is not considered a source for the chloride detected in groundwater.
- The same conclusion can be drawn regarding TDS, for which an occasional SSI is not consistently associated with boron or sulfate. The observed SSI (TDS) in MW-2D, appears to be related to the natural variation in groundwater quality, along with a spatial trend of increasing TDS with distance from recharge areas.
- Ion ratio cross plots of the indicator constituents boron, chloride and sulfate show distinct and separate groupings for waste boundary and background groundwater and leachate samples. Background and waste boundary groundwater plots along a trend line associated with variability across the site while leachate plots in a distinct separate grouping away from the groundwater

trend. The ground water trends over time for wells with SSIs show the water quality moving away from the leachate grouping indicating that the leachate is not impacting downgradient groundwater.

- The conclusions listed above are also supported by the analytical results for isotope ratios of boron and strontium in leachate and groundwater samples from a previous sampling event. While only a single set of leachate samples to date have been collected, the indication in downgradient wells, including wells that have shown SSIs, is that the leachate is distinctly different from that of background and downgradient groundwater, and supports no release from the landfill to groundwater.

1.0 Objective

American Electric Power (AEP) operates a coal combustion residual (CCR) Landfill that is used for the management of CCR materials. The landfill is regulated under the federal CCR Rule (40 CFR Part 257) that became effective in October 2015. During the initial phase of groundwater monitoring (detection monitoring), the CCR Rule requires the owners or operators of regulated units to collect at least eight independent samples from at least one background location and at least three waste boundary wells, analyzed for constituents listed in Appendix III and Appendix IV of the CCR rule. That sampling was completed in July 2017.

Historically, the Upper Prediction Limit (UPL) for each constituent was established for site monitoring wells. The results of the detection monitoring event were compared to the UPL; if these results exceed the UPL, a verification sampling event is conducted. If the UPL is exceeded in both events, it is assumed that a statistically significant increase (SSI) is confirmed for the constituent.

Eight rounds of detection monitoring have been conducted at the landfill. Each round consists of an initial sampling event, followed by one or two rounds of verification samples based on the results of the initial events. Following completion of the verification sampling for each event, a statistical analysis is conducted to assess whether statistically SSIs above background are detected in the waste boundary monitoring wells for Appendix III constituents. For each semiannual sampling round where SSIs are detected, an alternate source demonstration (ASD) has been performed to assess whether these SSIs were the result of a release of leachate from the CCR landfill.

Previous ASDs performed by Geosyntec and Wood Environment & Infrastructure Solutions, Inc. (Wood) have indicated that the source of previously identified SSIs result from natural variation in groundwater quality or potential impacts from historical oil and gas operations. The most recent ASD was completed by Wood in July 2022 for the detection monitoring event of November 2021, with verification samples taken in February 2022.

The First semiannual detection monitoring samples for 2022 were taken in May 2022, with verification samples taken in July 2022. Again, a statistical evaluation of monitoring results identified SSIs for Appendix III constituents. The objective of this ASD is to review these results, and to assess whether the findings of the previous ASDs remain valid; that is, that the SSIs detected in the waste boundary wells, from detection monitoring samples collected in May 2022 and verified in July 2022 samples, are not the result of a release from the landfill.

1.1 Scope

As stated in 40 CFR 257.94(e)(2), the CCR Rule allows 90 days after the initial identification of Appendix III SSIs for the owner or operator to demonstrate that a source other than the regulated unit is responsible for identified SSIs. The regulations allow the ASD to address several potential causes of SSIs other than a release from the regulated unit, including error[s] in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

The scope of this ASD is focused on evaluating the first 2022 semiannual detection monitoring results (including verification samples) and assessing whether the data are consistent with the assessment conducted in the most recent ASD report (Wood, July 2022). The ASD will be undertaken to assess, through multiple lines of evidence, whether an alternative source for the SSIs can be supported, following the guidelines published in October 2017 by the Electric Research Power Institute (EPRI, "Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites"). This report does not include evaluations of potential errors in sampling and analysis, or the statistical approaches which were used to identify the SSIs.

1.2 Approach

The ASD presented in this document is based on a geochemical and hydrologic evaluation of groundwater quality at the CCR Landfill. The purpose of this ASD is to evaluate the identified SSIs within the larger geochemical context of the CCR Landfill groundwater flow system, to assess the likelihood that these SSIs are the result of releases from the CCR Landfill. In addition to the groundwater analytical data collected for compliance with the CCR rule, used to support the statistical evaluation, Wood relied on supplemental analytical data, including previous analyses of the CCR Landfill leachate and monitoring well groundwater analyses of the isotopes of boron and strontium.

1.3 Report Organization

This ASD has been prepared following the *Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites* (EPRI, 2017) to the extent applicable. **Section 2** presents a summary the CCR Landfill setting, and a summary of the results from the statistical evaluation of the Appendix III detection monitoring parameters. **Section 3** presents the primary and secondary lines of evidence developed from a geochemical evaluation of the site. **Section 4** presents the technical findings of the ASD and includes certification by an Indiana-licensed Professional Engineer (PE). References are included in **Section 5**.

2.0 Background

2.1 Site Description

The Rockport Power Plant is located in southwest Indiana in Spencer County, on property extending into three Townships: Ohio, Hammond, and Grass. Two CCR-regulated units are located on the property, two adjacent bottom ash ponds (BAP) and the CCR Landfill. The general layout of the property and the locations of the CCR units are shown on **Figure 1**. The CCR Landfill, or Landfill, is located about 8,000 feet (1.5 miles) northeast of the generating plant. **Figure 2** shows the general layout of the CCR Landfill and the monitoring well locations.

2.1.1 Landfill Operation

The CCR Landfill is an active disposal unit that primarily contains fly ash, with materials generated by the emission control systems added beginning in 2007. These materials include sodium sulfate generated by the removal of sulfur dioxide by the dry sorbent injection (DSI) system, and granular brominated activated carbon used for mercury removal. To a lesser extent, some bottom ash has also been placed within the CCR Landfill. As shown on **Figure 2**, the active portion of the CCR Landfill directly adjoins a closed portion of the landfill to the northeast.

The CCR Landfill is currently permitted by the Indiana Department of Environmental Management (IDEM) Office of Land Quality, Solid Waste Permits Section, as a Restricted Waste Site (RWS) under Indiana Administrative Code (IAC) 329 Title 10 (Solid Waste CCR Landfill Disposal Facilities) Rule 9-4. The active CCR Landfill is permitted as a RWS Type I, which requires a liner and leachate collection system. The permit was most recently renewed on 25 August 2020.

Leachate from the CCR Landfill cells is collected in lined ponds located north and west of the active CCR Landfill area. These ponds also collect storm water runoff from the CCR Landfill area. Prior to discharge, the leachate commingled with runoff is transferred to the Leachate Treatment Pond (north of the West Leachate Pond). Effluent from the Leachate Treatment Pond is discharged and monitored under National Pollution Discharge Elimination System (NPDES) Permit No. IN0051845 at Station 002.

2.1.2 Groundwater Flow

The principal groundwater flow zone underlying the CCR Landfill consists of the saturated section of the unconsolidated glaciofluvial sand and sand and gravel valley train sediments that fill the Ohio River valley in this area. The depth to water in this zone typically ranges from 20 to 35 feet (ft) below ground surface (BGS), and the saturated thickness (which generally increases to the southeast) ranges from less than 15 ft to more than 80 ft. A generalized cross-section is presented in **Figure 3**.

Groundwater primarily occurs under unconfined conditions, or semi-confined conditions where the saturated zone is directly overlain by surficial silt and clay. Piezometric data collected from clustered monitoring wells indicate that vertical gradients within the saturated zone are minor, and groundwater flow is primarily horizontal. Groundwater flows into the plant and landfill areas from the north, northwest and/or west, and continues flowing under the property generally to the south and east, towards Honey Creek and/or the Ohio River. A potentiometric surface map from 9 May 2022 is presented on **Figure 4**.

2.1.3 Existing Groundwater Monitoring System

In 2015, when the CCR Rule took effect, a monitoring well network was already present at the CCR Landfill for groundwater monitoring under IDEM permit. While the valley train sediments are considered a single well-connected aquifer system, the saturated thickness of the sediments allowed for wells at the CCR Landfill to be installed in clusters, to monitor up to three levels (shallow – “S”, intermediate – “I”, and deep – “D”) within the principal flow zone. However, the valley train sediments that make up the flow zone thin to the north, leaving less saturated overburden upgradient of the CCR Landfill. As a result, only one or two levels could be monitored in some locations.

The official CCR groundwater monitoring network for the CCR Landfill includes five background or cross-gradient wells (MW-6S, MW-8S/I, MW-11S and MW-14S) and 16 waste boundary wells (MW-1S/I/D, MW-2S/I/D, MW-15S/I, MW-16S/I/D, MW-17S/I and MW-21S/I/D). At most locations, the saturated overburden was thick enough to allow installation of screens at three different levels, with the deepest wells being completed just above bedrock at depths of 88 to 100 ft BGS. Two clusters, MW-15 and MW-17 are located just east of the CCR Landfill in an area of relatively shallow bedrock. Therefore, the deeper wells at these locations (designated “I”) have completed depths just above bedrock at 66 to 67 ft BGS. A comprehensive summary of analytical data for the groundwater monitoring network since June 2016 is presented on **Table A-1** in **Appendix A**.

2.2 Summary of Previous SSIs and ASDs

Eight baseline monitoring events and one initial detection monitoring event for the CCR Landfill were completed prior to 17 October 2017. On behalf of AEP, Geosyntec submitted these results to Groundwater Stats Consulting, LLC for statistical analysis. Oversight on the use of statistical calculations was provided by Dr. Kirk Cameron of MacStat Consulting, Ltd. According to the report (*Statistical Analysis Summary, Landfill*, Geosyntec 2018), the initial eight rounds of baseline data were used to calculate the UPLs for each of the Appendix III constituents to represent background values. Results from each detection monitoring event conducted to date have been compared to the UPLs established from the eight baseline rounds to identify SSIs compared to background.

Following completion of the first detection monitoring event, the initial statistical evaluation identified 13 SSIs for calcium (2), chloride (7), fluoride (1) and TDS (3). On 4 January 2019, Geosyntec prepared an ASD focusing on statistical methods. Geosyntec evaluated the new data and based on multiple lines of evidence, revised the statistical approach for some monitoring wells. Initially, the statistical evaluation included a mixture of interwell (between wells) and intrawell (within one well) techniques. The interwell analysis

compares data from waste boundary wells against a background data set composed of results from upgradient and cross-gradient well data. The intrawell approach compares each waste boundary well against a background composed of its own historical data and is used to detect statistically significant increases within samples from an individual well over time (Horsey, HR et. al., 2001). Spatial and temporal variability observed in samples from the background monitoring wells caused Geosyntec to select an intrawell approach for all Appendix III constituents in all waste boundary monitoring wells.

After using an intrawell approach, the number of SSIs was reduced to eight, distributed among seven waste boundary wells. In January 2019 Geosyntec published an ASD to document changes to the statistical methodologies and attributed the observed SSIs to impacts from historic oil and gas operations. Since the statistical methods were revised, results from all subsequent detection monitoring events have been analyzed following the same approach. The most recent statistical analysis was summarized in a memorandum dated 17 August 2022. Based on that analysis, four SSIs were identified at monitoring wells MW-1I, MW-2I, and MW-2D, which were confirmed after verification sampling.

- **Monitoring Well MW-1I:**

- **Chloride:** The UPL for chloride is 42.1 mg/L and the May 2022 result was 46.5 mg/L. The verification result from July 2022 was 47.2 mg/L.

- **Monitoring Well MW-2I:**

- **Chloride:** The UPL for chloride is 34 mg/L and the May 2022 result was 51.3 mg/L. The verification result from July 2022 was 58.8 mg/L.

- **Monitoring Well MW-2D:**

- **Chloride:** The UPL for chloride is 132 mg/L and the May 2022 result was 184 mg/L. The verification result from July 2022 was 175 mg/L.
- **Total Dissolved Solids:** The UPL for TDS is 506 mg/L and the May 2022 result was 580 mg/L. The verification result from July 2022 was 650 mg/L.

A summary of the SSIs identified in each of the detection monitoring events is presented below, in **Exhibit 2-1**.

Exhibit 2-1. Monitoring Wells and Appendix III Parameters with SSIs

Parameter	MW-1S	MW-1I	MW-1D	MW-2S	MW-2I	MW-2D	MW-15I	MW-16S	MW-16D	MW-17I	MW-21S	MW-21I
Calcium						◆			◆◆ ●			
Chloride	◆◆	◆◆ ● ★ ■		◆◆ ◆	■	◆◆◆ ◆◆◆ ●★■		◆	◆◆ ◆◆ ◆◆ ●		◆	
Fluoride				◆●			●			◆◆ ◆	◆◆ ●	◆●
TDS	◆●		●			◆◆◆ ●■		◆	◆◆ ◆◆ ◆◆ ●			

◆ 2018-2020 SSI, after verification

- May 2021 SSI, after verification
- ★ November 2021 SSI, after verification
- May 2022, after verification

As shown in **Exhibit 2-1**, four SSIs were identified, three for chloride in MW-1I, MW-2I, and MW-2D, and one SSI (TDS) identified in MW-2D. Three of these SSIs identified in the first round of 2022 were identified in previous semi-annual sampling events. Wood has reviewed its July 2022 ASD with respect to the statistical evaluation of the new semiannual sampling event. The evaluation presented in the July 2022 ASD report remains valid. Wood has updated the geochemical analysis that forms the basis of the ASD and has included updated graphics to support the findings in this current ASD report.

3.0 Alternative Source Demonstration

The ASD presented below relies on multiple lines of evidence that the SSIs identified in the statistical analysis are not caused by releases of landfill leachate into the groundwater flow system. When taken as a whole, these lines of evidence present a compelling case that the SSIs are not a result of a release from the landfill, but a result of natural variation in groundwater quality, a result of historical oil and gas operations, and/or from the influence of storm water ponds on groundwater quality. This ASD follows the approach of Wood's July 2022 report, updated with data collected for the first semiannual sampling event (May 2022).

To assess the potential of a release from the CCR Landfill to groundwater, Wood evaluated groundwater quality data, including isotopes, in the context of the geochemical characteristics of CCR Landfill leachate. The results of this evaluation support that CCR Landfill leachate at the Rockport site can be ruled out as a source of the SSIs identified in waste boundary monitoring wells, through primary and supporting lines of evidence, each of which are described in more detail within this section.

Primary lines of evidence focus on the relationship between source material that could be released into the subsurface (in this case, landfill leachate) and the type and distribution of SSIs identified in groundwater. The lines of evidence supporting the conclusion of this ASD can be summarized as follows:

- SSIs are not identified for the site-specific primary indicator constituents of the Rockport CCR Landfill leachate.
- Geochemical evaluations of the CCR Landfill support that leachate has not affected water quality.
 - Conservative ion ratios and major ion chemistry do not indicate a release from the CCR Landfill.
 - Isotopes of boron and strontium do not indicate a release from the CCR Landfill.

Each of these lines of evidence are described in detail below.

3.1 SSIs Are Not Identified for Primary Indicator Constituents

The primary indicators for CCR leachate typically have much higher concentrations in leachate than in natural groundwater. They are mobile and relatively non-reactive in groundwater, so that groundwater impacted by a CCR leachate release should have elevated concentrations of the indicator constituents relative to background and with relatively similar contributions. The elevated concentrations would be expected to result in SSIs identified by statistical evaluation of the data from the downgradient waste boundary wells, and the SSIs would be expected to be generally consistent between downgradient wells. The primary lines of evidence presented below compare the occurrence of SSIs in groundwater to the composition of landfill leachate.

3.1.1 Site-Specific Leachate Analysis for Primary Indicator Constituents

The composition of landfill leachate is governed by the types of materials placed in the unit and identifying the leachate’s primary constituents is key to assessing a potential release to groundwater. Since all Appendix III constituents are naturally occurring, the best indicators of CCR impacts are those constituents that are found at concentrations much higher in the source material than are seen in natural groundwater. AEP conducted sampling of its leachate collection system to identify relative concentrations of Appendix III and IV constituents in the Rockport CCR Landfill leachate.

The leachate collection system for the Landfill discharges into the North and West Leachate Collection Ponds, shown on **Figure 2**, which then discharge to the Leachate Treatment Pond, directly north of the West Leachate Pond. Five samples were collected from both the West and North Leachate Collection Ponds between 31 October 2018 and 20 March 2019 and results are detailed on **Table A-2** in **Appendix A**. A summary of the range of Appendix III constituent results for leachate pond samples, compared to background and waste boundary well samples, is provided below in **Exhibit 3-1**.

Exhibit 3-1. Summary of Landfill Leachate Pond and Groundwater Concentrations for Appendix III Constituents

Parameter (Units in mg/L)	Range for Leachate Ponds		Range for Upgradient (Background) Wells		Range for Downgradient Waste Boundary Wells	
	Min	Max	Min	Max	Min	Max
Boron	9.18	12.3	<0.002	0.115	<0.002	0.139
Calcium	166	368	35.6	82.0	28.7	129.8
Chloride	847	1,250	1.29	30.0	8.78	214
Fluoride	<1.50	<1.50	0.25	1.21	0.064	1.31
Total Dissolved Solids (TDS)	22,100	30,900	179	430	196	760
Sulfate	14,100	19,000	0.83	87.1	4.62	62.0

Because the CCR Landfill leachate ponds also receive some storm water runoff, concentrations in at least some of these samples are likely to be diluted compared to concentrated leachate from landfilled materials (depending on the amount of recent rainfall). Nevertheless, pond samples serve as reliable indicators of the relative composition of leachate. As seen in **Exhibit 3-1**, boron and sulfate occur at concentrations as much as three orders-of-magnitude above background groundwater levels. Results for chloride and TDS are as much as two orders-of-magnitude above background concentrations. Calcium and fluoride concentrations are within the same orders-of-magnitude as those detected in background groundwater. These results indicate that boron and sulfate are the best indicator constituents of CCR impacts, followed by TDS and chloride, based on their elevated occurrence in landfill leachate compared to natural groundwater.

3.1.2 Occurrence of Primary indicator Constituents in Waste Boundary Monitoring Well Samples

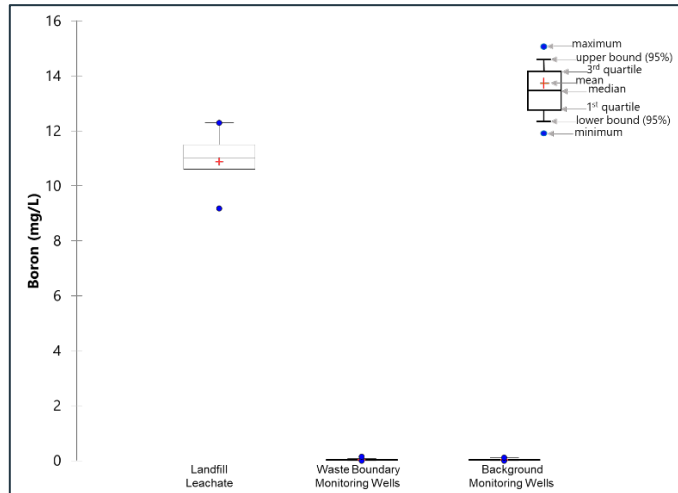
Four primary indicator constituents are identified for the Rockport CCR Landfill leachate: boron, sulfate, TDS and chloride. In the May 2022 sampling round, three SSIs were identified for chloride (MW-1I, MW-2I, and MW-2D), and one SSI was identified for TDS at MW-2D. However, no SSIs were identified in waste boundary wells for either boron or sulfate. Given the predominance of boron and sulfate in the CCR Landfill leachate, and that neither of these constituents are elevated above background, it is concluded that Landfill

leachate is not the source of the observed SSIs. This assumption is supported by a more in-depth review of the indicator constituents, presented below.

Boron

No SSIs have been identified for boron. Boron has been identified in background wells at concentrations ranging from <0.002 to 0.115 mg/L. Concentrations in waste boundary well samples range from <0.002 to 0.139 mg/L. Landfill leachate boron concentrations are much higher and range from 9.18 to 12.3 mg/L. The boron results are plotted graphically on **Exhibit 3-2**, which illustrates the range of results for leachate (at the left of the chart) compared to and background and waste boundary groundwater samples. It should be noted that the highest concentration of boron observed in waste boundary groundwater samples (0.139 mg/L) occurred in MW-16I and did not represent an SSI for that well.

Exhibit 3-2. CCR monitoring well and landfill leachate ponds boron concentrations

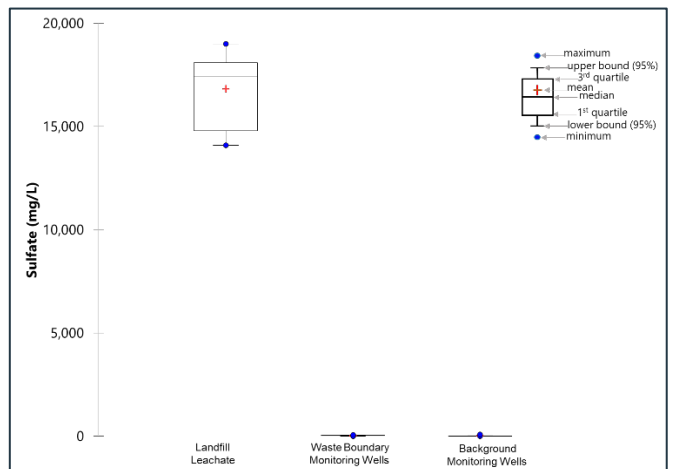


If a release of landfill leachate had occurred, boron concentrations in waste boundary well samples should be clearly higher than the range of background well results, and SSIs would likely be found in at least some of the monitoring wells with other identified SSIs.

Sulfate

No SSIs have been identified for sulfate. Sulfate has been identified in background wells at concentrations ranging from 0.83 to 87.1 mg/L. Concentrations in waste boundary well samples range from 4.62 to 62.0 mg/L. Landfill leachate sulfate concentrations are orders of magnitude higher and range from 14,100 to 19,000 mg/L. The sulfate results are plotted graphically on **Exhibit 3-3**, which clearly shows that leachate concentrations of sulfate are orders-of-magnitude higher than all groundwater samples, and that no discernable difference is present between the background and waste boundary samples. Furthermore, the highest monitoring well concentrations are seen in samples from background well MW-8I (54.0 to 87.1 mg/L).

Exhibit 3-3. CCR monitoring well and landfill leachate ponds sulfate concentrations



It is expected that a release of landfill leachate would elevate groundwater concentrations of all Appendix III constituents present in the leachate in relatively similar proportions. Even if all constituents were not exhibiting SSIs, a pattern of related SSIs would be observed if the increases were caused by landfill leachate.

Since all SSIs occurred in absence of a boron or sulfate SSI, and the highest groundwater sulfate concentrations are associated with a background well, it is concluded that the reported SSIs are caused by the natural variation in groundwater quality, potentially impacted by historical oil and gas operations which are assumed to have high chloride and TDS and little to no sulfate, and not by releases from the CCR Landfill.

3.2 Geochemical Evaluations

While the CCR rule requires the use of statistical analyses of samples collected from groundwater monitoring wells to assess potential impacts from CCR units (SSIs), the approach does not consider the site specific hydrogeochemical interactions that can often be complex due to simultaneous operations and natural variation within the context of the local hydrogeologic setting. Since geochemical evaluations rely on interpretation of graphical data, the discussion includes reduced size exhibits imbedded in the text. Full size exhibits are included in **Appendix B**. The major observations and conclusions from the geochemical evaluation are summarized in the sections below.

3.2.1 Indicator Parameter Cross-Plots

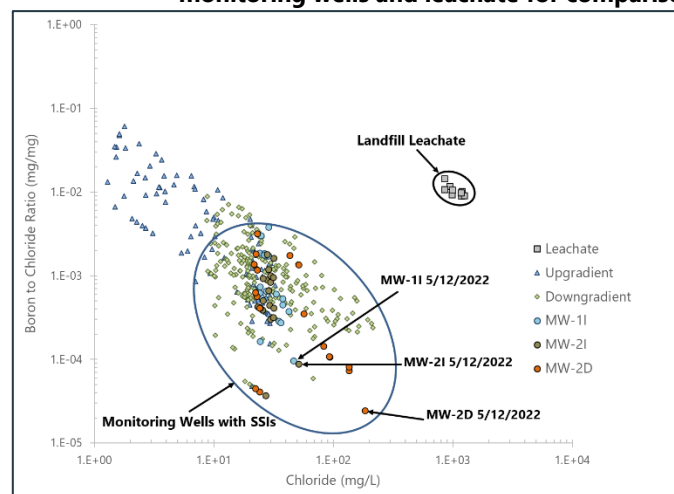
To aid in the interpretation of individual Appendix III and other potential indicator parameters for the assessment of potential releases from the CCR Landfill, ratios of selected Appendix III indicator parameters were calculated and plotted versus concentrations of the conservative ion chloride. The use of these plotting techniques typically provides groupings of end members (sources of water such as background groundwater or landfill leachate), and potential trends of mixing that are not readily identifiable by analysis of individual indicator parameters on their own.

Plots of the B/Cl and SO₄/Cl ratios versus chloride in waste boundary monitoring wells show distinct end member groupings from that of the landfill leachate and support the conclusion that there are no discernable impacts from the CCR Landfill on any of the waste boundary monitoring wells. The graphics presented here include data for all wells in the CCR Landfill system and show that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas represented by upgradient monitoring wells.

Boron to Chloride ratio Versus Chloride Concentration

The plotting of B/Cl versus chloride groundwater data shows primarily a single large cluster that trends perpendicular to the composition of leachate samples and is hypothesized as background and natural variability (**Exhibit 3-4**). The data are plotted on log-log scales due to the large range of concentrations and ratios making the separation in groupings appear closer than they are. The Landfill leachate clearly plots as a separate grouping of water quality having greater B/Cl ratios, while the monitoring well data plots along a trend of what can be described as natural variability. Background monitoring well MW-11S plots as upgradient recharge having lower chloride concentration and a higher B/Cl ratio. Moving along the

Exhibit 3-4. Boron to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison

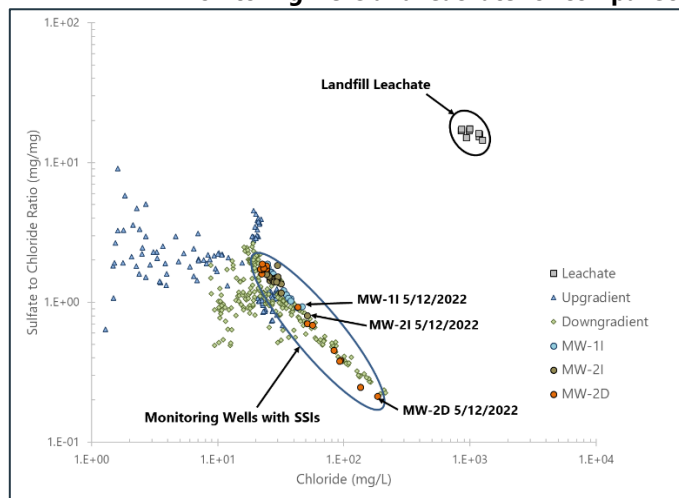


flow path to downgradient monitoring wells, this is followed by a trend of increasing chloride concentrations and salinity with decreasing B/Cl ratios due to geochemical evolution of groundwater and potential mixing with water associated with historic oil and gas operations and/or storm water ponds. While chloride increases, boron does not increase at the same rate, resulting in the decreasing trend of B/Cl ratios as chloride concentrations and residence time increases. Thus, it is hypothesized that MW-11S represents an extreme end member of recent recharge, or relatively fresh groundwater, and after flow through the shallow overburden groundwater evolves geochemically to a lower B/Cl ratio, as chloride increases, approaching the larger background cluster values that represent older more mineralized groundwater without a significant source of boron in the aquifer matrix. The extreme end of the groundwater dataset trend is represented by MW-17I, MW-16D, and MW-2D due to higher chloride concentrations, but with lower B/Cl ratios. This plot supports that these wells are not impacted by CCR Landfill leachate but could be influenced by infiltration from the storm water holding ponds or flushing of salts from water holding ponds associated with historic oil and gas operations. If there were impacts from the landfill to groundwater, one would expect a trend of B/Cl ratios versus chloride moving from the groundwater trend toward the leachate values, but this does not occur, and instead the trend is away from the leachate grouping.

Sulfate to Chloride Ratio Versus Chloride Concentration

Plotting of the SO_4/Cl ratio versus chloride shows similar results to the B/Cl ratios versus chloride concentration plot supporting the conclusion that there are no discernable impacts from the CCR Landfill on groundwater (**Exhibit 3-5**). The SO_4/Cl ratios for leachate group separately and are much higher than groundwater values. The SO_4/Cl ratios for leachate are typically around 15 mg/mg or higher, while groundwater ratios are below a value of 6 mg/mg. Similar to B/Cl ratios, the SO_4/Cl ratios versus chloride plot along a trend line of decreasing ratios as chloride and residence time increases. The extreme end of the groundwater data set trend is represented by MW-17I, MW-16D, and MW-2D variability due to higher chloride concentrations that is clearly different from leachate. Additionally, there is no trend of mixing of even small quantities of leachate with groundwater which would be shown by a deviation from the groundwater trend toward leachate, and the separation is distinct between downgradient groundwater and leachate with a trend away from that of leachate.

Exhibit 3-5. Sulfate to chloride ratio versus chloride concentration for CCR Landfill groundwater monitoring wells and leachate for comparison



3.2.2 Isotope Analyses of CCR Related Water Quality and Materials

General Overview of Isotope Analyses

Water samples were collected from selected CCR Landfill monitoring wells and CCR Landfill leachate and submitted for isotope analyses of boron, strontium, and oxygen and hydrogen of water. The results of the isotope analyses serve as additional supporting lines of evidence for interpretations made using major ion

and indicator parameter concentrations and reinforce the lack of leachate impacts to groundwater at the CCR Landfill.

Boron and its isotope ratio ($\delta^{11}\text{B}$) have been successfully used to identify groundwater pollution sources versus background or naturally occurring detections of constituents of concern (Davidson and Bassett 1993; Vengosh et al. 1994; Kendall et al., 1995; Buszka et al. 2007; Ruhl et al. 2014; Harkness et al. 2017). In particular, boron isotopes have been successfully used to assess CCR related impacts in groundwater. Similarly, strontium and its isotopes ($^{87}\text{Sr}/^{86}\text{Sr}$) have also been successfully used to identify different groundwater source end members, mixing, and to determine anthropogenic versus geogenic processes associated with constituents of concern and associated with CCR impacts to groundwater (Kendall and Bullen 1995; Ruhl et al. 2014; Meredith 2016; Harkness et al. 2017; Nigroa et al. 2017).

CCR Landfill Isotope Results

Stable isotope analyses are typically performed on a pair of isotopes (e.g., ^{11}B and ^{10}B , or ^{87}Sr and ^{86}Sr) and are reported as a ratio relative to internal standards, in per mil (‰) using Greek “delta” notation (δ). Deviations based on analysis of the standard are corrected for, to provide values that can be compared between different laboratories and equipment. Isotopes commonly reported relative to a standard include boron (eq. 1), where the standard for boron is the National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) 951:

$$\delta^{11}\text{B}(\text{‰}) = \frac{\left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Sample}} - \left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Standard}}}{\left(\frac{^{11}\text{B}}{^{10}\text{B}}\right)_{\text{Standard}}} \times 1000 \quad \text{eq. 1}$$

Isotope ratios of strontium can be reported relative to a standard value but are commonly reported as the actual ratio $^{87}\text{Sr}/^{86}\text{Sr}$. The values for strontium reported here are the actual ratios, but they have been corrected to the NIST SRM 987.

Background monitoring wells for the CCR Landfill show lower boron concentrations and higher $\delta^{11}\text{B}$ values compared to Landfill leachate samples (**Exhibit 3-6**). While only a limited number of background and waste boundary wells were tested (including MW-17I with a previous and current SSI, and MW-21S with a previously reported SSI), there is a clear distinction between all the CCR Landfill monitoring wells and the Landfill leachate which indicates that the wells represented are not impacted by the Landfill, and that boron in the monitoring wells is of a different source other than leachate.

In addition, while there is a variation in the leachate boron concentrations, the $\delta^{11}\text{B}$ values remain approximately equivalent. This supports the hypothesis that boron is $\delta^{11}\text{B}$ values in leachate are dominated by the CCR materials. The range of observed concentrations is related to the amount of water generating the leachate or potentially dilution by fresh water derived from stormwater runoff. The result is a range of boron concentrations having a similar $\delta^{11}\text{B}$ value distinctly different from groundwater in both background and downgradient monitoring wells.

Strontium isotope results also support the boron isotope, major ion, and indicator parameter interpretations that there are no identifiable impacts on groundwater from the landfill. There are noticeably lower strontium concentrations and ratios for all CCR Landfill monitoring wells sampled compared to Landfill leachate (**Exhibit 3-7**).

Exhibit 3-6. Boron isotope ratio ($\delta^{11}\text{B}$) versus boron concentration for CCR Landfill leachate and monitoring wells for comparison

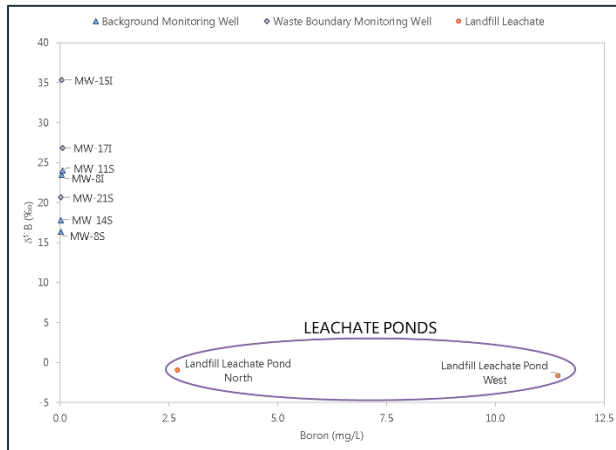
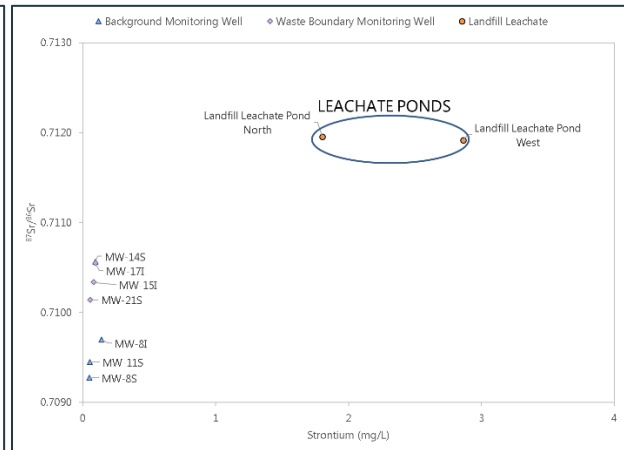


Exhibit 3-7. Strontium isotope ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) versus strontium concentration for CCR Landfill leachate and monitoring wells for comparison



3.3 Hydraulic Connection to the Landfill

The groundwater monitoring network and the relationship of the wells to the regulated landfill are shown on **Figure 2**. Recent potentiometric flow data available for the site consistently indicate a local groundwater flow direction to the south and southeast as shown on **Figure 4**. As shown on this figure, several well clusters are downgradient from the landfill are also downgradient of the borrow area storm water ponds. Groundwater monitored by the well clusters downgradient of the storm water ponds are concluded to be unaffected by potential releases from the landfill unit but maybe impacted by the storm water ponds which likely has water with higher salinity, TDS, and chloride.

4.0 Summary

As summarized in **Exhibit 2-1** above, in the first semiannual detection monitoring event of May 2022, SSIs were identified in three of 16 downgradient monitoring wells for chloride and one well for TDS. The following statements summarize how the lines of evidence discussed above apply to each of the constituents with identified SSIs:

- Boron occurs naturally at low concentration in site groundwater, in similar concentrations in background and downgradient wells. Boron occurs at concentrations approximately three orders-of-magnitude in the CCR Landfill leachate as compared to site groundwater, and is a conservative ion, making it an excellent indicator for impacts from landfill leachate impacts in groundwater. If landfill leachate were impacting groundwater, boron would be expected to be detected in multiple waste boundary wells and at statistically significant concentrations above background; no SSIs for boron have ever been detected at the site. Furthermore, the boron that is present has been shown to be isotopically different.
- Sulfate is another common indicator for CCR leachate impacts, which also occurs naturally in site groundwater (at similar concentration ranges in background and downgradient wells) and is elevated in the CCR Landfill leachate at concentrations approximately three orders-of-magnitude above

background monitoring wells. No SSIs for sulfate have ever been determined in any of the waste boundary well samples.

- Chloride is a naturally occurring and conservative ion, which occurs in the CCR Landfill leachate at concentrations about two orders-of-magnitude above groundwater concentrations. Spatial trends can be observed in **Exhibits 3-4** and **3-5** and indicate that chloride concentrations tend to increase in groundwater moving downgradient from recharge areas. May 2022 data and July 2022 verification data indicated groundwater concentrations of chloride over background in MW-1I, MW-2I, and MW-2D. However, because the SSIs indicated for chloride are not associated with SSIs for boron and sulfate, the CCR Landfill leachate is not considered a source for the chloride detected in groundwater.
- The same conclusion can be drawn regarding TDS, for which an occasional SSI is not consistently associated with boron or sulfate. The observed SSI (TDS) in MW-2D, appears to be related to the natural variation in groundwater quality, along with a spatial trend of increasing TDS with distance from recharge areas.
- Ion ratio cross plots of the indicator constituents boron, chloride and sulfate show distinct and separate groupings for waste boundary and background groundwater and leachate samples. Background and waste boundary groundwater plots along a trend line associated with variability across the site while leachate plots in a distinct separate grouping away from the groundwater trend. The ground water trends over time for wells with SSIs show the water quality moving away from the leachate grouping indicating that the leachate is not impacting downgradient groundwater.
- The conclusions listed above are also supported by the analytical results for isotope ratios of boron and strontium in leachate and groundwater samples from a previous sampling event. While only a single set of leachate samples to date have been collected, the indication in downgradient wells, including wells that have shown SSIs, is that the leachate is distinctly different from that of background and downgradient groundwater, and supports no release from the landfill to groundwater.

4.1 Conclusion

This ASD has demonstrated, through multiple lines of evidence, that the SSIs identified in the statistical analysis of the first 2022 detection monitoring event data are not the result of a release of leachate from the CCR Landfill. Therefore, the unit will continue in detection monitoring.

4.2 Professional Engineer Certification

I certify that the above-described Alternative Source Demonstration is appropriate for evaluating the groundwater monitoring data for the Rockport Plant CCR Landfill and that the requirements of 40 CFR 257.95(g)(3)(ii) have been met.



28 October 2022

K. Joe Deatherage, PE
Indiana Registered Engineer (PE 10403612)

Date

5.0 References

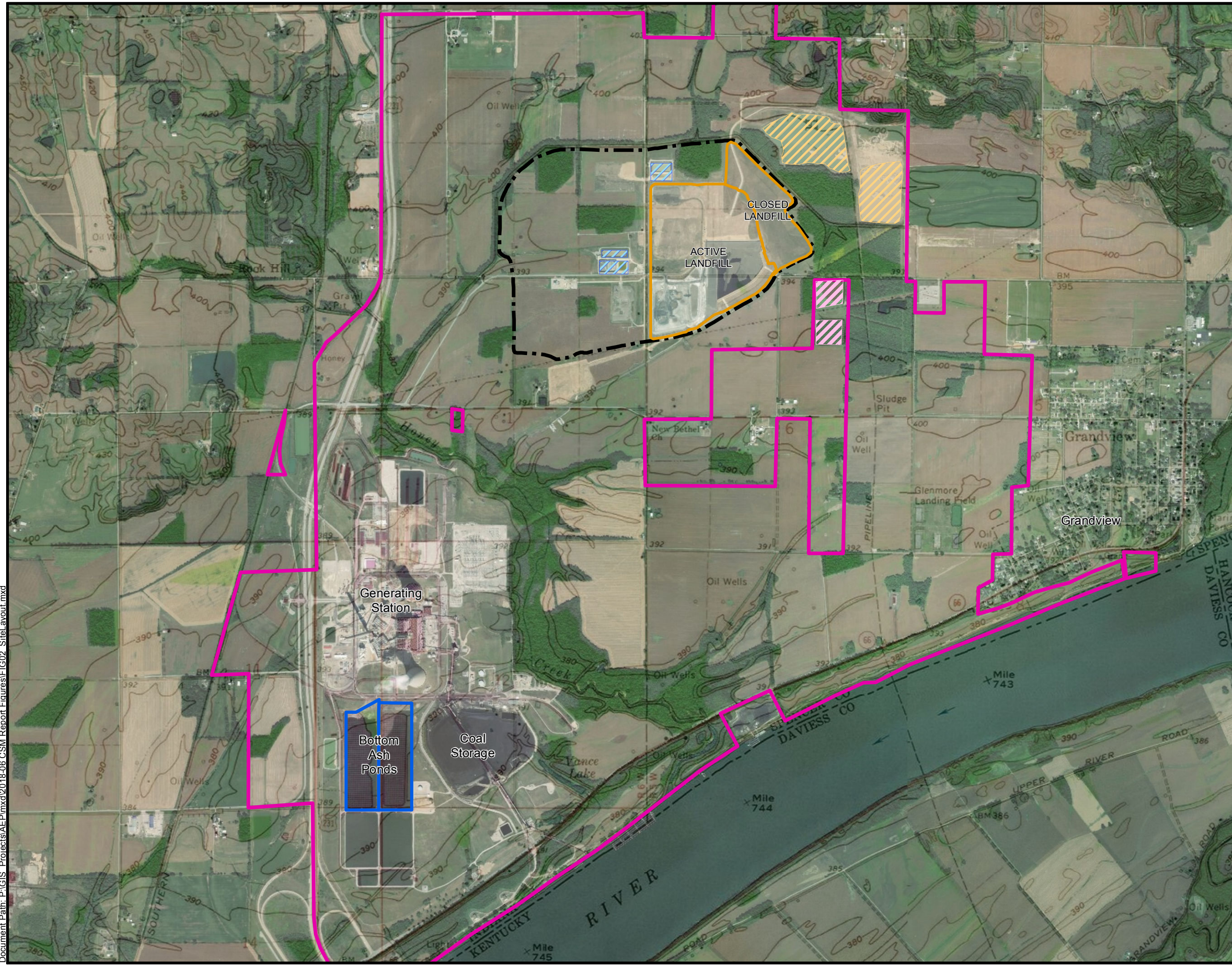
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Figures

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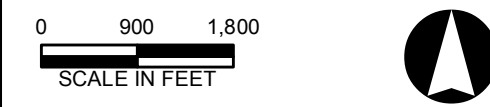


- Legend**
-  Stormwater Ponds
 -  Landfill Leachate Ponds
 -  Grandview Wastewater Ponds
 -  Property Boundary
 -  Bottom Ash Ponds (BAP)
 -  Landfill Area 1A (Active and Closed)
 -  1984 Landfill Permit Boundary (Area 1)

Data Sources

Date of Photography: 2016
 Source of Photography: U.S. Department of Agriculture, National Agriculture Imagery Program (NAIP)

USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps



SITE LAYOUT

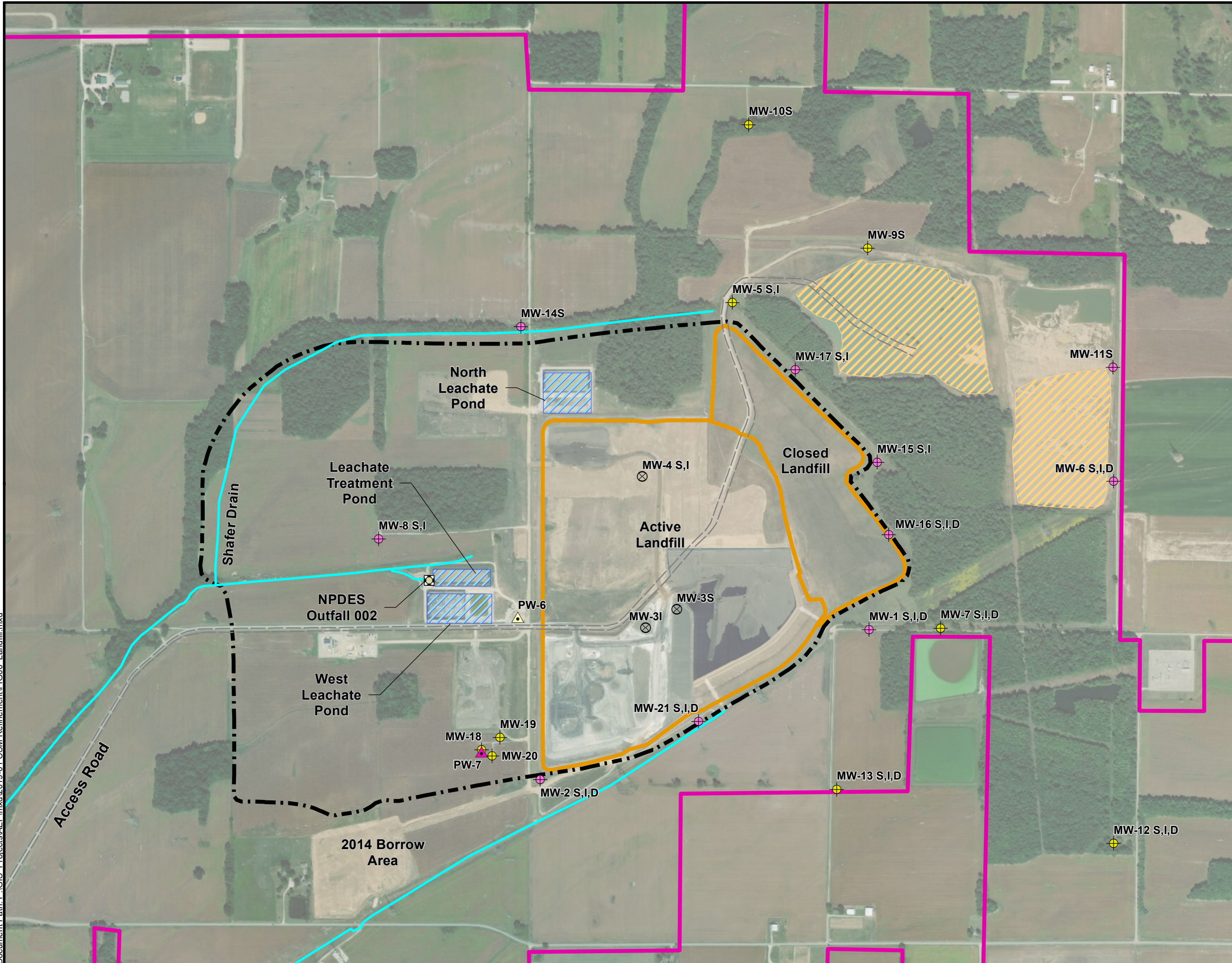
AEP - ROCKPORT, IN
PROJECT NUMBER: 7650202784

SCALE	1" = 1,800'	FIG. 1
DATE	5/4/2021	
DRAWN BY	TMR	
APPROVED BY	KDR	

wood.

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Lexington, Kentucky 40509
Phone: (859) 255-3308

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- Legend**
- Landfill - Monitoring Well
 - Landfill - CCR Monitoring Well
 - Landfill - Augmentation Water Supply Well
 - Landfill - Dust Control Water Supply Well
 - Abandoned Monitoring Well
 - NPDES Outfall 002
 - Access Road
 - Drains / Ditches
 - Stormwater Ponds
 - Landfill Leachate Ponds
 - Property Boundary
 - 1984 Landfill Permit Boundary (Area 1)
 - Landfill Area 1A (Active and Closed)

Data Sources

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps, 1964, photorevised 1982

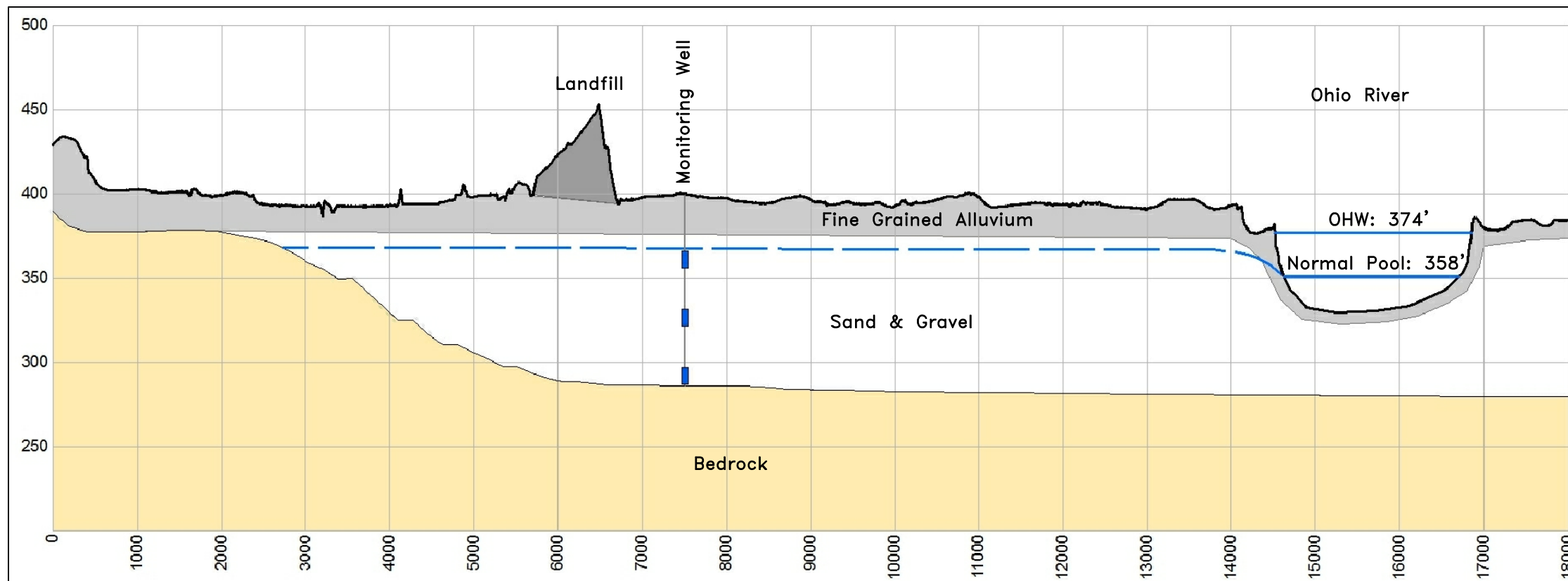
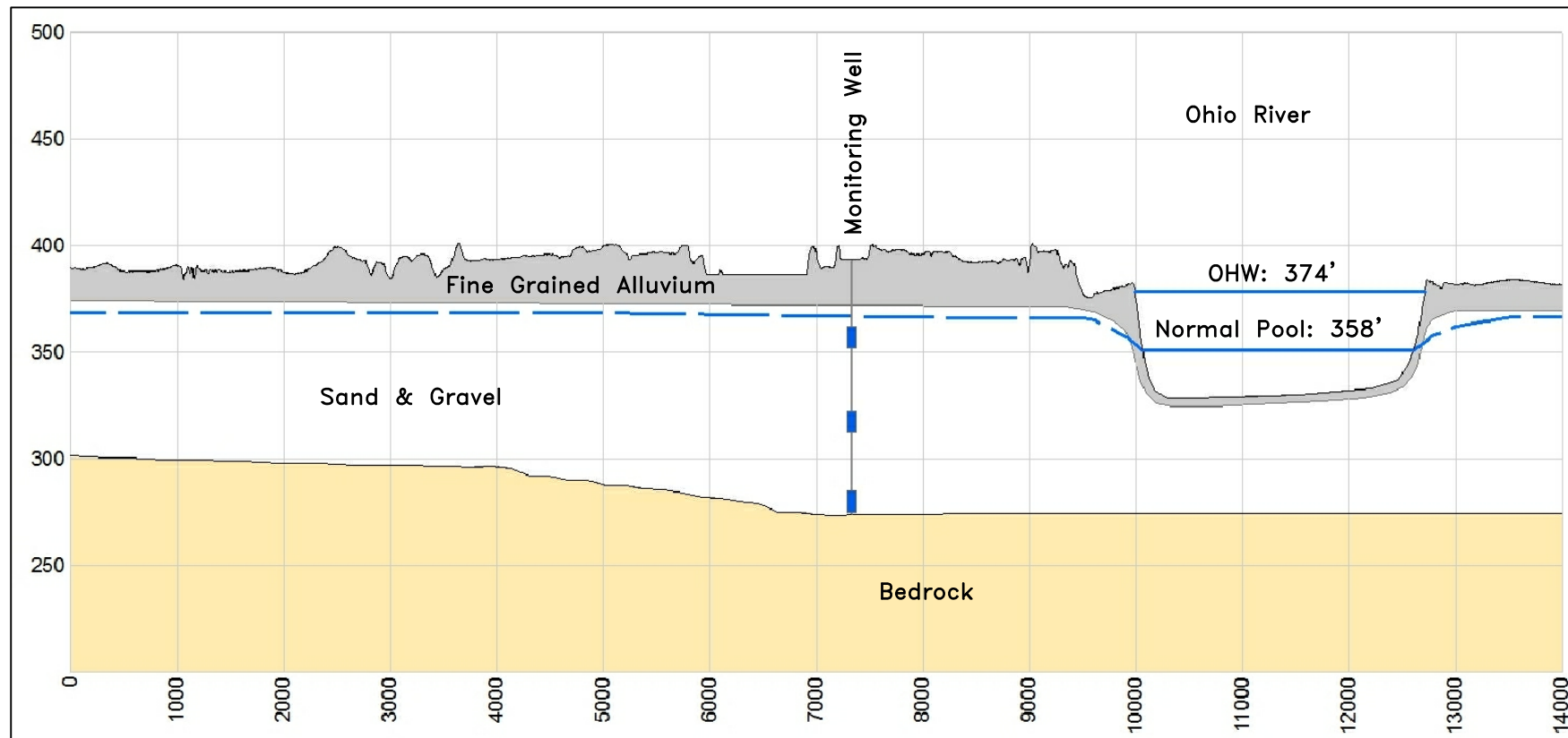


LANDFILL LAYOUT
AEP - ROCKPORT, IN
PROJECT NUMBER: 7650202784

SCALE	1" = 800'	FIG. 2
DATE	5/4/2021	
DRAWN BY	TMR	
APPROVED BY	KDR	

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Lexington, Kentucky 40509
Phone: (859) 255-3308



SCALE: As Shown
VERTICAL EXAGGERATION: 4X



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Phone: (859) 255-3308

**BOTTOM ASH PONDS
AEP - ROCKPORT, INDIANA**

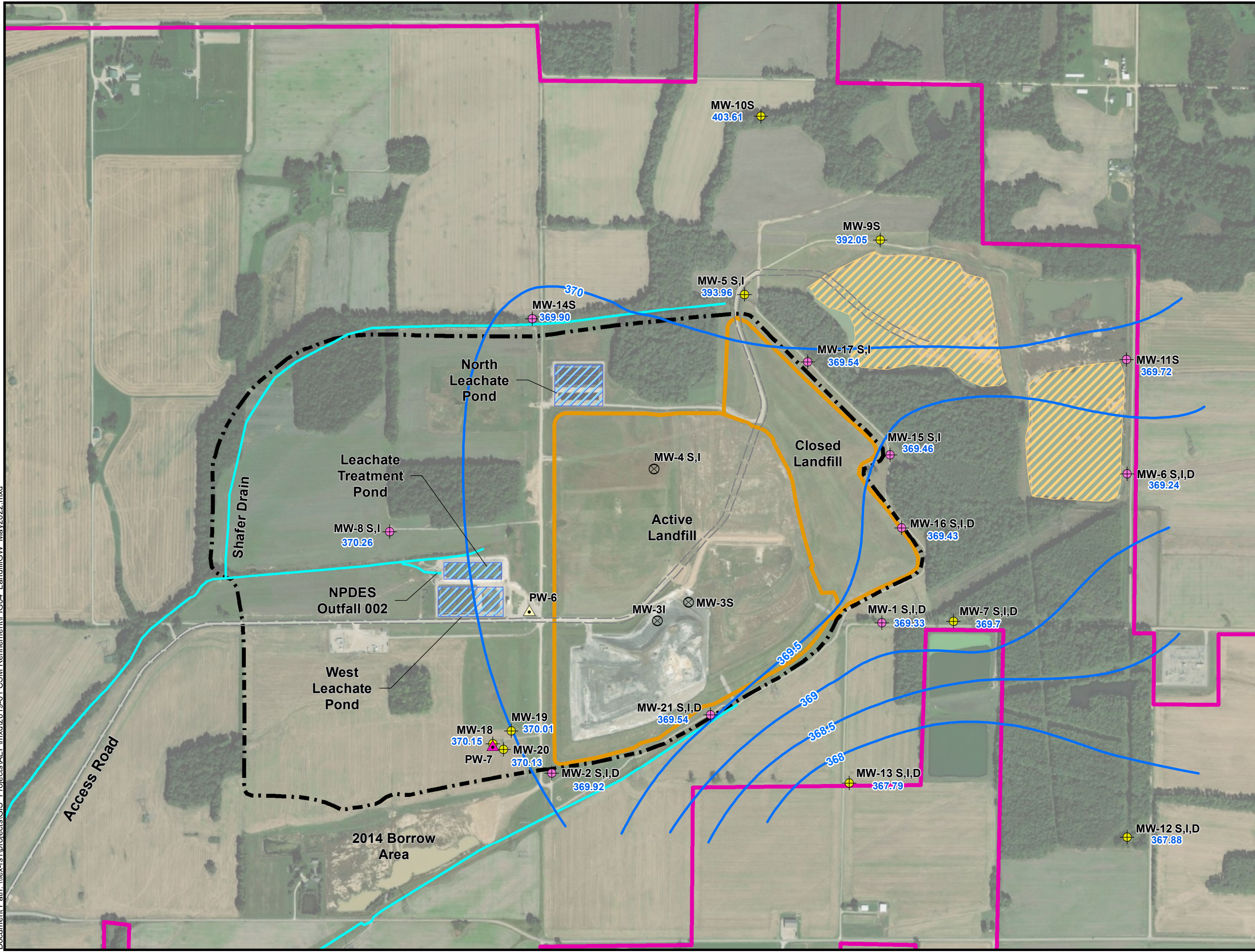
GENERALIZED CROSS-SECTIONS

PROJECT NUMBER: 7650202784

SCALE	As Shown
DATE	5/4/2021
DRAWN BY	TMR
APPROVED BY	ALD

**FIG
3**

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Legend

- Landfill - Monitoring Well
- Landfill - CCR Monitoring Well
- Landfill - Augmentation Water Supply Well
- Landfill - Dust Control Water Supply Well
- Abandoned Monitoring Well
- Groundwater Elevation Contour Contour Interval 0.5 Feet
- Access Road
- Drains / Ditches
- Stormwater Ponds
- Landfill Leachate Ponds
- Property Boundary
- 1984 Landfill Permit Boundary (Area 1)
- Landfill Area 1A (Active and Closed)

Data Sources

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Source: USGS Rockport and Lewisport (IN/KY) Topographic Quadrangle Maps, 1964, photorevised 1982

0 400 800
SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOURS
May 9, 2022
AEP - ROCKPORT, IN

PROJECT NUMBER: 7650202784

SCALE	1" = 800'	FIG. 4
DATE	9/14/2022	
DRAWN BY	BIF	
APPROVED BY	KDR	

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2030 Falling Waters Road Suite 300
Knoxville, TN 37922
Phone: 865-671-6774



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Appendices



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Appendix A
Analytical Data Tables

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	1/3/2018	6/6/2018	8/16/2018	11/14/2018	2/13/2019	4/1/2019
Field Parameters																		
Elevation	ft NGVD	--	--	369.45	369.29	368.81	368.29	367.61	367.69	367.66	368.33	368.01	366.11	369.43	369.91	368.71	369.68	370.56
pH	S.U.	--	7.09 - 8.14	8.14	7.2	7.09	7.34	7.4	7.1	7.19	7.26	7.08	7.64	7.48	7.3	7.48	7.46	7.35
Specific Conductance	µmhos/cm	--	--	687	612	703	657	470	300	567	536	635	686	590	658	535	530	892
Turbidity	NTU	--	--	0.23	1.5	0.34	0.65	1	2	0.63	0.78	0.4	1.31	1.12	0	0.56	0.8	1.15
Dissolved Oxygen	mg/L	--	--	3.37	4	2.82	3.46	5	4	2.48	2.72	3	3.06	0.61	4.59	2.3	1.1	1.09
Temperature	°C	--	--	15.04	18.9	19.09	15.17	14.8	15.7	16.81	15.81	15.63	12.81	16.23	15.38	14.7	14.9	14.6
ORP	mV	--	--	89.2	111	77.1	52.9	105	46	53.7	16.2	43.8	-20.8	-76.5	302	100.5	172	126.4
Laboratory Parameters																		
Antimony	µg/L	6	--	0.03	0.2	0.02	0.02	0.04	0.04	0.05	0.02	--	--	--	--	0.05	--	--
Arsenic	µg/L	10	--	0.43	0.69	0.38	0.38	0.43	0.76	0.5	0.39	--	--	--	--	0.34	--	--
Barium	µg/L	2000	--	18.5	21.9	17.2	17.9	17.7	36.5	22.3	17.3	--	--	--	--	17.8	--	--
Beryllium	µg/L	4	--	<0.01	0.16	<0.005	<0.005	<0.005	0.023	0.01	<0.004	--	--	--	--	0.03	--	--
Cadmium	µg/L	5	--	0.02	0.22	0.005	0.007	0.02	0.09	0.22	0.01	--	--	--	--	<0.01	--	--
Chromium	µg/L	100	--	0.3	0.7	0.3	0.207	0.72	1.38	0.552	0.255	--	--	--	--	0.25	--	--
Cobalt	µg/L	6	--	0.171	0.398	0.014	0.01	0.052	1.21	0.164	0.02	--	--	--	--	<0.02	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.15	0.74	--	0.09	--	1.3	--	--
Lead	µg/L	15	--	0.204	0.572	0.01	0.022	0.076	1.26	0.526	0.033	--	--	--	--	0.12	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	0.65	0.8	0.68	0.74	0.59	0.97	1.64	0.64	--	--	--	--	0.6	--	--
Selenium	µg/L	50	--	1.1	1.1	0.9	0.9	1	1.1	1.1	1.2	--	--	--	--	0.8	--	--
Thallium	µg/L	2	--	<0.02	0.168	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	--	--	--	--	<0.1	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	4.5	--	0.7	--	2	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	19.5	19.7	22.4	--	19.5	--	19.7	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	5.55	4.29	--	3.8	--	1	--	--	
Boron	mg/L	--	0.048	0.037	0.015	0.022	0.02	0.005	0.03	0.031	0.028	0.044	--	0.046	--	0.04	--	--
Calcium	mg/L	--	(79.5) 79	70.7	62.9	68	74.4	65	71.5	72.6	69.2	67.6	--	71.8	--	71.9	--	--
Lithium	mg/L	0.04	--	0.004	0.024	0.002	0.01	0.008	0.01	0.009	0.0007	--	--	--	--	0.03	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	27.3	26.9	26.9	25.6	--	26.8	--	26.8	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0015	--	--	0.0027	--	0.0022	--	--	
Potassium	mg/L	--	--	--	--	--	--	--	1.32	1.24	1.16	1.15	--	1.19	--	1.16	--	--
Sodium	mg/L	--	--	--	--	--	--	--	40.6	35.2	39.6	36.1	--	31.2	--	35	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.11	0.12	0.105	0.104	--	0.11	--	0.108	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	278	273	271	269	--	250	--	273	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.086	0.108	0.104	0.109	--	0.106	--	0.1	--	--
Chloride	mg/L	--	(29.6) 33	29.6	31.1	31.4	31.9	32	30.7	31.3	30.4	33.1	39.9	34.9	37.3	38.1	40.4	38.5
Fluoride	mg/L	4	0.677	0.59	0.65	0.6	0.54	0.57	0.59	0.63	0.58	0.57	--	0.61	--	0.63	--	--
TDS	mg/L	--	(412.7) 419	392	392	411	398	392	384	402	406	396	--	386	--	410	--	--
Sulfate	mg/L	--	(36.95) 37	33.7	35.5	32.4	30.7	30.7	30.5	33.3	33.6	34.6	--	34.2	--	32.3	--	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	--	<0.07	--	--
Radium-228	pCi/L	--	--	-0.185	0.445	0.244	-0.00464	0.447	-0.172	-0.122	0.133	--	--	--	--	-0.0731	--	--
Radium-226	pCi/L	--	--	0.0665	0.374	-0.00261	0.296	0.487	0.0407	0.0324	0.176	--	--	--	--	0.108	--	--
Radium-226/228	pCi/L	5	--	-0.1185	0.819	0.24139	0.29136	0.934	-0.1313	-0.0896	0.309	--	--	--	--	0.108	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	0.4	--	1.65	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	9	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--	0.8	--	6.24	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.049	0.014	--	<0.002	--	0.035	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0001	0.0002	<0.0001	0.0002	--	<0.0002	--	0.0026	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	5/23/2019	7/23/2019	2/18/2020	5/19/2020	11/11/2020	5/26/2021	11/12/2021	5/12/2022
Field Parameters											
Elevation	ft NGVD	--	--	371.82	372.42	370.36	370.78	369.85	369.23	368.43	369.33
pH	S.U.	--	7.09 - 8.14	7.91	7.36	7.12	7.04	7.01	7.75	7.56	7.38
Specific Conductance	µmhos/cm	--	--	593	618	1386	440	691	793	687	658
Turbidity	NTU	--	--	0.05	1.6	0.47	0	0.7	0	0.55	9.62
Dissolved Oxygen	mg/L	--	--	0.87	1.5	4.6	1.68	8.97	0	3.75	2.02
Temperature	°C	--	--	15.6	18.2	12.43	15.36	14.75	15.6	14.5	15.76
ORP	mV	--	--	-28.8	57	118.1	140	100	222	239	68
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.29	--	--	--	--	--	--	--
Barium	µg/L	2000	--	17.6	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	<0.01	--	--	--	--	--	--	--
Chromium	µg/L	100	--	0.2	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	<0.02	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.13	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.03	--	--	--	--	--	--	--
Mercury	µg/L	2	--	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	1	--	--	--	--	--	--	--
Selenium	µg/L	50	--	0.7	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	--	--	--	--	--
Zinc	µg/L	--	--	7.8	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	<0.06	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	2	--	--	--	--	--	--	--
Boron	mg/L	--	0.048	<0.02	--	--	0.02	<0.02	0.019	0.02	<0.009
Calcium	mg/L	--	(79.5) 79	73.7	--	--	72	67.8	66.2	65.8	65.9
Lithium	mg/L	0.04	--	0.02	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	26.7	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.001	--	--	--	--	--	--	--
Potassium	mg/L	--	--	1.24	--	--	--	--	--	--	--
Sodium	mg/L	--	--	25.8	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.106	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	303	--	--	--	--	--	--	--
Bromide	mg/L	--	--	0.1	--	--	--	--	0.1	--	--
Chloride	mg/L	--	(29.6) 33	33.7	30	--	34.7	33.3	35	66.2	35
Fluoride	mg/L	4	0.677	0.55	--	--	0.55	0.66	0.66	0.65	0.62
TDS	mg/L	--	(412.7) 419	388	--	442	350	402	430	380	380
Sulfate	mg/L	--	(36.95) 37	36.3	--	--	37.1	34.1	31.6	31	36.8
Sulfide	mg/L	--	--	<0.1	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.173	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	1.09	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	1.263	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.26	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0004	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-11

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	6/6/2018	8/16/2018	11/14/2018	2/13/2019	4/1/2019	5/23/2019
Field Parameters																		
Elevation	ft NGVD	--	--	369.42	369.25	368.8	368.24	367.58	367.63	367.62	368.28	367.25	369.39	397.45	368.74	369.73	370.51	371.86
pH	S.U.	--	6.43 - 7.90	6.7	7	7.4	7.09	7.6	7.4	7.24	6.89	7.1	7.5	7.31	7.75	7.5	7.37	7.01
Specific Conductance	µmhos/cm	--	--	461	479	570	544	370	500	443	402	424	480	533	425	443	802	503
Turbidity	NTU	--	--	0.9	0.7	0.24	0.35	1	1	0.6	0.36	1	0.32	0	0.61	1	1.06	0.06
Dissolved Oxygen	mg/L	--	--	0.4	0.3	1.07	0	0.3	1	0.46	27.63	0.5	0.87	0.22	0.19	2	1.28	0.73
Temperature	°C	--	--	17.5	18.2	16.99	14.53	14.4	15.7	15.44	16.52	16.4	16.25	16.03	14.68	14.7	14.6	16.79
ORP	mV	--	--	-21	205	-2.1	4.4	10	36	-26.2	-118.8	-23	-102.2	253	62.9	155	134.2	5.2
Laboratory Parameters																		
Antimony	µg/L	6	--	0.04	0.04	0.01	0.02	0.02	0.01	0.04	0.02	--	--	--	<0.02	--	--	<0.02
Arsenic	µg/L	10	--	0.86	0.78	0.92	0.8	0.82	0.69	0.89	0.86	--	--	--	0.82	--	--	0.73
Barium	µg/L	2000	--	85.5	86.1	84.9	93.4	90.5	76.7	85	94.3	--	--	--	85.6	--	--	83.8
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.004	<0.004	--	--	--	<0.02	--	--	<0.02
Cadmium	µg/L	5	--	0.08	0.1	0.02	0.02	0.02	0.05	0.01	0.007	--	--	--	0.02	--	--	<0.01
Chromium	µg/L	100	--	0.2	1	0.2	0.051	0.39	0.686	0.155	0.112	--	--	--	<0.04	--	--	0.04
Cobalt	µg/L	6	--	0.341	0.364	0.401	0.381	0.424	0.054	0.558	0.569	--	--	--	0.48	--	--	0.368
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.12	0.2	0.48	--	0.22	--	--	0.08
Lead	µg/L	15	--	0.851	1.25	0.156	0.059	0.099	0.427	0.068	0.137	--	--	--	0.07	--	--	<0.02
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--	<0.002
Molybdenum	µg/L	100	--	2.47	2.85	2.89	3.27	3.33	1.82	2.87	2.85	--	--	--	2.96	--	--	2.38
Selenium	µg/L	50	--	<0.03	0.04	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	--	--	--	<0.03	--	--	<0.03
Thallium	µg/L	2	--	0.03	0.02	0.02	0.03	0.104	0.03	0.02	0.02	--	--	--	<0.1	--	--	<0.1
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	1	4.2	--	1	--	--	0.9
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	18.5	18.9	20.7	17.8	--	18.2	--	--	18
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	1	2	2.96	--	3	--	--	<1
Boron	mg/L	--	0.093	0.075	0.014	0.018	0.015	0.004	0.045	0.049	0.047	0.018	0.11	0.056	0.05	--	--	0.02
Calcium	mg/L	--	(79.5) 71	67.4	60	64.5	63.9	60.9	66.9	65.7	64.8	68.1	66.4	--	65.5	--	--	67.7
Lithium	mg/L	0.04	--	0.005	0.022	0.007	0.005	0.005	0.006	0.008	0.0005	--	--	--	0.03	--	--	<0.009
Magnesium	mg/L	--	--	--	--	--	--	--	20.8	21.2	20.6	21.5	21	--	20.6	--	--	20.6
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.599	--	0.316	--	0.515	--	--	0.37
Potassium	mg/L	--	--	--	--	--	--	--	1.34	1.08	0.98	0.92	1.31	--	0.97	--	--	0.98
Sodium	mg/L	--	--	--	--	--	--	--	19.8	19.5	19.1	19.2	18.1	--	18.5	--	--	18.2
Strontium	mg/L	--	--	--	--	--	--	--	0.0934	0.0926	0.086	0.0911	0.093	--	0.0882	--	--	0.0912
Alkalinity	mg/L	--	--	222	--	--	--	--	222	225	226	222	230	--	227	--	--	243
Bromide	mg/L	--	--	--	--	--	--	--	0.061	0.087	0.081	0.072	0.081	--	0.08	--	--	0.09
Chloride	mg/L	--	(29.6) 27.4	24.9	24.8	24.3	24.1	24.4	24.1	26.5	26.5	27.5	28.6	--	28.8	30.1	34.1	33.1
Fluoride	mg/L	4	0.428	0.37	0.4	0.37	0.31	0.33	0.35	0.38	0.34	0.37	0.42	--	0.41	--	--	0.42
TDS	mg/L	--	(412.7) 349	323	315	331	334	316	300	323	330	327	321	--	308	--	--	341
Sulfate	mg/L	--	(47.8) 48	44.3	46.7	42.4	40.7	41.4	41.2	43.8	43.3	44.1	42	--	40.7	--	--	40.2
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	--	<0.07	--	--	<0.1
Radium-228	pCi/L	--	--	0.0603	0.105	1.42	0.662	0.108	-0.0752	0.3	2.21	--	--	--	0.415	--	--	0.71
Radium-226	pCi/L	--	--	0.33	1.57	0.276	0.65	0.513	0.15	0.33	0.323	--	--	--	0.288	--	--	0.37
Radium-226/228	pCi/L	5	--	0.3903	1.675	1.696	1.312	0.621	0.0748	0.63	2.533	--	--	--	0.703	--	--	1.08
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.37	--	0.4	--	0.12	--	--	0.43
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.3	--	1	--	0.9	--	--	<0.7
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.51	--	1	--	<1	--	--	1
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.03	<0.0004	0.035	0.048	0.011	--	0.053	--	--	0.034
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.583	0.1	0.455	0.445	0.303	--	0.508	--	--	0.397

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-11

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/23/2019	9/11/2019	11/22/2019	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/26/2021	11/12/2021	2/15/2022	5/12/2022	7/20/2022
Field Parameters															
Elevation	ft NGVD	--	--	372.45	--	370.95	370.40	370.81	369.90	368.07	369.25	368.50	--	369.34	369.88
pH	S.U.	--	6.43 - 7.90	7.21	7.25	7.05	7.22	7.44	7.34	7.37	7.72	7.53	--	7.33	7.54
Specific Conductance	µmhos/cm	--	--	493	481	491	566	575	590	549	648	598	--	623	650
Turbidity	NTU	--	--	2.1	0.58	1.7	0	2.96	1.38	2.8	0	1.9	--	2.41	0.11
Dissolved Oxygen	mg/L	--	--	0.57	0.26	2.1	0.28	1.64	0.18	0.2	0	0	--	0.31	0
Temperature	°C	--	--	16.4	17.5	14	15.23	17.24	15.42	14.4	18	14.66	--	15.65	17.38
ORP	mV	--	--	27	-35.8	-206	42	18	70	143	178	244	--	-27	-18
Laboratory Parameters															
Antimony	µg/L	6	--	--	--	<0.02	--	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.71	--	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	11	--	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.03	--	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.2	--	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.838	--	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	0.5	--	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.291	--	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	<0.002	--	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	3.1	--	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	<0.03	--	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	3	--	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	17.5	--	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	<5	--	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.093	--	--	0.01	0.02	--	<0.02	--	0.017	0.016	--	<0.009	--
Calcium	mg/L	--	(79.5) 71	--	--	66.7	71.2	--	65.9	--	67.4	68.2	--	70.4	--
Lithium	mg/L	0.04	--	--	--	0.00355	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	20.7	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	0.784	--	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	0.9	--	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	18.1	--	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	0.0917	--	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	210	--	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	0.08	--	--	--	--	0.09	--	--	--	--
Chloride	mg/L	--	(29.6) 27.4	30.6	33.5	35	37.7	35.4	36.3	36.9	37.8	42.5	46.8	46.5	47.2
Fluoride	mg/L	4	0.428	--	--	0.37	0.4	0.39	0.43	--	0.38	0.4	--	0.41	--
TDS	mg/L	--	(412.7) 349	--	--	348	323	340	322	--	350	340	--	350	--
Sulfate	mg/L	--	(47.8) 48	--	--	39.7	40.1	--	39.0	--	38.6	39	--	43.4	--
Sulfide	mg/L	--	--	--	--	<0.2	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.546	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.421	--	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.967	--	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	<0.2	--	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	<5	--	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	0.05	--	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	0.758	--	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/19/2016	9/20/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.6	369.43	368.97	368.42	367.75	367.81	367.81	368.34	367.44	366.27
pH	S.U.	--	6.74 - 8.16	7.6	7.1	7.36	7.5	7.4	7.33	7.25	8.06	7.3	7.68
Specific Conductance	µmhos/cm	--	--	496	471	464	842	400	558	394	525	448	539
Turbidity	NTU	--	--	8.8	2	6.27	4	5	1.93	2.15	2.47	2	3.89
Dissolved Oxygen	mg/L	--	--	0.5	0.2	0.55	0.8	2	0.25	0.53	0.81	0.4	1.83
Temperature	°C	--	--	19.4	16.7	15.77	14.8	14.7	15.14	15.84	21.46	16.5	6.7
ORP	mV	--	--	63	220	92.8	252	182	49.6	132.7	152.8	-14	-5.3
Laboratory Parameters													
Antimony	µg/L	6	--	0.05	0.03	0.03	0.03	0.03	0.02	0.02	0.02	--	--
Arsenic	µg/L	10	--	1.29	0.73	1.07	0.65	0.77	0.58	0.75	0.59	--	--
Barium	µg/L	2000	--	255	147	160	147	162	139	142	139	--	--
Beryllium	µg/L	4	--	0.01	<0.005	0.007	<0.005	<0.005	<0.005	0.006	<0.004	--	--
Cadmium	µg/L	5	--	0.13	0.07	0.04	0.04	0.15	0.04	0.04	0.05	--	--
Chromium	µg/L	100	--	0.3	1.5	0.3	0.072	0.439	0.687	0.174	0.131	--	--
Cobalt	µg/L	6	--	3.64	0.373	0.836	0.329	0.577	0.173	0.44	0.212	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.93	1.02	--
Lead	µg/L	15	--	1.13	1.37	0.5	0.222	0.807	1.92	0.419	0.355	--	--
Mercury	µg/L	2	--	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	3.44	3.59	3.6	3.24	2.43	3.4	3.05	2.94	--	--
Selenium	µg/L	50	--	0.07	0.03	0.07	0.03	0.03	0.03	0.06	<0.03	--	--
Thallium	µg/L	2	--	0.04	0.02	0.056	0.02	0.05	0.03	0.04	0.03	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.5	4.5	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	18.9	19.4	21.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	8.08	14.6	--
Boron	mg/L	--	0.066	0.017	0.015	0.016	0.018	0.006	0.055	0.046	0.019	0.002	--
Calcium	mg/L	--	(79.5) 75	63.6	57.9	65.2	69.3	63.4	70	67.8	63.9	65.7	--
Lithium	mg/L	0.04	--	<0.0002	0.017	0.0005	0.004	0.007	0.007	0.009	0.002	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	21.9	22.2	20.7	20.9	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.511	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.13	1.13	0.89	0.89	--
Sodium	mg/L	--	--	--	--	--	--	--	19.4	19.3	18.8	18	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0985	0.101	0.0885	0.092	--
Alkalinity	mg/L	--	--	--	--	--	--	--	206	202	206	220	--
Bromide	mg/L	--	--	--	--	--	--	--	0.09	0.115	0.109	0.03	--
Chloride	mg/L	--	(29.6) 50	27.3	29.8	29.8	39.3	40.6	40.3	40.9	39.3	10.3	--
Fluoride	mg/L	4	0.321	0.28	0.3	0.28	0.29	0.26	0.26	0.28	0.24	0.85	0.31
TDS	mg/L	--	(412.7) 369	331	329	288	339	323	330	342	338	339	--
Sulfate	mg/L	--	(45.1) 45	40.2	40.6	32.3	33.6	36.4	37	39.5	39.6	10.4	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.558	0.06	0.525	0.566	0.315	0.0844	0.511	0.444	--	--
Radium-226	pCi/L	--	--	0.526	0.135	0.932	6.73	0.334	0.154	0.213	0.502	--	--
Radium-226/228	pCi/L	5	--	1.084	0.195	1.457	7.296	0.649	0.2384	0.724	0.946	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.58	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	4.2	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.052	0.012	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.553	0.62	0.486	0.616	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-1D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2018	8/16/2018	11/14/2018	2/13/2019	5/23/2019	7/23/2019	11/22/2019	2/17/2020	5/19/2020	11/11/2020	2/3/2021	5/26/2021	11/12/2021	5/12/2022
Field Parameters																	
Elevation	ft NGVD	--	--	369.56	369.94	368.73	369.71	371.84	372.45	367.22	369.34	370.40	369.91	376.09	368.95	368.22	369.35
pH	S.U.	--	6.74 - 8.16	8.24	7.35	7.77	7.41	7.18	7.3	7.26	7.38	7.05	7.14	7.5	7.68	7.35	7.21
Specific Conductance	µmhos/cm	--	--	508	568	457	317	0.504	510	609	817	454	664	467	747	735	624
Turbidity	NTU	--	--	1.71	0	1.03	2	0.3	1.5	2.53	0.98	0	0.43	2.9	0	1.44	2.83
Dissolved Oxygen	mg/L	--	--	0.25	0.26	0.2	10	3.68	2.1	3.57	6.09	9.13	0	4.8	0	0	2.47
Temperature	°C	--	--	15.85	16.71	14.06	14	17.02	16.7	14.31	13.25	15.71	15.84	13.2	15.9	14.75	15.51
ORP	mV	--	--	-112	200	53	188	55.9	44	51.3	211.2	152	95	145	200	239	160
Laboratory Parameters																	
Antimony	µg/L	6	--	--	--	0.03	--	0.05	--	0.04	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.62	--	0.47	--	0.57	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	101	--	99.2	--	101	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	--	<0.02	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.02	--	0.02	--	0.03	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.07	--	0.1	--	0.2	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.04	--	0.058	--	0.097	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.55	--	0.75	--	0.83	--	0.4	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.07	--	0.138	--	0.2	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	2	--	1	--	1	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.04	--	0.09	--	0.08	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	--	<0.1	--	--	--	--	--	--	--
Zinc	µg/L	--	--	2	--	1	--	65.9	--	2	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	17.9	--	19	--	17.8	--	18.5	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	16.1	--	<1	--	4	--	<5	--	--	--	--	--	--	--
Boron	mg/L	--	0.066	0.103	0.02	0.1	<0.02	0.02	--	0.04	--	0.04	0.04	--	0.033	0.042	<0.009
Calcium	mg/L	--	(79.5) 75	70.9	--	71.9	--	73.6	--	72.5	--	59.9	80.3	56.8	77.2	73.7	68.6
Lithium	mg/L	0.04	--	--	--	0.01	--	0.01	--	0.0038	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	20.4	--	22.1	--	18.3	--	22.2	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.216	--	0.138	--	0.169	--	0.163	--	--	--	--	--	--	--
Potassium	mg/L	--	--	1.34	--	1.71	--	1.23	--	1.3	--	--	--	--	--	--	--
Sodium	mg/L	--	--	18.2	--	20.9	--	18.7	--	26	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.359	--	0.272	--	0.553	--	0.194	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	218	--	222	--	208	--	260	--	--	--	--	--	--	--
Bromide	mg/L	--	--	0.113	--	0.1	--	0.09	--	0.1	--	--	--	--	0.11	--	--
Chloride	mg/L	--	(29.6) 50	43.1	43.8	46.9	43.8	32.1	--	49.1	--	23.8	56.2	--	44	55.4	30.9
Fluoride	mg/L	4	0.321	0.3	--	0.3	--	0.27	--	0.27	--	0.3	0.30	--	0.26	0.3	0.26
TDS	mg/L	--	(412.7) 369	345	--	340	--	346	--	398	257	261	397	264	410	410	350
Sulfate	mg/L	--	(45.1) 45	39.5	--	39.8	--	45.3	39.2	41.2	--	23.3	37.7	--	38.6	36	45.4
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	--	<0.2	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.295	--	0.55	--	0.197	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0679	--	0.652	--	0.11	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.3629	--	1.202	--	0.307	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.98	--	0.78	--	0.8	--	2.19	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	11.8	--	2	--	2	--	3	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	5.05	--	3	--	<5	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.002	--	0.02	--	<0.003	--	<0.02	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0605	--	0.144	--	0.148	--	0.131	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-2S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/9/2017	5/9/2017	7/19/2017	10/4/2017	6/6/2018	11/13/2018	2/13/2019	4/1/2019	5/22/2019
Field Parameters																	
Elevation	ft NGVD	--	--	369.34	369.03	369.02	368.77	366.24	368.15	368.06	368.22	366.68	369.94	367.91	368.87	369.97	371.02
pH	S.U.	--	6.30 - 8.44	6.4	7.68	7.63	7.34	7.65	7.66	7.12	7.46	7.17	7.62	7.53	7.77	7.72	7.66
Specific Conductance	µmhos/cm	--	--	423	465	440	459	341	522	354	409	509	470	425	451	491	500
Turbidity	NTU	--	--	3.1	1.85	0.51	0.96	0.74	1.31	2.68	4.81	1.55	1.84	2.15	0.8	1.51	1.08
Dissolved Oxygen	mg/L	--	--	2.8	1.85	4.67	3.91	4.18	3.63	4.52	2.62	2.63	4.66	3.7	3.1	4.7	5.77
Temperature	°C	--	--	17.5	16.34	15.81	16.03	15.1	15.73	15.67	16.06	16.42	16.48	14.51	14.6	14.5	15.93
ORP	mV	--	--	34	64	90.4	-19	165	13.1	165.7	-5.9	26.6	59.1	23	71	-17.9	-3.2
Laboratory Parameters																	
Antimony	µg/L	6	--	<0.02	0.02	0.04	0.02	0.02	0.02	0.04	0.12	--	--	0.04	--	--	0.03
Arsenic	µg/L	10	--	0.97	1.09	0.94	0.94	0.92	0.95	0.95	0.96	--	--	0.82	--	--	0.78
Barium	µg/L	2000	--	16	14	12.4	12.4	11	12.3	12.3	13.6	--	--	16.5	--	--	18
Beryllium	µg/L	4	--	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	<0.02	--	--	<0.02
Cadmium	µg/L	5	--	0.01	0.01	0.02	0.02	0.09	0.009	0.01	0.03	--	--	0.11	--	--	0.08
Chromium	µg/L	100	--	0.4	0.6	0.3	0.337	0.329	0.67	0.37	0.41	--	--	0.1	--	--	0.1
Cobalt	µg/L	6	--	0.177	0.09	0.017	0.019	0.014	0.051	0.064	0.121	--	--	<0.02	--	--	0.02
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.33	0.2	1.58	0.28	--	--	0.56
Lead	µg/L	15	--	0.158	0.105	0.101	0.022	0.063	0.042	0.047	0.243	--	--	0.04	--	--	0.133
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	<0.002
Molybdenum	µg/L	100	--	2.03	2.39	2.07	1.91	2.14	1.92	1.75	1.81	--	--	2	--	--	2
Selenium	µg/L	50	--	0.3	0.3	0.2	0.3	0.4	0.3	0.2	0.3	--	--	0.2	--	--	1
Thallium	µg/L	2	--	<0.02	<0.01	<0.01	<0.01	0.074	<0.01	<0.01	0.03	--	--	<0.1	--	--	<0.1
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	3.3	5.3	89.4	--	--	7.5
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	28.6	28.8	31.9	26.7	26.8	--	--	25
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	36.6	14.7	15.3	7.27	--	--	6.68
Boron	mg/L	--	0.109	<0.002	0.015	0.014	0.018	0.004	0.069	0.084	0.052	0.045	0.073	0.06	--	--	<0.02
Calcium	mg/L	--	(79.5) 66	59.4	51.6	57.4	62.4	51.6	57.9	59	53.3	60.7	57	54.7	--	--	51.3
Lithium	mg/L	0.04	--	0.0004	0.018	0.005	0.008	0.009	0.0007	0.002	0.005	--	--	<0.009	--	--	<0.009
Magnesium	mg/L	--	--	--	--	--	--	--	21.2	21.9	19.5	22.8	21.3	20.9	--	--	19
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0124	--	0.0063	0.0025	--	--	0.0017
Potassium	mg/L	--	--	--	--	--	--	--	0.73	0.81	0.65	0.64	0.68	0.68	--	--	0.66
Sodium	mg/L	--	--	--	--	--	--	--	13.4	14	11.8	16.3	22.1	23.7	--	--	26
Strontium	mg/L	--	--	--	--	--	--	--	0.0837	0.0855	0.0756	0.0888	0.0906	0.086	--	--	0.0803
Alkalinity	mg/L	--	--	--	--	--	--	--	174	191	188	207	215	207	--	--	220
Bromide	mg/L	--	--	--	--	--	--	--	0.02	0.071	0.116	0.06	0.063	<0.04	--	--	<0.04
Chloride	mg/L	--	(29.6) 24	21.5	21.8	23.8	21.8	21.2	21	20.8	19.6	21.2	25.3	24.8	26.5	26.1	26.4
Fluoride	mg/L	4	0.299	0.26	0.29	0.26	0.26	0.25	0.26	0.26	0.23	0.25	0.29	0.28	--	--	0.3
TDS	mg/L	--	(412.7) 343	298	265	301	316	284	285	321	308	323	329	272	--	--	352
Sulfate	mg/L	--	(35.08) 35	26	27.6	26.2	24.1	25.9	26.6	30.3	33.8	30	28.9	24.7	--	--	26.2
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.1	--	--	<0.1
Radium-228	pCi/L	--	--	-0.035	0.54	0	0.228	0.343	0.0555	-0.0726	0.631	--	--	0.146	--	--	0.54
Radium-226	pCi/L	--	--	0.12	0.172	0.143	0.143	0.311	0.465	0.434	0.0617	--	--	0.0173	--	--	0.0674
Radium-226/228	pCi/L	5	--	-0.035	0.66	0.172	0.371	0.654	0.5205	0.3614	0.6927	--	--	0.1633	--	--	0.6074
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	0.27	1.84	--	--	0.87
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	0.6	5	--	--	4
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	2	1	--	--	5.16
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.053	0.013	<0.002	0.003	--	--	0.003
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0001	<0.0001	<0.0001	0.0021	0.0003	0.0005	--	--	0.0009

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-2S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/23/2019	9/11/2019	11/14/2019	5/18/2020	7/16/2020	11/11/2020	2/4/2021	5/27/2021	8/4/2021	11/11/2021	5/12/2022
Field Parameters														
Elevation	ft NGVD	--	--	371.37	370.52	370.86	369.39	377.69	370.64	368.33	369.35	369.45	369.07	369.92
pH	S.U.	--	6.30 - 8.44	7.45	7.33	7.54	7.43	7.55	7.4	7.62	9.5	7.3	7	7.57
Specific Conductance	µmhos/cm	--	--	486	473	657	462	584	588	562	500	579	588	482
Turbidity	NTU	--	--	1.7	0.83	0.2	1.64	0.53	0.56	0.3	0	7.84	0	0.3
Dissolved Oxygen	mg/L	--	--	1.3	1.78	3.59	2.3	3.24	3.98	5.1	4.8		3.97	3.36
Temperature	°C	--	--	16.2	16.4	15.18	16.64	14.96	15.54	13.8	16.36	15.32	14.67	15.38
ORP	mV	--	--	55	7.7	4	27	48	85	72	73	150	218	124
Laboratory Parameters														
Antimony	µg/L	6	--	--	--	<0.02	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.76	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	19.3	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	<0.01	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.255	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	<0.02	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	<0.2	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	<0.05	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	<0.002	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	1	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	1.1	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	<0.7	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	25.2	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	<5	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.109	--	--	0.03	0.02	--	0.03	--	0.043	--	0.028	<0.009
Calcium	mg/L	--	(79.5) 66	--	--	59.2	53.7	--	58.4	--	59.8	--	55.2	42.8
Lithium	mg/L	0.04	--	--	--	0.00413	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	20.4	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	0.001	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	0.7	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	32.9	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	0.0909	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	221	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	0.08	--	--	--	--	0.09	--	--	--
Chloride	mg/L	--	(29.6) 24	26.8	26.6	27.3	28.9	28.7	27.0	--	24.8	--	23.0	16.8
Fluoride	mg/L	4	0.299	--	--	0.28	0.34	0.33	0.34	0.36	0.35	0.35	0.33	0.39
TDS	mg/L	--	(412.7) 343	339	--	336	344	347	336	--	370	--	330	280
Sulfate	mg/L	--	(35.08) 35	--	--	27.8	24.9	--	25.7	--	30.8	--	27.1	17.9
Sulfide	mg/L	--	--	--	--	<0.2	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.161	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0407	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.2017	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	1.84	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	2	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	<5	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	<0.02	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	<0.0005	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	1/3/2018	6/6/2018	8/16/2018
Field Parameters															
Elevation	ft NGVD	--	--	369.26	368.97	368.94	368.7	366.31	368.06	368.01	368.16	366.64	365.54	369.85	369.32
pH	S.U.	--	6.43 - 8.69	7.89	7.14	7.45	7.26	7.7	7.64	8.42	6.98	7.16	7.84	7.55	7.52
Specific Conductance	µmhos/cm	--	--	581	542	513	495	370	557	383	431	553	568	802	614
Turbidity	NTU	--	--	2.02	1.41	0.94	1.83	3.99	16	24.3	6.25	10.3	1.3	0.91	0
Dissolved Oxygen	mg/L	--	--	1.54	7.64	1.96	3.62	--	10.86	1.97	22.85	0.71	1.12	1.1	0.06
Temperature	°C	--	--	15.88	15.93	17.11	15.97	14.38	14.74	15.42	16.34	15.68	11.06	15.3	16.03
ORP	mV	--	--	65.9	29.8	-29.6	-11.6	161.9	-52.8	156.9	-180.6	-63.4	-51.8	-55.4	-46
Laboratory Parameters															
Antimony	µg/L	6	--	0.06	0.06	0.07	0.13	0.1	0.1	0.15	0.11	--	--	--	--
Arsenic	µg/L	10	--	0.64	0.68	0.55	0.61	0.65	0.74	0.9	0.76	--	--	--	--
Barium	µg/L	2000	--	78.5	84	67.1	60.1	59.4	58.4	59.3	62.9	--	--	--	--
Beryllium	µg/L	4	--	<0.005	0.006	<0.005	<0.005	<0.005	0.01	0.022	0.02	--	--	--	--
Cadmium	µg/L	5	--	0.03	0.05	0.05	0.07	0.16	0.22	0.09	0.05	--	--	--	--
Chromium	µg/L	100	--	0.2	0.6	0.1	0.143	0.154	1.01	0.829	0.567	--	--	--	--
Cobalt	µg/L	6	--	0.606	0.76	0.415	0.26	0.28	0.581	1.28	0.995	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	2.21	1.82	--	0.2	--
Lead	µg/L	15	--	0.208	0.454	0.178	0.231	0.383	0.588	1.39	1.19	--	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	4.91	5	4.21	3.14	2.07	2.06	2.17	2.07	--	--	--	--
Selenium	µg/L	50	--	0.7	0.7	0.6	0.4	0.2	0.2	0.4	0.2	--	--	--	--
Thallium	µg/L	2	--	0.051	0.04	0.04	0.02	0.03	0.03	0.04	0.064	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.4	3.4	--	20.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	16.3	16.8	18.9	--	16.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	315	244	--	9.39	--
Boron	mg/L	--	0.043	0.019	0.009	0.025	0.013	<0.002	0.024	0.034	0.025	0.03	--	0.052	0.03
Calcium	mg/L	--	(79.5) 78	74	67.5	66.8	73.9	63.9	71.5	71	68.9	72.5	--	72.7	--
Lithium	mg/L	0.04	--	0.005	0.021	0.002	0.006	0.007	0.005	0.007	<0.0002	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	22.8	23.6	22.8	23.7	--	23.7	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.463	--	--	0.564	--
Potassium	mg/L	--	--	--	--	--	--	--	1.09	1.2	1.01	1.05	--	1.14	--
Sodium	mg/L	--	--	--	--	--	--	--	14.7	15.3	15.8	16.8	--	16.9	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0919	0.0977	0.0885	0.0946	--	0.0959	--
Alkalinity	mg/L	--	--	--	--	--	--	--	223	218	236	252	--	254	--
Bromide	mg/L	--	--	--	--	--	--	--	0.05	0.071	0.072	0.075	--	0.077	--
Chloride	mg/L	--	(29.6) 32	28.6	29.7	28	25.8	27.1	25.8	28.6	29.7	29.8	28.8	31.8	31.5
Fluoride	mg/L	4	0.371	0.3	0.33	0.31	0.36	0.3	0.31	0.31	0.28	0.28	--	0.32	--
TDS	mg/L	--	(412.7) 375	332	363	330	326	314	312	343	346	343	--	356	--
Sulfate	mg/L	--	(48.53) 49	42.9	54.7	41.1	36.9	39.2	39.2	42.4	44.1	45.5	--	43.2	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	--
Radium-228	pCi/L	--	--	-0.0463	0.62	0.241	0.137	0.648	0.146	0.163	0.195	--	--	--	--
Radium-226	pCi/L	--	--	0.398	0.342	0.267	0.288	0.197	0.289	0.328	0.341	--	--	--	--
Radium-226/228	pCi/L	5	--	0.3517	0.962	0.508	0.425	0.845	0.435	0.491	0.536	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	1.96	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.3	--	--	21.7	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	154	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.053	0.016	0.03	0.054	--	0.238	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.258	0.331	0.333	0.323	--	0.563	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	2/13/2019	5/22/2019	11/14/2019	5/18/2020	11/11/2020	5/27/2021	11/11/2021	5/12/2022	7/19/2022
Field Parameters													
Elevation	ft NGVD	--	--	367.97	368.87	371.17	371.18	369.44	370.65	369.39	369.17	369.97	370.3
pH	S.U.	--	6.43 - 8.69	7.2	7.55	7.34	7.39	7.8	6.86	9.66	6.99	7.46	6.88
Specific Conductance	µmhos/cm	--	--	434	435	481	576	420	558	510	647	700	669
Turbidity	NTU	--	--	17.03	2.8	0	4.1	2.08	2.72	0	0	1.87	5.31
Dissolved Oxygen	mg/L	--	--	0.13	10	0.71	0.33	5.14	7.66	0	0.06	4.49	0
Temperature	°C	--	--	14.25	14.3	16.09	15.93	15.94	4.84	16.6	14.51	16.3	17.11
ORP	mV	--	--	36.8	-17	-83.8	-115	-58	25	-95	-43	-54	-71
Laboratory Parameters													
Antimony	µg/L	6	--	0.02	--	0.03	0.05	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.49	--	0.4	0.39	--	--	--	--	--	--
Barium	µg/L	2000	--	95	--	102	90.8	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	<0.02	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.04	--	0.003	0.12	--	--	--	--	--	--
Chromium	µg/L	100	--	0.327	--	0.06	0.1	--	--	--	--	--	--
Cobalt	µg/L	6	--	0.492	--	0.347	0.141	--	--	--	--	--	--
Copper	µg/L	--	--	1.52	--	0.24	<0.2	--	--	--	--	--	--
Lead	µg/L	15	--	0.467	--	0.143	0.07	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2	--	2.13	2.14	--	--	--	--	--	--
Selenium	µg/L	50	--	0.2	--	0.05	0.9	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	<0.1	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	35.2	--	7.4	1	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	16.9	--	15.9	15	--	--	--	--	--	--
Aluminum	µg/L	--	--	91.9	--	6.25	<5	--	--	--	--	--	--
Boron	mg/L	--	0.043	0.05	<0.02	<0.02	0.01	<0.02	<0.02	0.013	0.013	<0.009	--
Calcium	mg/L	--	(79.5) 78	64.8	--	64.3	63.4	61.9	66.6	70.9	72.1	78	--
Lithium	mg/L	0.04	--	<0.009	--	<0.009	0.00402	--	--	--	--	--	--
Magnesium	mg/L	--	--	21.2	--	20.4	19.4	--	--	--	--	--	--
Manganese	mg/L	--	--	0.576	--	0.699	0.272	--	--	--	--	--	--
Potassium	mg/L	--	--	0.89	--	0.92	0.9	--	--	--	--	--	--
Sodium	mg/L	--	--	15.3	--	13.5	13.2	--	--	--	--	--	--
Strontium	mg/L	--	--	0.0864	--	0.083	0.0803	--	--	--	--	--	--
Alkalinity	mg/L	--	--	247	--	241	208	--	--	--	--	--	--
Bromide	mg/L	--	--	0.06	--	0.05	0.04	--	--	0.06	--	--	--
Chloride	mg/L	--	(29.6) 32	27.9	31.5	25.4	23.3	24.4	24.3	29.2	31.7	51.3	58.8
Fluoride	mg/L	4	0.371	0.32	--	0.32	0.33	0.36	0.37	0.35	0.32	0.3	--
TDS	mg/L	--	(412.7) 375	308	--	328	296	297	296	350	340	380	--
Sulfate	mg/L	--	(48.53) 49	39	--	39.2	39.3	40.5	38.6	40.8	37.2	41.1	--
Sulfide	mg/L	--	--	<0.1	--	<0.1	<0.2	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.291	--	0.451	0.191	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.258	--	0.194	0.0689	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.549	--	0.645	0.2599	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.2	--	0.64	1.08	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	--	0.9	2	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<1	--	1	<5	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.037	--	0.02	<0.02	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.565	--	0.643	0.251	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-2D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	6/7/2018	8/16/2018	11/12/2018	2/13/2019	5/22/2019	7/24/2019
Field Parameters																		
Elevation	ft NGVD	--	--	369.22	368.96	368.9	368.68	366.41	368.04	367.96	367.95	366.6	369.84	369.25	367.91	368.89	371.01	371.37
pH	S.U.	--	6.45-8.63	7.86	7.47	7.29	7.1	7.4	7.39	7.3	8.51	7.24	7.55	7.33	7.36	7.32	7.25	6.28
Specific Conductance	µmhos/cm	--	--	586	524	551	516	386	568	388	516	428	460	830	464	391	803	834
Turbidity	NTU	--	--	2.31	3.15	3.5	0.79	3.45	2.67	2.32	1.72	1.82	5.05	0	5.4	2.1	1.25	3
Dissolved Oxygen	mg/L	--	--	0.45	0.31	1.77	0.31	5.47	0.79	0.87	0.45	0.84	6.83	0.74	0.86	0.37	2.29	0.9
Temperature	°C	--	--	15.8	15.79	19.32	15.58	14.22	14.45	15.65	16.06	15.71	15.35	17.83	14.61	13.7	15.57	15.8
ORP	mV	--	--	-2.7	-168.3	45	-0.7	206.9	-87.3	143.6	-24.8	-41	32.3	-24	-25.4	-164	-71.2	8
Laboratory Parameters																		
Antimony	µg/L	6	--	0.03	0.06	0.02	0.02	0.03	0.03	0.04	0.02	--	--	--	0.03	--	<0.02	--
Arsenic	µg/L	10	--	0.78	0.82	0.81	0.61	0.62	0.59	0.65	0.62	--	--	--	0.58	--	0.53	--
Barium	µg/L	2000	--	185	195	180	172	157	160	159	169	--	--	--	190	--	248	--
Beryllium	µg/L	4	--	<0.005	0.006	0.007	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.02	--	<0.02	--
Cadmium	µg/L	5	--	0.12	0.12	0.07	0.1	0.26	0.09	0.08	0.08	--	--	--	0.17	--	0.3	--
Chromium	µg/L	100	--	0.2	0.4	0.3	0.05	0.277	0.562	0.188	0.162	--	--	--	0.2	--	<0.04	--
Cobalt	µg/L	6	--	0.473	0.439	0.425	0.212	0.327	0.252	0.335	0.353	--	--	--	0.5	--	0.488	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	--	1.96	2.09	--	0.22	--	0.18	--
Lead	µg/L	15	--	0.648	0.359	0.247	0.021	0.378	0.045	0.144	0.075	--	--	--	0.14	--	0.129	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	<0.002	--
Molybdenum	µg/L	100	--	2.11	2.16	1.97	2.09	1.8	2.13	1.9	1.89	--	--	--	2	--	2	--
Selenium	µg/L	50	--	<0.03	<0.03	0.05	0.09	0.08	0.03	0.06	0.04	--	--	--	<0.03	--	<0.03	--
Thallium	µg/L	2	--	0.02	0.02	0.03	0.01	0.02	0.02	0.02	0.02	--	--	--	<0.1	--	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	6	3.5	--	0.9	--	533	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.5	17.9	20.5	17.4	--	17.8	--	17.1	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	17.5	20.7	70.5	--	15.4	--	3	--
Boron	mg/L	--	0.074	<0.002	0.01	0.013	0.014	<0.002	0.03	0.027	0.073	0.041	0.076	0.038	0.07	--	<0.02	--
Calcium	mg/L	--	(79.5) 81	75.6	65.8	66.7	73.9	64.2	74.2	70.8	64.7	67.7	78.6	--	72.4	--	98.5	114
Lithium	mg/L	0.04	--	0.002	0.018	0.002	0.007	0.007	0.008	0.011	0.0006	--	--	--	<0.009	--	0.02	--
Magnesium	mg/L	--	--	--	--	--	--	--	24.3	23.9	21.9	22.6	26.4	--	24.5	--	32.2	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.657	--	0.943	--	0.717	--	0.941	--
Potassium	mg/L	--	--	--	--	--	--	--	1.17	1.21	1.32	1.1	1.28	--	0.99	--	1.2	--
Sodium	mg/L	--	--	--	--	--	--	--	17.3	16.9	16	15.8	16.4	--	14.8	--	20.7	--
Strontium	mg/L	--	--	--	--	--	--	--	0.104	0.104	0.0894	0.0952	0.111	--	0.102	--	0.138	--
Alkalinity	mg/L	--	--	--	--	--	--	--	249	248	261	248	263	--	247	--	261	--
Bromide	mg/L	--	--	--	--	--	--	--	0.06	0.079	0.156	0.083	0.073	--	<0.04	--	0.08	--
Chloride	mg/L	--	(29.6) 25	24.2	24.2	22.8	22.2	22.3	21.7	23.1	23	22.4	43.1	93.0 ?	51.3	40.9	135	156
Fluoride	mg/L	4	0.222	0.19	0.21	0.2	0.19	0.19	0.2	0.21	0.18	0.2	0.22	--	0.2	--	0.18	--
TDS	mg/L	--	(412.7) 358	341	339	338	327	318	318	343	340	332	361	--	348	--	531	540
Sulfate	mg/L	--	(46.44) 46	42.1	44.2	39.6	35.4	38.3	37.6	40.5	40.5	42.3	39.8	--	36.1	--	33.3	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	--	<0.1	--	<0.1	--
Radium-228	pCi/L	--	--	0.0495	0.195	0.451	0.473	0.506	1.11	0.0264	0.257	--	--	--	0.0387	--	0.553	--
Radium-226	pCi/L	--	--	-0.0267	0.133	-0.00345	1.77	0.772	0.185	0.429	0.115	--	--	--	0.245	--	0.207	--
Radium-226/228	pCi/L	5	--	0.0228	0.328	0.44755	2.243	1.278	1.295	0.4554	0.372	--	--	--	0.2837	--	0.76	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.11	--	0.12	--	0.11	--	0.39	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.8	--	0.5	--	1	--	3	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.14	--	2.75	--	<1	--	1	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.055	0.017	0.005	--	0.007	--	0.009	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.565	0.602	0.662	0.619	0.621	--	0.702	--	0.948	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-2D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/11/2019	11/14/2019	2/18/2020	5/18/2020	7/15/2020	11/11/2020	2/3/2021	5/27/2021	8/5/2021	11/11/2021	2/15/2022	5/12/2022	7/20/2022
Field Parameters																
Elevation	ft NGVD	--	--	-----	371.11	-----	369.47	370.67	370.61	368.29	369.31	369.43	369.03	368.45	369.81	370.2
pH	S.U.	--	6.45-8.63	7.15	7.3	7.08	7.76	7.26	7.22	7.34	9.45	7.2	6.83	7.17	7.28	7.07
Specific Conductance	µmhos/cm	--	--	705	726	1377	617	781	725	674	664	734	943	951	1050	1050
Turbidity	NTU	--	--	1.9	9.2	2.13	2.92	0.88	1.35	1	0	6.94	0	0	0.2	2.33
Dissolved Oxygen	mg/L	--	--	0.58	0.3	0.57	0.07	0	0	0.2	5.72		0.26	--	0.11	0.76
Temperature	°C	--	--	16.5	14.94	12.75	15.06	15.56	14.25	13.8	16.69	15.82	15.73	14	16.7	19.42
ORP	mV	--	--	-109	-73	-76.4	-90	-40	-113	-145	-85	-133	-63	-100	-58	-36
Laboratory Parameters																
Antimony	µg/L	6	--	--	0.04	--	--	--	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	0.62	--	--	--	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	193	--	--	--	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	<0.02	--	--	--	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	0.19	--	--	--	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	0.334	--	--	--	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	0.537	--	--	--	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	--	0.4	--	--	--	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	0.416	--	--	--	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	<0.002	--	--	--	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	2.28	--	--	--	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	0.04	--	--	--	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	16.5	--	--	--	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	10	--	--	--	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.074	--	0.02	--	<0.02	--	<0.02	--	0.012	--	0.011	--	<0.009	--
Calcium	mg/L	--	(79.5) 81	103	76.9	--	88.7	--	92.2	--	88.5	--	96.3	--	114	--
Lithium	mg/L	0.04	--	--	0.00298	--	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	24.7	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	0.855	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	16.9	--	--	--	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	0.108	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	252	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.06	--	--	--	--	--	0.07	--	--	--	--	--
Chloride	mg/L	--	(29.6) 25	110	56.5	76.3	93.6	96.2	92.2	74.2	82.9	94.2	135	159	184	175
Fluoride	mg/L	4	0.222	SSI 1	0.18	--	0.21	0.2	0.20	--	0.21	--	0.2	--	0.2	--
TDS	mg/L	--	(412.7) 358	443	356	--	399	411	395	400	440	420	470	--	580	650
Sulfate	mg/L	--	(46.44) 46	--	38.9	--	36.2	--	35.1	--	37.6	--	33.3	--	39.1	--
Sulfide	mg/L	--	--	--	<0.2	--	--	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	0.803	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	0.334	--	--	--	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	1.137	--	--	--	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	1.64	--	--	--	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	<5	--	--	--	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	<0.02	--	--	--	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	0.8	--	--	--	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-5S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	11/10/2020	5/27/2021	11/12/2021	5/12/2022
Field Parameters								
Elevation	ft NGVD	--	--	392.55	391.70	393.08	391.14	393.96
pH	S.U.	--	7.56	7.56	6.77	7.59	6.64	7.33
Specific Conductance	µmhos/cm	--	--	1202	2050	826	1800	1419
Turbidity	NTU	--	--	0.43	6.72	31.76	0	1.8
Dissolved Oxygen	mg/L	--	--	1.09	4	7.3	0.44	4.83
Temperature	°C	--	--	12.53	16.51	18.5	13.88	18.1
ORP	mV	--	--	71.3	11	-76	101	4.1
Laboratory Parameters								
Antimony	µg/L	6	--	0.1	--	--	--	--
Arsenic	µg/L	10	--	0.85	--	--	--	--
Barium	µg/L	2000	--	158	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.08	--	--	--	--
Chromium	µg/L	100	--	<0.04	--	--	--	--
Cobalt	µg/L	6	--	8.15	--	--	--	--
Copper	µg/L	--	--	0.43	--	--	--	--
Lead	µg/L	15	--	0.05	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	--
Molybdenum	µg/L	100	--	1	--	--	--	--
Selenium	µg/L	50	--	0.8	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	--	--
Zinc	µg/L	--	--	5	--	--	--	--
Silica (Dissolved)	mg/L	--	--	21.5	--	--	--	--
Aluminum	µg/L	--	--	2	--	--	--	--
Boron	mg/L	--	0.102	0.102	0.057	0.07	0.059	0.055
Calcium	mg/L	--	86.3	86.3	93.5	71.5	96.9	77.7
Lithium	mg/L	0.04	--	<0.009	--	--	--	--
Magnesium	mg/L	--	--	22.2	--	--	--	--
Manganese	mg/L	--	--	0.522	--	--	--	--
Potassium	mg/L	--	--	1.78	--	--	--	--
Sodium	mg/L	--	--	188	--	--	--	--
Strontium	mg/L	--	--	0.3	--	--	--	--
Alkalinity	mg/L	--	--	229	--	--	--	--
Bromide	mg/L	--	--	1.05	--	0.38	--	--
Chloride	mg/L	--	364	364	451	147	420	355
Fluoride	mg/L	4	0.21	0.21	0.23	0.24	0.19	0.24
TDS	mg/L	--	840	840	1030	580	970	860
Sulfate	mg/L	--	41.2	41.2	47.1	52.6	46.4	38.2
Sulfide	mg/L	--	--	<0.1	--	--	--	--
Radium-228	pCi/L	--	--	0.915	--	--	--	--
Radium-226	pCi/L	--	--	0.799	--	--	--	--
Radium-226/228	pCi/L	5	--	1.714	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.11	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	6.1	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.01	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.555	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-6S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/18/2016	9/20/2016	11/16/2016	1/10/2017	3/8/2017	5/8/2017	7/18/2017	10/3/2017	6/5/2018	8/15/2018	9/26/2018	11/1/2018	11/14/2018	12/12/2018
Field Parameters																	
Elevation	ft NGVD	--	--	369.59	368.99	368.14	367.39	367.54	367.81	368.48	367.6	369.94	370.04	368.35	368.89	368.72	368.4
pH	S.U.	--	7.9	7.5	7.4	8.1	7.9	7.9	7.6	7.7	7.3	7.52	7.7	7.9	7.31	7.91	7.46
Specific Conductance	µmhos/cm	--	--	401	430	741	360	300	441	292	347	330	483	321	430	221	464
Turbidity	NTU	--	--	1	0.5	1	2	1	1	1	1	0.47	0	8	0.51	0.4	0.53
Dissolved Oxygen	mg/L	--	--	7.1	5.7	1	6	5	5	7	7	5.82	8.1	5.1	7.53	5.5	4.42
Temperature	°C	--	--	16.8	19	15	14.8	14.7	15.5	15.2	16.4	16.28	16	15.5	15.04	14.4	14.71
ORP	mV	--	--	53	71	258	146	36	49	74	0.3	-9.3	155	133	115.3	126	196
Laboratory Parameters																	
Antimony	µg/L	6	--	0.03	0.03	0.03	0.03	0.03	0.03	0.02	--	--	0.03	0.03	0.02	0.03	0.03
Arsenic	µg/L	10	--	0.26	0.26	0.26	0.28	0.26	0.28	0.27	--	--	0.25	0.25	0.23	0.23	0.24
Barium	µg/L	2000	--	13.6	13.6	14.1	14.8	15.8	15.4	14.3	--	--	14.8	13.5	12.1	11.8	13.4
Beryllium	µg/L	4	--	0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	<0.004	<0.02	<0.02	<0.02	<0.02
Cadmium	µg/L	5	--	0.25	0.02	0.02	0.008	0.05	0.009	0.04	--	--	0.06	0.04	0.01	<0.01	<0.01
Chromium	µg/L	100	--	0.4	0.3	0.2	0.599	1.37	0.583	0.291	--	--	0.42	0.265	0.221	0.218	0.212
Cobalt	µg/L	6	--	0.052	0.019	0.027	0.045	0.049	0.061	0.026	--	--	0.039	<0.02	<0.02	<0.02	<0.02
Copper	µg/L	--	--	--	--	--	--	--	--	0.37	0.31	0.46	0.42	0.29	0.17	0.18	0.26
Lead	µg/L	15	--	0.074	0.034	0.05	0.032	0.113	0.083	0.056	--	--	0.247	0.03	<0.02	0.02	<0.02
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	3.28	3.34	2.8	2.93	3.29	2.73	4.36	--	--	2.22	2.37	2.38	2.18	2.2
Selenium	µg/L	50	--	0.3	0.2	0.3	0.4	0.7	0.8	0.4	--	--	0.4	0.2	0.2	0.2	0.4
Thallium	µg/L	2	--	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	--	--	0.01	<0.1	<0.1	<0.1	<0.1
Zinc	µg/L	--	--	--	--	--	--	--	--	1	0.5	2.5	1	0.7	<0.7	1	2
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	14.4	14.6	16.9	15.4	15.2	16.8	15.3	15.2	15.9
Aluminum	µg/L	--	--	--	--	--	--	--	--	8.57	17.8	10.4	13.8	3	2	5.28	3
Boron	mg/L	--	0.012	0.014	0.012	0.028	0.006	0.032	0.051	0.078	0.094	0.09	0.101	0.08	0.04	0.04	0.102
Calcium	mg/L	--	46.1	46.3	44.4	50.8	47.8	53.2	50.3	47	44.8	45.2	52.8	44.1	42.3	38.8	46.8
Lithium	mg/L	0.04	--	0.015	0.004	0.006	0.014	0.009	0.011	<0.0002	--	--	0.005	0.02	<0.009	0.01	<0.009
Magnesium	mg/L	--	--	--	--	--	--	23.3	23.5	20.9	19.8	19.3	24	18.8	19.3	17.5	20.8
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0007	--	0.0024	0.0021	<0.0002	0.0007	0.0002	0.0003
Potassium	mg/L	--	--	--	--	--	--	0.7	0.75	0.82	0.78	0.57	0.91	0.71	0.5	0.92	0.86
Sodium	mg/L	--	--	--	--	--	--	38.9	34.9	26.3	23.2	15.6	25.6	26.1	22	20.2	23.3
Strontium	mg/L	--	--	--	--	--	--	0.0661	0.067	0.0574	0.0548	0.0555	0.065	0.051	0.0519	0.0524	0.0595
Alkalinity	mg/L	--	--	272	--	--	--	260	272	241	249	237	267	241	230	242	247
Bromide	mg/L	--	--	--	--	--	--	<0.02	0.072	<0.05	0.04	0.03	0.04	<0.04	<0.04	<0.04	<0.04
Chloride	mg/L	--	8.44	8.35	6.04	7.04	7.03	3.32	8.68	4.88	3.28	2.38	11.9	6.83	3.52	3.91	6.48
Fluoride	mg/L	4	0.73	0.79	0.73	0.69	0.65	0.25	0.69	0.57	0.71	0.89	0.81	0.84	0.86	0.88	0.88
TDS	mg/L	--	294	290	266	279	287	296	305	274	261	225	277	261	225	196	240
Sulfate	mg/L	--	18.8	18.3	10.9	14.3	14	6.9	17.5	9.6	7.5	3.8	15.6	9.8	4.9	5.2	10
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.4	<0.1	<0.1	<0.07	<0.07
Radium-228	pCi/L	--	--	0.101	0.798	-0.249	0.501	0.297	-0.337	0.954	--	--	0.328	0.367	0.354	0.387	-0.368
Radium-226	pCi/L	--	--	0	0.0671	0.202	0.0815	-0.00471	0.12	-0.0229	--	--	0.0553	0.089	0.0398	0.0239	0.0533
Radium-226/228	pCi/L	5	--	0.101	0.8651	-0.047	0.5825	0.29229	-0.217	0.954	--	--	0.3833	0.456	0.3938	0.4109	0.0533
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	1.85	--	0.4	2.17	1.86	0.14	0.53	0.17
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.2	--	0.9	3.1	3	0.7	<0.7	2
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	4.34	--	1	2.51	109	1	2	8.1
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.023	<0.002	0.003	0.163	<0.003	0.005	0.01
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	<0.0001	0.0002	0.0007	0.0015	<0.0002	0.0121	0.0003	<0.0002	0.0007

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-6S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	5/23/2019	11/14/2019	5/19/2020	11/12/2020	5/25/2021	5/13/2022
Field Parameters									
Elevation	ft NGVD	--	--	372.52	370.42	370.70	369.42	368.82	369.24
pH	S.U.	--	7.9	7.42	7.29	7.67	7.1	8	7.29
Specific Conductance	µmhos/cm	--	--	473	452	373	366	354	506
Turbidity	NTU	--	--	1.4	0.21	5.46	1.72	2.9	3.16
Dissolved Oxygen	mg/L	--	--	6.4	5.85	7.17	8.47	3.5	8.19
Temperature	°C	--	--	16.6	14.4	15.47	17.96	16.8	16.31
ORP	mV	--	--	70	291.1	150	84	219	228
Laboratory Parameters									
Antimony	µg/L	6	--	0.03	0.03	--	--	--	--
Arsenic	µg/L	10	--	0.22	0.23	--	--	--	--
Barium	µg/L	2000	--	15.9	15	--	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.03	<0.01	--	--	--	--
Chromium	µg/L	100	--	0.285	0.284	--	--	--	--
Cobalt	µg/L	6	--	<0.02	<0.02	--	--	--	--
Copper	µg/L	--	--	0.51	<0.2	--	--	--	--
Lead	µg/L	15	--	0.04	<0.05	--	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	2	2	--	--	--	--
Selenium	µg/L	50	--	0.6	0.4	--	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	--	--	--	--
Zinc	µg/L	--	--	<0.7	<0.7	--	--	--	--
Silica (Dissolved)	mg/L	--	--	15.8	15	--	--	--	--
Aluminum	µg/L	--	--	2	<5	--	--	--	--
Boron	mg/L	--	0.012	0.02	0.01	<0.02	<0.02	0.017	<0.05
Calcium	mg/L	--	46.1	52.5	47.8	43.1	43.0	43.4	46.3
Lithium	mg/L	0.04	--	0.02	0.00645	--	--	--	--
Magnesium	mg/L	--	--	22.9	20	--	--	--	--
Manganese	mg/L	--	--	0.0003	<0.0005	--	--	--	--
Potassium	mg/L	--	--	0.62	0.4	--	--	--	--
Sodium	mg/L	--	--	25.5	29.6	--	--	--	--
Strontium	mg/L	--	--	0.691	0.0627	--	--	--	--
Alkalinity	mg/L	--	--	264	262	--	--	--	--
Bromide	mg/L	--	--	<0.04	<0.04	--	--	--	--
Chloride	mg/L	--	8.44	9.64	5.36	1.49	2.07	1.29	2.54
Fluoride	mg/L	4	0.73	0.95	0.9	1.02	1.11	1.21	1.09
TDS	mg/L	--	294	315	277	214	225	210	270
Sulfate	mg/L	--	18.8	16.8	12	1.6	4.4	0.83	6.24
Sulfide	mg/L	--	--	<0.1	<0.2	--	--	--	--
Radium-228	pCi/L	--	--	0.343	-0.011	--	--	--	--
Radium-226	pCi/L	--	--	0.0431	0.0416	--	--	--	--
Radium-226/228	pCi/L	5	--	0.3861	0.0416	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.22	0.4	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	1	0.9	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	<5	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	<0.02	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0002	<0.0005	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-61

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/25/2018	10/31/2018	11/15/2018	12/12/2018	5/23/2019	11/14/2019	5/20/2020	11/11/2020	5/25/2021	5/13/2022
Field Parameters													
Elevation	ft NGVD	--	--	369.18	368.75	368.62	368.48	372.32	370.28	370.42	369.32	368.71	369.23
pH	S.U.	--	7.6	7.8	7.25	7.35	7.44	7.66	7.32	7.49	7.58	8.03	7.55
Specific Conductance	µmhos/cm	--	--	332	467	344	458	453	374	431	310	385	372
Turbidity	NTU	--	--	6.5	0.76	0.74	0.25	0.36	0.46	0.4	2.3	9.9	2.32
Dissolved Oxygen	mg/L	--	--	1.7	0.27	2.78	0.79	1.02	2.15	2.34	10	0	9.12
Temperature	°C	--	--	16.4	15.9	14.2	14.71	16.5	14.4	14.57	15.1	17.2	19.69
ORP	mV	--	--	149	24.9	140.5	163	168.8	301.7	188	111	102	236
Laboratory Parameters													
Antimony	µg/L	6	--	0.25	0.25	0.25	0.23	0.23	0.2	--	--	--	--
Arsenic	µg/L	10	--	0.2	0.2	0.19	0.19	0.19	0.19	--	--	--	--
Barium	µg/L	2000	--	31.9	32.2	31.9	30.5	35.8	28.5	--	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.11	0.01	0.01	0.01	0.01	0.02	--	--	--	--
Chromium	µg/L	100	--	0.05	0.1	<0.04	0.05	0.07	0.222	--	--	--	--
Cobalt	µg/L	6	--	0.313	0.452	0.42	0.362	0.436	0.525	--	--	--	--
Copper	µg/L	--	--	2.36	0.78	0.92	1.21	0.6	0.7	--	--	--	--
Lead	µg/L	15	--	0.05	0.118	<0.02	<0.02	<0.02	<0.05	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	5.31	4.7	4.46	4.17	4.4	4.43	--	--	--	--
Selenium	µg/L	50	--	0.6	0.7	0.8	0.6	0.6	0.4	--	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	--	--	--	--
Zinc	µg/L	--	--	3	<0.7	0.7	2	1	1	--	--	--	--
Silica (Dissolved)	mg/L	--	--	19.9	18.1	18.8	18.6	18.1	16.6	--	--	--	--
Aluminum	µg/L	--	--	6.57	5.88	5.54	3	4	<5	--	--	--	--
Boron	mg/L	--	0.06	0.06	0.04	0.03	0.06	<0.02	0.01	<0.02	<0.02	0.016	<0.05
Calcium	mg/L	--	42.2	43.1	42.4	43.1	47.2	47.4	44.7	50.8	46.3	43.5	42.7
Lithium	mg/L	0.04	--	0.01	<0.009	0.034	<0.009	0.01	0.0054	--	--	--	--
Magnesium	mg/L	--	--	13.9	15.1	14.6	16.1	15.7	14	--	--	--	--
Manganese	mg/L	--	--	0.185	0.24	0.247	0.249	0.272	0.276	--	--	--	--
Potassium	mg/L	--	--	0.93	0.76	0.78	0.88	1.13	0.8	--	--	--	--
Sodium	mg/L	--	--	35.7	35.9	32.9	32.7	29.9	26.6	--	--	--	--
Strontium	mg/L	--	--	0.0482	0.0528	0.0549	0.061	0.0622	0.0582	--	--	--	--
Alkalinity	mg/L	--	--	267	259	246	257	278	227	--	--	--	--
Bromide	mg/L	--	--	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	--	--	--	--
Chloride	mg/L	--	5.18	2.91	3.47	3.94	3.84	2.7	2.26	3.09	2.52	1.77	7.75
Fluoride	mg/L	4	0.89	0.88	0.86	0.86	0.86	0.85	0.89	0.94	1.04	1.05	1.00
TDS	mg/L	--	281	274	285	248	245	268	224	229	211	220	230
Sulfate	mg/L	--	9.9	5.4	4.9	6.3	7.3	4.1	4.1	7.1	5.6	3.38	15.5
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	<0.2	--	--	--	--
Radium-228	pCi/L	--	--	0.218	0.216	0.675	0.488	0.496	0.296	--	--	--	--
Radium-226	pCi/L	--	--	0.35	0.323	0.638	0.489	0.557	0.215	--	--	--	--
Radium-226/228	pCi/L	5	--	0.568	0.539	1.313	0.977	1.053	0.511	--	--	--	--
Copper (Dissolved)	µg/L	--	--	2.79	1.09	0.86	0.74	2.58	0.5	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	4	1	<0.7	<0.7	3	0.9	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	30.9	1	8.05	4	4	<5	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.064	<0.003	0.003	0.004	0.003	<0.02	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.254	0.232	0.246	0.231	0.256	0.238	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-6D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/25/2018	10/31/2018	11/14/2018	12/12/2018	5/23/2019	11/14/2019	5/18/2020	11/11/2020	5/25/2021	5/13/2022
Field Parameters													
Elevation	ft NGVD	--	--	369.15	368.72	369.6	368.44	372.31	370.23	370.6	369.29	368.74	369.21
pH	S.U.	--	7.5	7.7	7.21	7.54	7.4	7.55	7.73	7.34	7.49	7.95	7.38
Specific Conductance	µmhos/cm	--	--	369	521	365	513	681	730	539	416	536	556
Turbidity	NTU	--	--	9	0	8.4	0.25	1.2	1.2	0.44	1.5	1.9	1.66
Dissolved Oxygen	mg/L	--	--	0.4	0.34	0.42	0.15	0.9	2.19	9.55	6.4	0	3.2
Temperature	°C	--	--	16.2	16	13.5	15.07	18.6	14.1	14.64	15.2	19.4	17.58
ORP	mV	--	--	155	54.3	131	110	145	126.6	127	109	108	211
Laboratory Parameters													
Antimony	µg/L	6	--	0.02	0.03	0.03	0.02	<0.02	0.05	--	--	--	--
Arsenic	µg/L	10	--	0.89	1.3	1.05	0.93	0.94	1.08	--	--	--	--
Barium	µg/L	2000	--	77.1	75.7	73.6	76.5	112	76	--	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--	--
Cadmium	µg/L	5	--	0.03	0.01	0.02	0.01	0.01	0.01	--	--	--	--
Chromium	µg/L	100	--	0.04	0.346	0.2	0.05	0.08	0.09	--	--	--	--
Cobalt	µg/L	6	--	0.392	0.806	0.598	0.404	0.578	0.429	--	--	--	--
Copper	µg/L	--	--	0.45	1.18	1.6	1.64	0.17	0.5	--	--	--	--
Lead	µg/L	15	--	<0.02	0.205	0.167	<0.02	<0.02	<0.05	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	0.002	<0.002	--	--	--	--
Molybdenum	µg/L	100	--	3.23	2.79	2.83	3.02	2.81	3.13	--	--	--	--
Selenium	µg/L	50	--	7.3	8.5	8.2	4.3	0.09	9.3	--	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--	--
Zinc	µg/L	--	--	<0.7	2	73.1	2	<0.7	<0.7	--	--	--	--
Silica (Dissolved)	mg/L	--	--	19.5	17.5	17.6	18	18.2	16.5	--	--	--	--
Aluminum	µg/L	--	--	2	142	70.3	3	1	6	--	--	--	--
Boron	mg/L	--	0.094	0.05	0.03	0.05	0.115	0.03	0.02	<0.02	<0.02	0.019	<0.05
Calcium	mg/L	--	61.9	61.7	57.2	53.1	60.1	78.9	62	62.4	61.7	59.5	62.4
Lithium	mg/L	0.04	--	0.02	0.009	0.01	<0.009	0.01	0.00722	--	--	--	--
Magnesium	mg/L	--	--	16.8	16.9	15.2	17.1	22.1	17.4	--	--	--	--
Manganese	mg/L	--	--	0.147	0.145	0.156	0.144	0.278	0.12	--	--	--	--
Potassium	mg/L	--	--	1.2	1.04	1.43	1.47	1.29	1.05	--	--	--	--
Sodium	mg/L	--	--	29	27.8	26.5	29	35.5	30	--	--	--	--
Strontium	mg/L	--	--	0.0919	0.093	0.0927	0.102	0.14	0.0949	--	--	--	--
Alkalinity	mg/L	--	--	260	260	266	271	305	265	--	--	--	--
Bromide	mg/L	--	--	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	--	--	--	--
Chloride	mg/L	--	12.3	10.9	10.2	10	10.8	25.1	12.2	15.6	9.36	6.44	32.6
Fluoride	mg/L	4	0.39	0.41	0.41	0.42	0.42	0.36	0.41	0.43	0.46	0.47	0.42
TDS	mg/L	--	331	310	295	276	296	408	310	311	286	300	310
Sulfate	mg/L	--	27.3	24.1	23	22.2	23.6	39.5	25.4	29.8	20.1	15.6	22.2
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	<0.2	--	--	--	--
Radium-228	pCi/L	--	--	0.29	0.21	0.275	-0.0272	0.586	0.179	--	--	--	--
Radium-226	pCi/L	--	--	0.295	0.122	0.102	0.423	0.543	0.108	--	--	--	--
Radium-226/228	pCi/L	5	--	0.585	0.332	0.377	0.423	0.423	0.423	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.27	0.44	0.7	0.5	0.53	0.4	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	0.9	2	2	1	2	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	31.6	3	2	45.3	15.6	10	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.082	<0.003	0.004	0.117	0.007	<0.02	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.127	0.137	0.135	0.142	0.263	0.123	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-7S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/14/2018	12/12/2018	5/22/2019	11/12/2020	5/25/2021	5/12/2022
Field Parameters											
Elevation	ft NGVD	--	--	369.5	368.76	368.68	368.47	371.91	369.63	368.59	369.7
pH	S.U.	--	7.4	7.4	7.33	7.31	7.3	8.39	6.72	7.72	7.19
Specific Conductance	µmhos/cm	--	--	417	611	455	629	527	678	725	629
Turbidity	NTU	--	--	106	104	42.6	44	4.77	9.78	7.7	8.52
Dissolved Oxygen	mg/L	--	--	0.4	0.32	0.7	0.23	0.65	0.4	0	0.14
Temperature	°C	--	--	15.4	15.01	13.9	14.43	14.69	14.47	15.2	14.94
ORP	mV	--	--	106	85.4	48.2	92	0.1	135	227	180
Laboratory Parameters											
Antimony	µg/L	6	--	0.14	0.15	0.06	0.09	0.02	--	--	--
Arsenic	µg/L	10	--	1.48	2.01	0.7	1.06	0.11	--	--	--
Barium	µg/L	2000	--	18.7	24.3	12.9	15.4	8.42	--	--	--
Beryllium	µg/L	4	--	0.101	0.127	0.05	0.07	<0.02	--	--	--
Cadmium	µg/L	5	--	0.05	0.06	0.02	0.05	0.02	--	--	--
Chromium	µg/L	100	--	2.08	2.45	0.831	1.48	0.1	--	--	--
Cobalt	µg/L	6	--	6.48	9.82	3.47	4.98	0.255	--	--	--
Copper	µg/L	--	--	4.4	5.36	1.91	2.76	0.51	--	--	--
Lead	µg/L	15	--	4.69	6.69	2.38	3.56	0.205	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--	--
Molybdenum	µg/L	100	--	<0.4	<0.4	<0.4	<0.4	<0.4	--	--	--
Selenium	µg/L	50	--	0.6	0.8	0.3	0.4	0.2	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	7.9	9.5	14	5	39.1	--	--	--
Silica (Dissolved)	mg/L	--	--	20.8	18.7	18.6	19.3	18.4	--	--	--
Aluminum	µg/L	--	--	1520	1850	681	1170	39.3	--	--	--
Boron	mg/L	--	0.079	0.04	0.07	0.135	0.08	0.03	<0.02	0.015	<0.009
Calcium	mg/L	--	70.2	73.7	68.3	66.2	67.1	62.4	68.5	78.2	71.4
Lithium	mg/L	0.04	--	0.02	0.01	<0.009	<0.009	<0.009	--	--	--
Magnesium	mg/L	--	--	25.4	25.7	24.3	24.6	21.7	--	--	--
Manganese	mg/L	--	--	0.334	0.49	0.182	0.248	0.0145	--	--	--
Potassium	mg/L	--	--	1.33	1.39	1.81	1.3	0.87	--	--	--
Sodium	mg/L	--	--	17.9	19.1	18.9	18.7	17	--	--	--
Strontium	mg/L	--	--	0.083	0.0857	0.0883	0.0874	0.0803	--	--	--
Alkalinity	mg/L	--	--	256	261	255	261	242	--	--	--
Bromide	mg/L	--	--	0.09	0.09	0.09	0.09	0.1	--	--	--
Chloride	mg/L	--	32.8	32.2	33.5	33.2	33.6	35.4	27.7	19.5	32.3
Fluoride	mg/L	4	0.52	0.54	0.53	0.54	0.55	0.55	0.60	0.59	0.57
TDS	mg/L	--	358	370	358	354	353	353	346	380	350
Sulfate	mg/L	--	32	32.2	33.1	33.1	33.7	34.1	36.1	34.8	39.3
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--	--
Radium-228	pCi/L	--	--	0.48	0.601	0.254	0.191	0.27	--	--	--
Radium-226	pCi/L	--	--	0.271	0.245	0.211	0.507	0.0334	--	--	--
Radium-226/228	pCi/L	5	--	0.751	0.846	0.465	0.698	0.3034	--	--	--
Copper (Dissolved)	µg/L	--	--	1.01	0.07	1.62	0.2	0.17	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	<0.7	3	<0.7	<0.7	--	--	--
Aluminum (Dissolved)	µg/L	--	--	311	3	2	3	2	--	--	--
Iron (Dissolved)	mg/L	--	--	0.618	0.004	0.005	0.007	<0.003	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0797	0.0021	0.0012	0.0026	0.0009	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-71

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/15/2018	12/12/2018	5/22/2019	11/12/2020	5/26/2021	5/13/2022
Field Parameters											
Elevation	ft NGVD	--	--	369.01	368.51	368.5	368.27	371.73	369.44	368.59	369.29
pH	S.U.	--	7.4	7.5	7.3	7.03	7.27	8.4	6.72	7.71	7.18
Specific Conductance	µmhos/cm	--	--	419	613	460	645	573	712	744	715
Turbidity	NTU	--	--	19	14.4	7.05	19.9	1.6	1.43	6.3	28
Dissolved Oxygen	mg/L	--	--	0.3	0.36	0.95	0.21	0.7	0.29	0	0.55
Temperature	°C	--	--	15.5	15.17	13.78	14.46	15.1	15.02	14.9	15.1
ORP	mV	--	--	57	-19.2	68.4	44	-71.2	-57	-7	160.4
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	0.03	<0.02	<0.02	0.02	--	--	--
Arsenic	µg/L	10	--	0.28	0.43	0.24	0.26	0.23	--	--	--
Barium	µg/L	2000	--	175	230	162	147	116	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	0.05	0.06	0.03	0.03	0.35	--	--	--
Chromium	µg/L	100	--	0.2	0.315	0.09	0.07	0.09	--	--	--
Cobalt	µg/L	6	--	3.07	8.34	1.11	1.67	1.1	--	--	--
Copper	µg/L	--	--	0.55	1.45	0.59	0.76	0.4	--	--	--
Lead	µg/L	15	--	0.45	0.6	0.05	0.145	0.228	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--	--
Molybdenum	µg/L	100	--	4.2	4.31	<0.4	3.45	3.63	--	--	--
Selenium	µg/L	50	--	0.05	0.09	0.05	0.05	0.04	--	--	--
Thallium	µg/L	2	--	<0.1	0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	2	15.1	1	2	3	--	--	--
Silica (Dissolved)	mg/L	--	--	20.5	18.1	18.5	18.8	18.4	--	--	--
Aluminum	µg/L	--	--	74.1	304	69.9	39.5	27.7	--	--	--
Boron	mg/L	--	0.07	0.04	0.06	0.09	0.08	0.03	<0.02	0.017	<0.05
Calcium	mg/L	--	75.3	75.4	68.8	68.8	73.7	73.7	71.4	75	79.7
Lithium	mg/L	0.04	--	0.01	<0.009	<0.009	<0.009	<0.009	--	--	--
Magnesium	mg/L	--	--	21.9	21.7	21.4	22.8	21.5	--	--	--
Manganese	mg/L	--	--	2.76	4	1.08	2.89	0.821	--	--	--
Potassium	mg/L	--	--	1.22	0.97	1.57	1.19	1.08	--	--	--
Sodium	mg/L	--	--	19.8	20.1	21.5	21.3	18.1	--	--	--
Strontium	mg/L	--	--	0.0928	0.0932	0.1	0.103	0.11	--	--	--
Alkalinity	mg/L	--	--	236	237	233	229	232	--	--	--
Bromide	mg/L	--	--	0.1	0.1	0.1	0.1	0.1	--	0.16	--
Chloride	mg/L	--	45	45.8	48.2	47.6	48.8	49	53.3	56.6	65.2
Fluoride	mg/L	4	0.33	0.34	0.34	0.35	0.35	0.33	0.36	0.34	0.32
TDS	mg/L	--	312	348	338	354	347	376	357	380	410
Sulfate	mg/L	--	38.4	38.9	38.9	39	39.1	43.1	42.6	42	44
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--	--
Radium-228	pCi/L	--	--	-0.0705	0.369	0.123	0.089	0.643	--	--	--
Radium-226	pCi/L	--	--	4.16	0.513	0.605	0.934	0.155	--	--	--
Radium-226/228	pCi/L	5	--	4.16	0.882	0.728	1.023	0.798	--	--	--
Copper (Dissolved)	µg/L	--	--	0.93	0.24	1.56	0.72	0.15	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	0.9	3	2	2	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	10.6	2	137	2	--	1	--
Iron (Dissolved)	mg/L	--	--	<0.003	0.01	0.006	0.128	<0.003	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.172	0.51	0.243	3.9	0.121	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-7D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/12/2018	5/22/2019	11/12/2020	5/26/2021	5/12/2022
Field Parameters											
Elevation	ft NGVD	--	--	369.08	368.65	368.57	368.35	371.82	369.50	368.68	369.09
pH	S.U.	--	7.2	7.5	6.91	7.26	7.18	7.91	6.64	7.47	7.06
Specific Conductance	µmhos/cm	--	--	419	617	444	622	549	1760	1870	1810
Turbidity	NTU	--	--	10.8	1.02	5.96	0	0.01	0.07	0.4	3.5
Dissolved Oxygen	mg/L	--	--	0.7	3.72	11.3	0.52	2	0	0	0.32
Temperature	°C	--	--	15.2	14.79	13.32	15.23	16.25	15.17	14.9	16.09
ORP	mV	--	--	57	26.4	26.4	-5	-40.4	-11	86	23
Laboratory Parameters											
Antimony	µg/L	6	--	0.04	0.03	0.04	0.06	0.02	--	--	--
Arsenic	µg/L	10	--	0.91	0.8	0.87	0.85	0.72	--	--	--
Barium	µg/L	2000	--	286	283	268	320	284	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	0.02	0.02	0.04	<0.01	<0.01	--	--	--
Chromium	µg/L	100	--	0.2	0.334	0.1	0.1	0.07	--	--	--
Cobalt	µg/L	6	--	2.52	2.46	2.24	2.24	1.88	--	--	--
Copper	µg/L	--	--	0.34	0.44	0.57	1.59	0.08	--	--	--
Lead	µg/L	15	--	0.1	0.164	0.101	0.144	<0.02	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--	--
Molybdenum	µg/L	100	--	4.09	9.76	7.38	5.43	3.49	--	--	--
Selenium	µg/L	50	--	0.05	0.05	0.03	<0.03	<0.03	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	1	2	4	3	5.1	--	--	--
Silica (Dissolved)	mg/L	--	--	216	19.2	19.9	19.8	19.2	--	--	--
Aluminum	µg/L	--	--	31.4	56.7	16.5	<1	1	--	--	--
Boron	mg/L	--	0.06	0.04	0.05	0.07	0.04	0.02	<0.02	0.019	<0.009
Calcium	mg/L	--	80.1	79.2	75	62.8	77.4	76.7	153	168	177
Lithium	mg/L	0.04	--	<0.009	0.01	0.02	<0.009	<0.009	--	--	--
Magnesium	mg/L	--	--	25	25.8	21	25.7	24.3	--	--	--
Manganese	mg/L	--	--	1.89	1.66	1.34	1.51	1.49	--	--	--
Potassium	mg/L	--	--	1.22	1.07	1.39	1.25	0.94	--	--	--
Sodium	mg/L	--	--	14.2	15.4	12.9	15.3	13.9	--	--	--
Strontium	mg/L	--	--	0.137	0.141	0.125	0.146	0.138	--	--	--
Alkalinity	mg/L	--	--	273	293	296	300	296	--	--	--
Bromide	mg/L	--	--	0.09	0.08	0.08	0.08	0.009	--	1.16	--
Chloride	mg/L	--	17.3	17.5	17.2	16.9	17.2	19.1	360	420	436
Fluoride	mg/L	4	0.27	0.26	0.26	0.26	0.27	0.26	0.25	0.23	0.2
TDS	mg/L	--	359	358	3.46	340	344	371	899	990	970
Sulfate	mg/L	--	36.9	36.3	36	35.4	35.5	35.2	33.8	33	33.5
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.07	<0.1	--	--	--
Radium-228	pCi/L	--	--	0.36	0.202	0.548	0.159	0.89	--	--	--
Radium-226	pCi/L	--	--	0.983	0.107	0.45	0.717	0.265	--	--	--
Radium-226/228	pCi/L	5	--	1.343	0.309	0.998	0.876	1.155	--	--	--
Copper (Dissolved)	µg/L	--	--	0.55	0.17	2.01	0.18	0.77	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	2	4	1	3	--	--	--
Aluminum (Dissolved)	µg/L	--	--	6.36	6.44	2	3	2	--	--	--
Iron (Dissolved)	mg/L	--	--	0.103	0.081	0.08	0.093	0.072	--	--	--
Manganese (Dissolved)	mg/L	--	--	1.76	1.6	1.47	1.35	1.5	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-8S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/19/2016	9/21/2016	11/17/2016	1/9/2017	3/7/2017	5/9/2017	7/18/2017	10/4/2017	12/12/2017	6/5/2018	11/13/2018	5/23/2019	11/21/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.78	369.44	369.25	368.53	368.39	368.39	368.81	367.5	366.59	369.59	368.9	371.48	371.51	370.01
pH	S.U.	--	7.3	7.2	7.1	7.9	7.6	7.6	7.4	7.4	7.75	7.7	7.59	7.58	7.38	7.43	6.29
Specific Conductance	µmhos/cm	--	--	516	540	811	450	260	444	410	395	460	400	354	440	495	567
Turbidity	NTU	--	--	1.1	2	2	3	4	8	1	2.46	6	3.48	2.6	0.69	53.7	0
Dissolved Oxygen	mg/L	--	--	3.2	3.6	1	2	4	2	3.2	3.12	0.8	2.1	3.8	6.54	6.51	4.63
Temperature	°C	--	--	20.7	21.6	16.2	14	14.2	15.6	15.8	16.57	14.1	15.05	14.4	16.17	12.82	14.81
ORP	mV	--	--	29	18	275	131	50	50	65	29.9	-17	-33.7	158	54.2	110.9	164
Laboratory Parameters																	
Antimony	µg/L	6	--	0.3	0.02	0.03	0.02	0.04	0.03	0.02	--	--	--	0.05	<0.02	0.04	--
Arsenic	µg/L	10	--	1.78	1.33	1.26	1.56	1.53	2.09	1.19	--	--	--	1.61	1.52	1.97	--
Barium	µg/L	2000	--	13.1	12.2	10.9	13.8	14.5	16.9	10.9	--	--	--	10.4	9.22	16.6	--
Beryllium	µg/L	4	--	0.232	<0.005	<0.005	0.006	0.009	0.01	<0.004	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.31	0.02	0.05	0.01	0.26	0.09	0.13	--	--	--	0.03	<0.01	0.03	--
Chromium	µg/L	100	--	0.6	0.4	0.156	1.04	0.881	0.423	0.277	--	--	--	0.578	0.235	0.378	--
Cobalt	µg/L	6	--	0.453	0.125	0.113	0.447	0.433	0.981	0.052	--	--	--	0.207	0.058	0.669	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.18	0.12	--	0.25	1.7	0.13	0.5	--
Lead	µg/L	15	--	0.364	0.066	0.065	0.19	0.278	0.389	0.038	--	--	--	0.152	0.03	0.33	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.015	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	1.1	0.8	0.71	0.77	1.56	0.75	0.83	--	--	--	0.9	0.9	0.5	--
Selenium	µg/L	50	--	0.6	0.2	0.2	0.2	0.2	0.3	0.2	--	--	--	0.5	0.6	1	--
Thallium	µg/L	2	--	0.276	0.03	<0.01	0.01	0.17	<0.01	<0.01	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	0.7	0.6	--	1	3	2	2	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	21.5	21.2	24.7	--	21.7	21.4	<0.06	20.9	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	7.37	10.6	--	53	31	8.03	164	--
Boron	mg/L	--	0.01	0.012	0.011	0.032	<0.002	0.043	0.028	0.022	0.016	--	0.058	0.04	<0.02	0.01	<0.02
Calcium	mg/L	--	42.7	41.5	42.7	42.9	45.8	44.8	42.9	44.4	39.8	--	42.3	35.6	35.9	39	42.2
Lithium	mg/L	0.04	--	0.025	0.001	0.002	0.002	0.006	0.006	0.001	--	--	--	<0.009	0.02	0.00311	--
Magnesium	mg/L	--	--	--	--	--	--	19.6	20	20	17.6	--	18.8	16	16.1	16.9	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0021	--	--	0.0323	0.0154	0.0033	0.0413	--
Potassium	mg/L	--	--	--	--	--	--	0.91	0.89	0.77	0.65	--	0.82	0.88	0.76	1	--
Sodium	mg/L	--	--	--	--	--	--	41.2	40.5	42.1	43.2	--	40.1	34.6	37.4	39.7	--
Strontium	mg/L	--	--	--	--	--	--	0.0562	0.0564	0.0543	0.0494	--	0.0555	0.0464	0.0458	0.0478	--
Alkalinity	mg/L	--	--	--	--	--	--	162	181	167	171	--	181	159	150	173	--
Bromide	mg/L	--	--	--	--	--	--	0.03	0.062	0.04	0.06	--	<0.02	<0.04	<0.04	0.1	--
Chloride	mg/L	--	23.7	23.5	22.1	21.1	20.8	21.4	22.8	22.7	22.4	22.5	23.8	22.9	23.6	23.1	27.2
Fluoride	mg/L	4	0.56	0.56	0.54	0.55	0.47	0.52	0.52	0.47	0.52	0.56	0.59	0.57	0.58	0.49	0.5
TDS	mg/L	--	345	321	332	322	300	320	319	319	317	--	324	288	312	324	342
Sulfate	mg/L	--	26.5	26.4	23.4	21.7	22.1	21.7	21.8	22.3	23.1	24.9	21.2	19.5	20.4	20	23.8
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.455	1.16	0.343	0.394	0.26	-0.175	1.5	--	--	--	0.346	0.113	0.0252	--
Radium-226	pCi/L	--	--	0.122	0.131	0.147	0.282	0.0561	0.127	0.153	--	--	--	0.137	0.0183	0.296	--
Radium-226/228	pCi/L	5	--	0.577	1.291	0.49	0.676	0.3161	-0.048	1.653	--	--	--	0.483	0.1313	0.3212	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.96	--	--	0.44	0.29	0.48	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.5	--	--	0.7	2	2	0.7	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2	--	--	1	1	7.36	10	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.004	<0.0004	<0.0004	0.014	--	0.002	0.003	0.007	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	0.0002	0.0004	0.0002	0.0004	--	0.0012	0.0006	0.0007	<0.0005	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-8S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/12/2021	5/12/2022
Field Parameters							
Elevation	ft NGVD	--	--	370.96	369.67	369.46	370.26
pH	S.U.	--	7.3	6.8	7.75	6.94	7.39
Specific Conductance	µmhos/cm	--	--	633	513	559	572
Turbidity	NTU	--	--	5.16	3.62	0.08	9.67
Dissolved Oxygen	mg/L	--	--	3.21	0.86	3.78	4.57
Temperature	°C	--	--	17.04	17.54	13.25	17.2
ORP	mV	--	--	94	132	156	242.2
Laboratory Parameters							
Antimony	µg/L	6	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--
Boron	mg/L	--	0.01	<0.02	0.014	0.015	<0.009
Calcium	mg/L	--	42.7	43.5	39.7	40	38.9
Lithium	mg/L	0.04	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--	--
Chloride	mg/L	--	23.7	27.1	26.8	27.3	29.4
Fluoride	mg/L	4	0.56	0.56	0.59	0.55	0.56
TDS	mg/L	--	345	326	330	310	340
Sulfate	mg/L	--	26.5	23.3	19.8	20.3	23.8
Sulfide	mg/L	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-81

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/19/2016	9/21/2016	11/17/2016	1/9/2017	3/6/2017	5/9/2017	7/18/2017	10/4/2017	12/12/2017	6/4/2018	11/14/2018	5/23/2019	11/22/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.06	369.7	369.51	368.84	368.68	368.68	369.07	367.78	366.87	369.85	367.78	371.38	371.37	369.87
pH	S.U.	--	7.2	7.2	7.44	7.6	7.6	7.4	7.2	7.3	7.56	7.9	7.68	7.22	7.22	6.73	7.83
Specific Conductance	µmhos/cm	--	--	580	455	968	420	80	507	485	471	390	619	453	607	525	601
Turbidity	NTU	--	--	9	3.29	1	5	10	2	1	6.26	1	3.18	9	2.4	8	0
Dissolved Oxygen	mg/L	--	--	0.6	0.17	0.8	1	4.5	0.3	0.2	0.31	9.7	2.46	0.37	2.53	1.3	0
Temperature	°C	--	--	21	15.39	17.1	14	14.4	15	16.2	15.51	14.4	17.42	13.8	19.41	13.6	15.09
ORP	mV	--	--	-60	-63.9	-1	29	25	52	-15	-67.4	111	-75.3	190	-8.1	-185	21
Laboratory Parameters																	
Antimony	µg/L	6	--	0.27	0.07	0.1	0.08	0.08	0.08	0.07	--	--	--	0.17	0.17	0.16	--
Arsenic	µg/L	10	--	11.5	2.08	1.39	2.58	2.78	2.09	1.31	--	--	--	3.41	1.07	1.6	--
Barium	µg/L	2000	--	70.1	57	58.4	54.9	56.9	57.8	60.4	--	--	--	57.9	63.8	58.5	--
Beryllium	µg/L	4	--	0.119	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.28	0.02	0.04	0.02	0.04	0.05	0.02	--	--	--	0.15	0.02	0.08	--
Chromium	µg/L	100	--	0.5	0.1	0.055	0.817	0.511	0.23	0.077	--	--	--	0.07	0.05	0.1	--
Cobalt	µg/L	6	--	0.961	0.643	0.646	0.671	0.656	0.77	0.672	--	--	--	1.01	0.55	0.741	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.11	0.13	--	0.42	1.45	0.2	0.5	--
Lead	µg/L	15	--	0.242	0.02	0.032	0.025	0.032	0.054	0.01	--	--	--	0.111	<0.02	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	3	2.34	2.47	2.31	2.73	2.29	2.58	--	--	--	2.7	2.72	2.43	--
Selenium	µg/L	50	--	7.5	2.7	3	2.3	2.9	4.5	4.7	--	--	--	2.5	3.7	1.4	--
Thallium	µg/L	2	--	0.166	0.03	0.03	0.04	0.05	0.03	0.03	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	0.7	0.9	--	3.2	9.2	21.9	3	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	14.6	14.7	17.1	--	16.4	14.1	<0.06	13.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	2	1	--	0.8	8.7	<1	<5	--
Boron	mg/L	--	0.017	0.016	0.017	0.028	0.006	0.083	0.045	0.026	0.096	--	0.044	0.06	0.03	0.02	0.02
Calcium	mg/L	--	72	67.9	67.4	77.5	79.5	74.7	71.9	72.2	74.7	--	76.7	67.7	70.7	66.9	68.8
Lithium	mg/L	0.04	--	0.007	0.008	0.009	0.005	0.01	0.001	<0.0002	--	--	--	0.02	0.02	0.00419	--
Magnesium	mg/L	--	--	--	--	--	--	22.3	22.9	22.2	22.5	--	23.5	21.4	22.4	20.7	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.357	--	--	0.32	0.509	0.407	0.443	--
Potassium	mg/L	--	--	--	--	--	--	1.84	1.73	1.48	2.02	--	1.6	2.28	1.76	1.76	--
Sodium	mg/L	--	--	--	--	--	--	29.4	28.5	29.7	28.6	--	32.5	31.5	31.6	29.2	--
Strontium	mg/L	--	--	--	--	--	--	0.146	0.148	0.14	0.146	--	0.152	0.139	0.138	0.129	--
Alkalinity	mg/L	--	--	245	--	--	--	245	246	247	237	--	268	250	250	268	--
Bromide	mg/L	--	--	--	--	--	--	0.04	0.065	0.062	0.064	--	0.05	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	21.7	22	21.5	21.3	20.9	20.7	21.2	20.9	20.1	19.3	20.9	20.6	21	19.7	20.4
Fluoride	mg/L	4	0.35	0.34	0.29	0.29	0.25	0.28	0.28	0.25	0.27	0.29	0.29	0.33	0.34	0.3	0.32
TDS	mg/L	--	370	358	376	387	371	391	376	379	378	--	407	390	371	381	357
Sulfate	mg/L	--	87.5	86.3	79.2	77.5	80	80.3	81.9	83.4	85.9	87.1	79	68.2	62.3	68.3	61.7
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.4275	0.157	0.42	1.1	0.372	0.45	0.616	--	--	--	0.354	0.43	0.479	--
Radium-226	pCi/L	--	--	0.824	0.521	0.746	0.725	0.643	0.561	0.463	--	--	--	0.676	0.663	0.723	--
Radium-226/228	pCi/L	5	--	1.2515	0.678	1.166	1.825	1.015	1.011	1.079	--	--	--	1.03	1.093	1.202	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.52	--	--	0.27	0.17	0.45	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.4	--	--	16.8	<0.7	2	0.9	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	2.46	--	--	<0.8	<1	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	0.36	0.405	0.35	0.515	--	1.08	0.213	0.334	0.333	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	0.349	0.39	0.324	0.363	--	0.31	0.358	0.368	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-81

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/12/2021	5/12/2022
Field Parameters							
Elevation	ft NGVD	--	--	370.84	369.5	369.37	370.18
pH	S.U.	--	7.2	7.38	8.33	6.8	7.29
Specific Conductance	µmhos/cm	--	--	621	530	643	619
Turbidity	NTU	--	--	6.98	33.42	0.08	5.7
Dissolved Oxygen	mg/L	--	--	0.48	5.35	0	0.37
Temperature	°C	--	--	17.23	20.33	13.61	16.7
ORP	mV	--	--	-8	143	100	105
Laboratory Parameters							
Antimony	µg/L	6	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--
Boron	mg/L	--	0.017	<0.02	0.02	0.02	0.009
Calcium	mg/L	--	72	66.8	68.1	67.6	67
Lithium	mg/L	0.04	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--	--
Chloride	mg/L	--	21.7	19.3	18.8	19.3	20
Fluoride	mg/L	4	0.35	0.38	0.36	0.34	0.35
TDS	mg/L	--	370	343	390	350	340
Sulfate	mg/L	--	87.5	56.7	56	54	57.6
Sulfide	mg/L	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-11S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/18/2016	9/20/2016	11/16/2016	1/9/2017	3/7/2017	5/19/2017	7/18/2017	10/3/2017	12/12/2017	6/5/2018	11/14/2018	5/23/2019	11/15/2019	5/20/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.93	369.4	368.47	367.7	367.51	367.92	368.57	367.86	366.6	369.69	369.27	373.25	371.21	
pH	S.U.	--	7.9	7.3	7.3	8.4	8.1	7.9	7.78	7.7	7.2	8.3	7.21	7.55	7.71	7.76	7.4
Specific Conductance	µmhos/cm	--	--	272	330	433	200	70	307	386	267	260	360	309	440	533	435
Turbidity	NTU	--	--	0.81	0.4	1	0.8	0.3	2.64	0.4	0.5	0.6	0.39	0.2	1	1.97	0.18
Dissolved Oxygen	mg/L	--	--	9.3	7.4	2	7	7	6.99	6.1	8	19.4	6.94	6.9	9	5.53	8.95
Temperature	°C	--	--	16.1	22.4	14.7	14.8	15	15.7	17.1	15.4	13.4	14.97	13.25	17.3	15.3	13.75
ORP	mV	--	--	24	167	227	126	47	75.6	73	-13	73	-2.7	152	240	114.7	216
Laboratory Parameters																	
Antimony	µg/L	6	--	0.04	0.04	0.05	0.04	0.04	0.04	<0.05	--	--	--	0.05	0.05	0.04	--
Arsenic	µg/L	10	--	0.53	0.42	0.45	0.52	0.52	0.48	0.5	--	--	--	0.38	0.36	0.43	--
Barium	µg/L	2000	--	9.79	11.3	7.91	6.52	7.09	7.73	8.16	--	--	--	12.5	13.7	10.8	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.02	--	--	--	<0.02	0.03	<0.02	--
Cadmium	µg/L	5	--	0.03	0.03	0.02	0.01	0.007	0.03	<0.02	--	--	--	0.03	0.02	<0.01	--
Chromium	µg/L	100	--	0.05	0.8	0.416	0.725	1.25	0.567	0.568	--	--	--	0.384	0.483	0.468	--
Cobalt	µg/L	6	--	0.043	0.029	0.027	0.022	0.027	0.03	0.02	--	--	--	<0.02	0.03	<0.02	--
Copper	µg/L	--	--	--	--	--	--	--	--	0.44	0.26	--	0.25	0.44	2.07	0.3	--
Lead	µg/L	15	--	0.02	0.046	0.027	0.02	0.02	0.023	0.06	--	--	--	0.03	<0.02	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	0.002	0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	4.36	3.37	4.71	6.09	6.03	4.86	4.69	--	--	--	2.4	2.04	2.15	--
Selenium	µg/L	50	--	0.08	0.1	0.07	0.05	0.2	0.2	0.3	--	--	--	0.04	<0.03	0.06	--
Thallium	µg/L	2	--	0.01	0.01	0.02	0.01	0.01	0.01	0.2	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	7	<0.4	--	2	<0.7	<0.7	0.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	24.9	24.4	27.3	--	25.8	26.6	24.5	25	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	10	3.63	--	2	3	3	<5	--
Boron	mg/L	--	0.062	0.062	0.077	0.053	0.029	0.057	0.047	0.067	0.09	--	0.076	0.11	0.08	0.052	0.04
Calcium	mg/L	--	41.6	38.8	45.1	37.3	40.4	42.8	41.2	44.2	43.7	--	55.8	56.4	54.3	47.6	55.8
Lithium	mg/L	0.04	--	0.024	0.004	0.005	0.003	0.013	0.009	0.002	--	--	--	0.01	0.01	0.00669	--
Magnesium	mg/L	--	--	--	--	--	--	17.2	17.7	18.8	17.6	--	24.8	19.5	17.7	17	--
Manganese	mg/L	--	--	--	--	--	--	--	--	<0.0001	--	--	<0.0002	0.0004	<0.0002	0.0006	--
Potassium	mg/L	--	--	--	--	--	--	0.42	0.42	0.42	0.48	--	0.37	0.88	0.4	0.5	--
Sodium	mg/L	--	--	--	--	--	--	5.72	5.58	6.82	7.26	--	7.11	5.35	4.43	4.47	--
Strontium	mg/L	--	--	--	--	--	--	0.0508	0.0535	0.0532	0.0537	--	0.0706	0.0774	0.0707	0.0638	--
Alkalinity	mg/L	--	--	--	--	--	--	153	175	187	167	--	226	246	235	223	--
Bromide	mg/L	--	--	--	--	--	--	<0.02	<0.06	<0.02	<0.02	--	<0.02	<0.04	<0.4	<0.04	--
Chloride	mg/L	--	1.82	1.83	1.62	1.54	2.12	4.63	9.87	8.19	3.68	2.4	6.98	1.79	1.62	1.48	2.68
Fluoride	mg/L	4	0.74	0.76	0.73	0.92	0.96	1	0.86	0.75	0.89	0.82	0.62	0.72	0.82	0.77	0.58
TDS	mg/L	--	212	201	196	182	179	197	239	224	200	--	276	238	279	216	246
Sulfate	mg/L	--	10.9	10.6	5.3	4.1	7.6	13.7	16.4	15.6	9.3	8	21.7	5.9	14.7	2.7	13.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.231	0.741	0.179	1.96	0.0959	0.0337	0.771	--	--	--	0.419	0.805	1.72	--
Radium-226	pCi/L	--	--	0.584	-0.0127	0.109	0.141	0.0906	0.091	0.0225	--	--	--	0.217	0.0772	0.0737	--
Radium-226/228	pCi/L	5	--	0.815	0.7283	0.288	2.101	0.1865	0.1247	0.7935	--	--	--	0.636	0.8822	1.7937	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.82	--	--	0.63	0.71	0.26	0.3	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	9	--	--	2	1	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	66.5	--	--	2.92	3	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.014	--	0.008	0.04	0.004	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	0.0002	0.0001	<0.0002	--	<0.002	0.0005	<0.0002	<0.0005	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-11S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	5/25/2021	5/13/2022
Field Parameters						
Elevation	ft NGVD	--	--	370.17	369.24	369.72
pH	S.U.	--	7.9	7.36	7.72	7.85
Specific Conductance	µmhos/cm	--	--	302	413	244
Turbidity	NTU	--	--	1.7	2.5	15.11
Dissolved Oxygen	mg/L	--	--	8.2	4.4	5.9
Temperature	°C	--	--	14.4	15.3	20.64
ORP	mV	--	--	173	112	125
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.062	0.04	0.038	<0.05
Calcium	mg/L	--	41.6	52.4	53.9	47.9
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--
Chloride	mg/L	--	1.82	1.52	2.28	2.7
Fluoride	mg/L	4	0.74	0.83	0.66	0.51
TDS	mg/L	--	212	211	240	230
Sulfate	mg/L	--	10.9	2.9	10.7	7.99
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-12S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	11/1/2018	11/14/2008	12/11/2018	5/22/2019	11/21/2019	11/11/2020	5/28/2021	5/13/2022
Field Parameters												
Elevation	ft NGVD	--	--	367.81	367.96	367.93	368.21	372.14	368.42	367.68	368.12	367.88
pH	S.U.	--	7.2	5.9	7.6	6.83	7.12	7.31	7.52	7.19	7.65	7.1
Specific Conductance	µmhos/cm	--	--	522	551	517	816	757	728	712	806	754
Turbidity	NTU	--	--	9	1.14	2.14	23.7	13.8	5.1	3.13	0	5.4
Dissolved Oxygen	mg/L	--	--	0.2	3.13	0.36	0.29	0	10.83	1.93	0	0.12
Temperature	°C	--	--	14.5	14.05	13.16	13.36	14.8	12.81	13.23	15.3	16.8
ORP	mV	--	--	68	-34.8	184.2	-10	9	144.1	81	106	39.7
Laboratory Parameters												
Antimony	µg/L	6	--	0.06	0.03	0.17	0.06	0.07	0.19	--	--	--
Arsenic	µg/L	10	--	0.3	0.27	0.25	0.61	0.45	0.44	--	--	--
Barium	µg/L	2000	--	26.8	26.3	25.3	31	29.7	28.8	--	--	--
Beryllium	µg/L	4	--	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	0.06	0.05	0.13	0.04	0.09	0.09	--	--	--
Chromium	µg/L	100	--	0.276	0.1	0.1	0.639	0.476	0.315	--	--	--
Cobalt	µg/L	6	--	0.642	0.4783	0.439	1.23	0.924	0.955	--	--	--
Copper	µg/L	--	--	0.5	0.36	0.55	1.08	1.59	1.2	--	--	--
Lead	µg/L	15	--	0.34	0.08	0.08	0.904	0.538	0.526	--	--	--
Mercury	µg/L	2	--	--	--	--	--	0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	2	2	2	2	1	1	--	--	--
Selenium	µg/L	50	--	0.2	0.07	0.1	0.2	0.09	0.3	--	--	--
Thallium	µg/L	2	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	1	0.8	2	2	19.3	8.2	--	--	--
Silica (Dissolved)	mg/L	--	--	21.5	20	20	20.3	19.3	18.8	--	--	--
Aluminum	µg/L	--	--	45.2	8.53	3	291	119	106	--	--	--
Boron	mg/L	--	0.067	0.04	0.07	0.03	0.12	0.02	0.03	<0.02	0.02	<0.05
Calcium	mg/L	--	86.3	87	86.4	80.2	89.3	84.9	88.7	83.4	91.9	82.4
Lithium	mg/L	0.04	--	0.01	0.01	0.01	<0.009	0.01	0.00591	--	--	--
Magnesium	mg/L	--	--	31.6	33.7	30.5	33	30.3	32.3	--	--	--
Manganese	mg/L	--	--	0.0864	0.0758	0.0811	0.106	0.163	0.116	--	--	--
Potassium	mg/L	--	--	1.18	1.26	1.57	1.87	1.19	1.49	--	--	--
Sodium	mg/L	--	--	30.2	33.9	32.1	32.4	30.5	29.6	--	--	--
Strontium	mg/L	--	--	0.103	0.111	0.114	0.119	0.114	0.114	--	--	--
Alkalinity	mg/L	--	--	392	358	374	361	354	348	--	--	--
Bromide	mg/L	--	--	0.1	0.1	0.1	0.1	0.1	0.2	--	--	--
Chloride	mg/L	--	30.1	30.1	29.9	29.4	29.5	29.7	28.7	27.4	26.8	26.6
Fluoride	mg/L	4	0.35	0.36	0.36	0.37	0.36	0.38	0.32	0.39	0.41	0.38
TDS	mg/L	--	445	446	434	422	437	455	456	420	430	420
Sulfate	mg/L	--	37.2	37.1	37.1	36.4	36.7	37.4	37.8	37.5	38.2	39.9
Sulfide	mg/L	--	--	<0.1	<0.1	<0.07	<0.1	<0.1	<0.2	--	--	--
Radium-228	pCi/L	--	--	0.562	0.306	0.941	0.569	0.568	0.613	--	--	--
Radium-226	pCi/L	--	--	0.5	0.202	0.244	0.314	0.379	0.226	--	--	--
Radium-226/228	pCi/L	5	--	1.062	0.508	1.185	0.883	0.947	0.839	--	--	--
Copper (Dissolved)	µg/L	--	--	0.66	0.38	1.41	0.7	0.33	1.96	--	--	--
Zinc (Dissolved)	µg/L	--	--	3	2	3	4	7.5	5	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	1	1	76.2	2	<5	--	--	--
Iron (Dissolved)	mg/L	--	--	0.025	0.01	0.006	0.238	0.05	<0.02	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0847	0.0797	0.0677	0.103	0.144	0.0388	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-12I

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	11/1/2018	11/14/2018	12/11/2018	5/22/2019	11/14/2019	11/12/2020	5/28/2021	5/13/2022
Field Parameters												
Elevation	ft NGVD	--	--	369.85	367.84	367.81	368.16	371.95	368.3	367.52	368.06	368.91
pH	S.U.	--	0	7.15	7.74	7.01	7.12	7.27	7.33	7.05	7.6	7.1
Specific Conductance	µmhos/cm	--	--	662	622	579	901	882	811	870	921	864
Turbidity	NTU	--	--	1.48	8.76	2.54	2.3	39.5	3	0.97	0	2.08
Dissolved Oxygen	mg/L	--	--	1.2	2.68	9.27	1.99	0.2	2.59	0.27	0	1.17
Temperature	°C	--	--	15.21	13.94	12.9	12.92	14.8	13.7	12.29	14.8	15.1
ORP	mV	--	--	-35.1	-87.8	-54.9	-52	-57	-10.1	-59	4	-66.1
Laboratory Parameters												
Antimony	µg/L	6	--	<0.01	<0.02	<0.02	<0.02	0.12	0.03	--	--	--
Arsenic	µg/L	10	--	10.1	9.24	8.79	9.32	12.6	10.3	--	--	--
Barium	µg/L	2000	--	370	374	365	377	395	393	--	--	--
Beryllium	µg/L	4	--	0.006	<0.02	0.02	<0.02	0.04	<0.02	--	--	--
Cadmium	µg/L	5	--	<0.005	0.02	<0.01	0.17	0.16	0.02	--	--	--
Chromium	µg/L	100	--	0.101	0.289	0.05	0.2	1.32	0.2	--	--	--
Cobalt	µg/L	6	--	1.5	1.67	1.42	1.58	2.7	1.54	--	--	--
Copper	µg/L	--	--	1.15	1.23	0.44	0.56	8.39	1	--	--	--
Lead	µg/L	15	--	0.063	0.21	0.03	0.07	1.47	0.07	--	--	--
Mercury	µg/L	2	--	--	--	--	--	0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	2.92	2.87	2.87	3.13	2.8	3.01	--	--	--
Selenium	µg/L	50	--	0.04	0.06	<0.003	<0.03	0.1	<0.03	--	--	--
Thallium	µg/L	2	--	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	1	2	1	3	6.3	17.5	--	--	--
Silica (Dissolved)	mg/L	--	--	20.9	18.8	19.2	12.6	19	17.8	--	--	--
Aluminum	µg/L	--	--	48.8	64.6	5.87	5.67	581	10	--	--	--
Boron	mg/L	--	0.115	0.062	0.115	0.03	0.05	0.03	0.02	<0.02	0.018	<0.05
Calcium	mg/L	--	94.1	100	94.8	90.9	95.6	99.2	93.9	93.2	111	95.8
Lithium	mg/L	0.04	--	0.009	<0.009	0.03	0.01	0.01	0.00469	--	--	--
Magnesium	mg/L	--	--	32.5	32.6	30.5	31	31.5	29.9	--	--	--
Manganese	mg/L	--	--	1.17	1.2	1.08	1.12	2.13	1.08	--	--	--
Potassium	mg/L	--	--	2.03	2.43	2.28	2.26	2.13	1.9	--	--	--
Sodium	mg/L	--	--	43.2	45	43.9	42	45.7	49.4	--	--	--
Strontium	mg/L	--	--	0.134	0.138	0.144	0.142	0.15	0.14	--	--	--
Alkalinity	mg/L	--	--	433	448	433	441	458	431	--	--	--
Bromide	mg/L	--	--	0.139	0.1	0.1	0.1	0.1	0.1	--	--	--
Chloride	mg/L	--	33	34	33.9	33.7	33.1	33.4	32.8	33.3	33.4	32.8
Fluoride	mg/L	4	0.24	0.25	0.25	0.25	0.23	0.25	0.22	0.27	0.29	0.25
TDS	mg/L	--	499	506	493	484	485	532	484	497	520	480
Sulfate	mg/L	--	31.5	30.9	31	30.7	31	32.5	32.3	32.3	31.8	34.8
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.1	<0.1	<0.2	--	--	--
Radium-228	pCi/L	--	--	-0.0683	0.788	1.19	1.04	1.17	0.863	--	--	--
Radium-226	pCi/L	--	--	0.463	0.516	0.51	0.83	0.565	0.578	--	--	--
Radium-226/228	pCi/L	5	--	0.463	1.304	1.7	1.87	1.735	1.441	--	--	--
Copper (Dissolved)	µg/L	--	--	0.19	0.35	0.42	1.08	0.64	1.68	--	--	--
Zinc (Dissolved)	µg/L	--	--	1	10.2	2	8.1	1	3	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2.36	5.95	2	3	16.6	<5	--	--	--
Iron (Dissolved)	mg/L	--	--	1.15	1.18	1.09	1.16	1.51	1.15	--	--	--
Manganese (Dissolved)	mg/L	--	--	1.12	1.16	1.06	1.16	1.11	1.14	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-12D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/30/2018	11/14/2018	12/11/2018	5/22/2019	11/15/2019	11/12/2020	5/27/2021	5/13/2022
Field Parameters												
Elevation	ft NGVD	--	--	367.91	367.91	367.86	368.25	372.03	368.34	367.59	368.18	368.98
pH	S.U.	--	7.3	7.16	8.06	7.08	7.17	7.41	7.42	7.06	7.78	7.6
Specific Conductance	µmhos/cm	--	--	530	510	449	717	686	850	684	746	725
Turbidity	NTU	--	--	9.68	12.7	5.25	2.2	1.4	7.41	1.51	0	5.6
Dissolved Oxygen	mg/L	--	--	1.68	1.41	4.9	1.4	0.7	7.97	0.31	0	1.58
Temperature	°C	--	--	15.56	15.16	12	12.56	15.1	13.4	12.79	16.4	16.34
ORP	mV	--	--	-52.6	-90.9	-40.8	-69	-56	89.2	-77	-22	-32
Laboratory Parameters												
Antimony	µg/L	6	--	0.02	0.06	<0.02	<0.02	0.02	0.25	--	--	--
Arsenic	µg/L	10	--	11.9	9.78	9.95	9.64	13.3	7.64	--	--	--
Barium	µg/L	2000	--	282	268	272	271	282	273	--	--	--
Beryllium	µg/L	4	--	0.006	<0.02	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	<0.005	0.05	<0.01	0.01	0.04	0.08	--	--	--
Chromium	µg/L	100	--	0.108	0.266	0.1	0.2	0.06	0.453	--	--	--
Cobalt	µg/L	6	--	0.462	0.538	0.378	0.4	0.554	0.679	--	--	--
Copper	µg/L	--	--	0.51	41	0.64	0.24	0.46	2.74	--	--	--
Lead	µg/L	15	--	0.127	0.329	0.111	0.05	0.02	0.502	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	3.09	2.96	2.94	3.13	3.57	4.24	--	--	--
Selenium	µg/L	50	--	<0.03	0.07	<0.03	<0.03	<0.03	0.06	--	--	--
Thallium	µg/L	2	--	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	1	3	2	0.8	1	11.5	--	--	--
Silica (Dissolved)	mg/L	--	--	21.1	18.9	19.5	19.5	18.8	17.8	--	--	--
Aluminum	µg/L	--	--	14	53.9	26.1	5.83	3	105	--	--	--
Boron	mg/L	--	0.098	0.112	0.09	0.03	0.09	<0.02	<0.02	<0.02	0.016	<0.05
Calcium	mg/L	--	90.8	95.1	86.9	86.1	82.9	84.5	80.3	91.1	91.1	94.3
Lithium	mg/L	0.04	--	0.013	<0.009	<0.009	<0.009	0.02	0.00169	--	--	--
Magnesium	mg/L	--	--	30.3	29.6	28.5	26.7	26.5	27.2	--	--	--
Manganese	mg/L	--	--	0.989	0.902	0.878	0.743	0.979	0.933	--	--	--
Potassium	mg/L	--	--	1.16	0.89	1.34	1.45	0.76	0.8	--	--	--
Sodium	mg/L	--	--	10.5	11.3	11	10.2	9.06	9.66	--	--	--
Strontium	mg/L	--	--	0.161	0.161	0.171	0.158	0.147	0.142	--	--	--
Alkalinity	mg/L	--	--	373	353	371	384	368	347	--	--	--
Bromide	mg/L	--	--	0.081	0.08	0.07	0.07	0.07	0.1	--	0.08	--
Chloride	mg/L	--	16.1	17.2	17	16.6	16.7	15.9	16.1	17.9	18.2	20
Fluoride	mg/L	4	0.27	0.26	0.26	0.26	0.26	0.26	0.23	0.30	0.28	0.25
TDS	mg/L	--	328	386	381	374	380	393	376	389	410	400
Sulfate	mg/L	--	15.6	14.2	14.2	13.8	13.9	14.8	15.9	16.4	14.8	17.1
Sulfide	mg/L	--	--	<0.04	<0.1	<0.07	<0.1	<0.1	<0.2	--	--	--
Radium-228	pCi/L	--	--	0.643	0.405	0.589	1.69	0.698	0.529	--	--	--
Radium-226	pCi/L	--	--	0.702	0.454	0.608	0.766	0.548	0.574	--	--	--
Radium-226/228	pCi/L	5	--	1.345	0.859	1.197	2.456	1.246	1.103	--	--	--
Copper (Dissolved)	µg/L	--	--	0.35	0.21	0.12	0.44	0.25	<0.2	--	--	--
Zinc (Dissolved)	µg/L	--	--	3.3	2	1	1	0.7	4	--	--	--
Aluminum (Dissolved)	µg/L	--	--	7.24	2	2	5.13	1	<5	--	--	--
Iron (Dissolved)	mg/L	--	--	1.29	0.965	0.996	1.12	1.62	0.616	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.994	0.88	0.801	0.832	1.03	0.906	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-131

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/11/2018	5/21/2019	11/12/2020	5/27/2021	5/13/2022
Field Parameters											
Elevation	ft NGVD	--	--	368.83	368.45	368.41	368.31	371.99	369.21	368.73	369.33
pH	S.U.	--	7.5	7.36	8.12	7.21	7.36	7.54	7.33	8.05	7.51
Specific Conductance	µmhos/cm	--	--	411	397	451	555	522	494	549	544
Turbidity	NTU	--	--	2.14	0.93	0.31	0.45	1.4	2.53	0	0
Dissolved Oxygen	mg/L	--	--	0.37	1.15	8.64	0.57	0.4	3.21	0	0.76
Temperature	°C	--	--	15.71	15.25	13.17	14.13	16.5	13.4	17.9	17.81
ORP	mV	--	--	-15.8	-74.3	44.5	-72	-30	87	173	4
Laboratory Parameters											
Antimony	µg/L	6	--	0.02	<0.02	<0.02	0.04	<0.2	--	--	--
Arsenic	µg/L	10	--	1.74	1.66	1.6	1.84	2.41	--	--	--
Barium	µg/L	2000	--	149	139	141	144	151	--	--	--
Beryllium	µg/L	4	--	0.006	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	<0.005	<0.01	<0.01	<0.01	<0.01	--	--	--
Chromium	µg/L	100	--	0.04	0.1	0.06	0.07	<0.04	--	--	--
Cobalt	µg/L	6	--	0.5	0.554	0.477	0.574	0.577	--	--	--
Copper	µg/L	--	--	0.39	0.62	0.1	0.58	0.09	--	--	--
Lead	µg/L	15	--	0.01	0.04	<0.02	<0.02	<0.02	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--	--
Molybdenum	µg/L	100	--	4.49	4.23	4.09	4.29	4.11	--	--	--
Selenium	µg/L	50	--	<0.03	<0.03	<0.03	<0.03	<0.03	--	--	--
Thallium	µg/L	2	--	0.04	<0.1	<0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	20.1	61.3	<0.7	2	<0.7	--	--	--
Silica (Dissolved)	mg/L	--	--	19.6	17.9	17.9	18.4	17.6	--	--	--
Aluminum	µg/L	--	--	2.54	10.6	2	<1	1	--	--	--
Boron	mg/L	--	0.042	0.09	0.05	<0.02	0.04	0.02	<0.02	0.011	<0.05
Calcium	mg/L	--	67.5	66	58.1	59.7	65.6	67.9	59.1	57.2	63.7
Lithium	mg/L	0.04	--	0.018	0.01	<0.009	<0.009	<0.009	--	--	--
Magnesium	mg/L	--	--	20.4	19.1	19.2	20.9	19.4	--	--	--
Manganese	mg/L	--	--	0.491	0.448	0.447	0.523	0.469	--	--	--
Potassium	mg/L	--	--	1.23	0.93	1.32	1.24	0.99	--	--	--
Sodium	mg/L	--	--	15.2	15.4	15.6	16.4	15.7	--	--	--
Strontium	mg/L	--	--	0.0781	0.0744	0.0834	0.0879	0.0831	--	--	--
Alkalinity	mg/L	--	--	231	228	231	241	235	--	--	--
Bromide	mg/L	--	--	0.04	<0.04	<0.04	<0.04	<0.04	--	0.02	--
Chloride	mg/L	--	20	20.6	20.5	20.3	20.4	20.1	19.1	18.7	20
Fluoride	mg/L	4	0.38	0.38	0.38	0.38	0.38	0.37	0.46	0.45	0.42
TDS	mg/L	--	297	319	305	310	310	318	292	300	300
Sulfate	mg/L	--	40.6	41.6	41.5	41.3	40.7	41.6	39.8	37.2	42.9
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.07	<0.1	--	--	--
Radium-228	pCi/L	--	--	-0.268	0.658	0.682	0.3	0.76	--	--	--
Radium-226	pCi/L	--	--	0.456	0.509	0.669	0.589	0.646	--	--	--
Radium-226/228	pCi/L	5	--	0.456	1.167	1.351	0.889	1.406	--	--	--
Copper (Dissolved)	µg/L	--	--	0.11	0.39	0.2	0.2	0.15	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	6.3	<0.7	3	<0.7	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	1	1	5	<1	--	--	--
Iron (Dissolved)	mg/L	--	--	0.185	0.189	0.193	0.26	0.278	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.493	0.467	0.461	0.483	0.418	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-13D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	9/26/2018	10/31/2018	11/15/2018	12/11/2018	5/21/2019	11/12/2020	5/27/2021	5/13/2022
Field Parameters											
Elevation	ft NGVD	--	--	368.79	368.43	368.39	368.29	371.95	369.16	368.71	369.31
pH	S.U.	--	7.4	7.03	8.11	7.17	7.29	7.45	7.29	7.73	7.35
Specific Conductance	µmhos/cm	--	--	406	382	427	540	524	521	586	550
Turbidity	NTU	--	--	5.34	10.6	4.66	3.22	2	31.2	21	11.9
Dissolved Oxygen	mg/L	--	--	1.34	1.4	5.45	0.51	1.7	1.34	0	2.05
Temperature	°C	--	--	16.29	14.99	12.18	14.06	18.7	15.2	17.6	17.82
ORP	mV	--	--	-71.4	-95.1	-48.5	-94	-48	-51	26	-53
Laboratory Parameters											
Antimony	µg/L	6	--	0.01	0.02	0.05	0.03	0.07	--	--	--
Arsenic	µg/L	10	--	6.44	5.62	7.55	5.3	20.8	--	--	--
Barium	µg/L	2000	--	206	204	198	219	265	--	--	--
Beryllium	µg/L	4	--	0.007	<0.02	<0.02	<0.02	<0.02	--	--	--
Cadmium	µg/L	5	--	<0.005	0.04	<0.01	<0.01	<0.01	--	--	--
Chromium	µg/L	100	--	0.071	0.353	0.209	0.06	0.2	--	--	--
Cobalt	µg/L	6	--	1.15	1.31	1.05	0.935	1.1	--	--	--
Copper	µg/L	--	--	0.26	1.02	0.55	0.28	1.11	--	--	--
Lead	µg/L	15	--	0.071	0.438	0.173	<0.02	0.07	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	--	--	--
Molybdenum	µg/L	100	--	2.88	2.59	2.77	3.23	3.21	--	--	--
Selenium	µg/L	50	--	<0.03	0.1	0.07	<0.03	0.04	--	--	--
Thallium	µg/L	2	--	0.02	<0.1	>0.1	<0.1	<0.1	--	--	--
Zinc	µg/L	--	--	0.6	2	1	2	1	--	--	--
Silica (Dissolved)	mg/L	--	--	19.3	17.6	17.9	17.9	17.4	--	--	--
Aluminum	µg/L	--	--	21.8	162	58.8	2	12.4	--	--	--
Boron	mg/L	--	0.037	0.071	0.111	119	0.03	0.02	<0.02	0.012	<0.05
Calcium	mg/L	--	65.9	68.9	63.4	60.8	67.4	66.2	64.6	66.6	66.4
Lithium	mg/L	0.04	--	0.016	<0.009	<0.009	<0.009	<0.009	--	--	--
Magnesium	mg/L	--	--	21.8	21.7	20.1	22.5	19.7	--	--	--
Manganese	mg/L	--	--	0.762	0.669	0.648	0.677	0.997	--	--	--
Potassium	mg/L	--	--	1.06	1.14	1.45	1.16	0.82	--	--	--
Sodium	mg/L	--	--	11.2	11.6	11.4	11.2	9.25	--	--	--
Strontium	mg/L	--	--	0.0852	0.0867	0.0913	0.098	0.0882	--	--	--
Alkalinity	mg/L	--	--	231	243	223	252	237	--	--	--
Bromide	mg/L	--	--	0.05	<0.04	<0.04	<0.04	<0.04	--	0.03	--
Chloride	mg/L	--	16.3	17	16.9	16.6	16.5	15.9	18.2	18	17.8
Fluoride	mg/L	4	0.28	0.27	0.27	0.28	0.27	0.26	0.30	0.29	0.28
TDS	mg/L	--	287	296	299	296	305	303	311	320	300
Sulfate	mg/L	--	35.5	34.8	34.7	34.1	33.3	33.9	38.8	37.4	38.2
Sulfide	mg/L	--	--	<0.4	<0.1	<0.07	<0.07	<0.1	--	--	--
Radium-228	pCi/L	--	--	0.141	-0.293	-0.157	0.226	0.844	--	--	--
Radium-226	pCi/L	--	--	0.501	0.356	0.242	0.389	0.586	--	--	--
Radium-226/228	pCi/L	5	--	0.642	0.356	0.242	0.615	1.43	--	--	--
Copper (Dissolved)	µg/L	--	--	0.07	0.11	0.09	0.21	0.56	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.5	1	<0.7	1	<0.7	--	--	--
Aluminum (Dissolved)	µg/L	--	--	11	3	2	20.5	1	--	--	--
Iron (Dissolved)	mg/L	--	--	1.29	0.915	0.995	1.13	0.866	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.74	0.625	0.702	0.612	0.777	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-14S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	7/20/2016	9/21/2016	11/17/2016	1/9/2017	3/7/2017	5/19/2017	7/18/2017	10/4/2017	12/12/2017	6/5/2018	11/13/2018	5/23/2019	11/16/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.07	369.7	369.34	368.92	368.49	368.63	369.88	368.43	368.41	368.94	369.27	371.36	371.63	369.98
pH	S.U.	--	7.2	7.1	7	7.7	7.5	7.4	6.95	7.3	7	7.6	7.55	7.55	7.15	7.51	7.68
Specific Conductance	µmhos/cm	--	--	576	640	955	530	80	441	496	488	490	450	309	604	655	550
Turbidity	NTU	--	--	3.9	6	1	2	0.7	2.07	1	0.5	1	0.6	0.2	0.61	9.8	0.52
Dissolved Oxygen	mg/L	--	--	3.8	3.3	1	3.4	3	3.82	3.7	4	10.2	5.42	6.9	2.57	0.455	3.22
Temperature	°C	--	--	18.7	22.6	15.2	14.4	13.9	14.54	15.9	15.3	13.5	14.98	13.25	17.01	12.4	15.74
ORP	mV	--	--	43	53	282	147	75	55.6	67	-23	133	-7.9	152	-203.7	-9	150
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	0.02	0.03	0.02	0.02	0.06	<0.05	--	--	--	<0.02	<0.02	0.03	--
Arsenic	µg/L	10	--	1.54	1.29	0.75	0.91	0.76	0.75	0.7	--	--	--	0.64	0.62	0.62	--
Barium	µg/L	2000	--	31	27.8	26.3	27	26.3	25	27	--	--	--	27	28.9	32.9	--
Beryllium	µg/L	4	--	0.008	0.005	<0.005	<0.005	<0.005	<0.004	<0.02	--	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.21	0.07	0.03	0.05	0.01	0.08	<0.02	--	--	--	0.05	0.01	<0.01	--
Chromium	µg/L	100	--	0.3	0.3	0.162	0.575	0.66	0.301	0.258	--	--	--	0.2	0.2	0.438	--
Cobalt	µg/L	6	--	0.573	0.333	0.088	0.187	0.083	0.065	0.03	--	--	--	0.03	0.03	0.04	--
Copper	µg/L	--	--	--	--	--	--	--	--	2.38	0.15	--	0.38	0.24	0.25	<0.2	--
Lead	µg/L	15	--	0.307	0.31	0.549	0.115	0.061	0.071	0.116	--	--	--	0.05	0.04	<0.05	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	1.51	1.43	1.26	1.62	1.84	1.35	1.67	--	--	--	1	1	1	--
Selenium	µg/L	50	--	1.4	1.2	1.2	1.1	1.1	1.2	1.3	--	--	--	1.1	0.9	0.9	--
Thallium	µg/L	2	--	<0.01	<0.01	0.02	0.054	0.055	0.01	0.07	--	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	9	0.8	--	1	1	<0.7	<0.7	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	20.3	20.2	23.3	--	20.4	20.2	<0.06	19.3	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	11.4	2	--	5.75	7.32	4	5	--
Boron	mg/L	--	0.011	0.008	0.01	0.008	<0.002	0.031	0.017	0.03	0.042	--	0.046	0.04	<0.02	0.01	<0.02
Calcium	mg/L	--	59.2	56.3	59.5	65.4	65.7	63.4	59.8	65.6	67	--	61.1	59.2	66.9	65.1	66.6
Lithium	mg/L	0.04	--	0.018	0.006	0.004	0.006	0.005	0.001	<0.0002	--	--	--	<0.009	0.01	0.00367	--
Magnesium	mg/L	--	--	--	--	--	--	27.6	28.1	29.3	29.9	--	27.4	26.4	30	29.8	--
Manganese	mg/L	--	--	--	--	--	--	--	--	0.0006	--	--	0.0014	0.0015	0.0008	0.002	--
Potassium	mg/L	--	--	--	--	--	--	0.5	0.54	0.49	0.59	--	0.51	0.55	0.53	0.5	--
Sodium	mg/L	--	--	--	--	--	--	33	29.4	30.1	29.9	--	29.2	24.9	23.3	23.7	--
Strontium	mg/L	--	--	--	--	--	--	0.101	0.102	0.103	0.106	--	0.101	0.0954	0.109	0.111	--
Alkalinity	mg/L	--	--	232	--	--	--	232	258	257	249	--	260	259	275	252	--
Bromide	mg/L	--	--	--	--	--	--	<0.02	<0.06	0.03	0.04	--	<0.02	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	28.6	29.4	28.1	27.8	27.2	26.8	29.4	29.6	29.9	30	27.1	29	28.6	28.9	28.6
Fluoride	mg/L	4	0.39	0.39	0.36	0.35	0.33	0.36	0.37	0.33	0.34	0.34	0.39	0.37	0.37	0.38	0.33
TDS	mg/L	--	368	364	361	362	344	354	376	377	376	--	360	344	390	374	411
Sulfate	mg/L	--	34.9	36.5	32.5	29.1	30.7	29.9	32.3	33.1	34.8	35.5	29.4	30.8	32.4	32.8	32.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	-0.343	0.769	0.693	0.601	-0.193	-0.019	1.73	--	--	--	0.334	0.271	1.1	--
Radium-226	pCi/L	--	--	0.594	0.131	0.413	0.179	0.0525	0.0316	0.153	--	--	--	0.0534	0.0483	0.112	--
Radium-226/228	pCi/L	5	--	0.251	0.9	1.106	0.78	-0.1405	0.0126	1.883	--	--	--	0.3874	0.3193	1.212	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	0.94	--	--	0.43	0.64	0.31	0.6	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	7	--	--	5.7	3	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	11.3	--	--	1	<1	1	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.016	--	0.002	<0.003	<0.003	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	<0.0001	0.0021	0.0001	<0.0002	--	<0.0002	0.0005	<0.0002	<0.0005	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-14S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/28/2021	5/12/2022
Field Parameters						
Elevation	ft NGVD	--	--	370.99	369.36	369.9
pH	S.U.	--	7.2	6.68	7.82	7.11
Specific Conductance	µmhos/cm	--	--	742	706	583
Turbidity	NTU	--	--	3.29	1.1	1.86
Dissolved Oxygen	mg/L	--	--	2.77	2.61	4.35
Temperature	°C	--	--	15.64	15	16.9
ORP	mV	--	--	101	97	200
Laboratory Parameters						
Antimony	µg/L	6	--	--	--	--
Arsenic	µg/L	10	--	--	--	--
Barium	µg/L	2000	--	--	--	--
Beryllium	µg/L	4	--	--	--	--
Cadmium	µg/L	5	--	--	--	--
Chromium	µg/L	100	--	--	--	--
Cobalt	µg/L	6	--	--	--	--
Copper	µg/L	--	--	--	--	--
Lead	µg/L	15	--	--	--	--
Mercury	µg/L	2	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--
Selenium	µg/L	50	--	--	--	--
Thallium	µg/L	2	--	--	--	--
Zinc	µg/L	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--
Boron	mg/L	--	0.011	<0.02	0.012	<0.05
Calcium	mg/L	--	59.2	66.4	82	68.2
Lithium	mg/L	0.04	--	--	--	--
Magnesium	mg/L	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--
Chloride	mg/L	--	28.6	26.3	25.4	25.4
Fluoride	mg/L	4	0.39	0.39	0.38	0.33
TDS	mg/L	--	368	370	430	400
Sulfate	mg/L	--	34.9	31.4	31	30.1
Sulfide	mg/L	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-15S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/7/2017	5/10/2017	7/19/2017	10/4/2017	6/5/2018	11/13/2018	5/23/2019	7/23/2019	9/11/2019
Field Parameters																	
Elevation	ft NGVD	--	--	370	369.87	369.49	368.87	367.92	367.84	367.86	368.75	367.84	396.63	368.96	371.96	372.79	372.26
pH	S.U.	--	7.1 - 7.7	7.2	7.1	7.2	7.7	7.2	7.2	7.3	7.3	7.35	7.16	7.46	7.5	5.74	7.38
Specific Conductance	µmhos/cm	--	--	512	512	510	904	470	60	419	368	393	416	317	348	362	269
Turbidity	NTU	--	--	7.6	2.2	1	1	1	0.5	2	2	2.34	0.33	0.41	1.51	8.3	3
Dissolved Oxygen	mg/L	--	--	0.5	0.5	1	1	1	6	0.4	0.3	0.07	1.9	0.77	0.4	1	0
Temperature	°C	--	--	16.5	17.7	19.1	15.5	13.8	13.9	14.6	15.7	14.7	14.96	12.94	15.21	15.8	16.55
ORP	mV	--	--	57	124	181	-10	179	64	65	24	18.1	-37.7	19.3	-218	47	63
Laboratory Parameters																	
Antimony	µg/L	6	--	0.04	0.04	0.02	0.04	0.04	0.03	0.04	0.02	--	--	<0.02	0.02	--	--
Arsenic	µg/L	10	--	0.32	0.24	0.21	0.18	0.26	0.21	0.21	0.23	--	--	0.13	0.12	--	--
Barium	µg/L	2000	--	4.71	5.85	3.21	3.27	6.05	4.98	3.54	3.11	--	--	2.46	2.54	--	--
Beryllium	µg/L	4	--	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.004	--	--	<0.02	<0.02	--	--
Cadmium	µg/L	5	--	0.14	0.25	0.05	0.05	0.06	0.04	0.05	0.05	--	--	0.04	0.1	--	--
Chromium	µg/L	100	--	0.2	1.7	0.5	0.058	0.493	0.934	0.198	0.096	--	--	0.05	0.08	--	--
Cobalt	µg/L	6	--	3.03	1.17	1.09	0.794	1.75	1.26	1.2	1.25	--	--	0.74	0.775	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.4	0.26	0.24	0.37	0.32	--	--
Lead	µg/L	15	--	0.286	0.101	0.098	0.037	0.039	0.024	0.062	0.083	--	--	0.03	0.05	--	--
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	<0.002	--	--
Molybdenum	µg/L	100	--	2.52	2.89	2.54	1.57	0.78	1.17	2.08	2.87	--	--	2.54	3.47	--	--
Selenium	µg/L	50	--	0.4	0.7	0.5	0.3	0.3	0.5	0.5	0.2	--	--	0.1	0.06	--	--
Thallium	µg/L	2	--	0.03	<0.01	0.02	0.02	0.03	0.04	0.02	0.02	--	--	<0.1	<0.1	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	3.5	1	21	2	2	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	13.1	12.7	15.8	13.1	12.4	<0.06	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	15.9	6.68	4.42	6.41	11.7	--	--
Boron	mg/L	--	0.15	0.011	0.012	0.008	<0.002	<0.002	0.084	0.077	0.073	0.095	0.078	0.04	<0.02	--	--
Calcium	mg/L	--	(79.5) 71	46.9	43.6	46.6	52.3	63.6	62.9	45.7	44.4	48.3	44.7	41.8	41.3	--	--
Lithium	mg/L	0.04	--	0.007	0.022	0.005	0.005	0.008	0.008	0.003	0.0009	--	--	<0.009	<0.009	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	28.2	19.3	17.2	18.5	16.9	15.1	13.9	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.489	--	0.391	0.444	0.452	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.07	1.11	1.03	1.27	0.93	1.16	0.68	--	--
Sodium	mg/L	--	--	--	--	--	--	--	35.5	44.7	39.2	42.3	35.9	27.2	17.3	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0903	0.0711	0.061	0.0662	0.0638	0.0574	0.0502	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	294	257	235	267	239	226	197	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.04	0.062	0.05	0.074	0.03	<0.04	<0.04	--	--
Chloride	mg/L	--	(29.6) 26	21.2	18.7	18.9	18.3	21.9	16.1	14.1	11.8	13.3	8.84	8.78	8.88	--	--
Fluoride	mg/L	4	0.86	0.65	0.65	0.63	0.5	0.36	0.42	0.65	0.66	0.62	0.69	0.72	0.88	0.87	0.81
TDS	mg/L	--	(412.7) 407	338	319	329	338	374	342	294	263	300	274	232	207	--	--
Sulfate	mg/L	--	(33.67) 34	30.3	27.7	25.1	23.2	28.3	23.4	21	20.3	23.2	16.3	13.1	10.2	--	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.07	<0.1	--	--
Radium-228	pCi/L	--	--	0.0335	-0.092	0.302	1.11	-0.0122	-0.108	0.106	-0.0928	--	--	0.482	0.439	--	--
Radium-226	pCi/L	--	--	0.384	--	0.116	0.139	0.189	0.0973	0.135	0.0916	--	--	-0.0262	0.282	--	--
Radium-226/228	pCi/L	5	--	0.4175	-0.092	0.418	1.249	0.1768	-0.0107	0.241	0.0916	--	--	0.482	0.721	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.37	--	0.51	1.59	0.53	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.6	--	1	2	<0.7	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	3.7	--	2	3	2	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.014	<0.002	0.004	<0.003	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.448	0.361	0.284	0.379	0.349	0.332	0.289	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-15S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/15/2019	5/19/2020	11/10/2020	5/28/2021	11/11/2021	5/12/2022
Field Parameters									
Elevation	ft NGVD	--	--	371.11	370.36	370.24	369.11	368.51	369.46
pH	S.U.	--	7.1 - 7.7	7.38	7.55	7.33	7.73	7.48	7.48
Specific Conductance	µmhos/cm	--	--	467	400	455	430	500	432
Turbidity	NTU	--	--	10	0	8.91	1.8	0	25.6
Dissolved Oxygen	mg/L	--	--	0	0	0.12	0	0	0.14
Temperature	°C	--	--	13.4	14.71	15.34	14.91	13.71	16.2
ORP	mV	--	--	64	135	22	110	182	130
Laboratory Parameters									
Antimony	µg/L	6	--	0.03	--	--	--	--	--
Arsenic	µg/L	10	--	0.16	--	--	--	--	--
Barium	µg/L	2000	--	3.17	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	--	--	--
Cadmium	µg/L	5	--	0.06	--	--	--	--	--
Chromium	µg/L	100	--	0.1	--	--	--	--	--
Cobalt	µg/L	6	--	2.15	--	--	--	--	--
Copper	µg/L	--	--	0.2	--	--	--	--	--
Lead	µg/L	15	--	0.1	--	--	--	--	--
Mercury	µg/L	2	--	<0.002	--	--	--	--	--
Molybdenum	µg/L	100	--	2.18	--	--	--	--	--
Selenium	µg/L	50	--	0.2	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	--	--	--
Zinc	µg/L	--	--	2	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	11.9	--	--	--	--	--
Aluminum	µg/L	--	--	10	--	--	--	--	--
Boron	mg/L	--	0.15	0.01	<0.02	<0.02	0.014	0.012	<0.009
Calcium	mg/L	--	(79.5) 71	40.2	42.4	45.4	66.4	46.3	43.7
Lithium	mg/L	0.04	--	0.00357	--	--	--	--	--
Magnesium	mg/L	--	--	15.1	--	--	--	--	--
Manganese	mg/L	--	--	0.743	--	--	--	--	--
Potassium	mg/L	--	--	0.8	--	--	--	--	--
Sodium	mg/L	--	--	19.7	--	--	--	--	--
Strontium	mg/L	--	--	0.0522	--	--	--	--	--
Alkalinity	mg/L	--	--	209	--	--	--	--	--
Bromide	mg/L	--	--	<0.04	--	--	--	--	--
Chloride	mg/L	--	(29.6) 26	9.48	10.3	10.1	10.6	10.4	10.2
Fluoride	mg/L	4	0.86	0.7	0.86	0.78	0.81	0.65	0.82
TDS	mg/L	--	(412.7) 407	234	218	236	250	270	220
Sulfate	mg/L	--	(33.67) 34	8.4	9.1	10.3	8.82	8.07	9.34
Sulfide	mg/L	--	--	<0.2	--	--	--	--	--
Radium-228	pCi/L	--	--	1.47	--	--	--	--	--
Radium-226	pCi/L	--	--	0.0996	--	--	--	--	--
Radium-226/228	pCi/L	5	--	1.5696	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	2.06	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	<5	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.02	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.257	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-151

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/7/2016	7/19/2016	9/21/2016	11/16/2016	1/10/2017	3/7/2017	5/10/2017	7/18/2017	10/4/2017	12/12/2017	1/3/2018
Field Parameters														
Elevation	ft NGVD	--	--	370	369.88	369.51	368.86	368.12	368.07	368.27	368.74	367.82	366.73	366.49
pH	S.U.	--	6.77 - 7.86	7.2	7.1	7.1	7.5	7.7	7.5	7.2	7.2	7.34	7.8	7.79
Specific Conductance	µmhos/cm	--	--	555	574	530	874	420	60	457	400	368	350	474
Turbidity	NTU	--	--	0.9	0.6	0.7	0.2	1	2	1	1	1.09	1	1.12
Dissolved Oxygen	mg/L	--	--	0.2	0.4	0.4	1.3	0.2	2	0.3	0.3	0.49	0.9	0.41
Temperature	°C	--	--	15.1	18.2	17.6	15.6	13.9	13.6	14.8	16.3	14.68	12.8	12.38
ORP	mV	--	--	52.5	-86	-54	259	-87	-42	51	-50	-79.7	-52	-77.2
Laboratory Parameters														
Antimony	µg/L	6	--	0.01	0.25	0.01	0.04	0.01	0.02	0.02	0.02	--	--	--
Arsenic	µg/L	10	--	25.2	27.9	21.1	23.6	20.2	20.4	20.2	23.6	--	--	--
Barium	µg/L	2000	--	118	132	119	107	91.2	88.9	86.1	94.8	--	--	--
Beryllium	µg/L	4	--	<0.005	0.165	<0.005	0.005	<0.005	<0.005	<0.004	<0.004	--	--	--
Cadmium	µg/L	5	--	0.02	0.23	0.009	0.06	0.005	0.03	0.03	0.02	--	--	--
Chromium	µg/L	100	--	0.2	0.5	0.1	0.132	0.35	0.7	0.134	0.089	--	--	--
Cobalt	µg/L	6	--	1.24	1.66	1.32	1.03	1	0.903	1.02	1.25	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.26	0.1	--	--
Lead	µg/L	15	--	0.026	0.254	0.026	0.213	0.01	0.065	0.09	0.082	--	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	5.76	6.74	5.75	6.73	7.63	7.91	6.52	5.58	--	--	--
Selenium	µg/L	50	--	<0.03	0.2	<0.03	<0.03	<0.03	0.07	0.04	<0.03	--	--	--
Thallium	µg/L	2	--	0.04	0.273	0.03	0.04	0.04	0.112	0.03	0.04	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	0.7	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	15	14	16.1	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	9.25	6.63	--	--
Boron	mg/L	--	0.072	0.06	0.032	0.03	0.022	0.019	0.047	0.038	0.05	0.08	--	0.04
Calcium	mg/L	--	(79.5) 54	44.1	44.6	46.1	51.4	46.5	51.1	46.6	43.9	44.6	--	--
Lithium	mg/L	0.04	--	0.005	0.018	0.004	0.004	0.011	0.006	0.002	<0.0002	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	13.3	12.7	11.1	11.2	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.134	--	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.01	1.02	0.94	1.05	--	--
Sodium	mg/L	--	--	--	--	--	--	--	62.3	56.1	51.8	45.4	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0865	0.088	0.0841	0.0871	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	229	239	224	202	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.084	0.101	0.081	0.067	--	--
Chloride	mg/L	--	(29.6) 70	59.3	53.8	43.4	44.9	48.3	38.5	32.7	27.1	23.7	22.8	--
Fluoride	mg/L	4	0.382	0.25	0.25	0.23	0.25	0.34	0.32	0.31	0.22	0.23	0.22	--
TDS	mg/L	--	(412.7) 398	380	356	334	340	351	331	322	300	287	--	--
Sulfate	mg/L	--	(47.44) 47	42.5	41	34	33.6	35.4	31.1	29.7	26.6	27.3	26.7	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	--
Radium-228	pCi/L	--	--	0.254	0.455	0.076	1.23	0.682	0.155	-0.367	1.49	--	--	--
Radium-226	pCi/L	--	--	0.609	0.636	0.428	0.517	0.187	0.71	0.189	0.153	--	--	--
Radium-226/228	pCi/L	5	--	0.863	1.091	0.504	1.747	0.869	0.865	-0.178	1.643	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.28	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.1	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.19	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.742	0.709	0.789	0.949	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.138	0.139	0.112	0.119	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-151

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2016	11/13/2018	5/23/2019	11/15/2019	5/19/2020	11/10/2020	2/3/2021	5/28/2021	11/11/2021	5/12/2022
Field Parameters														
Elevation	ft NGVD	--	--	369.64	370.28	369.01	372.01	371.09	370.42	370.28	368.37	369.35	368.56	369.53
pH	S.U.	--	6.77 - 7.86	8.06	7.36	7.6	7.29	7.38	7.49	7.52	7.57	7.72	7.95	7.5
Specific Conductance	µmhos/cm	--	--	420	527	412	414	495	435	381	400	393	402	444
Turbidity	NTU	--	--	0.88	0	0.18	0.95	7	0	1.35	0.4	2.96	0	6.5
Dissolved Oxygen	mg/L	--	--	1.89	0.25	0.31	1.61	0	0	6.34	0.1	0	0	0.56
Temperature	°C	--	--	14.9	17.77	12.52	18.94	13.7	14.47	16.12	13.6	14.92	13.47	16.61
ORP	mV	--	--	-94	-63	-63.7	-207.7	-85	-39	-70	-84	-106	87	-45
Laboratory Parameters														
Antimony	µg/L	6	--	--	--	<0.02	<0.02	0.04	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	23.8	25.8	26.5	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	93.3	95	88.9	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	<0.02	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	<0.01	0.01	0.05	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	<0.04	0.06	0.1	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	1.12	1.12	1.07	--	--	--	--	--	--
Copper	µg/L	--	--	0.15	--	0.12	0.1	0.6	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.03	<0.02	0.2	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	5.03	5.63	5.95	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.04	<0.03	0.04	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	<0.1	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	2.5	--	0.8	7.9	2	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	13.9	--	13.8	<0.06	12.5	--	--	--	--	--	--
Aluminum	µg/L	--	--	4.24	--	7.01	3	21.2	--	--	--	--	--	--
Boron	mg/L	--	0.072	0.066	--	0.07	0.03	0.03	0.03	0.03	--	0.028	0.026	0.019
Calcium	mg/L	--	(79.5) 54	47	--	39.9	47.8	45.2	49.2	44.2	--	53.3	44.4	44.2
Lithium	mg/L	0.04	--	--	--	<0.009	0.01	0.00289	--	--	--	--	--	--
Magnesium	mg/L	--	--	11.8	--	9.98	11.7	11	--	--	--	--	--	--
Manganese	mg/L	--	--	0.13	--	0.106	0.128	0.116	--	--	--	--	--	--
Potassium	mg/L	--	--	0.96	--	1.21	0.9	0.9	--	--	--	--	--	--
Sodium	mg/L	--	--	42	--	29.9	29.9	24.2	--	--	--	--	--	--
Strontium	mg/L	--	--	0.0955	--	0.0827	0.0942	0.0887	--	--	--	--	--	--
Alkalinity	mg/L	--	--	226	--	199	208	198	--	--	--	--	--	--
Bromide	mg/L	--	--	0.071	--	0.06	0.04	<0.04	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 70	25.1	--	23.7	18	16.9	19	12.8	--	16	14	19.8
Fluoride	mg/L	4	0.382	0.26	--	0.25	0.26	0.27	0.25	0.47	0.36	0.39	0.47	0.35
TDS	mg/L	--	(412.7) 398	279	--	248	260	248	253	213	--	240	220	250
Sulfate	mg/L	--	(47.44) 47	25.3	--	25.3	20.9	17.6	17.8	11.7	--	14.7	11.3	16
Sulfide	mg/L	--	--	<0.4	--	<0.07	<0.1	<0.2	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.283	0.423	1.63	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0962	0.557	0.194	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.3792	0.98	1.824	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.36	--	0.2	0.83	<0.2	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	2	--	0.8	1	1	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	--	1	2	<5	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.879	--	0.848	0.826	0.623	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.126	--	0.121	0.116	0.118	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-16S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/10/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.7	369.61	369.16	368.56	367.84	367.87	367.88	368.53	367.58	366.38
pH	S.U.	--	5.88 - 8.55	7.53	7.1	7.31	6.9	7.16	7.1	8.26	6.34	7.25	7.34
Specific Conductance	µmhos/cm	--	--	0.822	764	719	669	677	804	581	595	647	872
Turbidity	NTU	--	--	0.74	0.34	5.21	0.5	0.25	0.42	1.78	0.57	0.72	0.54
Dissolved Oxygen	mg/L	--	--	0.34	0.4	7.29	0.62	0.55	0.18	0.69	22.45	0.31	0.82
Temperature	°C	--	--	15.7	16.39	17.48	16.91	14.47	18.48	16.01	15.63	15.99	14.46
ORP	mV	--	--	112.4	56.2	153.4	233.5	83	56.1	177.3	-118.9	13.6	-12.2
Laboratory Parameters													
Antimony	µg/L	6	--	0.03	0.03	0.25	0.02	0.02	0.02	0.02	0.02	--	--
Arsenic	µg/L	10	--	0.37	0.37	0.38	0.34	0.42	0.31	0.39	0.33	--	--
Barium	µg/L	2000	--	32.3	29.9	29.5	25.3	25.1	25.7	29.8	25.6	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.03	0.03	0.1	0.006	0.008	0.004	0.01	0.04	--	--
Chromium	µg/L	100	--	0.2	0.5	0.3	1.03	0.081	0.463	0.196	0.101	--	--
Cobalt	µg/L	6	--	0.073	0.025	0.07	0.028	0.014	0.012	0.063	0.01	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.1	0.19	--
Lead	µg/L	15	--	0.074	0.057	0.182	<0.004	0.039	0.006	0.027	0.01	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	1.15	1.21	1.11	1.19	1.21	1.32	1.14	0.98	--	--
Selenium	µg/L	50	--	0.6	0.6	0.8	0.4	0.4	0.4	0.3	0.4	--	--
Thallium	µg/L	2	--	0.01	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	2	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	24	24.1	27.6	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	2.1	7.43	--
Boron	mg/L	--	0.088	0.028	0.025	0.024	0.025	0.017	0.038	0.082	0.037	0.061	--
Calcium	mg/L	--	(79.5) 114	96.2	83	93.5	96.4	94.6	106	105	91.8	108	109
Lithium	mg/L	0.04	--	0.007	0.031	0.005	0.018	0.013	0.013	0.008	0.01	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	36.4	36.6	31.4	38.2	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0028	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.01	1.3	0.97	1.03	--
Sodium	mg/L	--	--	--	--	--	--	--	36.9	36.7	28.7	35.7	--
Strontium	mg/L	--	--	--	--	--	--	--	0.129	0.132	0.108	0.133	--
Alkalinity	mg/L	--	--	--	--	--	--	--	423	431	436	438	--
Bromide	mg/L	--	--	--	--	--	--	--	0.1	0.158	0.162	0.206	--
Chloride	mg/L	--	(29.6) 24	18.7	19	17.1	16.4	17.5	19.3	22.9	19.8	19.3	--
Fluoride	mg/L	4	0.506	0.44	0.46	0.38	0.3	0.35	0.36	0.38	0.33	0.41	--
TDS	mg/L	--	(412.7) 517	483	471	509	486	474	473	499	484	503	517
Sulfate	mg/L	--	(52.4) 52	46.9	50.1	42.1	38.3	39.2	39.6	42.3	40.7	45	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	-0.0274	0.34	-0.131	0.0963	1.8	0.169	-0.045	2.76	--	--
Radium-226	pCi/L	--	--	0.163	0.707	0.0255	0.198	0.193	0.113	0.145	0.0933	--	--
Radium-226/228	pCi/L	5	--	0.1356	1.047	-0.1055	0.2943	1.993	0.282	0.1	2.8533	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.1	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.9	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.051	0.015	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0013	0.0145	0.0007	0.0127	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-16S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2018	11/14/2018	2/11/2019	5/22/2019	11/15/2019	5/19/2020	7/15/2020	11/11/2020	5/28/2021	11/11/2021	5/12/2022
Field Parameters															
Elevation	ft NGVD	--	--	369.62	370.12	368.86	369.84	371.94	370.84	370.40	370.95	392.06	369.06	368.36	369.43
pH	S.U.	--	5.88 - 8.55	7.23	7.07	7.02	7.12	7.1	7	7.54	7.06	6.5	7.2	6.62	7.5
Specific Conductance	µmhos/cm	--	--	770	920	720	570	774	961	675	823	948	763	832	680
Turbidity	NTU	--	--	2.2	0	0.3	1.3	0.18	4.2	1.54	2.35	2.28	12.87	0	1.7
Dissolved Oxygen	mg/L	--	--	7.8	0	1.35	0.41	0.34	0.39	0.48	1.63	0.11	0.56	0	2.22
Temperature	°C	--	--	15.73	17.04	14.2	14.4	14.54	12.05	15.03	18.03	14.73	15.35	13.88	20.43
ORP	mV	--	--	-36.9	147	142	183	-211.4	121	110	57	137	66	47	116
Laboratory Parameters															
Antimony	µg/L	6	--	--	--	0.05	--	0.03	0.03	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.34	--	0.26	0.3	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	29.9	--	21.9	27.2	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	<0.02	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.08	--	0.01	0.05	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.07	--	0.1	0.09	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	<0.02	--	<0.02	0.059	--	--	--	--	--	--
Copper	µg/L	--	--	1.19	--	1.46	--	0.66	0.3	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	0.112	--	<0.02	0.07	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	0.9	--	0.9	0.8	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	3.2	--	0.6	1	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	<0.1	--	--	--	--	--	--
Zinc	µg/L	--	--	5	--	31.6	--	<0.7	0.8	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	24.9	--	24.9	--	23.3	22.3	--	--	--	--	--	--
Aluminum	µg/L	--	--	5.68	--	3	--	1	<5	--	--	--	--	--	--
Boron	mg/L	--	0.088	0.109	0.034	0.107	0.02	0.03	0.02	0.03	--	0.02	0.021	0.019	<0.009
Calcium	mg/L	--	(79.5) 114	108	109	104	--	99.2	92.2	104	--	103	96.8	86.7	85.9
Lithium	mg/L	0.04	--	--	--	0.02	--	0.01	0.00639	--	--	--	--	--	--
Magnesium	mg/L	--	--	38.8	--	37.4	--	34.5	35.5	--	--	--	--	--	--
Manganese	mg/L	--	--	0.0062	--	0.004	--	0.0035	0.0115	--	--	--	--	--	--
Potassium	mg/L	--	--	1.1	--	1.28	--	0.95	0.9	--	--	--	--	--	--
Sodium	mg/L	--	--	38	--	44.4	--	29.4	29.6	--	--	--	--	--	--
Strontium	mg/L	--	--	0.137	--	0.138	--	0.21	0.118	--	--	--	--	--	--
Alkalinity	mg/L	--	--	463	--	510	--	478	445	--	--	--	--	--	--
Bromide	mg/L	--	--	0.118	--	0.1	--	0.08	0.1	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 24	17.3	--	16.2	--	18	20.7	26.7	25.8	21.8	21.2	13.3	13
Fluoride	mg/L	4	0.506	0.42	--	0.39	--	0.38	0.32	0.34	0.37	0.38	0.41	0.37	0.39
TDS	mg/L	--	(412.7) 517	520	533	548	517	493	497	470	489	473	480	440	400
Sulfate	mg/L	--	(52.4) 52	40.8	--	40.3	--	34.5	35.2	34.9	--	34.5	32.2	24.4	25.6
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	<0.2	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.0697	--	0.299	0.179	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.0503	--	0.0904	0.0453	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.12	--	0.3894	0.2243	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.21	--	2.59	--	0.38	1.7	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	5.2	--	4	--	<0.7	2	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	1	--	1	--	3	<5	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.004	--	<0.003	--	<0.003	<0.02	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0047	--	0.0023	--	<0.0027	0.0009	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-161

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/20/2016	9/21/2016	11/17/2016	1/11/2017	3/8/2017	5/19/2017	7/18/2017	10/4/2017	1/3/2018
Field Parameters													
Elevation	ft NGVD	--	--	369.79	369.62	369.18	368.57	367.84	367.87	367.87	368.58	367.58	366.39
pH	S.U.	--	6.73 - 7.90	7.69	7.56	7.37	7.08	7.36	7.28	6.96	7.2	7.46	7.68
Specific Conductance	µmhos/cm	--	--	957	870	867	702	674	779	569	665	644	821
Turbidity	NTU	--	--	0.42	0.46	1.37	1.4	0.18	1.41	2.27	3.15	0.7	1.9
Dissolved Oxygen	mg/L	--	--	0.29	8.08	0.68	0.53	0.46	0.34	0.21	0.29	0.28	0.38
Temperature	°C	--	--	16.2	16.86	15.43	15.64	14.71	15.19	15.48	15.99	15.71	13.08
ORP	mV	--	--	224.4	-158.9	54.7	242.3	86.1	53.5	49.8	-3.1	4.1	-25.6
Laboratory Parameters													
Antimony	µg/L	6	--	0.02	0.01	0.01	0.05	0.01	0.02	0.06	0.02	--	--
Arsenic	µg/L	10	--	0.71	0.75	0.75	0.67	0.72	0.68	0.7	0.73	--	--
Barium	µg/L	2000	--	267	267	262	234	220	221	206	238	--	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--
Cadmium	µg/L	5	--	0.06	0.03	0.03	0.05	0.04	0.03	0.08	0.03	--	--
Chromium	µg/L	100	--	0.1	0.2	0.1	0.082	0.085	0.422	0.204	0.118	--	--
Cobalt	µg/L	6	--	0.602	0.627	0.576	0.546	0.514	0.58	0.56	0.599	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.56	0.46	--
Lead	µg/L	15	--	0.023	0.025	0.023	0.053	0.01	0.034	0.153	0.065	--	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--
Molybdenum	µg/L	100	--	1.02	1.02	1.03	0.93	1	1.17	0.91	1.07	--	--
Selenium	µg/L	50	--	0.2	0.2	0.1	0.2	0.1	0.2	0.4	0.2	--	--
Thallium	µg/L	2	--	0.085	0.06	0.074	0.069	0.071	0.075	0.075	0.07	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2.7	0.8	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	19.9	20	22.8	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	15.5	14	--
Boron	mg/L	--	0.107	0.031	0.027	0.026	0.024	0.015	0.1	0.032	0.044	0.05	--
Calcium	mg/L	--	(79.5) 114	110	93.9	95.9	96.2	89.3	101	86.7	91.3	84	71.9
Lithium	mg/L	0.04	--	0.005	0.005	0.006	0.013	0.01	0.013	0.01	0.003	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	27.6	24.7	25.6	23	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	1.03	--	--
Potassium	mg/L	--	--	--	--	--	--	--	2.9	2.47	2.62	3.21	--
Sodium	mg/L	--	--	--	--	--	--	--	46.2	41.4	50	69.2	--
Strontium	mg/L	--	--	--	--	--	--	--	0.155	0.139	0.14	0.135	--
Alkalinity	mg/L	--	--	--	--	--	--	--	368	376	369	359	--
Bromide	mg/L	--	--	--	--	--	--	--	0.1	0.152	0.154	0.206	--
Chloride	mg/L	--	(29.6) 114	80.4	86.8	90.2	59.1	44.1	39.3	37.9	50.2	70.8	71.2
Fluoride	mg/L	4	0.192	0.1	0.15	0.1	0.1	0.1	0.16	0.1	0.08	0.1	--
TDS	mg/L	--	(412.7) 589	539	532	544	508	481	460	461	465	495	487
Sulfate	mg/L	--	(43.51) 44	38.7	42.2	36.8	33	34	35.4	35.1	36.1	40.4	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.357	1	0.977	0.174	2.27	0.182	0.427	0.513	--	--
Radium-226	pCi/L	--	--	0.235	0.576	0.248	0.413	0.362	0.399	0.511	0.274	--	--
Radium-226/228	pCi/L	5	--	0.592	1.576	1.225	0.587	2.632	0.581	0.938	0.787	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.14	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.051	0.014	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	1.03	1.06	1.04	0.873	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-161

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/6/2018	8/16/2018	11/14/2018	2/11/2019	5/22/2019	11/15/2019	5/19/2020	11/10/2020	5/28/2021	11/11/2021	5/12/2022
Field Parameters														
Elevation	ft NGVD	--	--	369.62	370.06	368.78	369.77	371.86	370.76	370.89	370.03	368.99	368.31	369.35
pH	S.U.	--	6.73 - 7.90	7.37	7.23	7.3	7.4	7.31	7.35	7.79	6.83	7.5	6.92	7.52
Specific Conductance	µmhos/cm	--	--	720	797	545	476	641	659	481	567	460	538	618
Turbidity	NTU	--	--	0.89	0	0.41	0.8	0.2	1.1	1.22	2.56	5.86	0	7.5
Dissolved Oxygen	mg/L	--	--	0.46	0	0.95	0.36	0.25	0.01	0.12	0.2	1.95	0	0.14
Temperature	°C	--	--	15.93	15.56	14.42	14.5	14.58	12	14.85	16.03	15.32	14.09	16.31
ORP	mV	--	--	-68.4	120	148	122	-21107	137	114	48	19	96	114
Laboratory Parameters														
Antimony	µg/L	6	--	--	--	<0.02	--	<0.02	0.03	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	0.66	--	0.64	0.72	--	--	--	--	--
Barium	µg/L	2000	--	--	--	153	--	151	126	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	<0.02	--	<0.02	<0.02	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	0.02	--	0.02	0.04	--	--	--	--	--
Chromium	µg/L	100	--	--	--	0.05	--	<0.04	0.1	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	0.336	--	0.346	0.58	--	--	--	--	--
Copper	µg/L	--	--	0.62	--	0.45	--	0.46	1.34	--	--	--	--	--
Lead	µg/L	15	--	--	--	<0.02	--	0.02	0.1	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	<0.002	<0.002	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	1	--	1	1	--	--	--	--	--
Selenium	µg/L	50	--	--	--	0.2	--	0.1	0.4	--	--	--	--	--
Thallium	µg/L	2	--	--	--	<0.1	--	<0.1	<0.1	--	--	--	--	--
Zinc	µg/L	--	--	0.6	--	0.8	--	<0.7	1	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	19.8	--	18.5	--	18	17.2	--	--	--	--	--
Aluminum	µg/L	--	--	10.2	--	5	--	4	10	--	--	--	--	--
Boron	mg/L	--	0.107	0.046	--	0.139	0.02	0.03	0.02	0.02	0.02	0.019	0.019	<0.009
Calcium	mg/L	--	(79.5) 114	82.9	61.6	53.7	--	56	41	51.9	44.5	50.4	50	61.8
Lithium	mg/L	0.04	--	--	--	<0.009	--	0.02	0.00427	--	--	--	--	--
Magnesium	mg/L	--	--	23.1	--	14.8	--	15.1	11.4	--	--	--	--	--
Manganese	mg/L	--	--	0.902	--	0.613	--	0.626	0.685	--	--	--	--	--
Potassium	mg/L	--	--	3.05	--	3.16	--	2.55	2.2	--	--	--	--	--
Sodium	mg/L	--	--	66	--	74.4	--	68.4	58.9	--	--	--	--	--
Strontium	mg/L	--	--	0.136	--	0.09	--	0.0898	0.0688	--	--	--	--	--
Alkalinity	mg/L	--	--	359	--	300	--	261	252	--	--	--	--	--
Bromide	mg/L	--	--	0.168	--	0.1	--	0.1	0.1	--	--	--	--	--
Chloride	mg/L	--	(29.6) 114	58.6	61.1	47.8	--	45.5	31.2	31.3	19.6	16.5	16.6	25.6
Fluoride	mg/L	4	0.192	0.17	--	0.17	--	0.17	0.14	0.14	0.20	0.18	0.15	0.15
TDS	mg/L	--	(412.7) 589	480	456	408	--	405	343	350	273	270	280	330
Sulfate	mg/L	--	(43.51) 44	38.7	--	32.5	--	33.2	25.2	25.8	21.4	18.5	17.6	24.2
Sulfide	mg/L	--	--	<0.4	--	<0.07	--	<0.1	<0.2	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	0.483	--	0.269	0.482	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	0.162	--	0.156	0.212	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	0.645	--	0.425	0.694	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.57	--	1.43	--	1.14	0.3	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	0.7	--	2	--	<0.7	1	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	0.8	--	1	--	1	<5	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.024	--	0.004	--	<0.003	<0.02	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.849	--	0.616	--	0.615	0.447	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-16D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/20/2016	11/17/2016	1/11/2017	3/8/2017	5/10/2017	7/18/2017	10/4/2017	1/3/2018	6/6/2018	8/16/2018	11/14/2018	2/11/2019
Field Parameters																	
Elevation	ft NGVD	--	--	369.85	369.68	369.23	368.64	367.91	367.94	367.96	368.64	367.68	366.47	369.69	370.13	368.87	369.84
pH	S.U.	--	6.04 - 9.13	6.8	7.31	7.26	7.29	7.48	7.44	7.54	9.03	7.6	7.74	7.32	7.26	7.35	7.37
Specific Conductance	µmhos/cm	--	--	519	582	538	613	525	614	436	597	516	692	690	782	607	510
Turbidity	NTU	--	--	1.8	0.24	0.31	0.55	0.4	0.81	1.74	0.41	2.95	1.85	0.9	0	0.35	1.4
Dissolved Oxygen	mg/L	--	--	0.4	--	1.33	0.55	0.49	0.11	0.29	0.32	0.21	0.47	0.44	0	0.94	1.48
Temperature	°C	--	--	16.8	16.96	16.04	15.1	14.55	15.2	15.46	15.62	15.77	13.14	15.94	15.88	14.45	13.2
ORP	mV	--	--	-19	23.5	35.7	108	14.6	2.1	36.6	108.9	-26.4	-36.7	-70.7	-11	62.8	60
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	0.02	0.02	0.02	0.01	0.02	0.03	0.03	--	--	--	--	<0.02	--
Arsenic	µg/L	10	--	0.48	0.4	0.31	0.32	0.34	0.31	0.33	0.39	--	--	--	--	0.32	--
Barium	µg/L	2000	--	240	246	221	217	210	224	212	247	--	--	--	--	270	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	--	<0.02	--
Cadmium	µg/L	5	--	0.08	0.08	0.02	0.05	0.02	0.01	0.07	0.1	--	--	--	--	0.04	--
Chromium	µg/L	100	--	0.3	0.4	0.1	1.21	0.112	0.188	0.151	0.141	--	--	--	--	0.05	--
Cobalt	µg/L	6	--	0.617	0.547	0.418	0.452	0.354	0.401	0.466	0.571	--	--	--	--	0.472	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	2.21	0.11	--	0.07	--	0.23	--
Lead	µg/L	15	--	0.078	0.04	0.021	0.066	0.008	0.022	0.07	0.103	--	--	--	--	0.03	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2.06	2.31	1.96	1.98	1.99	2.27	1.9	2.03	--	--	--	--	2	--
Selenium	µg/L	50	--	0.04	0.04	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	--	--	--	--	0.03	--
Thallium	µg/L	2	--	0.03	0.069	0.02	0.02	0.02	0.04	0.02	0.02	--	--	--	--	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	12.8	52.4	--	7.1	--	15.4	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.1	17.6	20.3	--	18.5	--	18.2	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	6.2	3.72	--	2.86	--	1	--
Boron	mg/L	--	0.113	0.033	0.013	0.012	0.014	0.004	0.023	0.102	0.017	0.059	--	0.033	--	0.07	--
Calcium	mg/L	--	(79.5) 88	84.3	68.7	70.5	77.9	72.4	79.2	75.8	71.7	80.4	80.1	90.2	83.8	84.1	--
Lithium	mg/L	0.04	--	0.001	0.013	0.003	0.006	0.013	0.007	0.008	0.0006	--	--	--	--	<0.009	--
Magnesium	mg/L	--	--	--	--	--	--	--	22.4	22.2	21	23.3	--	27.1	--	24.3	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.975	--	--	1.2	--	1	--
Potassium	mg/L	--	--	--	--	--	--	--	1.12	1.54	0.97	1.33	--	1.22	--	1.27	--
Sodium	mg/L	--	--	--	--	--	--	--	22.3	21.6	22.1	24.7	--	26.7	--	30	--
Strontium	mg/L	--	--	--	--	--	--	--	0.142	0.143	0.128	0.146	--	0.18	--	0.166	--
Alkalinity	mg/L	--	--	--	--	--	--	--	202	210	215	195	--	235	--	238	--
Bromide	mg/L	--	--	--	--	--	--	--	0.15	0.204	<0.05	0.233	--	0.303	--	0.275	--
Chloride	mg/L	--	(29.6) 73	68.7	69.6	67.6	63.6	67.9	65.4	69.9	69.6	81.5	86	108	99.7	102	109
Fluoride	mg/L	4	0.251	0.2	0.22	0.22	0.17	0.21	0.22	0.22	0.17	0.22	--	0.22	--	0.21	--
TDS	mg/L	--	(412.7) 384	350	321	342	356	343	347	367	363	383	--	434	447	434	439
Sulfate	mg/L	--	(39.69) 40	36.4	37.4	33.4	33.2	34	35.3	37.2	36.8	40	37.9	38.6	--	38.6	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	--	<0.07	--
Radium-228	pCi/L	--	--	-0.173	0.294	1.1	0.285	0.92	0.583	-0.121	0.222	--	--	--	--	0.138	--
Radium-226	pCi/L	--	--	0.0514	--	0.248	0.624	0.796	0.228	0.151	0.292	--	--	--	--	0.179	--
Radium-226/228	pCi/L	5	--	-0.1216	0.294	1.348	0.909	1.716	0.811	0.03	0.514	--	--	--	--	0.317	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.18	--	--	0.35	--	1.5	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	1	--	3	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	--	2	--	2	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.004	0.002	0.098	0.051	--	0.058	--	0.023	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.862	0.948	0.989	0.947	--	1.19	--	1	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-16D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	4/1/2019	5/22/2019	7/23/2019	9/11/2019	11/15/2019	2/18/2020	5/19/2020	7/15/2020	11/11/2020	2/2/2021	5/28/2021	8/5/2021	11/11/2021	5/12/2022
Field Parameters																	
Elevation	ft NGVD	--	--	370.82	371.96	372.67	----	370.78	369.44	370.44	370.98	370.05	368.20	369.11	369.08	368.38	369.43
pH	S.U.	--	6.04 - 9.13	7.28	7.31	7.02	7.28	7.31	7.17	7.7	7.22	7.15	7.39	9.64	7.2	6.8	7.49
Specific Conductance	µmhos/cm	--	--	945	755	731	813	1070	1869	799	969	1050	953	886	956	1060	1010
Turbidity	NTU	--	--	0.91	0.3	1.9	0.43	0.3	0.2	0.39	0.41	0.35	0.7	0	2.9	0	3.13
Dissolved Oxygen	mg/L	--	--	0.64	0.26	0.5	0.36	0.01	0.42	0.18	0	0.29	3.5	0		0.07	0.36
Temperature	°C	--	--	13.5	14.43	15.9	17.5	14.4	11.76	14.81	17.56	14.67	13.2	15.97	16.5	14.4	17.56
ORP	mV	--	--	-16.7	-216.5	50	-52.5	45	109.3	-22	-3	91	85	40	-36	15	46
Laboratory Parameters																	
Antimony	µg/L	6	--	--	0.02	--	--	0.02	--	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	0.39	--	--	0.35	--	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	286	--	--	348	--	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	<0.01	--	--	0.05	--	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	0.25	--	--	0.1	--	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	0.64	--	--	0.632	--	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	--	0.17	--	--	<0.2	--	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	0.02	--	--	<0.05	--	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	<0.002	--	--	<0.002	--	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	2	--	--	2	--	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	<0.03	--	--	<0.03	--	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	<0.1	--	--	<0.1	--	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	--	1	--	--	2	--	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	17.9	--	--	17.1	--	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	2	--	--	<5	--	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.113	--	0.03	--	--	0.03	--	0.03	--	0.04	--	0.038	--	0.038	0.026
Calcium	mg/L	--	(79.5) 88	--	88.5	95.6	109	100	--	108	102	109	106	122	103	105	102
Lithium	mg/L	0.04	--	--	0.02	--	--	0.00427	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	25.4	--	--	28.3	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	1.17	--	--	1.04	--	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	1.27	--	--	1.57	--	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	30.8	--	--	44.6	--	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	0.176	--	--	0.203	--	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	249	--	--	304	--	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.344	--	--	0.425	--	--	--	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 73	107	104	106	125	127	133	135	133	130	117	110	110	98.3	101
Fluoride	mg/L	4	0.251	--	0.2	--	--	0.17	--	0.17	0.2	0.21	--	0.23	0.2	0.18	0.19
TDS	mg/L	--	(412.7) 384	429	460	457	523	537	579	558	519	547	573	580	570	560	550
Sulfate	mg/L	--	(39.69) 40	--	38	--	--	40.8	38.9	40.1	--	39.1	--	40.6	--	37	41.4
Sulfide	mg/L	--	--	--	<0.1	--	--	<0.2	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	0.688	--	--	0.411	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	0.551	--	--	0.158	--	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	1.239	--	--	0.569	--	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	0.25	--	--	1.98	--	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	<0.7	--	--	3	--	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	<1	--	--	<5	--	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	0.067	--	--	<0.02	--	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	1.23	--	--	1.07	--	--	--	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-17S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/20/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/19/2017	10/4/2017	6/5/2018	11/13/2018	5/23/2019	11/15/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	370.14	370.11	369.81	369.37	368.47	368.21	368.24	368.89	373.03	369.48	368.74	371.85	371.44	370.99
pH	S.U.	--	7.11 - 7.97	7.77	7.3	7.65	7.7	7.6	7.5	7.3	7.5	7.44	7.41	7.51	7.58	7.64	7.8
Specific Conductance	µmhos/cm	--	--	350	373	344	146	310	60	357	287	351	319	280	322	396	358
Turbidity	NTU	--	--	0.6	0.7	0.79	1	1	1	3	1	0.47	0.4	0.89	0	4	0.7
Dissolved Oxygen	mg/L	--	--	0.6	1.2	0.37	0.1	0.2	1	0.2	0.2	0.38	10.12	1.07	1.56	1.3	0
Temperature	°C	--	--	14.7	17.9	14.55	14.7	13.8	13.5	14.9	14.3	16.82	14.39	13.45	15	13.4	14.43
ORP	mV	--	--	80	44	49.4	-40	62	47	45	30	-50.3	-84.3	121	-48.2	38	23
Laboratory Parameters																	
Antimony	µg/L	6	--	0.01	0.03	0.02	0.03	0.03	0.04	0.04	0.02	--	--	0.02	0.02	0.02	--
Arsenic	µg/L	10	--	0.24	0.26	0.22	0.2	0.21	0.2	0.22	0.22	--	--	0.17	0.18	0.24	--
Barium	µg/L	2000	--	2.12	2.74	2.24	2.4	3.45	3.94	4.37	2.25	--	--	2.11	2.3	2.2	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.08	0.01	0.02	0.02	0.09	0.02	0.06	--	--	0.02	0.03	0.03	--
Chromium	µg/L	100	--	0.5	0.2	0.1	0.066	0.489	0.776	0.233	0.124	--	--	0.07	0.06	0.1	--
Cobalt	µg/L	6	--	0.047	0.105	0.034	0.029	0.04	0.076	0.138	0.053	--	--	0.05	0.04	0.157	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.38	0.69	0.23	0.21	0.39	0.5	--
Lead	µg/L	15	--	0.024	0.098	0.025	0.02	0.02	0.079	0.108	0.038	--	--	0.03	0.05	0.1	--
Mercury	µg/L	2	--	<0.002	0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	3.98	4.2	4.08	3.39	0.44	0.7	1.14	4.38	--	--	3.73	4.78	4.67	--
Selenium	µg/L	50	--	0.07	0.06	0.08	0.1	0.2	0.1	0.1	0.08	--	--	0.3	0.2	0.4	--
Thallium	µg/L	2	--	0.01	0.01	0.01	0.053	0.02	0.02	<0.01	0.03	--	--	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	5.7	0.7	<0.7	14.4	1	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	14	13.7	15.8	13.5	13.2	<0.06	12.2	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	9.55	10.2	4.01	2	17.4	21.3	--
Boron	mg/L	--	0.065	0.015	0.016	0.016	0.017	0.006	0.058	0.041	0.02	0.033	0.045	0.05	0.03	0.02	0.02
Calcium	mg/L	--	(79.5) 41	36.9	34.8	34.8	35.9	32.3	40	35.5	34.4	34.1	32.4	33.1	32.7	28.7	32.8
Lithium	mg/L	0.04	--	<0.0002	0.02	0.003	0.004	0.003	0.008	0.003	<0.0002	--	--	<0.009	0.01	0.00355	--
Magnesium	mg/L	--	--	--	--	--	--	--	19.2	17.5	13.7	12.9	13	13.7	12.9	11.2	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.0428	--	0.0311	0.0418	0.0377	0.179	--
Potassium	mg/L	--	--	--	--	--	--	--	0.88	0.79	0.49	0.47	0.5	0.59	0.62	0.6	--
Sodium	mg/L	--	--	--	--	--	--	--	42.5	35.3	31.9	27.7	24.5	25.8	26.5	26.8	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0566	0.0529	0.0363	0.0345	0.0357	0.0374	0.0347	0.031	--
Alkalinity	mg/L	--	--	231	--	--	--	--	231	221	196	189	188	202	193	174	--
Bromide	mg/L	--	--	--	--	--	--	--	0.02	0.05	<0.02	<0.02	0.04	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	(29.6) 16	13.9	15.4	12.3	11.4	11	10.7	10.4	10.8	10.5	10.8	11.5	12	12.6	12.7
Fluoride	mg/L	4	1.08	0.85	0.86	0.73	0.7	0.48	0.46	0.58	0.82	0.89	0.98	0.91	1.08	0.96	0.95
TDS	mg/L	--	(412.7) 269	272	235	233	232	262	251	250	201	214	214	196	217	207	200
Sulfate	mg/L	--	(16.46) 16.5	14.3	14.8	10.9	10.5	10.7	12	13.1	10.2	10.7	9.5	8.4	7.7	6.2	6.5
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.783	-0.0129	0.027	0.791	-0.155	0.36	0.315	1.07	--	--	-0.0735	0.34	1.03	--
Radium-226	pCi/L	--	--	0.253	0.0439	0.0489	0.803	0.17	0.11	0.118	0.678	--	--	0.0202	0.0449	0.0579	--
Radium-226/228	pCi/L	5	--	1.036	0.031	0.0759	1.594	0.015	0.47	0.433	1.748	--	--	0.0202	0.0202	1.0879	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.35	--	0.56	0.7	2.05	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	1	--	1	1	<0.7	0.9	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.2	--	6.2	2	1	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	<0.0004	0.026	0.004	0.004	0.01	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.0028	0.0013	0.0322	0.0881	0.0304	0.041	0.0332	0.0662	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-17S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/10/2020	5/27/2021	11/11/2021	5/13/2022
Field Parameters							
Elevation	ft NGVD	--	--	370.67	369.24	368.89	369.54
pH	S.U.	--	7.11 - 7.97	7.51	7.58	7.72	7.9
Specific Conductance	µmhos/cm	--	403	403	389	420	404
Turbidity	NTU	--	--	0.95	24.31	0	5.4
Dissolved Oxygen	mg/L	--	--	8.47	0	3.44	8.7
Temperature	°C	--	--	16.15	20.2	13.24	15.5
ORP	mV	--	--	71	-53	88	173
Laboratory Parameters							
Antimony	µg/L	6	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--
Boron	mg/L	--	0.065	0.02	0.025	0.023	<0.05
Calcium	mg/L	--	(79.5) 41	33.9	35.9	35.2	34.4
Lithium	mg/L	0.04	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.03	--	--
Chloride	mg/L	--	(29.6) 16	12.9	11	9.41	10.2
Fluoride	mg/L	4	1.08	0.90	0.95	0.81	0.82
TDS	mg/L	--	(412.7) 269	211	210	230	230
Sulfate	mg/L	--	(16.46) 16.5	8.2	5.92	4.62	5.24
Sulfide	mg/L	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--

**Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana**

MW-171

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/8/2016	7/20/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/19/2017	10/4/2017	12/12/2017	1/3/2018	6/5/2018	8/16/2018	9/26/2018
Field Parameters																	
Elevation	ft NGVD	--	--	370.09	370.13	369.82	369.12	368.47	368.23	368.25	368.89	368.07	367.23	366.84	369.46	370.64	370.06
pH	S.U.	--	6.82 - 7.96	7.55	7.2	7.1	7.8	7.5	7.5	7.2	7.3	7.37	7.49	7.8	7.36	7.48	7.48
Specific Conductance	µmhos/cm	--	--	839	914	1000	607	670	60	768	678	786	530	848	652	728	453
Turbidity	NTU	--	--	13.4	9.8	--	0.1	2	9	2	1	74.99	1.74	12	1.28	0	0.58
Dissolved Oxygen	mg/L	--	--	0.8	0.8	0.9	1.3	0.3	1	0.3	0.2	0.26	0.1	2.34	0.2	0.17	0.37
Temperature	°C	--	--	14.1	16.4	18.3	14.4	13.7	13.8	14.7	14.7	17.05	8.97	7.25	15.11	17.06	14.18
ORP	mV	--	--	116	-73	-40	204	-52	8	46	-59	-90.8	-54	-40.5	-99.8	-69	-77.9
Laboratory Parameters																	
Antimony	µg/L	6	--	0.07	0.05	0.04	0.03	0.02	0.02	0.02	0.02	--	--	--	--	--	--
Arsenic	µg/L	10	--	7.14	7.41	6.45	3.38	3.94	4.61	3.61	3.76	--	--	--	--	--	--
Barium	µg/L	2000	--	168	190	198	149	148	159	133	140	--	--	--	--	--	--
Beryllium	µg/L	4	--	0.02	0.006	<0.005	<0.005	<0.005	<0.005	<0.004	<0.004	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.12	0.13	0.04	0.04	0.008	0.007	0.03	0.02	--	--	--	--	--	--
Chromium	µg/L	100	--	0.6	2.1	0.1	0.059	0.254	0.776	0.196	0.127	--	--	--	--	--	--
Cobalt	µg/L	6	--	1.24	0.778	0.472	0.37	0.391	0.406	0.394	0.372	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.26	0.24	--	--	0.52	--	--
Lead	µg/L	15	--	1.19	0.284	0.133	0.049	0.02	0.026	0.115	0.02	--	--	--	--	--	--
Mercury	µg/L	2	--	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	--	--
Molybdenum	µg/L	100	--	3.6	3.66	3.08	3.37	3.2	3.62	3.26	3.42	--	--	--	--	--	--
Selenium	µg/L	50	--	0.1	0.05	0.05	<0.03	<0.03	0.05	0.03	<0.03	--	--	--	--	--	--
Thallium	µg/L	2	--	0.03	0.02	0.02	0.056	0.02	0.02	0.01	0.05	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	4.3	30.8	--	--	2.4	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.1	17	19.8	--	--	16.5	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	3.39	21.5	--	--	5.91	--	--
Boron	mg/L	--	0.098	0.058	0.056	0.051	0.041	0.034	0.079	0.083	0.052	0.061	--	--	0.081	--	--
Calcium	mg/L	--	(79.5) 96	73.7	83.1	88.9	80	72.3	81.4	69.6	64.4	63	--	--	51.2	--	--
Lithium	mg/L	0.04	--	<0.0002	0.004	0.005	0.006	0.009	0.008	0.005	<0.0002	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	21	19.6	17.4	16.5	--	--	13.4	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.155	--	--	--	0.122	--	--
Potassium	mg/L	--	--	--	--	--	--	--	1.28	1.36	1.04	1.12	--	--	0.94	--	--
Sodium	mg/L	--	--	--	--	--	--	--	101	93.6	95.4	94.6	--	--	89.1	--	--
Strontium	mg/L	--	--	--	--	--	--	--	0.153	0.14	0.119	0.12	--	--	0.104	--	--
Alkalinity	mg/L	--	--	221	--	--	--	--	221	226	229	245	--	--	238	--	--
Bromide	mg/L	--	--	--	--	--	--	--	0.347	0.396	0.372	0.283	--	--	0.213	--	--
Chloride	mg/L	--	(29.6) 241	195	209	214	164	159	158	151	145	115	86	110	80.2	61.1	--
Fluoride	mg/L	4	0.656	0.57	0.56	0.52	0.56	0.56	0.58	0.61	0.63	0.66	0.76	0.65	0.87	0.98	1.03
TDS	mg/L	--	(412.7) 657	609	569	620	540	513	549	528	509	486	--	471	418	376	--
Sulfate	mg/L	--	(50.8) 51	43.1	49.3	48.1	44.1	43.2	44.9	43.5	44.7	46.6	44.8	--	41	--	--
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	--	<0.4	--	--
Radium-228	pCi/L	--	--	0.615	0.386	1	0.499	0.531	0.33	0.191	0.791	--	--	--	--	--	--
Radium-226	pCi/L	--	--	1.31	0.781	0.587	0.263	0.979	0.693	0.816	0.0231	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	1.925	1.167	1.587	0.762	1.51	1.023	1.007	0.8141	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.33	--	--	--	0.57	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.2	--	--	--	1	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2	--	--	--	2.64	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.896	0.909	0.741	0.603	--	--	0.546	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.185	0.188	0.141	0.144	--	--	0.113	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-171

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/13/2018	2/11/2019	4/1/2019	5/23/2019	7/23/2019	9/11/2019	11/15/2019	5/19/2020	11/10/2020	5/27/2021	11/11/2021	5/13/2022
Field Parameters															
Elevation	ft NGVD	--	--	369.35	369.89	369.89	372.03	373.11	----	371.60	370.47	370.86	369.38	369.09	369.75
pH	S.U.	--	6.82 - 7.96	7.55	7.68	7.68	7.51	6.65	7.63	7.44	7.94	7.59	7.76	7.78	7.85
Specific Conductance	µmhos/cm	--	--	450	391	391	570	488	363	654	487	437	389	500	495
Turbidity	NTU	--	--	7.42	6.9	6.9	3.67	6.4	5	7	1.02	8.35	14.91	0	4.2
Dissolved Oxygen	mg/L	--	--	0.76	0.47	0.47	0.91	1.1	0	0	0	0.42	0	0	0.15
Temperature	°C	--	--	12.6	13.5	13.5	17.85	14.8	15.49	13	14.72	17.14	20.46	13.35	16.35
ORP	mV	--	--	-77.4	-55	-55	-94.3	-5.3	-112	-87	-56	-70	-55	49	-60
Laboratory Parameters															
Antimony	µg/L	6	--	0.02	--	--	0.02	--	--	0.06	--	--	--	--	--
Arsenic	µg/L	10	--	3.65	--	--	3.72	--	--	4.5	--	--	--	--	--
Barium	µg/L	2000	--	86.8	--	--	91.8	--	--	87.9	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	--	--	<0.02	--	--	--	--	--
Cadmium	µg/L	5	--	0.03	--	--	<0.01	--	--	0.05	--	--	--	--	--
Chromium	µg/L	100	--	<0.04	--	--	<0.04	--	--	0.1	--	--	--	--	--
Cobalt	µg/L	6	--	0.186	--	--	0.22	--	--	0.306	--	--	--	--	--
Copper	µg/L	--	--	0.26	--	--	0.07	--	--	0.5	--	--	--	--	--
Lead	µg/L	15	--	0.03	--	--	0.02	--	--	0.2	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	--	--	<0.002	--	--	--	--	--
Molybdenum	µg/L	100	--	4.09	--	--	3.01	--	--	2.4	--	--	--	--	--
Selenium	µg/L	50	--	<0.03	--	--	<0.03	--	--	0.03	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	--	--	--
Zinc	µg/L	--	--	2	--	--	15.1	--	--	2	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	15.8	--	--	<0.06	--	--	14	--	--	--	--	--
Aluminum	µg/L	--	--	2	--	--	1	--	--	7	--	--	--	--	--
Boron	mg/L	--	0.098	0.07	--	--	0.04	--	--	0.04	0.04	0.04	0.043	0.039	<0.05
Calcium	mg/L	--	(79.5) 96	36.5	--	--	45.1	--	--	43.9	40.3	38.1	41	46.4	40.2
Lithium	mg/L	0.04	--	<0.009	--	--	0.01	--	--	0.00504	--	--	--	--	--
Magnesium	mg/L	--	--	9.44	--	--	11.8	--	--	12	--	--	--	--	--
Manganese	mg/L	--	--	0.0779	--	--	0.112	--	--	0.121	--	--	--	--	--
Potassium	mg/L	--	--	0.83	--	--	0.84	--	--	0.9	--	--	--	--	--
Sodium	mg/L	--	--	74.7	--	--	60.5	--	--	49.7	--	--	--	--	--
Strontium	mg/L	--	--	0.0796	--	--	0.098	--	--	0.103	--	--	--	--	--
Alkalinity	mg/L	--	--	231	--	--	201	--	--	205	--	--	--	--	--
Bromide	mg/L	--	--	0.1	--	--	0.2	--	--	2	--	--	0.08	--	--
Chloride	mg/L	--	(29.6) 241	50.1	--	--	60.2	--	--	41.2	32.8	25.5	30	40.08	36.6
Fluoride	mg/L	4	0.656	1.00	1.05	1.08	1.07	1.06	1.08	0.95	1.07	1.16	1.07	0.99	1.04
TDS	mg/L	--	(412.7) 657	328	--	--	352	--	--	309	273	239	280	270	260
Sulfate	mg/L	--	(50.8) 51	29.6	--	--	32.8	--	--	23.2	20.7	16.8	15.5	25.3	20.5
Sulfide	mg/L	--	--	<0.1	--	--	<0.1	--	--	<0.02	--	--	--	--	--
Radium-228	pCi/L	--	--	0.275	--	--	0.107	--	--	1.33	--	--	--	--	--
Radium-226	pCi/L	--	--	0.351	--	--	0.403	--	--	0.184	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.626	--	--	0.403	--	--	1.514	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	1.62	--	--	1.24	--	--	2.03	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	3	--	--	3	--	--	3	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	3	--	--	5.77	--	--	<5	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	0.348	--	--	0.418	--	--	0.364	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	0.0765	--	--	0.106	--	--	0.114	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	12/12/2017	6/6/2018
Field Parameters														
Elevation	ft NGVD	--	--	369.38	369.28	368.85	368.52	367.76	366.84	367.86	368.72	367.13	366.24	369.54
pH	S.U.	--	5.99 - 9.07	6.6	7.54	7.59	7.5	7.32	7.6	8.86	7.23	7.53	8	7.77
Specific Conductance	µmhos/cm	--	--	387	450	454	501	410	540	344	398	402	390	400
Turbidity	NTU	--	--	2.5	0.91	0.78	0.46	1.03	2.6	0.71	2.28	3.31	6	2.1
Dissolved Oxygen	mg/L	--	--	2.3	4.37	5.67	4.46	6.66	4.2	3.36	32.59	4.01	6.2	3.36
Temperature	°C	--	--	16.4	17.49	18.53	18.78	15.15	14.9	16.27	18.01	16.21	14.9	16.2
ORP	mV	--	--	36	13.1	48.9	46.9	198.4	150	160.1	-167.7	76.7	56	43
Laboratory Parameters														
Antimony	µg/L	6	--	0.03	0.02	0.02	0.02	0.03	0.03	0.04	0.05	--	--	0.04
Arsenic	µg/L	10	--	0.53	0.47	0.46	0.43	0.47	0.49	0.47	0.42	--	--	0.45
Barium	µg/L	2000	--	18.5	19.6	19.4	19.1	19.3	21.9	17.7	21.9	--	--	18.5
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.004	<0.04	--	--	<0.004
Cadmium	µg/L	5	--	0.02	0.02	0.006	0.02	0.01	0.01	0.01	0.01	--	--	0.01
Chromium	µg/L	100	--	0.4	0.7	0.3	0.292	0.401	0.536	0.3	0.272	--	--	0.233
Cobalt	µg/L	6	--	0.104	0.033	0.03	0.023	0.022	0.053	0.027	0.006	--	--	0.02
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.27	0.35	--	0.52
Lead	µg/L	15	--	0.095	0.042	0.025	0.023	0.024	0.095	0.023	0.024	--	--	0.024
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Molybdenum	µg/L	100	--	1.78	1.85	1.74	1.63	1.74	2	1.62	2.31	--	--	2.04
Selenium	µg/L	50	--	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.2	--	--	0.3
Thallium	µg/L	2	--	0.01	0.01	<0.01	<0.01	0.058	<0.01	<0.01	<0.01	--	--	<0.01
Zinc	µg/L	--	--	--	--	--	--	--	--	--	2	214	--	3.7
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	23.5	22.8	26.2	--	22.5
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	1	16.5	--	6.55
Boron	mg/L	--	0.046	0.002	0.011	0.007	0.015	0.002	0.018	0.033	0.034	0.027	--	0.039
Calcium	mg/L	--	(79.5) 62	55.1	52.8	52	60	54.4	59	56	55.9	59.8	--	52.8
Lithium	mg/L	0.04	--	0.003	0.013	0.003	0.009	0.007	0.002	0.005	<0.0002	--	--	0.005
Magnesium	mg/L	--	--	--	--	--	--	--	21.3	20.5	20.7	21.8	--	19.2
Manganese	mg/L	--	--	--	--	--	--	--	--	--	<0.0001	--	--	0.0008
Potassium	mg/L	--	--	--	--	--	--	--	0.6	0.69	0.57	0.61	--	0.58
Sodium	mg/L	--	--	--	--	--	--	--	18.9	16.6	20.6	19.3	--	15.5
Strontium	mg/L	--	--	--	--	--	--	--	0.0604	0.0601	0.58	0.061	--	0.0554
Alkalinity	mg/L	--	--	--	--	--	--	--	202	195	212	210	--	183
Bromide	mg/L	--	--	--	--	--	--	--	<0.02	0.03	0.061	<0.02	--	0.02
Chloride	mg/L	--	(29.6) 16	15	15.1	14.7	14.7	14.4	14.8	15.7	15.9	17.7	18	17.5
Fluoride	mg/L	4	0.689	0.61	0.064	0.62	0.63	0.54	0.58	0.6	0.54	0.6	0.6	0.66
TDS	mg/L	--	(412.7) 313	275	292	285	294	287	298	296	304	300	--	283
Sulfate	mg/L	--	23.6	21.2	21.1	17.4	14.9	15.9	16.5	17.6	18.8	20.1	21.1	18.7
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4
Radium-228	pCi/L	--	--	0.129	0.0598	0.213	0.14	1.71	-0.0315	0.0831	0.989	--	--	--
Radium-226	pCi/L	--	--	0.0309	0.513	0.239	0.344	0.357	0.0305	0.152	0.109	--	--	--
Radium-226/228	pCi/L	5	--	0.1599	0.5728	0.452	0.484	2.067	-0.001	0.2351	1.098	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.2	--	--	0.29
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	5.1	--	--	1
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	18.3	--	--	1
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.008	0.017	--	0.005
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0001	0.0001	0.0029	<0.0002	--	<0.0002

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21S

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/14/2018	2/12/2019	4/1/2019	5/21/2019	11/14/2019	2/18/2020	5/19/2020	7/16/2020	11/11/2020	2/3/2021	5/28/2021	8/5/2021	11/11/2021	5/12/2022
Field Parameters																	
Elevation	ft NGVD	--	--	368.42	370.37	371.3	371.43	370.65	369.05	369.92	400.27	370.10	367.97	369.07	369.07	368.47	369.54
pH	S.U.	--	5.99 - 9.07	7.34	7.74	7.8	7.59	7.54	7.53	8.11	7.93	7.59	7.68	10.28	7.5	7.83	7.62
Specific Conductance	µmhos/cm	--	--	380	318	404	424	530	856	347	416	499	529	450	519	585	545
Turbidity	NTU	--	--	1.67	2.8	2.45	0.29	2.8	8.71	0.65	0.46	1.9	1.3	0	5.95	0	0.5
Dissolved Oxygen	mg/L	--	--	9.55	7.1	3.89	5.26	7	6.64	5.6	7.8	6.95	6.5	5.78		5.6	0.65
Temperature	°C	--	--	14.14	15.2	14.3	15.98	15.5	11.8	12.23	15.6	15.76	13.4	17	16.49	14.7	19.14
ORP	mV	--	--	165.5	189	21.1	-194.8	121	132.4	136	141	148	178	86	111	178	43
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	--	--	<0.02	0.03	--	--	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	0.44	--	--	0.44	0.46	--	--	--	--	--	--	--	--	--
Barium	µg/L	2000	--	17.8	--	--	15.9	16.2	--	--	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	<0.02	--	--	<0.02	<0.02	--	--	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	0.01	--	--	0.01	0.01	--	--	--	--	--	--	--	--	--
Chromium	µg/L	100	--	0.232	--	--	0.287	0.418	--	--	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	0.06	--	--	0.02	0.03	--	--	--	--	--	--	--	--	--
Copper	µg/L	--	--	0.53	--	--	0.13	0.4	--	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	0.07	--	--	0.02	<0.05	--	--	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	<0.002	<0.002	--	--	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	2	--	--	2	2	--	--	--	--	--	--	--	--	--
Selenium	µg/L	50	--	0.3	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--
Thallium	µg/L	2	--	<0.1	--	--	<0.1	<0.1	--	--	--	--	--	--	--	--	--
Zinc	µg/L	--	--	0.8	--	--	<0.7	<0.7	--	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	23.2	--	--	21.3	18.8	--	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	17	--	--	5.26	10	--	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.046	0.06	<0.02	--	<0.02	0.01	--	<0.02	--	<0.02	--	0.011	--	0.012	<0.009
Calcium	mg/L	--	(79.5) 62	55	--	--	52.5	50.4	--	49.1	--	50.9	--	62.6	--	57.1	55.6
Lithium	mg/L	0.04	--	0.03	--	--	<0.009	0.00321	--	--	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	19.6	--	--	17	17.3	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	0.0041	--	--	0.0009	0.002	--	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	0.88	--	--	0.55	0.3	--	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	17.1	--	--	13	15.3	--	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	0.0553	--	--	0.0506	0.0508	--	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	193	--	--	167	171	--	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	<0.04	--	--	<0.04	<0.04	--	--	--	--	--	--	--	--	--
Chloride	mg/L	--	(29.6) 16	17.9	17.9	17.5	16	17.4	--	18	16.1	18.1	--	19.1	--	19.3	19.5
Fluoride	mg/L	4	0.689	0.66	--	--	0.65	0.73	0.79	0.76	0.77	0.83	0.85	0.81	0.78	0.74	0.67
TDS	mg/L	--	(412.7) 313	278	--	--	258	241	--	238	228	259	--	300	--	320	320
Sulfate	mg/L	--	23.6	17.0	--	--	14.1	15.8	--	15.1	--	16.4	--	18.4	--	20	23.1
Sulfide	mg/L	--	--	<0.07	--	--	<0.1	<0.2	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	0.0549	--	--	0.366	0.39	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.0246	--	--	-0.0257	0.0413	--	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	0.0795	--	--	0.366	0.4313	--	--	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	0.13	--	--	0.27	<0.2	--	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	<0.7	--	--	<0.7	0.8	--	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	2	--	--	5	<5	--	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	<0.003	--	--	<0.003	<0.02	--	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	<0.0002	--	--	<0.0002	<0.0005	--	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-211

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	6/6/2018	11/13/2018	5/21/2019	11/14/2019	5/19/2020
Field Parameters																	
Elevation	ft NGVD	--	--	369.3	369.19	368.77	368.43	367.68	367.8	368.03	368.24	367	369.44	368.39	371.41	370.62	369.92
pH	S.U.	--	6.63 - 8.69	7.99	7.56	7.56	7.3	7.35	7.5	8.56	7.44	7.44	7.54	7.69	7.31	7.48	7.38
Specific Conductance	µmhos/cm	--	--	548	500	488	432	397	520	361	422	399	430	402	403	526	386
Turbidity	NTU	--	--	0.73	0.65	1.04	0.97	2.82	2.5	1.34	1.02	3.21	1.71	1.18	0	4	1.08
Dissolved Oxygen	mg/L	--	--	0.5	1.63	1.49	1.88	1.53	0.3	0.55	0.76	0.2	0.17	0.22	0.36	0.4	2.47
Temperature	°C	--	--	16.88	17.39	16.17	16.95	13.68	15.1	16.39	17.11	15.47	15.55	14.87	16.34	15.6	14.95
ORP	mV	--	--	-9.2	-185.2	-16.7	105.2	21.1	-3	160.7	2.1	-10.3	-13.4	8.7	67.5	31	109
Laboratory Parameters																	
Antimony	µg/L	6	--	0.02	0.02	0.02	0.02	0.02	0.03	0.05	0.03	--	0.02	<0.02	<0.02	0.05	--
Arsenic	µg/L	10	--	1.55	1.67	1.55	1.41	1.39	1.08	1.19	1.38	--	0.98	1.63	0.65	1.12	--
Barium	µg/L	2000	--	127	136	121	126	126	123	116	123	--	121	120	106	110	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.004	<0.004	--	<0.004	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.02	0.02	0.04	0.02	0.01	0.01	0.01	--	0.03	0.01	0.01	0.07	--
Chromium	µg/L	100	--	0.1	0.2	0.1	0.386	1.04	0.349	0.125	0.143	--	0.061	0.1	0.1	0.2	--
Cobalt	µg/L	6	--	0.514	0.558	0.422	0.524	0.437	0.437	0.412	0.517	--	0.398	0.685	0.275	0.664	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.07	0.09	0.11	0.51	0.77	0.3	--
Lead	µg/L	15	--	0.02	0.021	0.046	0.035	<0.004	0.01	0.022	0.033	--	0.026	0.181	0.02	0.08	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	4.92	5.25	4.46	4.4	4.63	4.31	4.06	4.18	--	4.69	5.13	5.01	4.85	--
Selenium	µg/L	50	--	<0.03	0.05	0.03	0.09	0.07	0.07	0.05	0.05	--	<0.03	<0.03	<0.03	0.1	--
Thallium	µg/L	2	--	0.03	0.03	0.02	0.02	0.04	0.02	0.03	0.03	--	0.03	<0.1	<0.1	<0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	0.6	0.9	1	11.1	1	1	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.8	18.1	19.7	17.6	17.7	16.6	15.4	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	4.55	2.56	3.39	17.2	6.03	10	--
Boron	mg/L	--	0.092	0.007	0.012	0.011	0.012	<0.002	0.028	0.027	0.08	0.029	0.034	0.08	<0.02	0.01	<0.02
Calcium	mg/L	--	(979.5) 73	69	64.7	65.1	68.4	59.5	66.5	62.9	60.1	63.9	66.5	61.5	62.4	56.5	58.5
Lithium	mg/L	0.04	--	<0.0002	0.019	0.004	0.006	0.005	0.007	0.008	0.004	--	0.007	<0.009	<0.009	0.00335	--
Magnesium	mg/L	--	--	--	--	--	--	--	20.9	20.1	18.4	20	21.2	19.3	17.5	16.8	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.428	--	0.476	0.535	0.371	0.582	--
Potassium	mg/L	--	--	--	--	--	--	--	0.92	1.08	1.26	0.8	0.9	1.21	0.82	0.7	--
Sodium	mg/L	--	--	--	--	--	--	--	16	15.4	13	15	15.5	14.7	13.3	14.4	--
Strontium	mg/L	--	--	--	--	--	--	--	0.0931	0.0922	0.0805	0.0889	0.096	0.0887	0.0829	0.0797	--
Alkalinity	mg/L	--	--	--	--	--	--	--	212	222	221	215	230	224	199	199	--
Bromide	mg/L	--	--	--	--	--	--	--	0.03	0.05	<0.02	0.04	0.04	<0.04	<0.04	<0.04	--
Chloride	mg/L	--	(79.5) 22	21.1	21.7	20.4	20	19.9	19.6	21	20.4	20.5	20.6	20.2	18.1	17.5	19.3
Fluoride	mg/L	4	0.38	0.33	0.36	0.34	0.34	0.3	0.32	0.34	0.3	0.31	0.38	0.36	0.36	0.38	0.35
TDS	mg/L	--	(412.7) 359	331	334	305	317	292	275	306	322	306	317	294	278	262	283
Sulfate	mg/L	--	50	46.2	47.9	43.2	40.4	41	39.6	42.4	43.6	45.7	44.6	43.4	36	35.5	38.8
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	<0.4	<0.1	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.126	0.036	0.676	0.0796	1.78	0.281	0.108	0.45	--	--	0.638	0.458	0.113	--
Radium-226	pCi/L	--	--	0.223	1.37	0.305	0.576	0.953	0.601	0.483	0.775	--	--	0.315	0.284	0.579	--
Radium-226/228	pCi/L	5	--	0.349	1.406	0.981	0.6556	2.733	0.882	0.591	1.225	--	--	0.953	0.742	0.692	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.09	--	0.11	0.23	0.21	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.7	--	1	1	<0.7	1	--
Aluminum (Dissolved)	µg/L	--	--	--	1	--	--	--	--	--	1	--	<0.8	<1	4	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	0.019	<0.0004	0.078	0.062	0.024	0.028	<0.003	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.37	0.427	0.425	0.441	0.427	0.441	0.346	0.315	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-211

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	2/3/2021	5/27/2021	8/4/2021	11/11/2021	5/12/2022
Field Parameters									
Elevation	ft NGVD	--	--	370.10	368.10	369.06	368.9	368.48	369.52
pH	S.U.	--	6.63 - 8.69	7	7.53	9.72	7.4	7.71	7.55
Specific Conductance	µmhos/cm	--	--	518	452	413	469	500	491
Turbidity	NTU	--	--	3.55	0.3	0	1.63	0	0.01
Dissolved Oxygen	mg/L	--	--	0.02	0.2	0		0	3
Temperature	°C	--	--	15.73	14.7	16.98	16.15	14.21	17.63
ORP	mV	--	--	61	75	-10	7	171	63
Laboratory Parameters									
Antimony	µg/L	6	--	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--	--	--
Boron	mg/L	--	0.092	<0.02	--	0.011	--	0.011	<0.009
Calcium	mg/L	--	(979.5) 73	58.6	--	57.1	--	57.2	55.2
Lithium	mg/L	0.04	--	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	<0.02	--	--	--
Chloride	mg/L	--	(79.5) 22	18.0	--	17.9	--	18.2	19.1
Fluoride	mg/L	4	0.38	0.45	0.46	0.48	0.43	0.4	0.4
TDS	mg/L	--	(412.7) 359	266	--	290	--	280	280
Sulfate	mg/L	--	50	36.4	--	35.4	--	35.8	38.5
Sulfide	mg/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	6/9/2016	7/19/2016	9/21/2016	11/16/2016	1/11/2017	3/8/2017	5/9/2017	7/19/2017	10/4/2017	1/3-11/18	6/6/2018	11/13/2018	5/22/2019	11/14/2019	5/19/2020
Field Parameters																		
Elevation	ft NGVD	--	--	369.44	369.34	368.92	368.59	367.86	368.07	367.86	368.42	367.17	366.66	369.58	368.38	371.4	370.64	
pH	S.U.	--	6.71 - 8.73	8.14	7.76	7.69	7.47	7.19	7.6	7.44	8.48	7.48	7.03	7.65	7.66	7.47	7.41	7.55
Specific Conductance	µmhos/cm	--	--	591	544	478	585	441	60	493	531	449	564	470	451	511	670	449
Turbidity	NTU	--	--	2.82	0.48	1.93	0.33	3.09	1.9	1.42	0.55	1.01	1.11	2.43	1.87	0.87	11	1.18
Dissolved Oxygen	mg/L	--	--	0.53	0.17	0.49	0	1.82	0.2	0.22	0.47	0.31	18.7	0.18	0.33	1.88	0	0.66
Temperature	°C	--	--	15.24	16.81	15.93	15.25	12.99	15	16.7	17.58	16.26	14.93	15.45	14.15	15.44	16.2	14.87
ORP	mV	--	--	80.4	26.3	78.1	51.1	141.4	51	40	168.3	21.3	170.4	25.1	23.2	37.3	56	35
Laboratory Parameters																		
Antimony	µg/L	6	--	0.08	0.08	0.06	0.06	0.07	0.07	0.08	0.12	--	--	0.11	0.07	0.08	0.19	--
Arsenic	µg/L	10	--	1.07	1.06	0.95	0.86	0.99	0.92	0.97	1.04	--	--	0.84	0.89	1.04	1.08	--
Barium	µg/L	2000	--	241	240	226	206	220	220	216	226	--	--	218	201	202	203	--
Beryllium	µg/L	4	--	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.004	<0.004	--	--	0.005	<0.02	<0.02	<0.02	--
Cadmium	µg/L	5	--	0.02	0.03	0.02	0.03	0.02	0.02	0.04	0.02	--	--	0.13	0.02	0.03	0.16	--
Chromium	µg/L	100	--	0.2	0.3	0.1	0.05	0.124	0.433	0.165	0.11	--	--	0.091	0.06	<0.04	0.759	--
Cobalt	µg/L	6	--	0.216	0.21	0.195	0.171	0.202	0.182	0.208	0.203	--	--	0.196	0.224	0.234	0.397	--
Copper	µg/L	--	--	--	--	--	--	--	--	--	0.11	2.7	--	1.16	0.16	0.16	1.02	--
Lead	µg/L	15	--	0.107	0.075	0.066	0.056	0.091	0.092	0.118	0.089	--	--	0.229	0.1	0.09	0.776	--
Mercury	µg/L	2	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--	--	<0.002	<0.002	--
Molybdenum	µg/L	100	--	6.31	6.66	6.13	5.33	6.09	5.68	5.07	5.29	--	--	5.17	4.76	5.37	5.29	--
Selenium	µg/L	50	--	0.2	0.2	0.3	0.3	0.2	0.5	0.6	0.5	--	--	0.2	0.05	0.04	0.08	--
Thallium	µg/L	2	--	0.03	0.02	0.03	0.02	0.04	0.02	0.02	0.03	--	--	0.03	<0.1	<0.1	0.1	--
Zinc	µg/L	--	--	--	--	--	--	--	--	--	1	187	--	6.5	1	1	4	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--	--	17.5	17.6	19.6	--	17.6	17	16.9	16	--
Aluminum	µg/L	--	--	--	--	--	--	--	--	--	6.79	14.1	--	17.2	9.86	5	65.5	--
Boron	mg/L	--	0.071	0.022	0.015	0.015	0.013	0.004	0.024	0.107	0.015	0.092	0.088	0.03	0.04	<0.02	0.01	0.02
Calcium	mg/L	--	(79.5) 83	74.2	60.6	70.4	74.7	67.3	76.2	71.5	70.9	67.8	--	70.7	62.1	69.3	69.4	69.2
Lithium	mg/L	0.04	--	0.002	0.025	0.005	0.007	0.009	0.005	0.013	0.0005	--	--	0.006	0.01	<0.009	0.0044	--
Magnesium	mg/L	--	--	--	--	--	--	--	25	24.3	23.9	22.7	--	23.6	21.3	23.1	22.3	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	0.592	--	--	0.596	0.634	0.717	0.803	--
Potassium	mg/L	--	--	--	--	--	--	--	2.11	2.41	2.44	3.91	--	1.97	3.95	2.81	3.49	--
Sodium	mg/L	--	--	--	--	--	--	--	18.1	17.2	19.7	20.8	--	15.7	17.7	15.1	17.2	--
Strontium	mg/L	--	--	--	--	--	--	--	0.144	0.142	0.144	0.168	--	0.147	0.191	0.189	0.21	--
Alkalinity	mg/L	--	--	247	--	--	--	--	247	271	277	262	--	268	268	286	266	--
Bromide	mg/L	--	--	--	--	--	--	--	<0.05	0.08	0.07	<0.05	--	0.05	0.05	0.04	0.05	--
Chloride	mg/L	--	(29.6) 20	19.2	19.6	18.9	19.1	19.4	18.9	19.9	19.5	18.5	--	19.9	18.8	19.1	19.2	19.9
Fluoride	mg/L	4	0.407	0.36	0.38	0.36	0.33	0.36	0.33	0.35	0.3	0.32	--	0.4	0.34	0.36	0.32	0.26
TDS	mg/L	--	(412.7) 365	328	299	315	346	332	304	339	332	339	--	347	314	348	323	328
Sulfate	mg/L	--	43.22	39.2	41	35.5	32	34.4	35.1	37.1	36.5	37.4	--	38.4	35.2	36.8	38.6	33.3
Sulfide	mg/L	--	--	--	--	--	--	--	--	--	<0.4	--	--	<0.4	<0.07	<0.1	<0.2	--
Radium-228	pCi/L	--	--	0.441	0.77	0.604	0.688	0.722	0.518	0.0415	0.501	--	--	--	1.47	0.59	0.525	--
Radium-226	pCi/L	--	--	0.126	0.658	0.23	0.39	0.422	0.42	0.408	0.355	--	--	--	0.469	0.669	0.403	--
Radium-226/228	pCi/L	5	--	0.567	1.428	0.834	1.078	1.144	0.938	0.4495	0.856	--	--	--	1.939	1.259	0.928	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	0.39	--	--	0.08	1.33	0.85	<0.2	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.4	--	--	0.7	3	3	1	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--	--	--	2.16	--	--	2	1	2	<5	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--	<0.0004	<0.0004	0.053	0.016	--	<0.002	0.007	0.005	<0.02	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--	0.616	0.625	0.62	0.646	--	0.567	0.657	0.684	0.611	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

MW-21D

Parameter	Units	GWPS (MCL or RSL)	Appendix III UPL	11/11/2020	5/27/2021	11/11/2021	5/12/2022	7/20/2022
Field Parameters								
Elevation	ft NGVD	--	--	370.09	369.05	368.46	369.4	370.04
pH	S.U.	--	6.71 - 8.73	6.99	9.68	7.82	7.63	7.49
Specific Conductance	µmhos/cm	--	--	599	538	555	593	604
Turbidity	NTU	--	--	1.65	0	0	0.88	3.06
Dissolved Oxygen	mg/L	--	--	0.36	0	6.48	0.2	0.06
Temperature	°C	--	--	15.31	19.48	13.77	18.33	17.48
ORP	mV	--	--	120	-6	176	56	16
Laboratory Parameters								
Antimony	µg/L	6	--	--	--	--	--	--
Arsenic	µg/L	10	--	--	--	--	--	--
Barium	µg/L	2000	--	--	--	--	--	--
Beryllium	µg/L	4	--	--	--	--	--	--
Cadmium	µg/L	5	--	--	--	--	--	--
Chromium	µg/L	100	--	--	--	--	--	--
Cobalt	µg/L	6	--	--	--	--	--	--
Copper	µg/L	--	--	--	--	--	--	--
Lead	µg/L	15	--	--	--	--	--	--
Mercury	µg/L	2	--	--	--	--	--	--
Molybdenum	µg/L	100	--	--	--	--	--	--
Selenium	µg/L	50	--	--	--	--	--	--
Thallium	µg/L	2	--	--	--	--	--	--
Zinc	µg/L	--	--	--	--	--	--	--
Silica (Dissolved)	mg/L	--	--	--	--	--	--	--
Aluminum	µg/L	--	--	--	--	--	--	--
Boron	mg/L	--	0.071	<0.02	0.014	0.014	<0.009	--
Calcium	mg/L	--	(79.5) 83	70.9	69.8	69.7	72.1	--
Lithium	mg/L	0.04	--	--	--	--	--	--
Magnesium	mg/L	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--
Potassium	mg/L	--	--	--	--	--	--	--
Sodium	mg/L	--	--	--	--	--	--	--
Strontium	mg/L	--	--	--	--	--	--	--
Alkalinity	mg/L	--	--	--	--	--	--	--
Bromide	mg/L	--	--	--	0.04	--	--	--
Chloride	mg/L	--	(29.6) 20	19.5	19.8	19.5	21	19.9
Fluoride	mg/L	4	0.407	0.38	0.4	0.38	0.38	--
TDS	mg/L	--	(412.7) 365	318	330	330	330	--
Sulfate	mg/L	--	43.22	37.1	36.4	34.2	40	--
Sulfide	mg/L	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--
Radium-226/228	pCi/L	5	--	--	--	--	--	--
Copper (Dissolved)	µg/L	--	--	--	--	--	--	--
Zinc (Dissolved)	µg/L	--	--	--	--	--	--	--
Aluminum (Dissolved)	µg/L	--	--	--	--	--	--	--
Iron (Dissolved)	mg/L	--	--	--	--	--	--	--
Manganese (Dissolved)	mg/L	--	--	--	--	--	--	--

Table A-1
Summary of Analytical Data
CCR Landfill
Rockport Plant, Rockport, Indiana

Notes:

GWPS - Groundwater Protection Standard

MCL - USEPA Maximum Contaminant Levels

RSL - USEPA Generic Tables for Residential Tapwater, May 2018, TR=1E-06, THQ=1.0

Field Parameter Units

ft NGVD - Feet, National Geodetic Vertical Datum of 1929 (also known as mean sea level (MSL))

°C - degrees Celcius

S.U. - Standard Units

µmhos/cm - micromhos per centimeter

mg/L - milligrams per liter

ORP - millivolts (mV)

NTU - Nephelometric Turbidity Units

Laboratory Parameter Units

pCi/L picoCuries per Liter

Prepared by: AAW 08/25/2022

Checked by: TWH 9/21/2022

Table A-2
Summary of Leachate Pond Data
CCR Landfill
Rockport Plant, Rockport, Indiana

Source: American Electric Power

Parameter	Unit	Combined North/West Leachate Pond			North Leachate Pond					West Leachate Pond
		7/13/2016	7/19/2016	1/24/2017	7/13/2016	7/19/2016	9/14/2016	1/24/2017	9/29/2017	9/29/2017
Boron	mg/L	1.19	2.17	2.77	0.634	0.684	0.818	2.07	2.7	11.44
Calcium	mg/L	22.8	41.3	149	19.9	22.5	21.8	80.8	-	-
Chloride	mg/L	38.5	63.7	191	17.3	19.7	9.31	18.4	-	-
Fluoride	mg/L	0.27	0.41	0.32	0.25	0.2	0.57	0.23	-	-
Total Dissolved Solids	mg/L	918	1870	1870	332	434	310	656	-	-
Sulfate	mg/L	617	1180	1020	168	254	97.6	365	-	-
pH	SU	-	-	-	-	-	-	-	-	-

Notes:

mg/L: milligrams per liter

SU: standard unit

-: Not sampled

Laboratory data reports incorrectly identified Combined North/West Leachate Pond as North/South Leachate Pond. There is no South Leachate Pond.

Prepared by: kdr 6/1/2020

Checked by: tmr 6/1/2020

Table A-3
Summary of Isotope Data
CCR Landfill
Rockport Plant, Rockport, Indiana

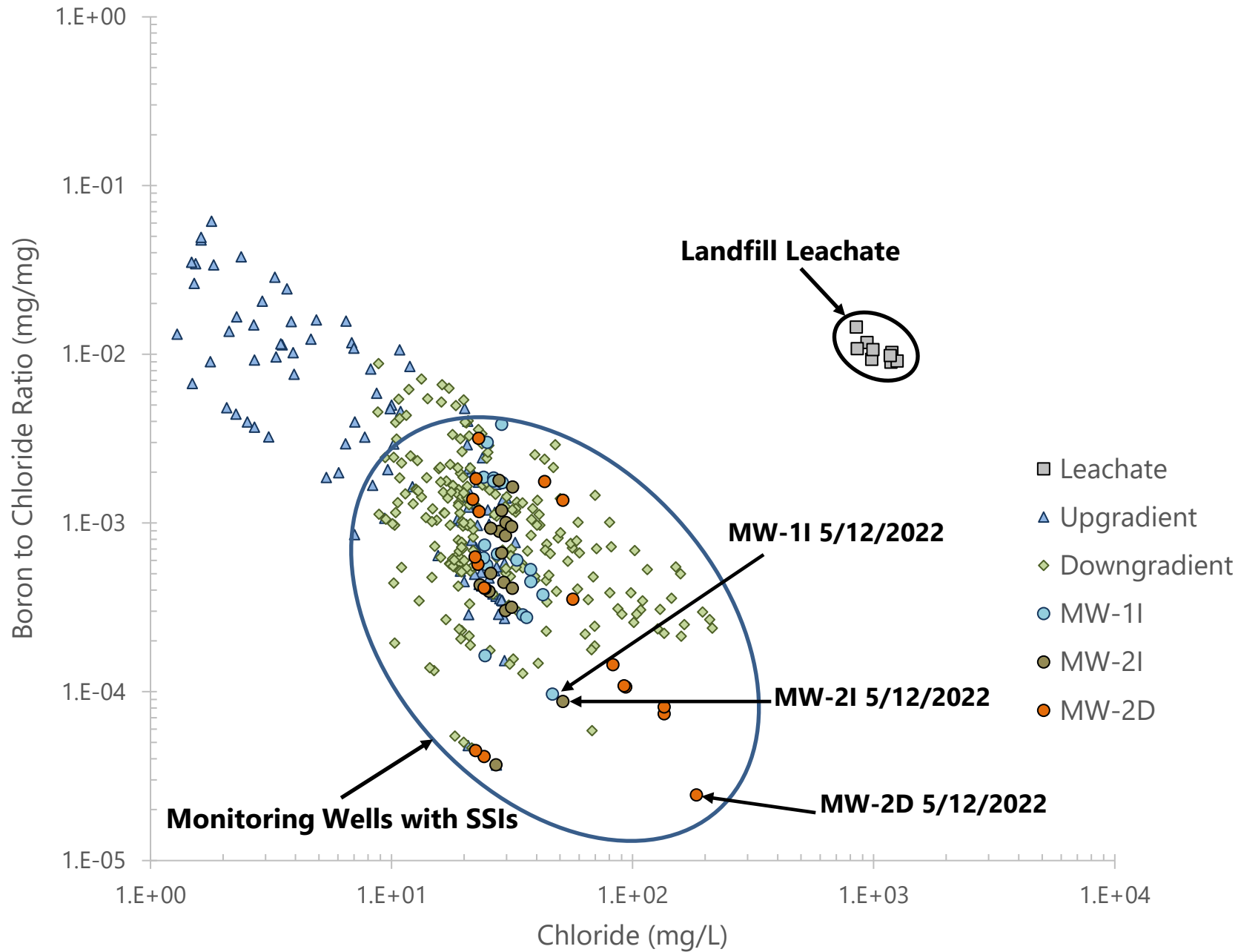
Sample Identifier	B (mg/L)	$\delta^{11}\text{B}$	Sr (mg/L)	$^{87}\text{Sr}/^{86}\text{Sr}$
Landfill Leachate Pond North	2.7	-0.93	1.80	0.711955
Landfill Leachate Pond West	11.4	-1.64	2.86	0.711919
MW-17I	0.058	26.86	0.093	0.710547
MW-8I	0.037	23.51	0.140	0.709697
MW-8S	0.020	16.33	0.048	0.709272
MW-11S	0.060	24.01	0.052	0.709447
MW-14S	0.017	17.78	0.094	0.710566
MW-15I	0.042	35.32	0.082	0.710333
MW-21S	0.016	20.66	0.055	0.710142

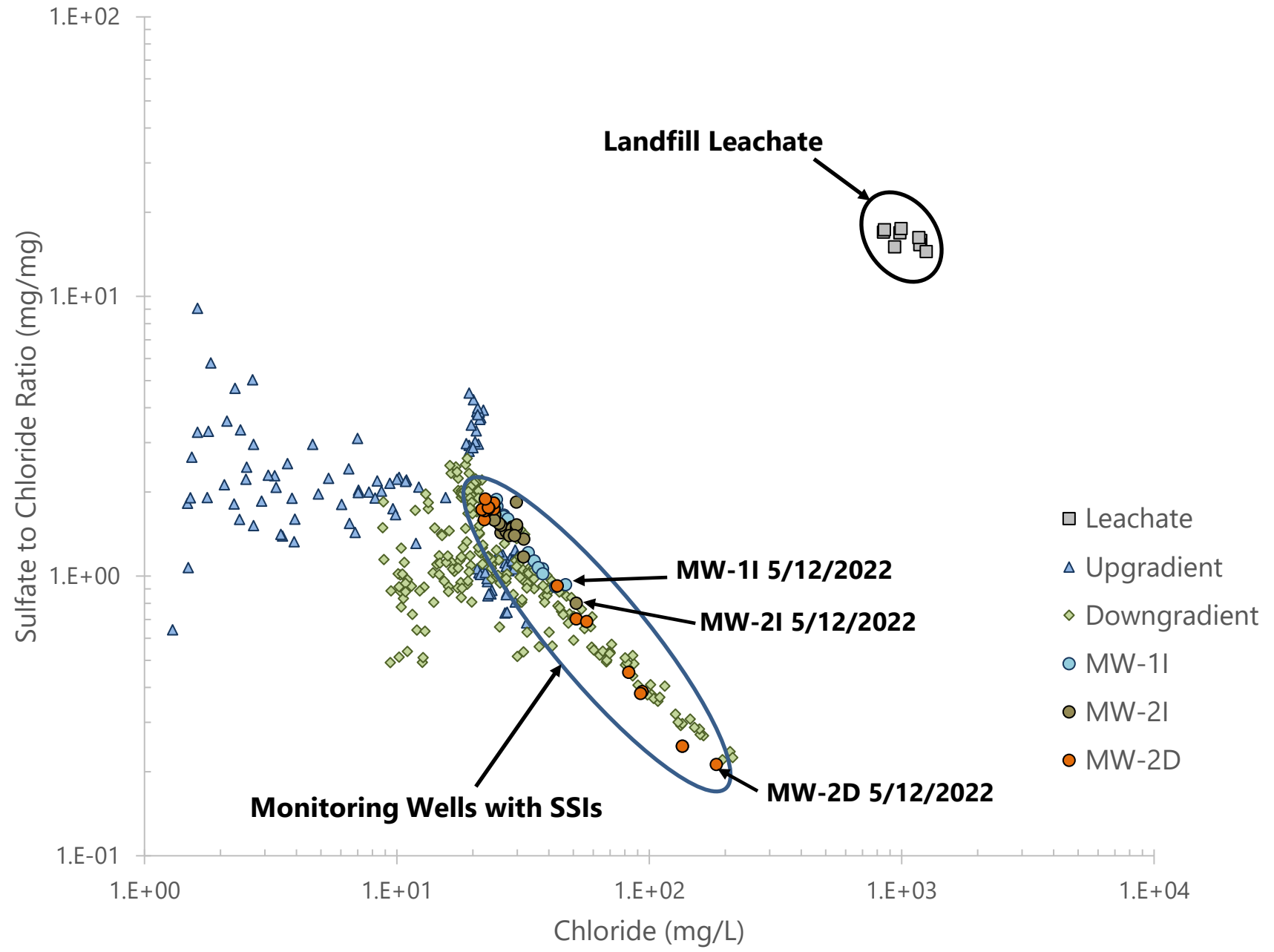
Note: monitoring well boron concentrations are averages of first eight rounds of sampling.



wood.

Appendix B
Full Size Geochemical Exhibits





APPENDIX 4 – Notices for Monitoring Program Transitions

No monitoring program transitions have been necessary at this time.

APPENDIX 5 – Well Installation/Decommissioning Logs

There were no wells installed or decommissioned during the reporting year.