

November 27, 2024
File No. 27224104.00

Mr. Mick Leat
Iowa Department of Natural Resources
Land Quality Bureau
6200 Park Avenue
Des Moines, Iowa 50321

Subject: 2024 Annual Water Quality Report and
Leachate Control System Performance Evaluation Report
Heidelberg Materials CKD Monofill
Permit No. 17-SDP-08-99P

Dear Mick,

SCS Engineers has completed the required groundwater monitoring and statistical evaluation at the Heidelberg Materials Cement Kiln Dust (CKD) Monofill for the 2024 reporting year. Our services were performed in general accordance with Iowa Administrative Code (IAC) 567-115.26 and the landfill permit requirements for implementation of the Hydrologic Monitoring System Plan (HMSP). Please find enclosed a copy of the 2024 Annual Water Quality Report for the Monofill.

Additionally, an evaluation of the leachate control system for the Monofill is included in accordance with IAC 567-115.26. The 2024 Leachate Control System Performance Evaluation Report for the site is included as Appendix F to the Annual Water Quality Report.

If you have any questions about this report, please contact us as noted below.

Sincerely,



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2024 Annual Water Quality Report 2024 Leachate Control System Performance Evaluation Report

Heidelberg Materials US Cement CKD Monofill
Solid Waste Permit No. 17-SDP-08-99P

Prepared for:

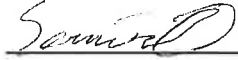
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27224104.00 | November 2024

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CERTIFICATION

Prepared by: 

Date: 11/27/2024

Typed: Semir Omerovic


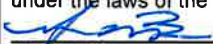
Reviewed by: 

Date: 11/27/2024

Typed: Timothy C. Buelow, P.E.

Certification page (115.26(8)"d")

An annual report summarizing the effect of the facility on groundwater and surface water quality shall be submitted to the department each year. The summary is to be prepared by an engineer registered in the state of Iowa.

	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p>
	<p><u></u> Date: <u>11/27/2024</u> Timothy C. Buelow, P.E. License No. 14445 My license renewal date is December 31, 2025. Pages or sheets covered by this seal: <u>All except Appendix B-1.</u></p>

EXECUTIVE SUMMARY

ES.1 PERIOD OF REPORT COVERAGE

SCS Engineers (SCS), on behalf of Heidelberg Materials US Cement, has completed the required groundwater sampling for the Heidelberg Materials US Cement CKD Monofill (Monofill). The purpose of this Annual Water Quality Report (AWQR) is to document and statistically evaluate the groundwater sampling results since the 2023 AWQR up to and including the April and October 2024 semiannual sampling events. This AWQR was prepared in accordance with the requirements of Iowa Administrative Code (IAC) 567-115.26, the site permit, and current requirements for implementation of the Hydrologic Monitoring System Plan (HMSP).

ES.2 REPORT PRIORITY

The following summarizes report priorities associated with groundwater compliance at the Monofill:

- Department review urgency: None.
- Department review impact on rules schedule: None.
- Actions or activities on hold pending Department review or comment: None.
- Actions and/or permit amendments needed: Updated plans and specifications for the Phase IV-VI disposal cells will be submitted by May 1, 2025, as required by permit special provision #3.a.

ES.3 SITE STATUS AND APPLICABLE RULES

- Monofill Status: Active, Operating Permit.
- Types of waste accepted: Industrial (Cement-Kiln Dust (CKD) waste).
- Applicable IAC rules: 567-115.26.

ES.4 COMMENTS

The following summarizes points of special emphasis:

- Monofill may be having a limited impact on the surrounding groundwater in isolated areas. Historical placement of CKD in the area could also be an influencing factor. Due to the nature of the impact, the industrial use of the site, and the lack of receptors in the area, additional assessment does not appear necessary at this time.
- The concentrations of several constituents in leak detection riser LDR-3 continue to steadily increase; however, groundwater at the immediate monitoring well MW-201 appears to be unaffected by conditions at LDR-3.

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1.0 ACRONYMS/ABBREVIATIONS

AL = Action Level
CCV = Continuing Calibration Verification
CL = Control Limit - Mean plus Two Standard Deviations
DNR = Iowa Department of Natural Resources
DO = Dissolved Oxygen
GWPS = Groundwater Protection Standard
GWQAP = Groundwater Quality Assessment Plan
LEL = Lower Explosive Limit
LCL = Lower Confidence Limit
LCS = Laboratory Control Sample
LN = Lognormal
M+/-2SD = Mean Plus/Minus Two Standard Deviations
MCL = EPA Maximum Contaminant Level
MDL = Method Detection Limit
N = Normal
NC = No Change
NM = Not Measured
ORP = Oxidation-Reduction Potential
PL = Prediction Limit
QA = Quality Assurance
QC = Quality Control
RL = Reporting Limit
SWS = DNR Statewide Standard for a Protected Groundwater Source
SSI = Statistically Significant Increase Above Background
SSL = Statistically Significant Level Above Groundwater Protection Standard
SSS = Site-Specific Standard (Site-Specific GWPS)
TSS = Total Suspended Solids
UCL = Upper Confidence Limit

2.0 SITE BACKGROUND

2.1 SITE LOCATION

The Heidelberg Materials US Cement manufacturing plant is located near the north edge of Mason City, Iowa on the northwest corner of the intersection of 25th Street Northwest and U.S. Highway 65. The cement manufacturing waste monofill (Monofill) is located on this property. The legal description of the Monofill location is the North ½ of Section 32, Township 97 North, Range 20 West, Cerro Gordo County, Iowa.

2.2 FACILITY

Heidelberg Materials US Cement owns and operates a cement manufacturing waste monofill on their mining and manufacturing facility property in Mason City, Iowa. The Monofill was constructed in the summer of 2002 and authorization to begin filling was granted by DNR on October 31, 2002. The Monofill was developed within portions of the previous clay quarry.

Prior to filling of cement manufacturing waste, including cement kiln dust (CKD), in the Monofill, CKD was buried in several areas across the current and former site property. Five of these burial areas within the current property and on the property now operated by the Lime Creek Nature Center are regulated by the Environmental Protection Agency (EPA) as a Superfund site (EPA ID No. IAD005288634).

In accordance with the consent decrees issued by the Iowa Department of Water, Air, and Waste Management in April 1984 (Consent Order No. 84-A-001) and the EPA (Civil Action No. 2c 84-3030) in May 1986, the Lehigh Cement Company buried CKD in portions of the clay quarry over top of remaining in-situ clay which was approximately three to four feet thick.

2.3 GEOLOGY OF THE SITE

The following information pertaining to this section was obtained from the Landfill Hydrogeologic Investigation Report prepared by Barr Engineering Company, August 2001 (note that the referenced tables, figures, and appendices are part of the referenced report and not included herein):

As indicated on the cross sections, the surficial deposits (i.e., unconsolidated material above the bedrock) at the site consist of two significant layers. The uppermost layer consists of brown, oxidized, generally mottled, clay till with zones of silt, sandy clay, sandy silty clay, and clayey sand. Bedding is not apparent in samples of the brown till. This brown clay till is present only in the unmined areas of the clay quarry. Thickness of the brown clay till varies from 5.5 ft. to 20.5 ft.

The stratigraphically lower second layer consists of greenish-gray clay. Based on field testing and observations, this clay was classified as likely being fat clay. However, laboratory testing indicated that the greenish-gray clay is lean clay. Thin bedding is visible in samples of the greenish-gray clay. Sandy zones were not seen in the greenish-gray clay samples. The greenish-gray clay is stiff but can be parted along bedding planes under manual pressure. This greenish-gray clay is homogeneous, unlike the overlying brown clay till, and may be consistent with a lacustrine depositional environment. An occasional gravel to small cobble sized rock was the only particle larger than clay size observed in the greenish-gray clay samples.

In some locations a "clay-shale" was encountered at the base of the greenish-gray clay, directly above the bedrock. This clay-shale was the same color as the clay immediately above it but was generally harder (based on standard penetration test blow counts) and less malleable than the overlying greenish-gray clay. Samples of the clay-shale also tended to break along bedding planes in thinner pieces than the overlying greenish-gray clay.

Bedrock encountered during drilling at the site consisted mainly of carbonate rocks. Core samples of the bedrock were obtained from wells MW-201, MW-202, and MW-203. The upper portions of the cores consisted mainly of mottled dark gray to brown dolomite. This dolomitic portion of the cores contained numerous vugs and cavities. Calcite crystals and some small pyrite crystals were observed in vugs in this upper zone of the bedrock. Lower portions of the cored intervals appeared to consist of more limestone than dolomite. The limestone portion of the cores tended to have fewer open vugs/cavities than stratigraphically higher portions of the cores. A 0.5-foot thick shaley zone was encountered within the carbonate bedrock at well MW-202.

2.4 HYDROLOGY OF THE SITE

The following information pertaining to this section was obtained from the Landfill Hydrogeologic Investigation Report prepared by Barr Engineering Company, August 2001:

A well-defined and continuous water table was not present in the unconsolidated material at the site. Some saturated zones were identified in the brown till during drilling; however, the saturated zones were not seen continuously across the site. Saturated zones were not observed in the greenish-gray clay during drilling. In order to fully evaluate the potential for saturated zones in the greenish-gray clay, the temporary piezometers and monitoring wells MW-101, MW-102, MW-103, and MW-104R were installed. The piezometers were installed in March 2001 and abandoned in June 2001. Piezometers were checked several times during this period to determine if there was any water in them. All the piezometers were dry when checked during the period March through June, except for piezometer PZ-1 at the end of June 2001.

When PZ-1 was checked on June 28 there was approximately 0.5 ft of water in the piezometer. The Barr geologist noted that the bentonite grout around the piezometer riser appeared to be desiccated and cracked and that the piezometer riser appeared to be loose (i.e., the riser pipe could be moved from side to side). Water was pumped out of piezometer PZ-1 with a whale pump until there was only about 0.1 ft of water remaining in the piezometer. Piezometer PZ-1 was checked again on June 29 and there was still only about 0.1 ft of water in the piezometer. As indicated in Appendix B, no saturated zones were observed in the greenish-gray clay when piezometer PZ-1 was installed. In light of the observations made at the time of piezometer installation, the lack of recharge in the piezometer suggests that the likely source of the water in piezometer PZ-1 was water leaking down the piezometer annulus from above through a compromised bentonite grout seal.

Water has not been detected in monitoring wells MW-102, MW-103, and MW-104R. Monitoring well MW-101 was constructed over a two-day period (Appendix B). No evidence of saturated zones in the greenish-gray clay was observed during the drilling of well MW-101. The driller noted some wet cuttings from a depth of approximately 7 feet. This depth appears consistent with the interpreted depth of the contact between

the brown till and the greenish gray clay (Appendix B). After the cement grout had cured, well MW-101 was checked and there was approximately 0.5 feet of water in the well. As with piezometer PZ-1, well MW-101 was evacuated using a whale pump. One day later, there was still no water in the well. It appears likely that water detected in well MW-101 moved down the borehole from the contact between the brown till and greenish-gray clay during the installation of well MW 101.

Laboratory permeability tests were performed on shelly tube samples from both the brown till and the greenish-gray clay. As shown in Table 2, the permeability of the brown till ranged from 1.3×10^{-8} to 1.6×10^{-8} ft/min. Permeability of the greenish-gray clay ranged from 1.3×10^{-8} to 7.8×10^{-8} ft/min.

During the installation of wells MW-201, MW-202, and MW-203 no groundwater was encountered in the unconsolidated sediments. Steel casings were grouted into the top of the bedrock at each of these wells (Appendix B). Rock coring was then done through these casings after the grout had set. Groundwater entered the coreholes from the bedrock and rose up inside the outer casings several feet above the bedrock surface. As noted above, some of the soil borings terminated when the auger encountered the bedrock surface. Groundwater did not enter these boreholes. Thus, it appears that the uppermost portion of the bedrock, rather than the clay-shale or the greenish-gray clay, is the upper confining unit for the bedrock aquifer at the site.

Groundwater elevations were measured in wells MW-201, MW-202, and MW-203 on March 26, April 25, June 22, and July 25, 2001. Comparison of the measured groundwater elevations with the bedrock surface elevations at wells MW-201, MW-202, and MW-203 (e.g., Figure 8) indicates that the piezometric surface in the bedrock aquifer is approximately 9.7 to 14 ft above the bedrock surface. Piezometric surface elevation contours for the bedrock aquifer are shown on Figures 9, 10, 11, and 12. As shown on these figures, the groundwater flow direction in the bedrock aquifer beneath the site varied from approximately north to northeast. The horizontal hydraulic gradient in the bedrock aquifer varied from 1.2×10^{-4} ft/ft to 1.5×10^{-3} ft/ft.

As described in Section 2, single well recovery tests were performed in wells MW-201 and MW-203 at the site. The aquifer test data and evaluations are presented in Appendix E. Data gathered during the tests was used to calculate a specific capacity for each of the wells. Following the method described in Driscoll (1986), specific capacity data can be used to estimate aquifer transmissivity. These estimates are considered good first approximations to the aquifer transmissivity (Driscoll, 1986). Estimated transmissivities for wells MW-201 and MW-203 are shown in Table 6. The geometric mean of the bedrock transmissivity, as estimated from the specific capacities of the wells, is 69 ft²/day.

Recovery test data for each well were analyzed with the Theis recovery method (Theis, 1935) using the software package AQTESOLV (Duffield, 1999). The geometric mean of the bedrock transmissivity, as determined from the recovery tests, is 124 ft²/day. Using information obtained during this investigation, the groundwater flow velocity in the bedrock beneath the new landfill site has been estimated. To facilitate the calculation of an estimated groundwater flow velocity it has been assumed that 1) the bedrock porosity is 0.05 (this is within the typical range for limestone and dolomite presented by Freeze and Cherry (1979)) and 2) the carbonate aquifer is 290 feet thick. Thus, the hydraulic conductivity of the bedrock aquifer beneath the site is estimated

to be 0.43 ft/day. The groundwater flow velocity in the bedrock beneath the site is estimated to 2.5 ft/yr. (0.069 ft/day).

3.0 FIGURES DISCUSSION

The following figures are attached.

3.1 FIGURE 1 – APPROVED MONITORING NETWORK

The Landfill property and hydrological monitoring system plan (HMSP) network are depicted in **Figure 1**. **Figure 1** indicates the locations of each monitoring well.

3.2 FIGURES 2 & 3 – GROUNDWATER CONTOURS – CLAY UNIT

Groundwater contour maps based on water levels measured in the clay unit during the April and October semiannual groundwater sampling events are included as **Figure 2** and **Figure 3**, respectively. **Figure 2** indicates a generally northwesterly flow direction. Monitoring well MW-101R was measured as dry during the October sampling event, therefore no contour lines could be accurately generated for **Figure 3**; however, the direction of flow would be expected to be generally southwesterly towards MW-101R. Elevation measurements of the north pond during the April and October semiannual sampling events were recorded as 1,111.94 feet and 1,109.85 feet, respectively. The level of the north pond is controlled via manual pumping to the south pond and discharges through NPDES Outfall #4 and monitoring point SW-1 to Calamus Creek.

3.3 FIGURES 4 & 5 – GROUNDWATER CONTOURS – BEDROCK UNIT

Groundwater contour maps based on water levels measured in the bedrock unit during the April and October semiannual groundwater sampling events are included as **Figure 4** and **Figure 5**, respectively. **Figure 4** and **Figure 5** indicate a generally north-northwesterly flow direction with flow beneath the Phase 1-3 area being away from the north pond. The vertical gradient within the nested monitoring well pair MW-102R/MW-202R appeared to be upward during the April semiannual sampling event and downward during the October semiannual sampling event.

4.0 QA/QC SUMMARY

Date indicates the date(s) of sampling.

4.1 APRIL 29, 2024 (2024 APRIL SAMPLING EVENT)

Based on the QA review, no samples were rejected as unusable due to QC failures. In general, the quality of the analytical data for this reporting period does not appear to have been compromised by analytical irregularities and results affected by QC anomalies are qualified with the appropriate data flags, which are listed in the laboratory report in **Appendix B-1**. Data validation documentation can be found in **Appendix B-2**.

4.2 OCTOBER 7, 2024 (2024 OCTOBER SAMPLING EVENT)

Based on the QA review, no samples were rejected as unusable due to QC failures. In general, the quality of the analytical data for this reporting period does not appear to have been compromised by analytical irregularities and results affected by QC anomalies are qualified with the appropriate data flags, which are listed in the laboratory report in **Appendix B-1**. Data validation documentation can be found in **Appendix B-2**.

5.0 DATA EVALUATION

Statistical evaluation in accordance with the requirements of the 1989 IAC 567-103.2(8)"d" were conducted for the groundwater analytical data collected during the April and October 2024 semiannual sampling events. The statistical evaluation for samples collected during 2024 semiannual sampling events is located in **Appendix D** of this report.

5.1 DATA EVALUATION

Groundwater monitoring for the Monofill consists of sampling from two units. The clay unit contains one upgradient monitoring well (MW-101R) located on the west side of the Monofill and two downgradient monitoring wells; one located on the north side (MW-102R) and one located on the east side (MW-103R) of the Monofill. The bedrock unit contains two upgradient monitoring wells located on the south (MW-205) and far southwest (MW-203R) sides of the Monofill and four downgradient monitoring wells; one located on the southeast side (MW-201), one located along the east side (MW-204), one located on the north side (MW-202R), and one located on the west side (MW-206) of the Monofill.

A total of 40 control limit exceedances were detected based on 2024 semiannual sampling results as listed in **Table 1** and **Table 7** compared to 39 control limit exceedances detected based on 2023 semiannual sampling results reported in the 2023 AWQR. Half of the control limit exceedances detected based on 2024 semiannual sampling results were attributed to the two downgradient non-purged clay unit samples.

Exceedances of action or advisory levels were largely associated with sodium, sulfate, and total dissolved solids as listed in **Table 9**. The action levels for sodium, sulfate, and total dissolved solids were also exceeded in upgradient monitoring well MW-101R. Concentrations of sodium, sulfate, and total dissolved solids in monitoring well MW-101R were significantly lower in the recharge sample as compared to the initial no-purge sample where samples were available, however the action level for sodium was also exceeded in the recharge samples. No recharge samples were able to be collected from the downgradient clay monitoring wells MW-101R, MW-102R, and MW-103R during the fall 2024 sampling event. Noted exceedances of the action or advisory levels were based on a review of concentrations listed in the Summary of Groundwater Chemistry in **Appendix C** and information reported in **Table 9**.

5.2 TRENDING IN MONITORING WELLS

Statistically significant trends at a 99 percent confidence level ($\alpha=0.01$) were identified in seven monitoring point – constituent pairs by Mann-Kendall analysis during this reporting period, four increasing and 3 decreasing. In addition to the groundwater monitoring wells, the leak detection risers (LDRs) and the surface water sampling point were included in the trend analysis. The trend analysis results using data through the October 2024 sampling event are included in **Appendix D**. The statistically significant trends were as follows:

Monitoring Point	Constituent	Trend
MW-103R-NP	Sulfate	Decreasing
MW-201	Sulfate	Decreasing
LDR-2	Total Organic Carbon	Decreasing
LDR-3	Chloride	Increasing
LDR-3	Potassium	Increasing

Monitoring Point	Constituent	Trend
LDR-3	Specific Conductance	Increasing
LDR-3	Total Dissolved Solids	Increasing

Although not necessarily statistically significant, the Mann-Kendall statistics can provide an indication of general trending in the data. Trend indications for wells and leak detection risers in the monitoring program are shown in the table below. The statistics used to develop the general trending differ from the Mann-Kendall statistics used in the diagnostics section of the statistical evaluation in that a much lower trend threshold is applied for the general trending information ($\alpha=0.20$ versus $\alpha=0.01$). Trends classified as decreasing or increasing exhibited a statistically significant trend with 80% confidence using the most recent eight data points. Trends classified as stable did not exhibit a statistically significant trend with 80% confidence using the eight most recent data points. A summary of Mann-Kendall statistics by constituent in each monitoring point is included in **Appendix E** of this report.

Trending in Monitoring Wells					
Aquifer	Monitoring Well	Decreasing Trends	Stable Trends	Increasing Trends	Number of Constituents Analyzed
Clay Unit	MW-101R-NP (u)	5.26%	94.74%	0.00%	19
	MW-102R-NP	6.67%	93.33%	0.00%	15
	MW-103R-NP	6.67%	86.67%	6.67%	15
Bedrock Unit	MW-201	35.00%	65.00%	0.00%	20
	MW-202R	5.88%	94.12%	0.00%	17
	MW-203R (u)	14.29%	85.71%	0.00%	14
	MW-204	0.00%	80.00%	20.00%	15
	MW-205 (u)	6.67%	93.33%	0.00%	15
	MW-206	0.00%	100.00%	0.00%	15
Leak Detection Risers	LDR-1	19.05%	76.19%	4.76%	21
	LDR-2	26.67%	66.67%	6.67%	15
	LDR-3	11.11%	44.44%	44.44%	18
Surface Water	SW-1	4.55%	86.36%	9.09%	22
Combined	Site Wide	11.31%	81.45%	7.24%	221

(u) indicates an upgradient monitoring point.

Review of the Mann-Kendall statistics indicated that approximately 93 percent of the Mann-Kendall statistics were considered stable or decreasing following the 2024 annual statistical evaluation with none of the decreasing trends being pH. Although concentrations of calcium, chloride, magnesium, potassium, specific conductance, total hardness, and TDS have continued to rise in leak detection riser LDR-3, concentrations of these constituents in the groundwater at nearby monitoring well MW-201 are stable to decreasing.

6.0 RECOMMENDATIONS

6.1 SITE IMPACT ON GROUNDWATER

Based on the data collected during the 2024 sampling events, it appears the Monofill may be having a limited impact on the surrounding groundwater in isolated areas. Historical placement of CKD in the area could also be an influencing factor. Due to the nature of the impact, the industrial use of the site, and the lack of receptors in the area, additional assessment does not appear necessary at this time.

Although concentrations of several parameters in LDR-3 have continued to steadily increase, groundwater at the nearest compliance point, bedrock monitoring well MW-201, appears to be unaffected by the conditions in LDR-3. Therefore, additional sampling or site assessment does not appear necessary at this time.

6.2 PROPOSED MONITORING

The groundwater monitoring program is summarized in **Table 1**. No changes to the HMSP monitoring program are recommended at this time. It is recommended that sampling continue for calendar year 2025 as summarized in **Table 2**.

6.3 PROPOSED MONITORING WELL CHANGES

Monitoring well performance is summarized in **Table 4**. No proposed changes to the monitoring wells are recommended at this time.

Tables

- 1 Monitoring Program Summary
- 2 Monitoring Program Implementation Schedule
- 3 Monitoring Well Maintenance and Performance Re-Evaluation Schedule
- 4 Monitoring Well Performance and Maintenance Summary
- 5 Background and GWPS Summary
- 6 Summary of Well/Detected Constituent Pairs with No Immediately Preceding Control Limit Exceedances
- 7 Summary Table of Ongoing and Newly Identified Control Limit Exceedances
- 8 Summary of Groundwater Chemistry
- 9 Historical Control and Action Level Exceedances
- 10 Groundwater Quality Assessment Plan Trend Analysis

Table 1
Monitoring Program Summary
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Monitoring Well	Formation	Current Monitoring Program	Change for Next Sampling Event	Control Limit Exceedances	Total Number of Samples in Each Monitoring Program Since January 1, 2018		
					Routine	Supplemental	Remedial Action
Clay Unit							
MW-101R	Gray Clay	Background	None	-	11	-	-
MW-102R	Gray Clay	Detection	None	Total Alkalinity, Bicarbonate, Calcium, Magnesium, Potassium, Specific Conductance, Sulfate, Total Dissolved Solids, Total Hardness	10	-	-
MW-103R	Gray Clay	Detection	None	Total Alkalinity, Bicarbonate, Calcium, Chloride, Magnesium, Nitrate/Nitrite as N, Potassium, Specific Conductance, Sulfate, Total Dissolved Solids, Total Hardness	14	-	-
Bedrock Unit							
MW-201	Dolomite	Detection	None	Total Alkalinity, Chloride, Magnesium, Potassium, Sodium, Sulfate, Total Dissolved Solids	14	-	-
MW-202R	Dolomite	Detection	None	Total Alkalinity, Carbonate, Magnesium, Nitrate/Nitrite as N, Sodium, Sulfate	14	-	-
MW-203R	Dolomite	Background	None	-	14	-	-
MW-204	Dolomite	Detection	None	Magnesium, Potassium, Sodium, Sulfate, Total Dissolved Solids	14	-	-
MW-205	Dolomite	Background	None	-	14	-	-
MW-206	Dolomite	Detection	None	Ammonia as N, Sulfate	14	-	-
Lysimeters							
LDR-1	Not Applicable	Detection	None	Not Evaluated	14	-	-
LDR-2	Not Applicable	Detection	None	Not Evaluated	14	-	-
LDR-3	Not Applicable	Detection	None	Not Evaluated	14	-	-
Surface Water							
SW-1	Surface Water	Detection	None	Not Evaluated	11	-	-

Notes: Control limit exceedances listed are based on at least one exceedance during the reporting period.

Table 2 - continued
Monitoring Program Implementation Schedule
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Regime	Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents	
		4/29/2024	10/7/2024	2025 Spring Event	2025 Fall Event
Lysimeters	LDR-1	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters
	LDR-2	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters
	LDR-3	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters
Surface Water	SW-1	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters
Leachate	Phase 1, 2, & 3 Sump Composite	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	None	Total alkalinity, ammonia-nitrogen, chloride, hardness, nitrate/nitrite, pH, total phosphorus, specific conductance, sulfate, TDS, TKN, TOC, TSS, Total inorganic parameters	None

Notes: Total inorganic parameters include: aluminum, arsenic, calcium, chromium, lead, magnesium, potassium, selenium, and sodium.
Phase 1, 2, and 3 Sump Composite sampled annually.
TDS - Total Dissolved Solids
TKN - Total Kjeldahl Nitrogen
TOC - Total Organic Compounds
TSS - Total Suspended Solids

Table 3
Monitoring Well Maintenance and Performance Re-Evaluation Schedule
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Compliance with:	2022	2023	2024	2025
567 IAC 114.21(2)"a" high and low water levels (annually)	Completed	Completed	Included	Scheduled
567 IAC 114.21(2)"b" changes in the hydrologic setting and flow paths	Completed	Completed	Included	Scheduled
567 IAC 114.21(2)"c" well depths	Completed	Completed	Included	Scheduled
567 IAC 114.21(2)"d" well recharge rates ⁽¹⁾		Completed		Scheduled

Notes:

⁽¹⁾ In-situ permeability testing was replaced with biennial well recharge rate evaluation in DNR correspondence dated July 22, 2020 (Doc# 98114).

Table 4
Monitoring Well Performance and Maintenance Summary
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Regime	Well	Top of Casing	Top of Screen	Total Depth	Description	Date of Measurements	Maximum Depth Discrepancy (ft)
						10/7/2024	
Clay Unit	MW-101R	1129.88	1111.53	28.9	Groundwater Level (ft)	DRY	2.3
					Groundwater Elevation (Ft MSL)	DRY	
					Measured Well Depth (ft)	26.6	
					Submerged screen	N	
	MW-102R	1128.29	1105.96	27.3	Groundwater Level (ft)	17.00	-1.7
					Groundwater Elevation (Ft MSL)	1111.29	
					Measured Well Depth (ft)	29.0	
					Submerged screen	Y	
	MW-103R	1125.10	1106.90	26.0	Groundwater Level (ft)	14.37	0.0
Groundwater Elevation (Ft MSL)					1110.73		
Measured Well Depth (ft)					26.0		
Submerged screen					Y		
Bedrock Unit	MW-201	1126.13	1094.41	42.0	Groundwater Level (ft)	14.42	0.8
					Groundwater Elevation (Ft MSL)	1111.71	
					Measured Well Depth (ft)	41.2	
					Submerged screen	Y	
	MW-202R	1128.58	1094.96	43.8	Groundwater Level (ft)	18.20	-1.6
					Groundwater Elevation (Ft MSL)	1110.38	
					Measured Well Depth (ft)	45.4	
					Submerged screen	Y	
	MW-203R	1149.85	1092.01	68.1	Groundwater Level (ft)	37.07	5.6
					Groundwater Elevation (Ft MSL)	1112.78	
					Measured Well Depth (ft)	62.5	
					Submerged screen	Y	
	MW-204	1123.80	1090.24	43.6	Groundwater Level (ft)	12.12	-0.1
					Groundwater Elevation (Ft MSL)	1111.68	
					Measured Well Depth (ft)	43.7	
					Submerged screen	Y	
	MW-205	1124.47	1088.82	45.7	Groundwater Level (ft)	11.99	-0.7
					Groundwater Elevation (Ft MSL)	1112.48	
Measured Well Depth (ft)					46.4		
Submerged screen					Y		
MW-206	1128.80	1099.97	39.0	Groundwater Level (ft)	18.11	-0.5	
				Groundwater Elevation (Ft MSL)	1110.69		
				Measured Well Depth (ft)	39.5		
				Submerged screen	Y		

Comments:

- 1) Measured well depths were within 1.0 foot of the installed depths where measured with the following exceptions:
 - (Shallower) MW-101R:** This monitoring well has consistently measured approximately 2.3 feet shallower than the installed depth; however, since the monitoring well produces sufficient groundwater for sampling it is likely that the well is functioning properly.
 - (Shallower) MW-203R:** This monitoring well has consistently measured approximately 5.6 feet shallower than the installed depth during the October 2024 sampling event; however, since the monitoring well produced sufficient groundwater for sampling it is likely that the well is functioning properly.
 - (Deeper) MW-102R & MW-202R:** These monitoring wells have consistently measured approximately 1.6 feet deeper than the installed depth. It is likely either the well construction information was recorded incorrectly or the wells were extended post-installation and the extensions were not recorded.

Table 5
Background and GWPS Summary
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Interwell Background/GWPS (Clay Unit: MW-101R)

Constituent	Units	Samples	Detections	Background Level	Statistical Test	Action Level	Source
Alkalinity, Total	mg/L	15	15	524.3 - 295.2	M+2SD	-	-
Aluminum	mg/L	14	8	0.436	M+2SD	0.05 mg/L	SMCL
Ammonia as N	mg/L	29	11	0.328	M+2SD	30.0 mg/L	HAL
Arsenic	mg/L	14	9	0.003	M+2SD	0.01 mg/L	MCL
Bicarbonate	mg/L	8	8	537.8	M+2SD	-	-
Calcium	mg/L	15	15	228.6	M+2SD	-	-
Carbonate	mg/L	8	0	6.42	M+2SD	-	-
Chloride	mg/L	33	27	14.7	M+2SD	250 mg/L	SMCL
Chromium	mg/L	14	3	0.007	M+2SD	0.1 mg/L	SWS
Lead	mg/L	14	7	0.003	M+2SD	.015 mg/L	SWS
Magnesium	mg/L	15	15	128.7	M+2SD	-	-
Nitrate/Nitrite as N	mg/L	15	7	0.180	M+2SD	-	-
pH	S.U.	24	24	6.29 - 8.53	M+/-2SD	6.5 - 8.5	SMCL
Phosphorus, Total	mg/L	14	2	0.060	M+2SD	-	-
Potassium	mg/L	15	15	11.01	M+2SD	-	-
Selenium	mg/L	14	1	0.003	M+2SD	-	-
Sodium	mg/L	15	15	63.6	M+2SD	20 mg/L	DWA
Specific Conductance	µS/cm	25	25	2765	M+2SD	-	-
Sulfate	mg/L	15	15	710	M+2SD	250 mg/L	SMCL
Total Dissolved Solids	mg/L	31	31	2247	M+2SD	500 mg/L	SMCL
Total Hardness	mg/L	14	14	1006	M+2SD	-	-
Total Kjeldahl Nitrogen	mg/L	14	0	0.50	M+2SD	-	-
Total Organic Carbon	mg/L	14	13	2.14	M+2SD	-	-

Interwell Background/GWPS (Bedrock Unit: MW-203R, MW-205)

Constituent	Units	Samples	Detections	Background Level	Statistical Test	Action Level	Source
Alkalinity, Total	mg/L	47	47	383.0 - 304.0	M+2SD	-	-
Aluminum	mg/L	40	4	0.133	M+2SD	0.05 mg/L	SMCL
Ammonia as N	mg/L	71	69	0.620	M+2SD	30.0 mg/L	HAL
Arsenic	mg/L	40	1	0.001	M+2SD	0.01 mg/L	MCL
Bicarbonate	mg/L	20	20	370.6	M+2SD	-	-
Calcium	mg/L	40	40	135.8	M+2SD	-	-
Carbonate	mg/L	20	0	6.033	M+2SD	-	-
Chloride	mg/L	71	51	29.9	M+2SD	250 mg/L	SMCL
Chromium	mg/L	40	5	0.019	M+2SD	0.1 mg/L	SWS
Lead	mg/L	40	5	0.002	M+2SD	.015 mg/L	SWS
Magnesium	mg/L	40	40	43.8	M+2SD	-	-
Nitrate/Nitrite as N	mg/L	47	0	0.050	M+2SD	-	-
pH	S.U.	61	61	5.51 - 10.13	M+/-2SD	6.5 - 8.5	SMCL
Phosphorus, Total	mg/L	47	3	0.150	M+2SD	-	-
Potassium	mg/L	40	40	10.6	M+2SD	-	-
Selenium	mg/L	40	3	0.003	M+2SD	-	-
Sodium	mg/L	40	40	20.6	M+2SD	20 mg/L	DWA
Specific Conductance	µS/cm	60	60	1743.2	M+2SD	-	-
Sulfate	mg/L	47	28	24.0	M+2SD	250 mg/L	SMCL
Total Dissolved Solids	mg/L	71	71	484.3	M+2SD	500 mg/L	SMCL
Total Hardness	mg/L	47	47	509	M+2SD	-	-
Total Kjeldahl Nitrogen	mg/L	47	14	0.682	M+2SD	-	-
Total Organic Carbon	mg/L	47	42	2.82	M+2SD	-	-

Notes:

- 1) Background levels based on most recent calculated control limits or reporting limit, as applicable.

Acronyms/Abbreviations:

RL = Reporting Limit	MCL = EPA Maximum Contaminant Level
GWPS = Groundwater Protection Standard	SMCL = Secondary Maximum Contaminant Level
SSS = Site-Specific GWPS	HAL = Health Advisory Level
SWS = Statewide Standard	DWA = Drinking Water Advisory
SD = Standard Deviation	ND = Non-Detection

Comments:

- 1) **Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical evaluations consist of control limits which consist of the mean plus two standard deviations (plus and minus two standard deviations for pH).
- 2) **Changes to the previous statistical method during reporting period:** None.

Table 6

**Summary of Well/Detected Constituent Pairs With No Immediately Preceding Control Limit Exceedances
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P**

Spring 2024

Well	Constituent	Units	Result	Background Standard
MW-201	Alkalinity, Total	mg/L	260	383.9 - 303.1
	Chloride	mg/L	31.3	30.3
MW-204	Sodium	mg/L	20.75	20.63

Fall 2024

Well	Constituent	Units	Result	Background Standard
MW-102R	Potassium	mg/L	13	11.01
MW-202R	Nitrate/Nitrite as N	mg/L	0.139	0.05
MW-206	Ammonia as N	mg/L	0.719	0.6199

Note: Tables include control limit exceedances identified during the 2024 sampling events that were not identified as control limit exceedances in the previous year.

Comments:

- 1) **Problems with the current HMSP network:** None.
- 2) **Schedule to implement remedies:** Not applicable.
- 3) **Alternative constituent or sample frequency changes:** None.
- 4) **Significant changes to prediction limits:** None.

Table 7
Summary Table of Ongoing and Newly Identified Control Limit Exceedances
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Key

	Denotes ongoing control limit exceedances that were identified as control limit exceedances during this reporting period and the previous reporting period at least once during each reporting period.
	Denotes newly identified control limit exceedances in the 2024 reporting period. Newly identified is defined as occurring at least once in the current reporting period but not in the immediately preceding reporting period.

Well	Constituent	Units	Result	Background Standard	Action Level/ Statewide Standard
MW-102R-NP	Alkalinity, Total	mg/L	653	524.3 - 295.2	-
	Bicarbonate	mg/L	653	537.8	-
	Calcium	mg/L	446	228.6	-
	Magnesium	mg/L	247	128.7	-
	Potassium	mg/L	13.00	11.01	-
	Specific Conductance	µS/cm	3110	2765	-
	Sulfate	mg/L	1510	709.8	250 mg/L
	Total Dissolved Solids	mg/L	2540	2247	500 mg/L
MW-103R-NP	Alkalinity, Total	mg/L	655	524.3 - 295.2	-
	Bicarbonate	mg/L	655	537.8	-
	Calcium	mg/L	498	228.6	-
	Chloride	mg/L	22.5	14.75	250 mg/L
	Magnesium	mg/L	305	128.7	-
	Nitrate/Nitrite as N	mg/L	0.435	0.1798	-
	Potassium	mg/L	25.4	11.01	-
	Specific Conductance	µS/cm	3463	2765	-
	Sulfate	mg/L	1770	709.8	250 mg/L
	Total Dissolved Solids	mg/L	3100	2247	500 mg/L
MW-201	Alkalinity, Total	mg/L	260	383.9 - 303.1	-
	Chloride	mg/L	31.3	30.3	250 mg/L
	Magnesium	mg/L	49.5	43.77	-
	Potassium	mg/L	23.2	10.61	-
	Sodium	mg/L	25.2	20.56	20 mg/L
	Sulfate	mg/L	119	23.99	250 mg/L
	Total Dissolved Solids	mg/L	522	484.3	500 mg/L
MW-202R	Alkalinity, Total	mg/L	283	383.9 - 303.1	-
	Carbonate	mg/L	165	6.177	-
	Magnesium	mg/L	67.7	43.77	-
	Nitrate/Nitrite as N	mg/L	0.139	0.05	-
	Sodium	mg/L	56.4	23.99	20 mg/L
	Sulfate	mg/L	68.9	23.98	250 mg/L
MW-204	Magnesium	mg/L	55.4	43.77	-
	Potassium	mg/L	12.85	10.61	-
	Sodium	mg/L	20.75	10.63	20 mg/L
	Sulfate	mg/L	146.5	23.99	250 mg/L
	Total Dissolved Solids	mg/L	557	484.3	500 mg/L
MW-206	Ammonia as N	mg/L	0.719	0.6199	30 mg/L
	Sulfate	mg/L	30.3	23.99	250 mg/L

Comments:

- 1) **Problems with the current HMSP network:** None.
- 2) **Proposed remedies:** None.
- 3) **Alternative constituent or sample frequency changes:** None.
- 4) **Plume delineation strategies:** Not Applicable.
- 5) **Property owner notifications:** Not applicable.

Table 8
Summary of Groundwater Chemistry
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

The Summary of Groundwater Chemistry is located in Appendix C.

Table 9
Historical Control Limit & Action Level Exceedances
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Key

	Control Limit Exceedance
X	Action Level Exceedance

Well	Constituent	2021	2022	2023	2024
MW-102R-NP	Alkalinity, Total				
	Bicarbonate				
	Calcium				
	Magnesium				
	Potassium				
	Sodium	X	X	X	X
	Specific Conductance				
	Sulfate				X
	Total Dissolved Solids	X	X	X	X
	Total Hardness				
Total Organic Carbon					
MW-103R-NP	Alkalinity, Total				
	Bicarbonate				
	Calcium				
	Chloride				
	Magnesium				
	Nitrate/Nitrite as N				
	Potassium				
	Sodium	X	X	X	X
	Specific Conductance				
	Sulfate	X	X	X	X
Total Dissolved Solids	X	X	X	X	
Total Hardness					
Total Organic Carbon					
MW-201	Alkalinity, Total				
	Ammonia as N				
	Arsenic				
	Bicarbonate				
	Chloride				
	Lead				
	Magnesium				
	Nitrate/Nitrite as N			X	
	pH			X	
	Potassium				
Selenium					
Sodium	X	X	X	X	
Sulfate					
Total Dissolved Solids	X	X	X	X	
Total Hardness					
MW-202R	Total Alkalinity				
	Bicarbonate				
	Carbonate				
	Magnesium				
	Nitrate/Nitrite as N				
pH		X	X		
Sodium	X	X	X	X	
Sulfate					
MW-204	Total Alkalinity				
	Bicarbonate				
	Magnesium				
	Potassium				
	Sodium	X		X	X
Sulfate					
Total Dissolved Solids	X	X	X	X	
MW-206	Ammonia as N				
	Bicarbonate				
	Sodium	X			
Sulfate					

Comments: Action level exceedances for upgradeint monitoring wells not included.

Table 10
Groundwater Quality Assessment Plan Trend Analysis
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

See Appendix E for Mann-Kendall Trend Analysis

Figures

- 1 Approved Monitoring Network
- 2 Spring Groundwater Contours (Clay)
- 3 Fall Groundwater Contours (Clay)
- 4 Spring Groundwater Contours (Bedrock)
- 5 Fall Groundwater Contours (Bedrock)

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Approved Monitoring Network

Legend

- | | | |
|--------------------------|--------------------------|-----------------------|
| Bedrock Monitoring Point | Leachate Piezometer | FML Liner Boundary |
| Clay Monitoring Point | Leak Detection Lysimeter | Future Waste Boundary |
| Monitoring Well | Waste Boundary | Property Boundary |
| | Existing Cell Boundary | |

Lehigh Cement Company
 Mason City, Iowa
 Project No: 27224104.00
 Drawing Date: November
 2024

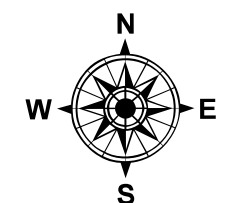


Figure 1

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Fall Groundwater Contours (Clay)



Legend

- ▲ Monitoring Well
- ▲ Leachate Piezometer
- ▲ Leak Detection Lysimeter
- Waste Boundary
- - - Existing Cell Boundary
- - - FML Liner Boundary
- Future Waste Boundary
- Property Boundary

Lehigh Cement Company
 Mason City, Iowa
 Project No: 27224104.00
 Drawing Date: November
 2024

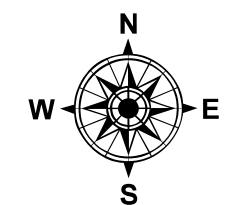


Figure 3

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SW-1 is Located 1-Mile East of the Site on Calmus Creek



Fall Groundwater Contours (Bedrock)

Legend		
Approximate Groundwater Contours Based on Field Measurements Taken October 7, 2024	Leachate Piezometer	FML Liner Boundary
Monitoring Well	Leak Detection Lysimeter	Future Waste Boundary
	Waste Boundary	Property Boundary
	Existing Cell Boundary	

Lehigh Cement Company
Mason City, Iowa
Project No: 27224104.00
Drawing Date: November 2024

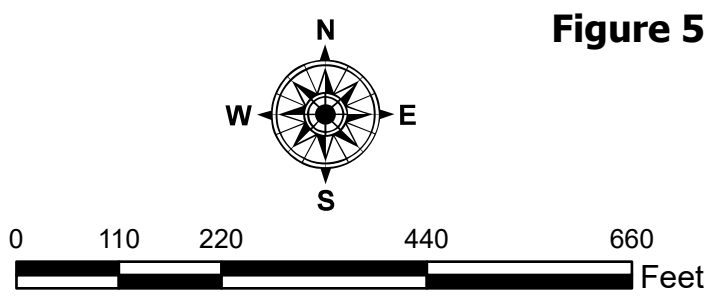



Figure 5

ENR, CCA, CCA, CCA, ENR, Tom Iwan, Graham, Fournier, PAO, METU, NCSA, UCCS, USDA, NRI, Iowa State University GIS Facility



Appendix A
Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-101R-NO PURGE	Date: 4/29/2024
Gradient: Up	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped?	Yes	
Litter/Standing Water?	No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	26.6
Initial Static Water Level (feet):	18.04
Initial Groundwater Elevation (ft-amsl):	1111.84
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:04 PM	Purging start time.						
3:07 PM	11.7	3.7	1369.2	7.15	114.5	51.2	
3:10 PM	11.9	3.3	1359.7	7.09	78.3	48.2	
3:13 PM	12.1	3.2	1355.9	7.06	59.4	45.5	
3:16 PM	12.4	3.1	1354.4	7.05	52.5	47.2	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none
----------------------	-------------------------

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-102R-NO PURGE	Date: 4/29/2024
Gradient: Down	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.9
Initial Static Water Level (feet):	14.02
Initial Groundwater Elevation (ft-amsl):	1111.08
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING	
-----------------	--

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:06 PM	Purging start time.						
2:09 PM	10.6	4.4	2821.4	6.77	191.9	3.8	
2:12 PM	10.9	4.1	2821.3	6.74	194.0	3.0	
2:15 PM	11.1	4.1	2824.0	6.73	194.0	2.9	
2:18 PM	11.4	4.1	2826.0	6.73	193.4	2.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE	
---------------------	--

Does the well require any future maintenance?		No
If yes, explain:		

Additional Comments:	Color: Clear Odor: None
----------------------	----------------------------

FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-103R-NO PURGE	Date:	4/29/2024
Gradient:	Down	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.1
Initial Static Water Level (feet):	11.73
Initial Groundwater Elevation (ft-amsl):	1113.37
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:34 PM	Purging start time.						
12:37 PM	11.0	4.2	2870.3	6.66	224.8	2.2	
12:40 PM	11.2	3.9	2871.8	6.70	220.7	2.2	
12:43 PM	11.4	3.8	2878.3	6.72	217.8	2.2	
12:46 PM	11.5	3.7	2880.7	6.72	215.2	2.2	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-None
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FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-101R-RECHARGE	Date:	4/30/2024
Gradient:	Up	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.6
Initial Static Water Level (feet):	18.21
Initial Groundwater Elevation (ft-amsl):	1111.67
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES						
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)
9:53 AM	Purging start time.					
9:56 AM	11.6	1.5	764.7	7.12	27.1	17.8
9:59 AM	11.5	0.6	767.2	7.03	2.7	16.7
10:02 AM	11.6	0.4	773.8	7.00	-7.4	19.0
10:05 AM	11.7	0.3	782.8	6.98	-14.2	21.2
Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-202R	Date:	4/29/2024
Gradient:	Down	Sampler:	Andrew Phillips

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	45.4
Initial Static Water Level (feet):	16.03
Initial Groundwater Elevation (ft-amsl):	1112.55
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:36 PM	Purging start time.						
3:39 PM	10.7	1.6	754.4	7.46	-145.6	0.4	
3:42 PM	10.9	0.3	750.0	7.42	-194.6	0.6	
3:45 PM	10.9	<0.1	748.5	7.42	-216.6	0.7	
3:48 PM	10.7	<0.1	748.1	7.42	-228.3	0.9	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-203R	Date: 4/29/2024
Gradient: Up	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	62.5
Initial Static Water Level (feet):	36.29
Initial Groundwater Elevation (ft-amsl):	1113.56
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
5:58 PM	Purging start time.						
6:01 PM	9.7	0.7	582.0	7.23	-105.7	11.9	
6:04 PM	9.8	0.1	579.5	7.12	-111.2	7.0	
6:07 PM	9.9	<0.1	575.3	7.09	-112.4	3.7	
6:10 PM	10.0	<0.1	573.1	7.08	-112.9	2.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: sulfur
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-204	Date: 4/29/2024
Gradient: Down	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped?	Yes	
Litter/Standing Water?	No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	43.7
Initial Static Water Level (feet):	11.21
Initial Groundwater Elevation (ft-amsl):	1112.59
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
4:20 PM	Purging start time.						
4:23 PM	10.4	2.0	845.3	7.18	-89.8	0.4	
4:26 PM	10.5	0.3	856.0	7.04	-89.0	1.7	
4:29 PM	10.5	<0.1	859.8	7.00	-87.3	0.6	
4:32 PM	10.4	<0.1	862.3	6.98	-85.6	0.8	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.9
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	158.33

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none
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FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-205	Date:	4/30/2024
Gradient:	Up	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped?	Yes	
Litter/Standing Water?	No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	46.4
Initial Static Water Level (feet):	11.82
Initial Groundwater Elevation (ft-amsl):	1112.65
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
8:33 AM	Purging start time.						
8:36 AM	10.1	1.2	594.8	7.05	-66.6	0.6	
8:39 AM	10.2	0.3	601.5	6.99	-78.7	0.3	
8:42 AM	10.3	<0.1	603.3	6.98	-79.3	0.5	
8:45 AM	10.4	<0.1	603.2	6.99	-79.2	0.5	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color: clear Odor: none

FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-206	Date:	4/30/2024
Gradient:	Down	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	39.6
Initial Static Water Level (feet):	17.08
Initial Groundwater Elevation (ft-amsl):	1111.72
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:11 AM	Purging start time.						
9:14 AM	11.2	2.3	638.5	7.16	-9.3	0.7	
9:17 AM	11.1	0.3	639.1	7.03	-33.4	0.6	
9:20 AM	11.2	<0.1	638.9	6.99	-39.7	1.0	
9:23 AM	11.3	<0.1	638.9	6.98	-41.5	1.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none
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FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	LDR-1	Date:	4/30/2024
Gradient:	N/A	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	23.0
Initial Static Water Level (feet):	11.22
Initial Groundwater Elevation (ft-amsl):	1114.59
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:35 PM	Purging start time.						
12:38 PM	11.9	4.9	2921.6	6.95	60.8	1674.8	
12:41 PM	11.1	5.1	2899.3	6.90	65.8	82.6	
12:44 PM	10.7	5.0	2900.7	6.90	80.0	42.5	
12:47 PM	10.4	3.8	2907.2	6.79	88.9	21.4	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill			
Monitoring Well/Piezometer ID:	LDR-2	Date:	4/30/2024
Gradient:	N/A	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	13.1
Initial Static Water Level (feet):	6.59
Initial Groundwater Elevation (ft-amsl):	1115.81
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (μS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:49 AM	Purging start time.						
10:52 AM	9.7	3.9	3081.8	6.55	124.6	12.5	
10:55 AM	9.9	3.6	3083.3	6.55	125.5	7.5	
10:58 AM	10.1	3.5	3085.5	6.56	126.1	4.8	
11:01 AM	11.0	3.6	3070.2	6.56	126.7	4.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance? No	
If yes, explain:	
Additional Comments:	Color: slight yellow tint Odor: none Volume Evacuated: 40 gallons

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: LDR-3	Date: 4/30/2024
Gradient: N/A	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	16.9
Initial Static Water Level (feet):	13.80
Initial Groundwater Elevation (ft-amsl):	1109.79
Equipment Used: Dedicated Tubing – Peristaltic Pump	

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
11:51 AM	Purging start time.						
11:54 AM	9.6	0.6	5346.8	6.60	104.8	28.6	
11:57 AM	10.2	0.2	5345.2	6.57	87.0	23.8	
12:00 PM	10.3	<0.1	5348.2	6.57	74.3	18.8	
12:03 PM	10.3	<0.1	5350.3	6.57	67.3	14.0	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color: clear Odor: none Volume Evacuated: 27 gallons
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FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-101R-NO PURGE	Date:	10/7/2024
Gradient:	Up	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.6
Initial Static Water Level (feet):	26.57
Initial Groundwater Elevation (ft-amsl):	0.00
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
	Purging start time.						
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	0.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	
Average Purge Rate (mL/min):	0.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Not enough water for sample, SWL-26.57

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill			
Monitoring Well/Piezometer ID: MW-102R-NO PURGE		Date: 10/7/2024	
Gradient: Down		Sampler: Konner Roth	

A. MW/PIEZOMETER CONDITIONS		
Well/Piezometer Capped?	Yes	
Litter/Standing Water?	No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	29.0
Initial Static Water Level (feet):	17.00
Initial Groundwater Elevation (ft-amsl):	1111.29
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
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FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:50 PM	Purging start time.						
2:53 PM	15.1	1.3	3129.8	6.50	114.1	9.3	
2:56 PM	15.5	0.5	3121.0	6.47	109.6	18.9	
2:59 PM	16.0	0.3	3115.6	6.46	104.1	29.1	
3:02 PM	17.2	0.3	3110.1	6.46	98.9	33.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.7
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	141.67

D. WELL MAINTENANCE	
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Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-None very slow collecting sample
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill			
Monitoring Well/Piezometer ID: MW-103R-NO PURGE		Date: 10/7/2024	
Gradient: Down		Sampler: Konner Roth	

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.0
Initial Static Water Level (feet):	14.37
Initial Groundwater Elevation (ft-amsl):	1110.73
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:14 PM	Purging start time.						
2:17 PM	16.2	3.0	3474.7	6.61	91.5	11.7	
2:20 PM	15.8	2.5	3466.8	6.59	100.0	26.2	
2:23 PM	15.6	2.5	3465.3	6.59	105.0	54.6	
2:26 PM	15.7	2.5	3463.3	6.58	108.3	67.1	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-201	Date: 10/8/2024
Gradient: Down	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	41.2
Initial Static Water Level (feet):	14.42
Initial Groundwater Elevation (ft-amsl):	1111.71
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (μS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
11:02 AM	Purging start time.						
11:05 AM	14.4	1.8	951.1	7.62	-93.9	6.3	
11:08 AM	14.1	0.7	952.9	7.35	-126.4	12.6	
11:11 AM	14.1	0.3	952.1	7.27	-133.3	19.4	
11:14 AM	14.1	0.2	951.8	7.25	-135.8	34.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-Sulfur

FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-202R	Date:	10/8/2024
Gradient:	Down	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	45.4
Initial Static Water Level (feet):	18.20
Initial Groundwater Elevation (ft-amsl):	1110.38
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING	
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FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:29 AM	Purging start time.						
10:32 AM	14.7	2.3	680.3	9.57	-33.2	3.4	
10:35 AM	14.9	1.1	676.6	9.65	-39.3	3.4	
10:38 AM	14.3	0.8	679.4	9.67	-42.1	3.6	
10:41 AM	14.0	0.6	680.3	9.67	-44.0	3.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-None
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FORM FOR GROUNDWATER SAMPLING

Project:	Heidelberg Materials US Cement CKD Monofill		
Monitoring Well/Piezometer ID:	MW-203R	Date:	10/7/2024
Gradient:	Up	Sampler:	Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	62.5
Initial Static Water Level (feet):	37.07
Initial Groundwater Elevation (ft-amsl):	1112.78
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
4:20 PM	Purging start time.						
4:23 PM	11.3	2.2	633.6	7.14	0.4	21.8	
4:26 PM	11.3	0.8	631.3	7.06	-59.8	9.9	
4:29 PM	11.5	0.4	625.5	7.04	-75.3	6.1	
4:32 PM	11.7	0.2	623.2	7.03	-82.0	4.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-Sulfur
----------------------	-------------------------

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-204	Date: 10/8/2024
Gradient: Down	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	43.7
Initial Static Water Level (feet):	12.12
Initial Groundwater Elevation (ft-amsl):	1111.68
Equipment Used: Dedicated Tubing – Peristaltic Pump	

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:35 AM	Purging start time.						
9:38 AM	13.4	2.0	900.7	7.23	76.8	3.4	
9:41 AM	13.3	0.9	933.6	6.98	7.4	3.8	
9:44 AM	13.4	0.5	947.1	6.91	-21.7	5.0	
9:47 AM	13.5	0.3	954.1	6.89	-33.4	6.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Mostly clear with a slight yellow tint, Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-205	Date: 10/7/2024
Gradient: Up	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	46.4
Initial Static Water Level (feet):	11.99
Initial Groundwater Elevation (ft-amsl):	1112.48
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
4:56 PM	Purging start time.						
4:59 PM	13.9	1.8	608.4	7.42	-65.5	3.5	
5:02 PM	13.8	0.7	649.3	7.14	-80.3	3.6	
5:05 PM	13.8	0.4	657.1	7.00	-80.6	4.4	
5:08 PM	13.8	0.2	659.5	6.96	-80.5	7.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.9
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	158.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-Sulfur
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: MW-206	Date: 10/7/2024
Gradient: Down	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	39.5
Initial Static Water Level (feet):	18.11
Initial Groundwater Elevation (ft-amsl):	1110.69
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING	
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FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:26 PM	Purging start time.						
3:29 PM	14.5	1.9	818.5	7.10	71.1	4.7	
3:32 PM	14.3	0.8	746.6	7.03	22.7	6.3	
3:35 PM	14.4	0.4	716.2	6.99	-10.9	8.6	
3:38 PM	15.4	0.3	706.3	6.96	-25.6	11.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE	
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Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-None
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FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: LDR-1	Date: 10/8/2024
Gradient: N/A	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	23.0
Initial Static Water Level (feet):	11.91
Initial Groundwater Elevation (ft-amsl):	1113.90
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
11:43 AM	Purging start time.						
11:46 AM	16.0	1.5	3323.1	6.44	27.3	13.8	
11:49 AM	16.4	0.7	3371.5	6.41	-2.2	17.1	
11:52 AM	16.5	0.4	3363.6	6.42	-16.9	20.4	
11:55 AM	16.5	0.2	3351.9	6.42	-21.5	25.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-Sulfur

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: LDR-2	Date: 10/8/2024
Gradient: N/A	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	13.1
Initial Static Water Level (feet):	5.68
Initial Groundwater Elevation (ft-amsl):	1116.72
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:35 PM	Purging start time.						
12:38 PM	18.4	3.1	3498.9	6.27	49.0	14.2	
12:41 PM	18.8	2.5	3482.1	6.25	61.8	19.6	
12:44 PM	17.5	2.3	3469.3	6.24	70.8	27.5	
12:47 PM	17.5	2.2	3466.4	6.24	77.0	35.8	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Heidelberg Materials US Cement CKD Monofill	
Monitoring Well/Piezometer ID: LDR-3	Date: 10/8/2024
Gradient: N/A	Sampler: Konner Roth

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	17.0
Initial Static Water Level (feet):	14.43
Initial Groundwater Elevation (ft-amsl):	1109.16
Equipment Used:	Dedicated Tubing – Peristaltic Pump


C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES						
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)
1:40 PM	Purging start time.					
1:43 PM	19.3	1.5	6027.8	6.36	64.1	3.7
1:46 PM	19.6	1.0	6075.4	6.34	55.1	4.0
1:49 PM	20.0	0.9	6068.9	6.33	42.9	4.3
1:52 PM	20.5	0.8	6082.7	6.32	35.2	4.6
Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	Color-Clear Odor-None
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Appendix B-1
Laboratory Analytical Data Sheets



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Jensen
SCS Engineers
1690 All State Court
Suite 100
West Des Moines, Iowa 50265

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JOB DESCRIPTION

Heidelberg CKD Monofill Spring 2024
Heidelberg Materials CKD Monofill

JOB NUMBER

310-280174-1

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Case Narrative

Client: SCS Engineers
Project: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1

Job ID: 310-280174-1

Eurofins Cedar Falls

Job Narrative 310-280174-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/1/2024 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.6°C, 1.6°C, 1.8°C and 2.9°C.

HPLC/IC

Method 9056A_ORGFM_48H: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-101R-No Purge (310-280174-1), MW-102R-No Purge (310-280174-2), MW-103R-No Purge (310-280174-3), MW-201 (310-280174-5), MW-202R (310-280174-6), MW-203R (310-280174-7), MW-204 (310-280174-8) and MW-D (310-280174-16).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B: The following samples were received with insufficient preservation: Phase 1,2,3 Sump Composite (310-280174-15). The maximum amount of preservative was added by the laboratory, but the sample remained strongly basic. No further attempt was made to acidify the sample, as it would have diluted the sample. This does not meet regulatory requirements.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 350.1: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: Phase 1,2,3 Sump Composite (310-280174-15). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 353.2: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: Phase 1,2,3 Sump Composite (310-280174-15). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 353.2: The following sample was diluted due to the nature of the sample matrix: MW-201 (310-280174-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Cedar Falls

Sample Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-280174-1	MW-101R-No Purge	Water	04/29/24 15:35	05/01/24 14:00
310-280174-2	MW-102R-No Purge	Water	04/29/24 14:38	05/01/24 14:00
310-280174-3	MW-103R-No Purge	Water	04/29/24 13:01	05/01/24 14:00
310-280174-4	MW-101R-Recharge	Water	04/30/24 16:24	05/01/24 14:00
310-280174-5	MW-201	Water	04/29/24 17:47	05/01/24 14:00
310-280174-6	MW-202R	Water	04/29/24 16:07	05/01/24 14:00
310-280174-7	MW-203R	Water	04/29/24 18:23	05/01/24 14:00
310-280174-8	MW-204	Water	04/29/24 16:50	05/01/24 14:00
310-280174-9	MW-205	Water	04/30/24 09:00	05/01/24 14:00
310-280174-10	MW-206	Water	04/30/24 09:40	05/01/24 14:00
310-280174-11	LDR-1	Water	04/30/24 13:02	05/01/24 14:00
310-280174-12	LDR-2	Water	04/30/24 11:15	05/01/24 14:00
310-280174-13	LDR-3	Water	04/30/24 12:18	05/01/24 14:00
310-280174-14	SW-1	Water	04/30/24 13:30	05/01/24 14:00
310-280174-15	Phase 1,2,3 Sump Composite	Water	04/30/24 13:50	05/01/24 14:00
310-280174-16	MW-D	Water	04/29/24 16:50	05/01/24 14:00

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Detection Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-101R-No Purge

Lab Sample ID: 310-280174-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	3.64		1.00	0.450	mg/L			1	9056A	Total/NA
Sulfate	304		20.0	8.40	mg/L			20	9056A	Total/NA
Aluminum	0.158	F1 F2	0.0500	0.0210	mg/L			1	6020B	Total/NA
Arsenic	0.00216		0.00200	0.000530	mg/L			1	6020B	Total/NA
Calcium	144		0.500	0.190	mg/L			1	6020B	Total/NA
Lead	0.000587		0.000500	0.000260	mg/L			1	6020B	Total/NA
Magnesium	78.8		0.500	0.150	mg/L			1	6020B	Total/NA
Potassium	7.97		0.500	0.150	mg/L			1	6020B	Total/NA
Sodium	44.3		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	684		2.06	0.618	mg/L			1	SM 2340B	Total/NA
Ammonia	0.216	F1	0.200	0.100	mg/L			1	350.1	Total/NA
Total Organic Carbon	0.996	J	1.00	0.500	mg/L			1	9060A	Total/NA
Total Suspended Solids	150		3.75	2.78	mg/L			1	I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	254		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	254		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Total Dissolved Solids	824		50.0	42.0	mg/L			1	SM 2540C	Total/NA

Client Sample ID: MW-102R-No Purge

Lab Sample ID: 310-280174-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	5.44		1.00	0.450	mg/L			1	9056A	Total/NA
Nitrate as N	0.0831	J H	0.200	0.0780	mg/L			1	9056A	Total/NA
Sulfate	1480		100	42.0	mg/L			100	9056A	Total/NA
Arsenic	0.000713	J	0.00200	0.000530	mg/L			1	6020B	Total/NA
Calcium	455		2.00	0.760	mg/L			4	6020B	Total/NA
Lead	0.000261	J	0.000500	0.000260	mg/L			1	6020B	Total/NA
Magnesium	245		2.00	0.600	mg/L			4	6020B	Total/NA
Potassium	12.3		0.500	0.150	mg/L			1	6020B	Total/NA
Selenium	0.00201	J	0.00500	0.00140	mg/L			1	6020B	Total/NA
Sodium	51.2		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	2150		8.24	2.47	mg/L			1	SM 2340B	Total/NA
Nitrate Nitrite as N	0.0916	J	0.100	0.0800	mg/L			1	353.2	Total/NA
Total Organic Carbon	1.34		1.00	0.500	mg/L			1	9060A	Total/NA
Total Suspended Solids	4.13		1.88	1.39	mg/L			1	I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	696		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	696		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Total Dissolved Solids	2610		250	210	mg/L			1	SM 2540C	Total/NA

Client Sample ID: MW-103R-No Purge

Lab Sample ID: 310-280174-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	19.9		1.00	0.450	mg/L			1	9056A	Total/NA
Nitrate as N	0.354	H H3	0.200	0.0780	mg/L			1	9056A	Total/NA
Sulfate	1790		100	42.0	mg/L			100	9056A	Total/NA
Calcium	468		2.00	0.760	mg/L			4	6020B	Total/NA
Magnesium	268		2.00	0.600	mg/L			4	6020B	Total/NA
Potassium	20.6		0.500	0.150	mg/L			1	6020B	Total/NA
Sodium	57.3		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	2270		8.24	2.47	mg/L			1	SM 2340B	Total/NA
Ammonia	0.125	J	0.200	0.100	mg/L			1	350.1	Total/NA
Nitrate Nitrite as N	0.363		0.100	0.0800	mg/L			1	353.2	Total/NA
Total Organic Carbon	1.06		1.00	0.500	mg/L			1	9060A	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-103R-No Purge (Continued)

Lab Sample ID: 310-280174-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	3.75		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	588		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	588		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	3100		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-101R-Recharge

Lab Sample ID: 310-280174-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.89		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	94.2		1.00	0.420	mg/L	1		9056A	Total/NA
Aluminum	0.0631		0.0500	0.0210	mg/L	1		6020B	Total/NA
Arsenic	0.00559		0.00200	0.000530	mg/L	1		6020B	Total/NA
Calcium	94.3		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	46.8		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	6.35		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	26.7		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	428		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.325		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	0.982	J	1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	12.8		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	364		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	364		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	480		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-201

Lab Sample ID: 310-280174-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31.3		1.00	0.450	mg/L	1		9056A	Total/NA
Nitrate as N	0.680	H	0.200	0.0780	mg/L	1		9056A	Total/NA
Sulfate	125		20.0	8.40	mg/L	20		9056A	Total/NA
Calcium	61.3		0.500	0.190	mg/L	1		6020B	Total/NA
Chromium	0.00181	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Magnesium	55.1		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	29.9		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	27.8		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	380		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.147	J	0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.48		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	260		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	260		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	458		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-202R

Lab Sample ID: 310-280174-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19.5		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	99.3		20.0	8.40	mg/L	20		9056A	Total/NA
Calcium	80.9		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	53.3		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	6.86		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	23.5		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	421		2.06	0.618	mg/L	1		SM 2340B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-202R (Continued)

Lab Sample ID: 310-280174-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia	0.329		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.34		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	283		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	283		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	432		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-203R

Lab Sample ID: 310-280174-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.64		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	0.846	J	1.00	0.420	mg/L	1		9056A	Total/NA
Calcium	73.8		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	32.0		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	5.05		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	16.7		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	316		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.339		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.17		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	2.75		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	342		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	342		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	312		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-204

Lab Sample ID: 310-280174-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26.9		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	148		20.0	8.40	mg/L	20		9056A	Total/NA
Calcium	112		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	53.9		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	11.2		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	19.5		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	502		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.497		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.73		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	1.88		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	278		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	278		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	574		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-205

Lab Sample ID: 310-280174-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.75		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	16.7		1.00	0.420	mg/L	1		9056A	Total/NA
Calcium	77.7		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	34.5		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	5.73		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	17.4		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	336		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.281		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.02		1.00	0.500	mg/L	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-205 (Continued)

Lab Sample ID: 310-280174-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	2.63		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	328		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	328		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	338		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-206

Lab Sample ID: 310-280174-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.01		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	28.2		1.00	0.420	mg/L	1		9056A	Total/NA
Calcium	81.9		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	37.0		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	6.29		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	16.7		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	357		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia	0.335		0.200	0.100	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.04		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	342		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	342		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	354		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-1

Lab Sample ID: 310-280174-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36.2		1.00	0.450	mg/L	1		9056A	Total/NA
Nitrate as N	0.162	J	0.200	0.0780	mg/L	1		9056A	Total/NA
Sulfate	1560		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	0.0822		0.0500	0.0210	mg/L	1		6020B	Total/NA
Calcium	486		2.00	0.760	mg/L	4		6020B	Total/NA
Chromium	0.00411	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Magnesium	263		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	47.0		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	27.3		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	2300		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Nitrate Nitrite as N	0.179		0.100	0.0800	mg/L	1		353.2	Total/NA
Total Phosphorus as P	0.0818	J	0.100	0.0670	mg/L	1		365.1	Total/NA
Total Organic Carbon	1.32		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	32.4		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	649		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	649		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2750		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-2

Lab Sample ID: 310-280174-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	188		100	45.0	mg/L	100		9056A	Total/NA
Sulfate	1330		100	42.0	mg/L	100		9056A	Total/NA
Calcium	442		2.00	0.760	mg/L	4		6020B	Total/NA
Magnesium	227		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	70.3		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	62.9		4.00	1.92	mg/L	4		6020B	Total/NA
Total Hardness	2040		8.24	2.47	mg/L	1		SM 2340B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-2 (Continued)

Lab Sample ID: 310-280174-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.41		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	705		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	705		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2830		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-3

Lab Sample ID: 310-280174-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	640		100	45.0	mg/L	100		9056A	Total/NA
Nitrate as N	0.649		0.200	0.0780	mg/L	1		9056A	Total/NA
Sulfate	2160		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	0.0265	J	0.0500	0.0210	mg/L	1		6020B	Total/NA
Calcium	686		2.50	0.950	mg/L	5		6020B	Total/NA
Chromium	0.0343		0.00500	0.00120	mg/L	1		6020B	Total/NA
Magnesium	383		2.50	0.750	mg/L	5		6020B	Total/NA
Potassium	357		2.50	0.750	mg/L	5		6020B	Total/NA
Sodium	117		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	3290		10.3	3.09	mg/L	1		SM 2340B	Total/NA
Ammonia	0.222		0.200	0.100	mg/L	1		350.1	Total/NA
Nitrate Nitrite as N	0.896	J	1.00	0.800	mg/L	10		353.2	Total/NA
Total Organic Carbon	0.956	J	1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	32.1		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	692		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	692		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	4800		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: SW-1

Lab Sample ID: 310-280174-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	76.1		1.00	0.450	mg/L	1		9056A	Total/NA
Sulfate	238		20.0	8.40	mg/L	20		9056A	Total/NA
Aluminum	0.0248	J	0.0500	0.0210	mg/L	1		6020B	Total/NA
Arsenic	0.000678	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Calcium	101		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	27.0		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	186		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	13.0		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	363		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Total Organic Carbon	5.20		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	5.37		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	355		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	355		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	808		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: Phase 1,2,3 Sump Composite

Lab Sample ID: 310-280174-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2180		100	45.0	mg/L	100		9056A	Total/NA
Nitrate as N	0.526		0.200	0.0780	mg/L	1		9056A	Total/NA
Sulfate	5620		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.160		0.0500	0.0133	mg/L	25		6020B	Total/NA
Calcium	8.61	J	12.5	4.75	mg/L	25		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: Phase 1,2,3 Sump Composite (Continued)

Lab Sample ID: 310-280174-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chromium	0.141		0.125	0.0300	mg/L		25		6020B	Total/NA
Potassium	8420		62.5	18.8	mg/L		125		6020B	Total/NA
Selenium	0.305		0.125	0.0350	mg/L		25		6020B	Total/NA
Sodium	557		25.0	12.0	mg/L		25		6020B	Total/NA
Total Hardness	21.5	J	51.5	15.4	mg/L		1		SM 2340B	Total/NA
Ammonia as N	5.88		0.500	0.210	mg/L		1		350.1	Total/NA
Total Kjeldahl Nitrogen	9.68		5.00	2.85	mg/L		1		351.2	Total/NA
Nitrate Nitrite as N	1.55		0.100	0.0800	mg/L		1		353.2	Total/NA
Total Phosphorus as P	2.46		0.500	0.335	mg/L		1		365.1	Total/NA
Total Organic Carbon	40.3		10.0	5.00	mg/L		10		9060A	Total/NA
Total Suspended Solids	372		30.0	22.2	mg/L		1		I-3765-85	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	6720		25.0	12.5	mg/L		1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO ₃	2770		25.0	12.5	mg/L		1		SM 2320B	Total/NA
Total Dissolved Solids	20600		2500	2100	mg/L		1		SM 2540C	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-280174-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	27.0		1.00	0.450	mg/L		1		9056A	Total/NA
Sulfate	151		20.0	8.40	mg/L		20		9056A	Total/NA
Arsenic	0.000561	J	0.00200	0.000530	mg/L		1		6020B	Total/NA
Calcium	122		0.500	0.190	mg/L		1		6020B	Total/NA
Magnesium	50.9		0.500	0.150	mg/L		1		6020B	Total/NA
Potassium	21.1		0.500	0.150	mg/L		1		6020B	Total/NA
Sodium	22.0		1.00	0.480	mg/L		1		6020B	Total/NA
Total Hardness	514		2.06	0.618	mg/L		1		SM 2340B	Total/NA
Ammonia	0.414		0.200	0.100	mg/L		1		350.1	Total/NA
Total Organic Carbon	1.32		1.00	0.500	mg/L		1		9060A	Total/NA
Total Suspended Solids	5.37		1.88	1.39	mg/L		1		I-3765-85	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	334		5.00	2.50	mg/L		1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO ₃	334		5.00	2.50	mg/L		1		SM 2320B	Total/NA
Total Dissolved Solids	566		50.0	42.0	mg/L		1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
SM 2340B	Total Hardness	Water	Total/NA	mg/L	0.500	3.3

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-101R-No Purge

Lab Sample ID: 310-280174-1

Date Collected: 04/29/24 15:35

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.64		1.00	0.450	mg/L			05/01/24 21:18	1
Nitrate as N	<0.200	H	0.200	0.0780	mg/L			05/01/24 21:18	1
Sulfate	304		20.0	8.40	mg/L			05/02/24 11:54	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.158	F1 F2	0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 20:44	1
Arsenic	0.00216		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 20:44	1
Calcium	144		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 20:44	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 20:44	1
Lead	0.000587		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 20:44	1
Magnesium	78.8		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:30	1
Potassium	7.97		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 20:44	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 20:44	1
Sodium	44.3		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 20:44	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	684		2.06	0.618	mg/L			05/07/24 17:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.216	F1	0.200	0.100	mg/L			05/03/24 22:36	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:53	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/09/24 16:14	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:05	1
Total Organic Carbon (SW846 9060A)	0.996	J	1.00	0.500	mg/L			05/03/24 23:48	1
Total Suspended Solids (USGS I-3765-85)	150		3.75	2.78	mg/L			05/03/24 08:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	254		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	254		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	824		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-102R-No Purge

Lab Sample ID: 310-280174-2

Date Collected: 04/29/24 14:38

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.44		1.00	0.450	mg/L			05/01/24 21:29	1
Nitrate as N	0.0831	J H	0.200	0.0780	mg/L			05/01/24 21:29	1
Sulfate	1480		100	42.0	mg/L			05/02/24 12:05	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:15	1
Arsenic	0.000713	J	0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:15	1
Calcium	455		2.00	0.760	mg/L		05/03/24 09:00	05/07/24 17:45	4
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:15	1
Lead	0.000261	J	0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:15	1
Magnesium	245		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 17:45	4
Potassium	12.3		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:15	1
Selenium	0.00201	J	0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:15	1
Sodium	51.2		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:15	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2150		8.24	2.47	mg/L			05/07/24 17:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			05/03/24 22:38	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:51	1
Nitrate Nitrite as N (EPA 353.2)	0.0916	J	0.100	0.0800	mg/L			05/09/24 16:16	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:05	1
Total Organic Carbon (SW846 9060A)	1.34		1.00	0.500	mg/L			05/04/24 00:24	1
Total Suspended Solids (USGS I-3765-85)	4.13		1.88	1.39	mg/L			05/03/24 08:02	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	696		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	696		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	2610		250	210	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-103R-No Purge

Lab Sample ID: 310-280174-3

Date Collected: 04/29/24 13:01

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.9		1.00	0.450	mg/L			05/01/24 21:41	1
Nitrate as N	0.354	H H3	0.200	0.0780	mg/L			05/01/24 21:41	1
Sulfate	1790		100	42.0	mg/L			05/02/24 12:17	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:18	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:18	1
Calcium	468		2.00	0.760	mg/L		05/03/24 09:00	05/07/24 17:47	4
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:18	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:18	1
Magnesium	268		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 17:47	4
Potassium	20.6		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:18	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:18	1
Sodium	57.3		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:18	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2270		8.24	2.47	mg/L			05/07/24 17:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.125	J	0.200	0.100	mg/L			05/03/24 22:39	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:51	1
Nitrate Nitrite as N (EPA 353.2)	0.363		0.100	0.0800	mg/L			05/09/24 16:18	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:05	1
Total Organic Carbon (SW846 9060A)	1.06		1.00	0.500	mg/L			05/04/24 02:13	1
Total Suspended Solids (USGS I-3765-85)	3.75		1.88	1.39	mg/L			05/03/24 08:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	588		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	588		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	3100		250	210	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-101R-Recharge

Lab Sample ID: 310-280174-4

Date Collected: 04/30/24 16:24

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.89		1.00	0.450	mg/L			05/01/24 22:16	1
Nitrate as N	<0.200		0.200	0.0780	mg/L			05/01/24 22:16	1
Sulfate	94.2		1.00	0.420	mg/L			05/01/24 22:16	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0631		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:22	1
Arsenic	0.00559		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:22	1
Calcium	94.3		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:22	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:22	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:22	1
Magnesium	46.8		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:49	1
Potassium	6.35		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:22	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:22	1
Sodium	26.7		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:22	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	428		2.06	0.618	mg/L			05/07/24 17:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.325		0.200	0.100	mg/L			05/03/24 22:39	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:52	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:37	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:06	1
Total Organic Carbon (SW846 9060A)	0.982 J		1.00	0.500	mg/L			05/04/24 02:49	1
Total Suspended Solids (USGS I-3765-85)	12.8		1.88	1.39	mg/L			05/04/24 09:40	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	364		5.00	2.50	mg/L			05/09/24 13:52	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	364		5.00	2.50	mg/L			05/09/24 13:52	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 13:52	1
Total Dissolved Solids (SM 2540C)	480		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-201

Lab Sample ID: 310-280174-5

Date Collected: 04/29/24 17:47

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.3		1.00	0.450	mg/L			05/01/24 18:01	1
Nitrate as N	0.680	H	0.200	0.0780	mg/L			05/01/24 18:01	1
Sulfate	125		20.0	8.40	mg/L			05/02/24 09:46	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:25	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:25	1
Calcium	61.3		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:25	1
Chromium	0.00181	J	0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:25	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:25	1
Magnesium	55.1		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:51	1
Potassium	29.9		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:25	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:25	1
Sodium	27.8		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:25	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	380		2.06	0.618	mg/L			05/07/24 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.147	J	0.200	0.100	mg/L			05/03/24 22:41	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:12	05/03/24 17:00	1
Nitrate Nitrite as N (EPA 353.2)	<1.00		1.00	0.800	mg/L			05/10/24 00:38	10
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:04	1
Total Organic Carbon (SW846 9060A)	1.48		1.00	0.500	mg/L			05/04/24 03:25	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			05/03/24 08:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	260		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	260		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	458		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-202R

Lab Sample ID: 310-280174-6

Date Collected: 04/29/24 16:07

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.5		1.00	0.450	mg/L			05/01/24 18:12	1
Nitrate as N	<0.200	H	0.200	0.0780	mg/L			05/01/24 18:12	1
Sulfate	99.3		20.0	8.40	mg/L			05/02/24 09:58	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:29	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:29	1
Calcium	80.9		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:29	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:29	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:29	1
Magnesium	53.3		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:54	1
Potassium	6.86		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:29	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:29	1
Sodium	23.5		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:29	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	421		2.06	0.618	mg/L			05/07/24 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.329		0.200	0.100	mg/L			05/03/24 22:41	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:52	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:40	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:04	1
Total Organic Carbon (SW846 9060A)	1.34		1.00	0.500	mg/L			05/06/24 17:24	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			05/03/24 08:02	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	283		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	283		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	432		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-203R

Lab Sample ID: 310-280174-7

Date Collected: 04/29/24 18:23

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.64		1.00	0.450	mg/L			05/01/24 18:24	1
Nitrate as N	<0.200	H	0.200	0.0780	mg/L			05/01/24 18:24	1
Sulfate	0.846	J	1.00	0.420	mg/L			05/01/24 18:24	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:32	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:32	1
Calcium	73.8		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:32	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:32	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:32	1
Magnesium	32.0		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:56	1
Potassium	5.05		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:32	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:32	1
Sodium	16.7		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:32	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	316		2.06	0.618	mg/L			05/07/24 17:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.339		0.200	0.100	mg/L			05/03/24 22:44	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:12	05/03/24 17:00	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:41	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:03	1
Total Organic Carbon (SW846 9060A)	1.17		1.00	0.500	mg/L			05/06/24 18:00	1
Total Suspended Solids (USGS I-3765-85)	2.75		1.88	1.39	mg/L			05/03/24 08:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	342		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	342		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	312		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-204

Lab Sample ID: 310-280174-8

Date Collected: 04/29/24 16:50

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.9		1.00	0.450	mg/L			05/01/24 18:35	1
Nitrate as N	<0.200	H	0.200	0.0780	mg/L			05/01/24 18:35	1
Sulfate	148		20.0	8.40	mg/L			05/02/24 10:09	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:36	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:36	1
Calcium	112		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:36	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:36	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:36	1
Magnesium	53.9		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:58	1
Potassium	11.2		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:36	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:36	1
Sodium	19.5		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:36	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	502		2.06	0.618	mg/L			05/07/24 17:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.497		0.200	0.100	mg/L			05/03/24 22:44	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:51	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:43	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:07	1
Total Organic Carbon (SW846 9060A)	1.73		1.00	0.500	mg/L			05/06/24 18:36	1
Total Suspended Solids (USGS I-3765-85)	1.88		1.88	1.39	mg/L			05/03/24 08:02	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	278		5.00	2.50	mg/L			05/08/24 12:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	278		5.00	2.50	mg/L			05/08/24 12:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/08/24 12:00	1
Total Dissolved Solids (SM 2540C)	574		50.0	42.0	mg/L			05/02/24 18:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-205

Lab Sample ID: 310-280174-9

Date Collected: 04/30/24 09:00

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.75		1.00	0.450	mg/L			05/01/24 18:47	1
Nitrate as N	<0.200		0.200	0.0780	mg/L			05/01/24 18:47	1
Sulfate	16.7		1.00	0.420	mg/L			05/01/24 18:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:39	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:39	1
Calcium	77.7		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:39	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:39	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:39	1
Magnesium	34.5		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 18:00	1
Potassium	5.73		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:39	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:39	1
Sodium	17.4		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:39	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	336		2.06	0.618	mg/L			05/07/24 18:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.281		0.200	0.100	mg/L			05/03/24 22:46	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:56	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:45	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/08/24 08:30	05/08/24 23:17	1
Total Organic Carbon (SW846 9060A)	1.02		1.00	0.500	mg/L			05/06/24 19:13	1
Total Suspended Solids (USGS I-3765-85)	2.63		1.88	1.39	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	328		5.00	2.50	mg/L			05/09/24 14:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	328		5.00	2.50	mg/L			05/09/24 14:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 14:02	1
Total Dissolved Solids (SM 2540C)	338		50.0	42.0	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-206

Lab Sample ID: 310-280174-10

Date Collected: 04/30/24 09:40

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.01		1.00	0.450	mg/L			05/01/24 19:22	1
Nitrate as N	<0.200		0.200	0.0780	mg/L			05/01/24 19:22	1
Sulfate	28.2		1.00	0.420	mg/L			05/01/24 19:22	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 21:57	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 21:57	1
Calcium	81.9		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 21:57	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 21:57	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 21:57	1
Magnesium	37.0		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 18:11	1
Potassium	6.29		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 21:57	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 21:57	1
Sodium	16.7		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 21:57	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	357		2.06	0.618	mg/L			05/07/24 18:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.335		0.200	0.100	mg/L			05/03/24 22:46	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:55	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:46	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/08/24 08:30	05/08/24 23:18	1
Total Organic Carbon (SW846 9060A)	1.04		1.00	0.500	mg/L			05/06/24 19:49	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	342		5.00	2.50	mg/L			05/09/24 14:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	342		5.00	2.50	mg/L			05/09/24 14:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 14:19	1
Total Dissolved Solids (SM 2540C)	354		50.0	42.0	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-1
 Date Collected: 04/30/24 13:02
 Date Received: 05/01/24 14:00

Lab Sample ID: 310-280174-11
 Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.2		1.00	0.450	mg/L			05/01/24 19:57	1
Nitrate as N	0.162	J	0.200	0.0780	mg/L			05/01/24 19:57	1
Sulfate	1560		100	42.0	mg/L			05/02/24 10:21	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0822		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 22:00	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 22:00	1
Calcium	486		2.00	0.760	mg/L		05/03/24 09:00	05/07/24 18:13	4
Chromium	0.00411	J	0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 22:00	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 22:00	1
Magnesium	263		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 18:13	4
Potassium	47.0		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 22:00	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 22:00	1
Sodium	27.3		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 22:00	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2300		8.24	2.47	mg/L			05/07/24 18:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			05/03/24 22:46	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:50	1
Nitrate Nitrite as N (EPA 353.2)	0.179		0.100	0.0800	mg/L			05/10/24 00:51	1
Total Phosphorus as P (EPA 365.1)	0.0818	J	0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:02	1
Total Organic Carbon (SW846 9060A)	1.32		1.00	0.500	mg/L			05/06/24 21:38	1
Total Suspended Solids (USGS I-3765-85)	32.4		1.88	1.39	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	649		5.00	2.50	mg/L			05/09/24 14:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	649		5.00	2.50	mg/L			05/09/24 14:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 14:28	1
Total Dissolved Solids (SM 2540C)	2750		250	210	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-2

Lab Sample ID: 310-280174-12

Date Collected: 04/30/24 11:15

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	188		100	45.0	mg/L			05/02/24 10:33	100
Nitrate as N	<0.200		0.200	0.0780	mg/L			05/01/24 20:08	1
Sulfate	1330		100	42.0	mg/L			05/02/24 10:33	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.200		0.200	0.0840	mg/L		05/03/24 09:00	05/07/24 18:18	4
Arsenic	<0.00800		0.00800	0.00212	mg/L		05/03/24 09:00	05/07/24 18:18	4
Calcium	442		2.00	0.760	mg/L		05/03/24 09:00	05/07/24 18:18	4
Chromium	<0.0200		0.0200	0.00480	mg/L		05/03/24 09:00	05/07/24 18:18	4
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 22:07	1
Magnesium	227		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 18:18	4
Potassium	70.3		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 18:18	4
Selenium	<0.0200		0.0200	0.00560	mg/L		05/03/24 09:00	05/07/24 18:18	4
Sodium	62.9		4.00	1.92	mg/L		05/03/24 09:00	05/07/24 18:18	4

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2040		8.24	2.47	mg/L			05/07/24 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			05/03/24 22:48	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:55	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/10/24 00:53	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/09/24 08:55	05/09/24 16:06	1
Total Organic Carbon (SW846 9060A)	1.41		1.00	0.500	mg/L			05/06/24 22:14	1
Total Suspended Solids (USGS I-3765-85)	<5.00		5.00	3.70	mg/L			05/02/24 18:26	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	705		5.00	2.50	mg/L			05/09/24 14:38	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	705		5.00	2.50	mg/L			05/09/24 14:38	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 14:38	1
Total Dissolved Solids (SM 2540C)	2830		250	210	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-3

Lab Sample ID: 310-280174-13

Date Collected: 04/30/24 12:18

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	640		100	45.0	mg/L			05/02/24 10:44	100
Nitrate as N	0.649		0.200	0.0780	mg/L			05/01/24 20:20	1
Sulfate	2160		100	42.0	mg/L			05/02/24 10:44	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0265	J	0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 22:10	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 22:10	1
Calcium	686		2.50	0.950	mg/L		05/03/24 09:00	05/07/24 18:20	5
Chromium	0.0343		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 22:10	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 22:10	1
Magnesium	383		2.50	0.750	mg/L		05/03/24 09:00	05/07/24 18:20	5
Potassium	357		2.50	0.750	mg/L		05/03/24 09:00	05/07/24 18:20	5
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 22:10	1
Sodium	117		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 22:10	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	3290		10.3	3.09	mg/L			05/07/24 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.222		0.200	0.100	mg/L			05/03/24 22:48	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:54	1
Nitrate Nitrite as N (EPA 353.2)	0.896	J	1.00	0.800	mg/L			05/10/24 00:55	10
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/08/24 08:30	05/08/24 23:20	1
Total Organic Carbon (SW846 9060A)	0.956	J	1.00	0.500	mg/L			05/06/24 22:50	1
Total Suspended Solids (USGS I-3765-85)	32.1		1.88	1.39	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	692		5.00	2.50	mg/L			05/09/24 14:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	692		5.00	2.50	mg/L			05/09/24 14:50	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 14:50	1
Total Dissolved Solids (SM 2540C)	4800		250	210	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: SW-1

Lab Sample ID: 310-280174-14

Date Collected: 04/30/24 13:30

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	76.1		1.00	0.450	mg/L			05/01/24 20:31	1
Nitrate as N	<0.200		0.200	0.0780	mg/L			05/01/24 20:31	1
Sulfate	238		20.0	8.40	mg/L			05/02/24 10:56	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0248	J	0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 22:14	1
Arsenic	0.000678	J	0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 22:14	1
Calcium	101		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 22:14	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 22:14	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 22:14	1
Magnesium	27.0		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 18:22	4
Potassium	186		2.00	0.600	mg/L		05/03/24 09:00	05/07/24 18:22	4
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 22:14	1
Sodium	13.0		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 22:14	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	363		8.24	2.47	mg/L			05/07/24 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			05/03/24 22:49	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:54	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/09/24 23:42	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/08/24 08:30	05/08/24 23:18	1
Total Organic Carbon (SW846 9060A)	5.20		1.00	0.500	mg/L			05/06/24 23:27	1
Total Suspended Solids (USGS I-3765-85)	5.37		1.88	1.39	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	355		5.00	2.50	mg/L			05/09/24 15:01	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	355		5.00	2.50	mg/L			05/09/24 15:01	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 15:01	1
Total Dissolved Solids (SM 2540C)	808		50.0	42.0	mg/L			05/02/24 18:58	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: Phase 1,2,3 Sump Composite

Lab Sample ID: 310-280174-15

Date Collected: 04/30/24 13:50

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2180		100	45.0	mg/L			05/02/24 11:31	100
Nitrate as N	0.526		0.200	0.0780	mg/L			05/01/24 20:43	1
Sulfate	5620		100	42.0	mg/L			05/02/24 11:31	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<1.25		1.25	0.525	mg/L		05/03/24 09:00	05/07/24 18:24	25
Arsenic	0.160		0.0500	0.0133	mg/L		05/03/24 09:00	05/07/24 18:24	25
Calcium	8.61	J	12.5	4.75	mg/L		05/03/24 09:00	05/07/24 18:24	25
Chromium	0.141		0.125	0.0300	mg/L		05/03/24 09:00	05/07/24 18:24	25
Lead	<0.0125		0.0125	0.00650	mg/L		05/03/24 09:00	05/07/24 18:24	25
Magnesium	<12.5		12.5	3.75	mg/L		05/03/24 09:00	05/07/24 18:24	25
Potassium	8420		62.5	18.8	mg/L		05/03/24 09:00	05/08/24 14:48	125
Selenium	0.305		0.125	0.0350	mg/L		05/03/24 09:00	05/07/24 18:24	25
Sodium	557		25.0	12.0	mg/L		05/03/24 09:00	05/07/24 18:24	25

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	21.5	J	51.5	15.4	mg/L			05/07/24 18:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	5.88		0.500	0.210	mg/L		05/09/24 08:19	05/09/24 21:19	1
Total Kjeldahl Nitrogen (EPA 351.2)	9.68		5.00	2.85	mg/L		05/03/24 05:10	05/03/24 16:48	1
Nitrate Nitrite as N (EPA 353.2)	1.55		0.100	0.0800	mg/L			05/09/24 23:44	1
Total Phosphorus as P (EPA 365.1)	2.46		0.500	0.335	mg/L		05/02/24 13:07	05/03/24 00:59	1
Total Organic Carbon (SW846 9060A)	40.3		10.0	5.00	mg/L			05/07/24 00:03	10
Total Suspended Solids (USGS I-3765-85)	372		30.0	22.2	mg/L			05/03/24 15:55	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	6720		25.0	12.5	mg/L			05/10/24 13:47	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	<25.0		25.0	12.5	mg/L			05/10/24 13:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	2770		25.0	12.5	mg/L			05/10/24 13:47	1
Total Dissolved Solids (SM 2540C)	20600		2500	2100	mg/L			05/03/24 13:20	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-D

Lab Sample ID: 310-280174-16

Date Collected: 04/29/24 16:50

Matrix: Water

Date Received: 05/01/24 14:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27.0		1.00	0.450	mg/L			05/01/24 21:06	1
Nitrate as N	<0.200	H	0.200	0.0780	mg/L			05/01/24 21:06	1
Sulfate	151		20.0	8.40	mg/L			05/02/24 11:42	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 22:21	1
Arsenic	0.000561	J	0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 22:21	1
Calcium	122		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 22:21	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 22:21	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 22:21	1
Magnesium	50.9		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 18:26	1
Potassium	21.1		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 22:21	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 22:21	1
Sodium	22.0		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 22:21	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	514		2.06	0.618	mg/L			05/07/24 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.414		0.200	0.100	mg/L			05/03/24 22:50	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		05/06/24 06:00	05/06/24 20:42	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			05/09/24 23:46	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 01:06	1
Total Organic Carbon (SW846 9060A)	1.32		1.00	0.500	mg/L			05/07/24 00:39	1
Total Suspended Solids (USGS I-3765-85)	5.37		1.88	1.39	mg/L			05/03/24 08:54	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	334		5.00	2.50	mg/L			05/09/24 15:40	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	334		5.00	2.50	mg/L			05/09/24 15:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/09/24 15:40	1
Total Dissolved Solids (SM 2540C)	566		50.0	42.0	mg/L			05/02/24 18:52	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-420605/3
Matrix: Water
Analysis Batch: 420605

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			05/01/24 17:38	1
Sulfate	<1.00		1.00	0.420	mg/L			05/01/24 17:38	1

Lab Sample ID: LCS 310-420605/4
Matrix: Water
Analysis Batch: 420605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.08		mg/L		101	90 - 110
Sulfate	10.0	10.38		mg/L		104	90 - 110

Lab Sample ID: 310-280174-9 MS
Matrix: Water
Analysis Batch: 420605

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.75		5.00	8.342		mg/L		92	80 - 120
Nitrate as N	<0.200		1.00	0.9187		mg/L		92	80 - 120
Sulfate	16.7		5.00	21.48		mg/L		95	80 - 120

Lab Sample ID: 310-280174-9 MSD
Matrix: Water
Analysis Batch: 420605

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3.75		5.00	8.378		mg/L		93	80 - 120	0	15
Nitrate as N	<0.200		1.00	0.9160		mg/L		92	80 - 120	0	15
Sulfate	16.7		5.00	21.52		mg/L		96	80 - 120	0	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-420506/1-A
Matrix: Water
Analysis Batch: 420834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		05/03/24 09:00	05/06/24 20:38	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/03/24 09:00	05/06/24 20:38	1
Calcium	<0.500		0.500	0.190	mg/L		05/03/24 09:00	05/06/24 20:38	1
Chromium	<0.00500		0.00500	0.00120	mg/L		05/03/24 09:00	05/06/24 20:38	1
Lead	<0.000500		0.000500	0.000260	mg/L		05/03/24 09:00	05/06/24 20:38	1
Potassium	<0.500		0.500	0.150	mg/L		05/03/24 09:00	05/06/24 20:38	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/03/24 09:00	05/06/24 20:38	1
Sodium	<1.00		1.00	0.480	mg/L		05/03/24 09:00	05/06/24 20:38	1

QC Sample Results

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 310-420506/1-A
Matrix: Water
Analysis Batch: 420954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	<0.500		0.500	0.150	mg/L		05/03/24 09:00	05/07/24 17:26	1

Lab Sample ID: LCS 310-420506/2-A
Matrix: Water
Analysis Batch: 420834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.2169		mg/L		108	80 - 120
Arsenic	0.200	0.2119		mg/L		106	80 - 120
Calcium	2.00	1.824		mg/L		91	80 - 120
Chromium	0.100	0.09854		mg/L		99	80 - 120
Lead	0.200	0.2161		mg/L		108	80 - 120
Potassium	2.00	1.974		mg/L		99	80 - 120
Selenium	0.400	0.3958		mg/L		99	80 - 120
Sodium	2.00	2.098		mg/L		105	80 - 120

Lab Sample ID: LCS 310-420506/2-A
Matrix: Water
Analysis Batch: 420954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	2.00	2.115		mg/L		106	80 - 120

Lab Sample ID: 310-280174-1 MS
Matrix: Water
Analysis Batch: 420834

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.158	F1 F2	0.200	0.4742	F1	mg/L		158	75 - 125
Arsenic	0.00216		0.200	0.2225		mg/L		110	75 - 125
Calcium	144		2.00	141.5	4	mg/L		-145	75 - 125
Chromium	<0.00500		0.100	0.09966		mg/L		100	75 - 125
Lead	0.000587		0.200	0.2072		mg/L		103	75 - 125
Potassium	7.97		2.00	9.926		mg/L		98	75 - 125
Selenium	<0.00500		0.400	0.4178		mg/L		104	75 - 125
Sodium	44.3		2.00	46.31	4	mg/L		98	75 - 125

Lab Sample ID: 310-280174-1 MS
Matrix: Water
Analysis Batch: 420954

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	78.8		2.00	80.42	4	mg/L		79	75 - 125

Lab Sample ID: 310-280174-1 MSD
Matrix: Water
Analysis Batch: 420834

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.158	F1 F2	0.200	0.5849	F1 F2	mg/L		213	75 - 125	21	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 310-280174-1 MSD
Matrix: Water
Analysis Batch: 420834

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Arsenic	0.00216		0.200	0.2221		mg/L		110	75 - 125	0	20
Calcium	144		2.00	141.4	4	mg/L		-150	75 - 125	0	20
Chromium	<0.00500		0.100	0.09824		mg/L		98	75 - 125	1	20
Lead	0.000587		0.200	0.2018		mg/L		101	75 - 125	3	20
Potassium	7.97		2.00	9.761		mg/L		89	75 - 125	2	20
Selenium	<0.00500		0.400	0.4138		mg/L		103	75 - 125	1	20
Sodium	44.3		2.00	45.35	4	mg/L		50	75 - 125	2	20

Lab Sample ID: 310-280174-1 MSD
Matrix: Water
Analysis Batch: 420954

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Magnesium	78.8		2.00	79.82	4	mg/L		49	75 - 125	1	20

Lab Sample ID: 310-280174-11 DU
Matrix: Water
Analysis Batch: 420834

Client Sample ID: LDR-1
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Lead	<0.000500		<0.000500		mg/L		NC	20

Lab Sample ID: 310-280174-11 DU
Matrix: Water
Analysis Batch: 420954

Client Sample ID: LDR-1
Prep Type: Total/NA
Prep Batch: 420506

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Aluminum	0.0860	J	0.1055	J	mg/L		20	20
Arsenic	<0.00800		<0.00800		mg/L		NC	20
Calcium	486		458.0		mg/L		6	20
Chromium	<0.0200		<0.0200		mg/L		NC	20
Magnesium	263		246.4		mg/L		7	20
Potassium	48.6		45.12		mg/L		7	20
Selenium	<0.0200		<0.0200		mg/L		NC	20
Sodium	30.2		28.13		mg/L		7	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-420681/79
Matrix: Water
Analysis Batch: 420681

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Result	Result					
Ammonia	<0.200		0.200	0.100	mg/L			05/03/24 22:34	1

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 310-420681/80
Matrix: Water
Analysis Batch: 420681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	8.55	9.007		mg/L		105	90 - 110

Lab Sample ID: 310-280174-1 MS
Matrix: Water
Analysis Batch: 420681

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.216	F1	1.00	1.126		mg/L		91	90 - 110

Lab Sample ID: 310-280174-1 MSD
Matrix: Water
Analysis Batch: 420681

Client Sample ID: MW-101R-No Purge
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	0.216	F1	1.00	1.062	F1	mg/L		85	90 - 110	6	10

Lab Sample ID: MB 310-421116/1-A
Matrix: Water
Analysis Batch: 421233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 421116

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.210	mg/L		05/09/24 08:19	05/09/24 21:05	1

Lab Sample ID: LCS 310-421116/2-A
Matrix: Water
Analysis Batch: 421233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 421116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	4.00	4.216		mg/L		105	90 - 110

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-420565/1-A
Matrix: Water
Analysis Batch: 420674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00	0.570	mg/L		05/03/24 05:10	05/03/24 16:45	1

Lab Sample ID: LCS 310-420565/2-A
Matrix: Water
Analysis Batch: 420674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Kjeldahl Nitrogen	4.01	4.127		mg/L		103	90 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: MB 310-420566/1-A
Matrix: Water
Analysis Batch: 420674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420566

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00	0.570	mg/L		05/03/24 05:12	05/03/24 16:56	1

Lab Sample ID: LCS 310-420566/2-A
Matrix: Water
Analysis Batch: 420674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420566

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Kjeldahl Nitrogen	4.01	4.407		mg/L		110	90 - 110

Lab Sample ID: MB 310-420697/1-A
Matrix: Water
Analysis Batch: 420807

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420697

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00	0.570	mg/L		05/06/24 06:00	05/06/24 20:32	1

Lab Sample ID: LCS 310-420697/2-A
Matrix: Water
Analysis Batch: 420807

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420697

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Kjeldahl Nitrogen	4.01	4.097		mg/L		102	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 310-421223/16
Matrix: Water
Analysis Batch: 421223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			05/09/24 15:38	1

Lab Sample ID: LCS 310-421223/17
Matrix: Water
Analysis Batch: 421223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	2.044		mg/L		99	90 - 110

Lab Sample ID: MB 310-421234/20
Matrix: Water
Analysis Batch: 421234

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			05/09/24 23:32	1

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: MB 310-421234/48
Matrix: Water
Analysis Batch: 421234

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			05/10/24 00:18	1

Lab Sample ID: LCS 310-421234/21
Matrix: Water
Analysis Batch: 421234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	1.870		mg/L		90	90 - 110

Lab Sample ID: LCS 310-421234/49
Matrix: Water
Analysis Batch: 421234

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	2.093		mg/L		101	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 310-420522/1-A
Matrix: Water
Analysis Batch: 420563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420522

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.100		0.100	0.0670	mg/L		05/02/24 13:07	05/03/24 00:56	1

Lab Sample ID: LCS 310-420522/2-A
Matrix: Water
Analysis Batch: 420563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420522

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	1.00	0.9185		mg/L		92	90 - 110

Lab Sample ID: MB 310-420958/1-A
Matrix: Water
Analysis Batch: 421083

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420958

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.100		0.100	0.0670	mg/L		05/08/24 08:30	05/08/24 23:15	1

Lab Sample ID: LCS 310-420958/2-A
Matrix: Water
Analysis Batch: 421083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	1.00	0.9431		mg/L		94	90 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: MB 310-421127/1-A
 Matrix: Water
 Analysis Batch: 421219

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 421127

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.100		0.100	0.0670	mg/L		05/09/24 08:55	05/09/24 16:03	1

Lab Sample ID: LCS 310-421127/2-A
 Matrix: Water
 Analysis Batch: 421219

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 421127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	1.00	1.017		mg/L		102	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 310-420714/11
 Matrix: Water
 Analysis Batch: 420714

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00	0.500	mg/L			05/03/24 11:47	1

Lab Sample ID: LCS 310-420714/12
 Matrix: Water
 Analysis Batch: 420714

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.70		mg/L		107	85 - 115

Lab Sample ID: 310-280174-5 MS
 Matrix: Water
 Analysis Batch: 420714

Client Sample ID: MW-201
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.48		4.99	7.185		mg/L		114	85 - 115

Lab Sample ID: MB 310-420808/11
 Matrix: Water
 Analysis Batch: 420808

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00	0.500	mg/L			05/06/24 14:24	1

Lab Sample ID: LCS 310-420808/12
 Matrix: Water
 Analysis Batch: 420808

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.76		mg/L		108	85 - 115

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: I-3765-85 - Residue, Non-filterable (TSS)

Lab Sample ID: MB 310-420552/1
Matrix: Water
Analysis Batch: 420552

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			05/02/24 18:26	1

Lab Sample ID: LCS 310-420552/2
Matrix: Water
Analysis Batch: 420552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	96.00		mg/L		96	75 - 116

Lab Sample ID: MB 310-420584/1
Matrix: Water
Analysis Batch: 420584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			05/03/24 08:02	1

Lab Sample ID: LCS 310-420584/2
Matrix: Water
Analysis Batch: 420584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	97.00		mg/L		97	75 - 116

Lab Sample ID: MB 310-420598/1
Matrix: Water
Analysis Batch: 420598

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			05/03/24 08:54	1

Lab Sample ID: LCS 310-420598/2
Matrix: Water
Analysis Batch: 420598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	88.00		mg/L		88	75 - 116

Lab Sample ID: MB 310-420666/1
Matrix: Water
Analysis Batch: 420666

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			05/03/24 15:55	1

Lab Sample ID: LCS 310-420666/2
Matrix: Water
Analysis Batch: 420666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	88.00		mg/L		88	75 - 116

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: I-3765-85 - Residue, Non-filterable (TSS)

Lab Sample ID: 310-280174-15 DU
Matrix: Water
Analysis Batch: 420666

Client Sample ID: Phase 1,2,3 Sump Composite
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Suspended Solids	372		390.0		mg/L		5	35

Lab Sample ID: MB 310-420689/1
Matrix: Water
Analysis Batch: 420689

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.00		5.00	3.70	mg/L			05/04/24 09:40	1

Lab Sample ID: LCS 310-420689/2
Matrix: Water
Analysis Batch: 420689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Total Suspended Solids	100	94.00		mg/L		94		75 - 116

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 310-421050/2
Matrix: Water
Analysis Batch: 421050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Total Alkalinity as CaCO3 to pH 4.5	1000	899.4		mg/L		90		90 - 110

Lab Sample ID: LCS 310-421221/2
Matrix: Water
Analysis Batch: 421221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Total Alkalinity as CaCO3 to pH 4.5	1000	904.0		mg/L		90		90 - 110

Lab Sample ID: 310-280174-9 DU
Matrix: Water
Analysis Batch: 421221

Client Sample ID: MW-205
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Alkalinity as CaCO3 to pH 4.5	328		326.0		mg/L		0.7	10
Bicarbonate Alkalinity as CaCO3	328		326.0		mg/L		0.7	
Carbonate Alkalinity as CaCO3	<5.00		<5.00		mg/L		NC	

Lab Sample ID: LCS 310-421337/1
Matrix: Water
Analysis Batch: 421337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Total Alkalinity as CaCO3 to pH 4.5	1000	1067		mg/L		107		90 - 110

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 310-420554/1
Matrix: Water
Analysis Batch: 420554

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	42.0	mg/L			05/02/24 18:52	1

Lab Sample ID: LCS 310-420554/2
Matrix: Water
Analysis Batch: 420554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	960.0		mg/L		96	90 - 110

Lab Sample ID: MB 310-420555/1
Matrix: Water
Analysis Batch: 420555

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	42.0	mg/L			05/02/24 18:58	1

Lab Sample ID: LCS 310-420555/2
Matrix: Water
Analysis Batch: 420555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	958.0		mg/L		96	90 - 110

Lab Sample ID: MB 310-420642/1
Matrix: Water
Analysis Batch: 420642

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	42.0	mg/L			05/03/24 13:20	1

Lab Sample ID: LCS 310-420642/2
Matrix: Water
Analysis Batch: 420642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	934.0		mg/L		93	90 - 110

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

HPLC/IC

Analysis Batch: 420605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	9056A	
310-280174-1	MW-101R-No Purge	Total/NA	Water	9056A	
310-280174-2	MW-102R-No Purge	Total/NA	Water	9056A	
310-280174-2	MW-102R-No Purge	Total/NA	Water	9056A	
310-280174-3	MW-103R-No Purge	Total/NA	Water	9056A	
310-280174-3	MW-103R-No Purge	Total/NA	Water	9056A	
310-280174-4	MW-101R-Recharge	Total/NA	Water	9056A	
310-280174-5	MW-201	Total/NA	Water	9056A	
310-280174-5	MW-201	Total/NA	Water	9056A	
310-280174-6	MW-202R	Total/NA	Water	9056A	
310-280174-6	MW-202R	Total/NA	Water	9056A	
310-280174-7	MW-203R	Total/NA	Water	9056A	
310-280174-8	MW-204	Total/NA	Water	9056A	
310-280174-8	MW-204	Total/NA	Water	9056A	
310-280174-9	MW-205	Total/NA	Water	9056A	
310-280174-10	MW-206	Total/NA	Water	9056A	
310-280174-11	LDR-1	Total/NA	Water	9056A	
310-280174-11	LDR-1	Total/NA	Water	9056A	
310-280174-12	LDR-2	Total/NA	Water	9056A	
310-280174-12	LDR-2	Total/NA	Water	9056A	
310-280174-13	LDR-3	Total/NA	Water	9056A	
310-280174-13	LDR-3	Total/NA	Water	9056A	
310-280174-14	SW-1	Total/NA	Water	9056A	
310-280174-14	SW-1	Total/NA	Water	9056A	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	9056A	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	9056A	
310-280174-16	MW-D	Total/NA	Water	9056A	
310-280174-16	MW-D	Total/NA	Water	9056A	
MB 310-420605/3	Method Blank	Total/NA	Water	9056A	
LCS 310-420605/4	Lab Control Sample	Total/NA	Water	9056A	
310-280174-9 MS	MW-205	Total/NA	Water	9056A	
310-280174-9 MSD	MW-205	Total/NA	Water	9056A	

Metals

Prep Batch: 420506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	3005A	
310-280174-2	MW-102R-No Purge	Total/NA	Water	3005A	
310-280174-3	MW-103R-No Purge	Total/NA	Water	3005A	
310-280174-4	MW-101R-Recharge	Total/NA	Water	3005A	
310-280174-5	MW-201	Total/NA	Water	3005A	
310-280174-6	MW-202R	Total/NA	Water	3005A	
310-280174-7	MW-203R	Total/NA	Water	3005A	
310-280174-8	MW-204	Total/NA	Water	3005A	
310-280174-9	MW-205	Total/NA	Water	3005A	
310-280174-10	MW-206	Total/NA	Water	3005A	
310-280174-11	LDR-1	Total/NA	Water	3005A	
310-280174-12	LDR-2	Total/NA	Water	3005A	
310-280174-13	LDR-3	Total/NA	Water	3005A	
310-280174-14	SW-1	Total/NA	Water	3005A	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Metals (Continued)

Prep Batch: 420506 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	3005A	
310-280174-16	MW-D	Total/NA	Water	3005A	
MB 310-420506/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-420506/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-280174-1 MS	MW-101R-No Purge	Total/NA	Water	3005A	
310-280174-1 MSD	MW-101R-No Purge	Total/NA	Water	3005A	
310-280174-11 DU	LDR-1	Total/NA	Water	3005A	

Analysis Batch: 420753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	SM 2340B	
310-280174-2	MW-102R-No Purge	Total/NA	Water	SM 2340B	
310-280174-3	MW-103R-No Purge	Total/NA	Water	SM 2340B	
310-280174-4	MW-101R-Recharge	Total/NA	Water	SM 2340B	
310-280174-5	MW-201	Total/NA	Water	SM 2340B	
310-280174-6	MW-202R	Total/NA	Water	SM 2340B	
310-280174-7	MW-203R	Total/NA	Water	SM 2340B	
310-280174-8	MW-204	Total/NA	Water	SM 2340B	
310-280174-9	MW-205	Total/NA	Water	SM 2340B	
310-280174-10	MW-206	Total/NA	Water	SM 2340B	
310-280174-11	LDR-1	Total/NA	Water	SM 2340B	
310-280174-12	LDR-2	Total/NA	Water	SM 2340B	
310-280174-13	LDR-3	Total/NA	Water	SM 2340B	
310-280174-14	SW-1	Total/NA	Water	SM 2340B	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	SM 2340B	
310-280174-16	MW-D	Total/NA	Water	SM 2340B	

Analysis Batch: 420834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-2	MW-102R-No Purge	Total/NA	Water	6020B	420506
310-280174-3	MW-103R-No Purge	Total/NA	Water	6020B	420506
310-280174-4	MW-101R-Recharge	Total/NA	Water	6020B	420506
310-280174-5	MW-201	Total/NA	Water	6020B	420506
310-280174-6	MW-202R	Total/NA	Water	6020B	420506
310-280174-7	MW-203R	Total/NA	Water	6020B	420506
310-280174-8	MW-204	Total/NA	Water	6020B	420506
310-280174-9	MW-205	Total/NA	Water	6020B	420506
310-280174-10	MW-206	Total/NA	Water	6020B	420506
310-280174-11	LDR-1	Total/NA	Water	6020B	420506
310-280174-12	LDR-2	Total/NA	Water	6020B	420506
310-280174-13	LDR-3	Total/NA	Water	6020B	420506
310-280174-14	SW-1	Total/NA	Water	6020B	420506
310-280174-16	MW-D	Total/NA	Water	6020B	420506
MB 310-420506/1-A	Method Blank	Total/NA	Water	6020B	420506
LCS 310-420506/2-A	Lab Control Sample	Total/NA	Water	6020B	420506
310-280174-1 MS	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-1 MSD	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-11 DU	LDR-1	Total/NA	Water	6020B	420506

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Metals

Analysis Batch: 420954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-2	MW-102R-No Purge	Total/NA	Water	6020B	420506
310-280174-3	MW-103R-No Purge	Total/NA	Water	6020B	420506
310-280174-4	MW-101R-Recharge	Total/NA	Water	6020B	420506
310-280174-5	MW-201	Total/NA	Water	6020B	420506
310-280174-6	MW-202R	Total/NA	Water	6020B	420506
310-280174-7	MW-203R	Total/NA	Water	6020B	420506
310-280174-8	MW-204	Total/NA	Water	6020B	420506
310-280174-9	MW-205	Total/NA	Water	6020B	420506
310-280174-10	MW-206	Total/NA	Water	6020B	420506
310-280174-11	LDR-1	Total/NA	Water	6020B	420506
310-280174-12	LDR-2	Total/NA	Water	6020B	420506
310-280174-13	LDR-3	Total/NA	Water	6020B	420506
310-280174-14	SW-1	Total/NA	Water	6020B	420506
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	6020B	420506
310-280174-16	MW-D	Total/NA	Water	6020B	420506
MB 310-420506/1-A	Method Blank	Total/NA	Water	6020B	420506
LCS 310-420506/2-A	Lab Control Sample	Total/NA	Water	6020B	420506
310-280174-1 MS	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-1 MSD	MW-101R-No Purge	Total/NA	Water	6020B	420506
310-280174-11 DU	LDR-1	Total/NA	Water	6020B	420506

Analysis Batch: 421056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	6020B	420506

General Chemistry

Prep Batch: 420522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	365.2/365.3/365	
310-280174-2	MW-102R-No Purge	Total/NA	Water	365.2/365.3/365	
310-280174-3	MW-103R-No Purge	Total/NA	Water	365.2/365.3/365	
310-280174-4	MW-101R-Recharge	Total/NA	Water	365.2/365.3/365	
310-280174-5	MW-201	Total/NA	Water	365.2/365.3/365	
310-280174-6	MW-202R	Total/NA	Water	365.2/365.3/365	
310-280174-7	MW-203R	Total/NA	Water	365.2/365.3/365	
310-280174-8	MW-204	Total/NA	Water	365.2/365.3/365	
310-280174-11	LDR-1	Total/NA	Water	365.2/365.3/365	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	365.2/365.3/365	
310-280174-16	MW-D	Total/NA	Water	365.2/365.3/365	
MB 310-420522/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-420522/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 420552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-12	LDR-2	Total/NA	Water	I-3765-85	
MB 310-420552/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-420552/2	Lab Control Sample	Total/NA	Water	I-3765-85	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry

Analysis Batch: 420554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	SM 2540C	
310-280174-2	MW-102R-No Purge	Total/NA	Water	SM 2540C	
310-280174-3	MW-103R-No Purge	Total/NA	Water	SM 2540C	
310-280174-4	MW-101R-Recharge	Total/NA	Water	SM 2540C	
310-280174-5	MW-201	Total/NA	Water	SM 2540C	
310-280174-6	MW-202R	Total/NA	Water	SM 2540C	
310-280174-7	MW-203R	Total/NA	Water	SM 2540C	
310-280174-8	MW-204	Total/NA	Water	SM 2540C	
310-280174-16	MW-D	Total/NA	Water	SM 2540C	
MB 310-420554/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-420554/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 420555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-9	MW-205	Total/NA	Water	SM 2540C	
310-280174-10	MW-206	Total/NA	Water	SM 2540C	
310-280174-11	LDR-1	Total/NA	Water	SM 2540C	
310-280174-12	LDR-2	Total/NA	Water	SM 2540C	
310-280174-13	LDR-3	Total/NA	Water	SM 2540C	
310-280174-14	SW-1	Total/NA	Water	SM 2540C	
MB 310-420555/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-420555/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 420563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	365.1	420522
310-280174-2	MW-102R-No Purge	Total/NA	Water	365.1	420522
310-280174-3	MW-103R-No Purge	Total/NA	Water	365.1	420522
310-280174-4	MW-101R-Recharge	Total/NA	Water	365.1	420522
310-280174-5	MW-201	Total/NA	Water	365.1	420522
310-280174-6	MW-202R	Total/NA	Water	365.1	420522
310-280174-7	MW-203R	Total/NA	Water	365.1	420522
310-280174-8	MW-204	Total/NA	Water	365.1	420522
310-280174-11	LDR-1	Total/NA	Water	365.1	420522
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	365.1	420522
310-280174-16	MW-D	Total/NA	Water	365.1	420522
MB 310-420522/1-A	Method Blank	Total/NA	Water	365.1	420522
LCS 310-420522/2-A	Lab Control Sample	Total/NA	Water	365.1	420522

Prep Batch: 420565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	351.2	
310-280174-2	MW-102R-No Purge	Total/NA	Water	351.2	
310-280174-3	MW-103R-No Purge	Total/NA	Water	351.2	
310-280174-4	MW-101R-Recharge	Total/NA	Water	351.2	
310-280174-6	MW-202R	Total/NA	Water	351.2	
310-280174-8	MW-204	Total/NA	Water	351.2	
310-280174-9	MW-205	Total/NA	Water	351.2	
310-280174-10	MW-206	Total/NA	Water	351.2	
310-280174-11	LDR-1	Total/NA	Water	351.2	
310-280174-12	LDR-2	Total/NA	Water	351.2	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry (Continued)

Prep Batch: 420565 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-13	LDR-3	Total/NA	Water	351.2	
310-280174-14	SW-1	Total/NA	Water	351.2	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	351.2	
MB 310-420565/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-420565/2-A	Lab Control Sample	Total/NA	Water	351.2	

Prep Batch: 420566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-5	MW-201	Total/NA	Water	351.2	
310-280174-7	MW-203R	Total/NA	Water	351.2	
MB 310-420566/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-420566/2-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 420584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-2	MW-102R-No Purge	Total/NA	Water	I-3765-85	
310-280174-6	MW-202R	Total/NA	Water	I-3765-85	
310-280174-8	MW-204	Total/NA	Water	I-3765-85	
MB 310-420584/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-420584/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 420598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	I-3765-85	
310-280174-3	MW-103R-No Purge	Total/NA	Water	I-3765-85	
310-280174-5	MW-201	Total/NA	Water	I-3765-85	
310-280174-7	MW-203R	Total/NA	Water	I-3765-85	
310-280174-16	MW-D	Total/NA	Water	I-3765-85	
MB 310-420598/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-420598/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 420642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	SM 2540C	
MB 310-420642/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-420642/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 420666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-9	MW-205	Total/NA	Water	I-3765-85	
310-280174-10	MW-206	Total/NA	Water	I-3765-85	
310-280174-11	LDR-1	Total/NA	Water	I-3765-85	
310-280174-13	LDR-3	Total/NA	Water	I-3765-85	
310-280174-14	SW-1	Total/NA	Water	I-3765-85	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	I-3765-85	
MB 310-420666/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-420666/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-280174-15 DU	Phase 1,2,3 Sump Composite	Total/NA	Water	I-3765-85	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry

Analysis Batch: 420674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	351.2	420565
310-280174-2	MW-102R-No Purge	Total/NA	Water	351.2	420565
310-280174-3	MW-103R-No Purge	Total/NA	Water	351.2	420565
310-280174-4	MW-101R-Recharge	Total/NA	Water	351.2	420565
310-280174-5	MW-201	Total/NA	Water	351.2	420566
310-280174-6	MW-202R	Total/NA	Water	351.2	420565
310-280174-7	MW-203R	Total/NA	Water	351.2	420566
310-280174-8	MW-204	Total/NA	Water	351.2	420565
310-280174-9	MW-205	Total/NA	Water	351.2	420565
310-280174-10	MW-206	Total/NA	Water	351.2	420565
310-280174-11	LDR-1	Total/NA	Water	351.2	420565
310-280174-12	LDR-2	Total/NA	Water	351.2	420565
310-280174-13	LDR-3	Total/NA	Water	351.2	420565
310-280174-14	SW-1	Total/NA	Water	351.2	420565
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	351.2	420565
MB 310-420565/1-A	Method Blank	Total/NA	Water	351.2	420565
MB 310-420566/1-A	Method Blank	Total/NA	Water	351.2	420566
LCS 310-420565/2-A	Lab Control Sample	Total/NA	Water	351.2	420565
LCS 310-420566/2-A	Lab Control Sample	Total/NA	Water	351.2	420566

Analysis Batch: 420681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	350.1	
310-280174-2	MW-102R-No Purge	Total/NA	Water	350.1	
310-280174-3	MW-103R-No Purge	Total/NA	Water	350.1	
310-280174-4	MW-101R-Recharge	Total/NA	Water	350.1	
310-280174-5	MW-201	Total/NA	Water	350.1	
310-280174-6	MW-202R	Total/NA	Water	350.1	
310-280174-7	MW-203R	Total/NA	Water	350.1	
310-280174-8	MW-204	Total/NA	Water	350.1	
310-280174-9	MW-205	Total/NA	Water	350.1	
310-280174-10	MW-206	Total/NA	Water	350.1	
310-280174-11	LDR-1	Total/NA	Water	350.1	
310-280174-12	LDR-2	Total/NA	Water	350.1	
310-280174-13	LDR-3	Total/NA	Water	350.1	
310-280174-14	SW-1	Total/NA	Water	350.1	
310-280174-16	MW-D	Total/NA	Water	350.1	
MB 310-420681/79	Method Blank	Total/NA	Water	350.1	
LCS 310-420681/80	Lab Control Sample	Total/NA	Water	350.1	
310-280174-1 MS	MW-101R-No Purge	Total/NA	Water	350.1	
310-280174-1 MSD	MW-101R-No Purge	Total/NA	Water	350.1	

Analysis Batch: 420689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-4	MW-101R-Recharge	Total/NA	Water	I-3765-85	
MB 310-420689/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-420689/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Prep Batch: 420697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-16	MW-D	Total/NA	Water	351.2	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry (Continued)

Prep Batch: 420697 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-420697/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-420697/2-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 420714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	9060A	
310-280174-2	MW-102R-No Purge	Total/NA	Water	9060A	
310-280174-3	MW-103R-No Purge	Total/NA	Water	9060A	
310-280174-4	MW-101R-Recharge	Total/NA	Water	9060A	
310-280174-5	MW-201	Total/NA	Water	9060A	
MB 310-420714/11	Method Blank	Total/NA	Water	9060A	
LCS 310-420714/12	Lab Control Sample	Total/NA	Water	9060A	
310-280174-5 MS	MW-201	Total/NA	Water	9060A	

Analysis Batch: 420807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-16	MW-D	Total/NA	Water	351.2	420697
MB 310-420697/1-A	Method Blank	Total/NA	Water	351.2	420697
LCS 310-420697/2-A	Lab Control Sample	Total/NA	Water	351.2	420697

Analysis Batch: 420808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-6	MW-202R	Total/NA	Water	9060A	
310-280174-7	MW-203R	Total/NA	Water	9060A	
310-280174-8	MW-204	Total/NA	Water	9060A	
310-280174-9	MW-205	Total/NA	Water	9060A	
310-280174-10	MW-206	Total/NA	Water	9060A	
310-280174-11	LDR-1	Total/NA	Water	9060A	
310-280174-12	LDR-2	Total/NA	Water	9060A	
310-280174-13	LDR-3	Total/NA	Water	9060A	
310-280174-14	SW-1	Total/NA	Water	9060A	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	9060A	
310-280174-16	MW-D	Total/NA	Water	9060A	
MB 310-420808/11	Method Blank	Total/NA	Water	9060A	
LCS 310-420808/12	Lab Control Sample	Total/NA	Water	9060A	

Prep Batch: 420958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-9	MW-205	Total/NA	Water	365.2/365.3/365	
310-280174-10	MW-206	Total/NA	Water	365.2/365.3/365	
310-280174-13	LDR-3	Total/NA	Water	365.2/365.3/365	
310-280174-14	SW-1	Total/NA	Water	365.2/365.3/365	
MB 310-420958/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-420958/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 421050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	SM 2320B	
310-280174-2	MW-102R-No Purge	Total/NA	Water	SM 2320B	
310-280174-3	MW-103R-No Purge	Total/NA	Water	SM 2320B	
310-280174-5	MW-201	Total/NA	Water	SM 2320B	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry (Continued)

Analysis Batch: 421050 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-6	MW-202R	Total/NA	Water	SM 2320B	
310-280174-7	MW-203R	Total/NA	Water	SM 2320B	
310-280174-8	MW-204	Total/NA	Water	SM 2320B	
LCS 310-421050/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 421083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-9	MW-205	Total/NA	Water	365.1	420958
310-280174-10	MW-206	Total/NA	Water	365.1	420958
310-280174-13	LDR-3	Total/NA	Water	365.1	420958
310-280174-14	SW-1	Total/NA	Water	365.1	420958
MB 310-420958/1-A	Method Blank	Total/NA	Water	365.1	420958
LCS 310-420958/2-A	Lab Control Sample	Total/NA	Water	365.1	420958

Prep Batch: 421116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	350.1	
MB 310-421116/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-421116/2-A	Lab Control Sample	Total/NA	Water	350.1	

Prep Batch: 421127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-12	LDR-2	Total/NA	Water	365.2/365.3/365	
MB 310-421127/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-421127/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 421219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-12	LDR-2	Total/NA	Water	365.1	421127
MB 310-421127/1-A	Method Blank	Total/NA	Water	365.1	421127
LCS 310-421127/2-A	Lab Control Sample	Total/NA	Water	365.1	421127

Analysis Batch: 421221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-4	MW-101R-Recharge	Total/NA	Water	SM 2320B	
310-280174-9	MW-205	Total/NA	Water	SM 2320B	
310-280174-10	MW-206	Total/NA	Water	SM 2320B	
310-280174-11	LDR-1	Total/NA	Water	SM 2320B	
310-280174-12	LDR-2	Total/NA	Water	SM 2320B	
310-280174-13	LDR-3	Total/NA	Water	SM 2320B	
310-280174-14	SW-1	Total/NA	Water	SM 2320B	
310-280174-16	MW-D	Total/NA	Water	SM 2320B	
LCS 310-421221/2	Lab Control Sample	Total/NA	Water	SM 2320B	
310-280174-9 DU	MW-205	Total/NA	Water	SM 2320B	

Analysis Batch: 421223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-1	MW-101R-No Purge	Total/NA	Water	353.2	
310-280174-2	MW-102R-No Purge	Total/NA	Water	353.2	
310-280174-3	MW-103R-No Purge	Total/NA	Water	353.2	
MB 310-421223/16	Method Blank	Total/NA	Water	353.2	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

General Chemistry (Continued)

Analysis Batch: 421223 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-421223/17	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 421233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	350.1	421116
MB 310-421116/1-A	Method Blank	Total/NA	Water	350.1	421116
LCS 310-421116/2-A	Lab Control Sample	Total/NA	Water	350.1	421116

Analysis Batch: 421234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-4	MW-101R-Recharge	Total/NA	Water	353.2	
310-280174-5	MW-201	Total/NA	Water	353.2	
310-280174-6	MW-202R	Total/NA	Water	353.2	
310-280174-7	MW-203R	Total/NA	Water	353.2	
310-280174-8	MW-204	Total/NA	Water	353.2	
310-280174-9	MW-205	Total/NA	Water	353.2	
310-280174-10	MW-206	Total/NA	Water	353.2	
310-280174-11	LDR-1	Total/NA	Water	353.2	
310-280174-12	LDR-2	Total/NA	Water	353.2	
310-280174-13	LDR-3	Total/NA	Water	353.2	
310-280174-14	SW-1	Total/NA	Water	353.2	
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	353.2	
310-280174-16	MW-D	Total/NA	Water	353.2	
MB 310-421234/20	Method Blank	Total/NA	Water	353.2	
MB 310-421234/48	Method Blank	Total/NA	Water	353.2	
LCS 310-421234/21	Lab Control Sample	Total/NA	Water	353.2	
LCS 310-421234/49	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 421337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-280174-15	Phase 1,2,3 Sump Composite	Total/NA	Water	SM 2320B	
LCS 310-421337/1	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-101R-No Purge

Lab Sample ID: 310-280174-1

Date Collected: 04/29/24 15:35

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 21:18
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 11:54
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 20:44
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:30
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:30
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:36
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:53
Total/NA	Analysis	353.2		1	421223	ENB7	EET CF	05/09/24 16:14
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:05
Total/NA	Analysis	9060A		1	420714	DGU1	EET CF	05/03/24 23:48
Total/NA	Analysis	I-3765-85		1	420598	ENB7	EET CF	05/03/24 08:54
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Client Sample ID: MW-102R-No Purge

Lab Sample ID: 310-280174-2

Date Collected: 04/29/24 14:38

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 21:29
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 12:05
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:15
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		4	420954	NFT2	EET CF	05/07/24 17:45
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:45
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:38
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:51
Total/NA	Analysis	353.2		1	421223	ENB7	EET CF	05/09/24 16:16
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:05
Total/NA	Analysis	9060A		1	420714	DGU1	EET CF	05/04/24 00:24
Total/NA	Analysis	I-3765-85		1	420584	DGU1	EET CF	05/03/24 08:02
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-103R-No Purge

Lab Sample ID: 310-280174-3

Date Collected: 04/29/24 13:01

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 21:41
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 12:17
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:18
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		4	420954	NFT2	EET CF	05/07/24 17:47
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:47
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:39
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:51
Total/NA	Analysis	353.2		1	421223	ENB7	EET CF	05/09/24 16:18
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:05
Total/NA	Analysis	9060A		1	420714	DGU1	EET CF	05/04/24 02:13
Total/NA	Analysis	I-3765-85		1	420598	ENB7	EET CF	05/03/24 08:54
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Client Sample ID: MW-101R-Recharge

Lab Sample ID: 310-280174-4

Date Collected: 04/30/24 16:24

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 22:16
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:22
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:49
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:49
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:39
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:52
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:37
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:06
Total/NA	Analysis	9060A		1	420714	DGU1	EET CF	05/04/24 02:49
Total/NA	Analysis	I-3765-85		1	420689	ENB7	EET CF	05/04/24 09:40
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 13:52
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-201

Lab Sample ID: 310-280174-5

Date Collected: 04/29/24 17:47

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 18:01
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 09:46
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:25
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:51
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:51
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:41
Total/NA	Prep	351.2			420566	W9YR	EET CF	05/03/24 05:12
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 17:00
Total/NA	Analysis	353.2		10	421234	ZJX4	EET CF	05/10/24 00:38
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:04
Total/NA	Analysis	9060A		1	420714	DGU1	EET CF	05/04/24 03:25
Total/NA	Analysis	I-3765-85		1	420598	ENB7	EET CF	05/03/24 08:54
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Client Sample ID: MW-202R

Lab Sample ID: 310-280174-6

Date Collected: 04/29/24 16:07

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 18:12
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 09:58
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:29
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:54
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:54
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:41
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:52
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:40
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:04
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 17:24
Total/NA	Analysis	I-3765-85		1	420584	DGU1	EET CF	05/03/24 08:02
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-203R

Lab Sample ID: 310-280174-7

Date Collected: 04/29/24 18:23

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 18:24
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:32
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:56
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:56
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:44
Total/NA	Prep	351.2			420566	W9YR	EET CF	05/03/24 05:12
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 17:00
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:41
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:03
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 18:00
Total/NA	Analysis	I-3765-85		1	420598	ENB7	EET CF	05/03/24 08:54
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Client Sample ID: MW-204

Lab Sample ID: 310-280174-8

Date Collected: 04/29/24 16:50

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 18:35
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 10:09
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:36
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 17:58
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 17:58
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:44
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:51
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:43
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:07
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 18:36
Total/NA	Analysis	I-3765-85		1	420584	DGU1	EET CF	05/03/24 08:02
Total/NA	Analysis	SM 2320B		1	421050	WZC8	EET CF	05/08/24 12:00
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: MW-205

Lab Sample ID: 310-280174-9

Date Collected: 04/30/24 09:00

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 18:47
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:39
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 18:00
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:00
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:46
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:56
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:45
Total/NA	Prep	365.2/365.3/365			420958	HE7K	EET CF	05/08/24 08:30
Total/NA	Analysis	365.1		1	421083	ZJX4	EET CF	05/08/24 23:17
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 19:13
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 14:02
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Client Sample ID: MW-206

Lab Sample ID: 310-280174-10

Date Collected: 04/30/24 09:40

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 19:22
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 21:57
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 18:11
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:11
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:46
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:55
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:46
Total/NA	Prep	365.2/365.3/365			420958	HE7K	EET CF	05/08/24 08:30
Total/NA	Analysis	365.1		1	421083	ZJX4	EET CF	05/08/24 23:18
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 19:49
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 14:19
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-1
Date Collected: 04/30/24 13:02
Date Received: 05/01/24 14:00

Lab Sample ID: 310-280174-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 19:57
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 10:21
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 22:00
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		4	420954	NFT2	EET CF	05/07/24 18:13
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:13
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:46
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:50
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:51
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:02
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 21:38
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 14:28
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Client Sample ID: LDR-2
Date Collected: 04/30/24 11:15
Date Received: 05/01/24 14:00

Lab Sample ID: 310-280174-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 20:08
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 10:33
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 22:07
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		4	420954	NFT2	EET CF	05/07/24 18:18
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:18
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:48
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:55
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/10/24 00:53
Total/NA	Prep	365.2/365.3/365			421127	HE7K	EET CF	05/09/24 08:55
Total/NA	Analysis	365.1		1	421219	ENB7	EET CF	05/09/24 16:06
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 22:14
Total/NA	Analysis	I-3765-85		1	420552	A4XP	EET CF	05/02/24 18:26
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 14:38
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: LDR-3

Lab Sample ID: 310-280174-13

Date Collected: 04/30/24 12:18

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 20:20
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 10:44
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 22:10
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		5	420954	NFT2	EET CF	05/07/24 18:20
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:20
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:48
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:54
Total/NA	Analysis	353.2		10	421234	ZJX4	EET CF	05/10/24 00:55
Total/NA	Prep	365.2/365.3/365			420958	HE7K	EET CF	05/08/24 08:30
Total/NA	Analysis	365.1		1	421083	ZJX4	EET CF	05/08/24 23:20
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 22:50
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 14:50
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Client Sample ID: SW-1

Lab Sample ID: 310-280174-14

Date Collected: 04/30/24 13:30

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 20:31
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 10:56
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 22:14
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		4	420954	NFT2	EET CF	05/07/24 18:22
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:22
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:49
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:54
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/09/24 23:42
Total/NA	Prep	365.2/365.3/365			420958	HE7K	EET CF	05/08/24 08:30
Total/NA	Analysis	365.1		1	421083	ZJX4	EET CF	05/08/24 23:18
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/06/24 23:27
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 15:01
Total/NA	Analysis	SM 2540C		1	420555	D7CP	EET CF	05/02/24 18:58

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Client Sample ID: Phase 1,2,3 Sump Composite

Lab Sample ID: 310-280174-15

Date Collected: 04/30/24 13:50

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 20:43
Total/NA	Analysis	9056A		100	420605	QTZ5	EET CF	05/02/24 11:31
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		25	420954	NFT2	EET CF	05/07/24 18:24
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		125	421056	NFT2	EET CF	05/08/24 14:48
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:24
Total/NA	Prep	350.1			421116	MQ8M	EET CF	05/09/24 08:19
Total/NA	Analysis	350.1		1	421233	ZJX4	EET CF	05/09/24 21:19
Total/NA	Prep	351.2			420565	W9YR	EET CF	05/03/24 05:10
Total/NA	Analysis	351.2		1	420674	ZJX4	EET CF	05/03/24 16:48
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/09/24 23:44
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 00:59
Total/NA	Analysis	9060A		10	420808	DGU1	EET CF	05/07/24 00:03
Total/NA	Analysis	I-3765-85		1	420666	ENB7	EET CF	05/03/24 15:55
Total/NA	Analysis	SM 2320B		1	421337	HE7K	EET CF	05/10/24 13:47
Total/NA	Analysis	SM 2540C		1	420642	DGU1	EET CF	05/03/24 13:20

Client Sample ID: MW-D

Lab Sample ID: 310-280174-16

Date Collected: 04/29/24 16:50

Matrix: Water

Date Received: 05/01/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420605	QTZ5	EET CF	05/01/24 21:06
Total/NA	Analysis	9056A		20	420605	QTZ5	EET CF	05/02/24 11:42
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420834	NFT2	EET CF	05/06/24 22:21
Total/NA	Prep	3005A			420506	KM3E	EET CF	05/03/24 09:00
Total/NA	Analysis	6020B		1	420954	NFT2	EET CF	05/07/24 18:26
Total/NA	Analysis	SM 2340B		1	420753	HE7K	EET CF	05/07/24 18:26
Total/NA	Analysis	350.1		1	420681	ZJX4	EET CF	05/03/24 22:50
Total/NA	Prep	351.2			420697	W9YR	EET CF	05/06/24 06:00
Total/NA	Analysis	351.2		1	420807	ZJX4	EET CF	05/06/24 20:42
Total/NA	Analysis	353.2		1	421234	ZJX4	EET CF	05/09/24 23:46
Total/NA	Prep	365.2/365.3/365			420522	HE7K	EET CF	05/02/24 13:07
Total/NA	Analysis	365.1		1	420563	ZJX4	EET CF	05/03/24 01:06
Total/NA	Analysis	9060A		1	420808	DGU1	EET CF	05/07/24 00:39
Total/NA	Analysis	I-3765-85		1	420598	ENB7	EET CF	05/03/24 08:54
Total/NA	Analysis	SM 2320B		1	421221	WZC8	EET CF	05/09/24 15:40
Total/NA	Analysis	SM 2540C		1	420554	D7CP	EET CF	05/02/24 18:52

Lab Chronicle

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
SDG: Heidelberg Materials CKD Monofill

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

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Method Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill Spring 2024

Job ID: 310-280174-1
 SDG: Heidelberg Materials CKD Monofill

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET CF
365.1	Phosphorus, Total	EPA	EET CF
9060A	Organic Carbon, Total (TOC)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2320B	Alkalinity	SM	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
350.1	Distillation, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
365.2/365.3/365	Phosphorus, Total	EPA	EET CF

Protocol References:

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

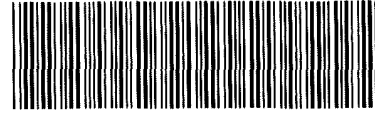
Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-280174 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/1/24</u>	TIME <u>1625</u>	Received By: <u>em</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>4</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C):	<u>0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>1.6</u>	Corrected Temp (°C):	<u>1.6</u>
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			





Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/1/24</u>	TIME <u>1625</u>	Received By: <u>em</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>4</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C):	<u>0</u>
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>2.9</u>	Corrected Temp (°C):	<u>2.9</u>
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			





Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/11/24</u>	TIME <u>1625</u>	Received By: <u>em</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>4</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C):	<u>0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>1.8</u>	Corrected Temp (°C):	<u>1.8</u>
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions/Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			





Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/1/24</u>	TIME <u>1625</u>	Received By: <u>em</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>4</u> of <u>4</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C):	<u>0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>0.6</u>	Corrected Temp (°C):	<u>0.6</u>
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions/Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



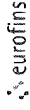
Chain of Custody Record

Eurofins TestAmerica Cedar Falls
3019 Ventur Way

Cedar Falls IA 50613-690
phone 319 277 2401 fax 319 277 2425

TestAmerica Laboratories Inc. d/b/s Eurofins TestAmerica

Regulatory Program DIV HEPDES RCRA OHP-G Groundwater



Client Contact		Project Manager		Site Contact		Date		COC No	
Kev n Jensen SCS Eng n ar		Ema I Cell		Lab Contact:		Carrier:		1 of 4 COCs	
1690 Alkstate Court Suite 100 West Des Moines Iowa 50265 515-615154		Analysis Turnaround Time <input type="checkbox"/> 10 WORKING DAY Other: <input type="checkbox"/> 1 wk <input type="checkbox"/> 2 day		Regulatory Program <input type="checkbox"/> DIV <input type="checkbox"/> HEPDES <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OHP-G <input type="checkbox"/> Groundwater		Total Dissolved Solids			
Project Name Heidelberg CKD Monofill Spr g 2024 Site Heidelberg Material CKD Monofill PO #		Sample Date		Sample Time		Total Organic Carbon			
Sample Identification		Sample Type		Matrix		Total Kjeldahl Nitrogen			
MW 101R No P e		4-29-24 15:35		H ₂ O		Sulfate			
MW 102R No P e		4-29-24 14:38		H ₂ O		Nitrate/Nitrite			
MW 10 R No P e		4-29-24 13:01		H ₂ O		Hardness			
MW 101R Recha		4-30-24 16:24		H ₂ O		Chloride			
MW 102R Recha						Ammonia-Nitrogen			
MW 10 R R charge						Perform MS / MSD (Y / N)			
Preservation Used 1= Ice 2= HCl 3= H2SO4 4=HNO3 5=NaOH 6= Other						Filtered Sample (Y / N)			
Possible Hazard Identification Are any sample from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample									
Special Instructions/QC Requirements & Comments									
Custody Seal No		Date/Time		Date/Time		Date/Time		Date/Time	
Relinquished by <i>Kramer Ruth</i>		Company SCS		Received by <i>Quark</i>		Company Eurofins		Therm ID No	
Relinquished by		Company		Date/Time		Date/Time		Date/Time	
Relinquished by		Company		Date/Time		Date/Time		Date/Time	

Form No. CA-C-WI-002 Rev. 4.23 dated 4/16/2019



Chain of Custody Record

Eurofins TestAmerica Cedar Falls
3019 Venture Way

Cedar Falls IA 50643-5907
Phone 319.277.2401 Fax 319.277.2425

TestAmerica Labora ories Inc dtria Eurofins TestAmerica

Regulatory Program DIV RPDES RCRA Other Groundwater

Project Manager _____ **Date** _____

Client Contact Kevin Jensen, SCS Engineers
1690 All-State Court, Suite 100
West Des Moines, Iowa 50265
515-621-6154

Site Contact: _____

Lab Contact: _____

COC No. 3 of 4 **COC** _____

Sampler For Lab Use Only
Walk-in Client
Lab Sampling

Job SDG No. _____

Sample Specific Notes

Sample Identification	Sample Date	Sample Time	Sample Type C-C-M-E	Matrix Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Total Alkalinity	Ammonia-Nitrogen	Chloride	Hardness	Nitrate/Nitrite	Total Phosphorus	Sulfate	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Organic Carbon	Total Suspended Solids
MW 201	4-29-24	1747	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MV 0, R	4-29-24	1607	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MW 0 R	4-29-24	1823	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MW 04	4-29-24	1650	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MW 05	4-30-24	0900	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MW 06	4-30-24	0940	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
LDR	4-30-24	1307	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
LDR	4-30-24	1115	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
LDR	4-30-24	1218	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
V 1	4-30-24	1330	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
Base 1 Sump Comp	4-30-24	1350	C	H ₂ O			X	X	X	X	X	X	X	X	X	X	X
MW D	4-24-24	1650	G	H ₂ O			X	X	X	X	X	X	X	X	X	X	X

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other _____

Possible Hazard Identification: _____

Are any samples from a listed EPA Hazardous Waste? Please list any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample _____

Received by: _____ Date/Time: 5/1/24 12:00
Company: SCS

Received by: _____ Date/Time: 5-1-24 16:25
Company: Eurofins

Received in Laboratory by: _____ Date/Time: _____
Company: _____



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-280174-1
SDG Number: Heidelberg Materials CKD Monofill

Login Number: 280174

List Number: 1

Creator: Muehling, Angela C

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Jensen
SCS Engineers
1690 All State Court
Suite 100
West Des Moines, Iowa 50265

Generated 10/25/2024 1:47:41 PM

JOB DESCRIPTION

Heidelberg CKD Monofill - Fall 2024

JOB NUMBER

310-292487-1

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Samuel Miller, Project Management Assistant I
Samuel.Miller@et.eurofinsus.com
(319)277-2401



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Case Narrative

Client: SCS Engineers
Project: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Job ID: 310-292487-1

Eurofins Cedar Falls

Job Narrative 310-292487-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/10/2024 10:53 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.1°C, 1.2°C, 3.1°C and 3.9°C.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Cedar Falls

Sample Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-292487-1	MW-201	Water	10/08/24 11:37	10/10/24 10:53
310-292487-2	MW-202R	Water	10/08/24 10:58	10/10/24 10:53
310-292487-3	MW-203R	Water	10/07/24 16:42	10/10/24 10:53
310-292487-4	MW-204	Water	10/08/24 10:25	10/10/24 10:53
310-292487-5	MW-205	Water	10/07/24 17:27	10/10/24 10:53
310-292487-6	MW-206	Water	10/07/24 16:08	10/10/24 10:53
310-292487-7	LDR-1	Water	10/08/24 12:14	10/10/24 10:53
310-292487-8	LDR-2	Water	10/08/24 13:05	10/10/24 10:53
310-292487-9	LDR-3	Water	10/08/24 14:10	10/10/24 10:53
310-292487-10	MW-D	Water	10/08/24 10:24	10/10/24 10:53
310-292487-11	MW-102R No Purge	Water	10/07/24 15:17	10/10/24 10:53
310-292487-12	MW-103R No Purge	Water	10/07/24 14:41	10/10/24 10:53



Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-201

Lab Sample ID: 310-292487-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	28.9		5.00	2.25	mg/L			5	9056A	Total/NA
Sulfate	119		5.00	2.10	mg/L			5	9056A	Total/NA
Arsenic	0.00160	J	0.00200	0.000530	mg/L			1	6020B	Total/NA
Calcium	104		0.500	0.190	mg/L			1	6020B	Total/NA
Magnesium	49.5		0.500	0.150	mg/L			1	6020B	Total/NA
Potassium	23.2		0.500	0.150	mg/L			1	6020B	Total/NA
Sodium	25.2		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	464		2.06	0.618	mg/L			1	SM 2340B	Total/NA
Ammonia as N	0.602		0.500	0.210	mg/L			1	350.1	Total/NA
Total Kjeldahl Nitrogen	0.601	J	1.00	0.570	mg/L			1	351.2	Total/NA
Total Organic Carbon	1.62		1.00	0.500	mg/L			1	9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	364		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	364		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Total Dissolved Solids	522		50.0	42.0	mg/L			1	SM 2540C	Total/NA

Client Sample ID: MW-202R

Lab Sample ID: 310-292487-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	12.7		5.00	2.25	mg/L			5	9056A	Total/NA
Sulfate	68.9		5.00	2.10	mg/L			5	9056A	Total/NA
Calcium	2.34		0.500	0.190	mg/L			1	6020B	Total/NA
Chromium	0.00122	J	0.00500	0.00120	mg/L			1	6020B	Total/NA
Magnesium	67.7		0.500	0.150	mg/L			1	6020B	Total/NA
Potassium	9.63		0.500	0.150	mg/L			1	6020B	Total/NA
Sodium	56.4		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	285		2.06	0.618	mg/L			1	SM 2340B	Total/NA
Nitrate Nitrite as N	0.139		0.100	0.0800	mg/L			1	353.2	Total/NA
Total Organic Carbon	1.09		1.00	0.500	mg/L			1	9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	318		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	153		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	165		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Total Dissolved Solids	386		50.0	42.0	mg/L			1	SM 2540C	Total/NA

Client Sample ID: MW-203R

Lab Sample ID: 310-292487-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	3.68	J	5.00	2.25	mg/L			5	9056A	Total/NA
Calcium	75.7		0.500	0.190	mg/L			1	6020B	Total/NA
Magnesium	33.2		0.500	0.150	mg/L			1	6020B	Total/NA
Potassium	5.44		0.500	0.150	mg/L			1	6020B	Total/NA
Sodium	17.4		1.00	0.480	mg/L			1	6020B	Total/NA
Total Hardness	326		2.06	0.618	mg/L			1	SM 2340B	Total/NA
Ammonia as N	0.218	J	0.500	0.210	mg/L			1	350.1	Total/NA
Total Organic Carbon	1.23		1.00	0.500	mg/L			1	9060A	Total/NA
Total Suspended Solids	1.50	J	1.88	1.39	mg/L			1	I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	342		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	342		5.00	2.50	mg/L			1	SM 2320B	Total/NA
Total Dissolved Solids	296		50.0	42.0	mg/L			1	SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-204

Lab Sample ID: 310-292487-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21.5		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	144		5.00	2.10	mg/L	5		9056A	Total/NA
Calcium	110		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	55.2		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	14.1		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	20.3		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	502		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia as N	0.263	J	0.500	0.210	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.35		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	346		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	346		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	550		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-205

Lab Sample ID: 310-292487-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.28	J	5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	16.5		5.00	2.10	mg/L	5		9056A	Total/NA
Calcium	78.1		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	36.9		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	6.84		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	18.2		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	347		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia as N	0.221	J	0.500	0.210	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.16		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	1.50	J	1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	344		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	344		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	320		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-206

Lab Sample ID: 310-292487-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.60	J	5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	30.3		5.00	2.10	mg/L	5		9056A	Total/NA
Calcium	86.4		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	40.6		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	7.06		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	18.3		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	383		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia as N	0.719		0.500	0.210	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.13		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	361		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	361		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	342		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-1

Lab Sample ID: 310-292487-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31.0		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	1600		20.0	8.40	mg/L	20		9056A	Total/NA
Arsenic	0.000842	J	0.00200	0.000530	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-1 (Continued)

Lab Sample ID: 310-292487-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	485		2.00	0.760	mg/L	4		6020B	Total/NA
Magnesium	264		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	53.4		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	28.8		4.00	1.92	mg/L	4		6020B	Total/NA
Total Hardness	2300		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Ammonia as N	0.411	J	0.500	0.210	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.41		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	11.2		3.00	2.22	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	652		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	652		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2810		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-2

Lab Sample ID: 310-292487-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	157		50.0	22.5	mg/L	50		9056A	Total/NA
Sulfate	1340		50.0	21.0	mg/L	50		9056A	Total/NA
Calcium	494		2.00	0.760	mg/L	4		6020B	Total/NA
Magnesium	259		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	57.2		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	48.9		4.00	1.92	mg/L	4		6020B	Total/NA
Total Hardness	2300		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Nitrate Nitrite as N	0.0862	J	0.100	0.0800	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.24		1.00	0.500	mg/L	1		9060A	Total/NA
Total Suspended Solids	1.88		1.88	1.39	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	676		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	676		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2780		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: LDR-3

Lab Sample ID: 310-292487-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	703		100	45.0	mg/L	100		9056A	Total/NA
Sulfate	2300		100	42.0	mg/L	100		9056A	Total/NA
Calcium	732		3.50	1.33	mg/L	7		6020B	Total/NA
Chromium	0.00299	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Magnesium	430		3.50	1.05	mg/L	7		6020B	Total/NA
Potassium	464		3.50	1.05	mg/L	7		6020B	Total/NA
Sodium	124		7.00	3.36	mg/L	7		6020B	Total/NA
Total Hardness	3600		14.4	4.32	mg/L	1		SM 2340B	Total/NA
Total Kjeldahl Nitrogen	0.617	J	1.00	0.570	mg/L	1		351.2	Total/NA
Nitrate Nitrite as N	0.408		0.100	0.0800	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.680	J F1	1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	632		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	632		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	4670		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-292487-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	149		5.00	2.10	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-D (Continued)

Lab Sample ID: 310-292487-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	113		0.500	0.190	mg/L	1		6020B	Total/NA
Magnesium	55.6		0.500	0.150	mg/L	1		6020B	Total/NA
Potassium	11.6		0.500	0.150	mg/L	1		6020B	Total/NA
Sodium	19.5		1.00	0.480	mg/L	1		6020B	Total/NA
Total Hardness	511		2.06	0.618	mg/L	1		SM 2340B	Total/NA
Ammonia as N	0.379	J	0.500	0.210	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.43		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	346		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	346		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	564		50.0	42.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-102R No Purge

Lab Sample ID: 310-292487-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.89	J	5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	1510		20.0	8.40	mg/L	20		9056A	Total/NA
Calcium	446		0.500	0.190	mg/L	1		6020B	Total/NA
Chromium	0.00357	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Magnesium	247		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	13.0		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	52.4		4.00	1.92	mg/L	4		6020B	Total/NA
Total Hardness	2130		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Total Organic Carbon	1.52		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	653		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	653		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2540		250	210	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-103R No Purge

Lab Sample ID: 310-292487-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22.5		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	1770		20.0	8.40	mg/L	20		9056A	Total/NA
Calcium	498		2.00	0.760	mg/L	4		6020B	Total/NA
Magnesium	305		2.00	0.600	mg/L	4		6020B	Total/NA
Potassium	25.4		2.00	0.600	mg/L	4		6020B	Total/NA
Sodium	61.4		4.00	1.92	mg/L	4		6020B	Total/NA
Total Hardness	2500		8.24	2.47	mg/L	1		SM 2340B	Total/NA
Nitrate Nitrite as N	0.435		0.100	0.0800	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.39		1.00	0.500	mg/L	1		9060A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	655		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	655		5.00	2.50	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	3100		250	210	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
SM 2340B	Total Hardness	Water	Total/NA	mg/L	0.500	3.3

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-201

Lab Sample ID: 310-292487-1

Date Collected: 10/08/24 11:37

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.9		5.00	2.25	mg/L			10/22/24 13:05	5
Sulfate	119		5.00	2.10	mg/L			10/22/24 13:05	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:15	1
Arsenic	0.00160	J	0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:15	1
Calcium	104		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:15	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:15	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:15	1
Magnesium	49.5		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:15	1
Potassium	23.2		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:15	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:15	1
Sodium	25.2		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:15	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	464		2.06	0.618	mg/L			10/15/24 17:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.602		0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:28	1
Total Kjeldahl Nitrogen (EPA 351.2)	0.601	J	1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:12	1
Nitrate Nitrite as N (EPA 353.2)	<0.100	F1	0.100	0.0800	mg/L			10/18/24 19:05	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:35	10/14/24 22:35	1
Total Organic Carbon (SW846 9060A)	1.62		1.00	0.500	mg/L			10/17/24 00:10	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	364		5.00	2.50	mg/L			10/16/24 10:51	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	364		5.00	2.50	mg/L			10/16/24 10:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 10:51	1
Total Dissolved Solids (SM 2540C)	522		50.0	42.0	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-202R

Lab Sample ID: 310-292487-2

Date Collected: 10/08/24 10:58

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.7		5.00	2.25	mg/L			10/22/24 13:17	5
Sulfate	68.9		5.00	2.10	mg/L			10/22/24 13:17	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:25	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:25	1
Calcium	2.34		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:25	1
Chromium	0.00122	J	0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:25	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:25	1
Magnesium	67.7		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:25	1
Potassium	9.63		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:25	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:25	1
Sodium	56.4		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:25	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	285		2.06	0.618	mg/L			10/15/24 17:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	<0.500		0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:35	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:13	1
Nitrate Nitrite as N (EPA 353.2)	0.139		0.100	0.0800	mg/L			10/18/24 22:47	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:35	10/14/24 22:35	1
Total Organic Carbon (SW846 9060A)	1.09		1.00	0.500	mg/L			10/17/24 00:46	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	318		5.00	2.50	mg/L			10/16/24 11:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	153		5.00	2.50	mg/L			10/16/24 11:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	165		5.00	2.50	mg/L			10/16/24 11:00	1
Total Dissolved Solids (SM 2540C)	386		50.0	42.0	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-203R

Lab Sample ID: 310-292487-3

Date Collected: 10/07/24 16:42

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.68	J	5.00	2.25	mg/L			10/22/24 13:29	5
Sulfate	<5.00		5.00	2.10	mg/L			10/22/24 13:29	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:27	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:27	1
Calcium	75.7		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:27	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:27	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:27	1
Magnesium	33.2		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:27	1
Potassium	5.44		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:27	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:27	1
Sodium	17.4		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:27	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	326		2.06	0.618	mg/L			10/15/24 17:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.218	J	0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:30	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:12	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 22:52	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:26	1
Total Organic Carbon (SW846 9060A)	1.23		1.00	0.500	mg/L			10/17/24 01:22	1
Total Suspended Solids (USGS I-3765-85)	1.50	J	1.88	1.39	mg/L			10/11/24 11:31	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	342		5.00	2.50	mg/L			10/16/24 11:09	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	342		5.00	2.50	mg/L			10/16/24 11:09	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 11:09	1
Total Dissolved Solids (SM 2540C)	296		50.0	42.0	mg/L			10/10/24 16:19	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-204

Lab Sample ID: 310-292487-4

Date Collected: 10/08/24 10:25

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.5		5.00	2.25	mg/L			10/18/24 15:32	5
Sulfate	144		5.00	2.10	mg/L			10/18/24 15:32	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:29	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:29	1
Calcium	110		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:29	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:29	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:29	1
Magnesium	55.2		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:29	1
Potassium	14.1		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:29	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:29	1
Sodium	20.3		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:29	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	502		2.06	0.618	mg/L			10/15/24 17:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.263	J	0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:44	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:10	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 22:53	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:25	1
Total Organic Carbon (SW846 9060A)	1.35		1.00	0.500	mg/L			10/17/24 01:58	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	346		5.00	2.50	mg/L			10/16/24 11:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	346		5.00	2.50	mg/L			10/16/24 11:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 11:28	1
Total Dissolved Solids (SM 2540C)	550		50.0	42.0	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-205

Lab Sample ID: 310-292487-5

Date Collected: 10/07/24 17:27

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.28	J	5.00	2.25	mg/L			10/18/24 16:19	5
Sulfate	16.5		5.00	2.10	mg/L			10/18/24 16:19	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:31	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:31	1
Calcium	78.1		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:31	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:31	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:31	1
Magnesium	36.9		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:31	1
Potassium	6.84		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:31	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:31	1
Sodium	18.2		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:31	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	347		2.06	0.618	mg/L			10/15/24 17:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.221	J	0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:42	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:13	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 22:55	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:22	1
Total Organic Carbon (SW846 9060A)	1.16		1.00	0.500	mg/L			10/17/24 02:35	1
Total Suspended Solids (USGS I-3765-85)	1.50	J	1.88	1.39	mg/L			10/11/24 08:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	344		5.00	2.50	mg/L			10/16/24 11:38	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	344		5.00	2.50	mg/L			10/16/24 11:38	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 11:38	1
Total Dissolved Solids (SM 2540C)	320		50.0	42.0	mg/L			10/10/24 16:19	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-206

Lab Sample ID: 310-292487-6

Date Collected: 10/07/24 16:08

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.60	J	5.00	2.25	mg/L			10/18/24 16:35	5
Sulfate	30.3		5.00	2.10	mg/L			10/18/24 16:35	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:34	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:34	1
Calcium	86.4		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:34	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:34	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:34	1
Magnesium	40.6		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:34	1
Potassium	7.06		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:34	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:34	1
Sodium	18.3		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:34	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	383		2.06	0.618	mg/L			10/15/24 17:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.719		0.500	0.210	mg/L		10/15/24 09:52	10/15/24 18:56	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:11	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 22:57	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:25	1
Total Organic Carbon (SW846 9060A)	1.13		1.00	0.500	mg/L			10/17/24 03:11	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 08:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	361		5.00	2.50	mg/L			10/16/24 11:47	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	361		5.00	2.50	mg/L			10/16/24 11:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 11:47	1
Total Dissolved Solids (SM 2540C)	342		50.0	42.0	mg/L			10/10/24 16:19	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-1

Lab Sample ID: 310-292487-7

Date Collected: 10/08/24 12:14

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.0		20.0	9.00	mg/L			10/18/24 16:50	20
Sulfate	1600		20.0	8.40	mg/L			10/18/24 16:50	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:45	1
Arsenic	0.000842	J	0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:45	1
Calcium	485		2.00	0.760	mg/L		10/14/24 10:00	10/21/24 15:36	4
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:45	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:45	1
Magnesium	264		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:36	4
Potassium	53.4		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:36	4
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:45	1
Sodium	28.8		4.00	1.92	mg/L		10/14/24 10:00	10/21/24 15:36	4

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2300		8.24	2.47	mg/L			10/21/24 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.411	J	0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:33	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:11	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 22:58	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:26	1
Total Organic Carbon (SW846 9060A)	1.41		1.00	0.500	mg/L			10/17/24 10:24	1
Total Suspended Solids (USGS I-3765-85)	11.2		3.00	2.22	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	652		5.00	2.50	mg/L			10/16/24 15:47	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	652		5.00	2.50	mg/L			10/16/24 15:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 15:47	1
Total Dissolved Solids (SM 2540C)	2810		250	210	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-2

Lab Sample ID: 310-292487-8

Date Collected: 10/08/24 13:05

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	157		50.0	22.5	mg/L			10/18/24 17:06	50
Sulfate	1340		50.0	21.0	mg/L			10/18/24 17:06	50

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:47	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:47	1
Calcium	494		2.00	0.760	mg/L		10/14/24 10:00	10/21/24 15:38	4
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:47	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:47	1
Magnesium	259		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:38	4
Potassium	57.2		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:38	4
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:47	1
Sodium	48.9		4.00	1.92	mg/L		10/14/24 10:00	10/21/24 15:38	4

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2300		8.24	2.47	mg/L			10/21/24 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	<0.500		0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:35	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:08	1
Nitrate Nitrite as N (EPA 353.2)	0.0862	J	0.100	0.0800	mg/L			10/18/24 23:03	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:21	1
Total Organic Carbon (SW846 9060A)	1.24		1.00	0.500	mg/L			10/17/24 11:00	1
Total Suspended Solids (USGS I-3765-85)	1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	676		5.00	2.50	mg/L			10/16/24 15:59	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	676		5.00	2.50	mg/L			10/16/24 15:59	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 15:59	1
Total Dissolved Solids (SM 2540C)	2780		250	210	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-3

Lab Sample ID: 310-292487-9

Date Collected: 10/08/24 14:10

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	703		100	45.0	mg/L			10/18/24 17:21	100
Sulfate	2300		100	42.0	mg/L			10/18/24 17:21	100

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:49	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:49	1
Calcium	732		3.50	1.33	mg/L		10/14/24 10:00	10/21/24 15:40	7
Chromium	0.00299	J	0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:49	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:49	1
Magnesium	430		3.50	1.05	mg/L		10/14/24 10:00	10/21/24 15:40	7
Potassium	464		3.50	1.05	mg/L		10/14/24 10:00	10/21/24 15:40	7
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:49	1
Sodium	124		7.00	3.36	mg/L		10/14/24 10:00	10/21/24 15:40	7

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	3600		14.4	4.32	mg/L			10/21/24 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	<0.500		0.500	0.210	mg/L		10/16/24 09:32	10/16/24 18:50	1
Total Kjeldahl Nitrogen (EPA 351.2)	0.617	J	1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:09	1
Nitrate Nitrite as N (EPA 353.2)	0.408		0.100	0.0800	mg/L			10/18/24 23:05	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:23	1
Total Organic Carbon (SW846 9060A)	0.680	J F1	1.00	0.500	mg/L			10/17/24 11:37	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	632		5.00	2.50	mg/L			10/16/24 16:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	632		5.00	2.50	mg/L			10/16/24 16:24	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 16:24	1
Total Dissolved Solids (SM 2540C)	4670		250	210	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-D

Lab Sample ID: 310-292487-10

Date Collected: 10/08/24 10:24

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.7		5.00	2.25	mg/L			10/18/24 18:08	5
Sulfate	149		5.00	2.10	mg/L			10/18/24 18:08	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:52	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:52	1
Calcium	113		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:52	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:52	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:52	1
Magnesium	55.6		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:52	1
Potassium	11.6		0.500	0.150	mg/L		10/14/24 10:00	10/21/24 15:51	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:52	1
Sodium	19.5		1.00	0.480	mg/L		10/14/24 10:00	10/21/24 15:51	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	511		2.06	0.618	mg/L			10/15/24 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	0.379	J	0.500	0.210	mg/L		10/18/24 11:08	10/18/24 19:09	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:09	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 18:46	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:35	10/14/24 22:36	1
Total Organic Carbon (SW846 9060A)	1.43		1.00	0.500	mg/L			10/17/24 07:24	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 13:36	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	346		5.00	2.50	mg/L			10/16/24 16:35	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	346		5.00	2.50	mg/L			10/16/24 16:35	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 16:35	1
Total Dissolved Solids (SM 2540C)	564		50.0	42.0	mg/L			10/11/24 16:52	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-102R No Purge

Lab Sample ID: 310-292487-11

Date Collected: 10/07/24 15:17

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.89	J	5.00	2.25	mg/L			10/19/24 13:41	5
Sulfate	1510		20.0	8.40	mg/L			10/18/24 18:24	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:54	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:54	1
Calcium	446		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:54	1
Chromium	0.00357	J	0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:54	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:54	1
Magnesium	247		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:53	4
Potassium	13.0		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:53	4
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:54	1
Sodium	52.4		4.00	1.92	mg/L		10/14/24 10:00	10/21/24 15:53	4

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2130		8.24	2.47	mg/L			10/21/24 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	<0.500		0.500	0.210	mg/L		10/16/24 09:32	10/16/24 18:52	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:09	1
Nitrate Nitrite as N (EPA 353.2)	<0.100		0.100	0.0800	mg/L			10/18/24 18:47	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:35	10/14/24 22:36	1
Total Organic Carbon (SW846 9060A)	1.52		1.00	0.500	mg/L			10/17/24 08:00	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 08:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	653		5.00	2.50	mg/L			10/16/24 16:45	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	653		5.00	2.50	mg/L			10/16/24 16:45	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 16:45	1
Total Dissolved Solids (SM 2540C)	2540		250	210	mg/L			10/10/24 16:19	1

Client Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-103R No Purge

Lab Sample ID: 310-292487-12

Date Collected: 10/07/24 14:41

Matrix: Water

Date Received: 10/10/24 10:53

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.5		20.0	9.00	mg/L			10/18/24 18:39	20
Sulfate	1770		20.0	8.40	mg/L			10/18/24 18:39	20

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:58	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:58	1
Calcium	498		2.00	0.760	mg/L		10/14/24 10:00	10/21/24 15:58	4
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:58	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:58	1
Magnesium	305		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:58	4
Potassium	25.4		2.00	0.600	mg/L		10/14/24 10:00	10/21/24 15:58	4
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:58	1
Sodium	61.4		4.00	1.92	mg/L		10/14/24 10:00	10/21/24 15:58	4

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	2500		8.24	2.47	mg/L			10/21/24 15:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N (EPA 350.1)	<0.500		0.500	0.210	mg/L		10/16/24 09:32	10/16/24 18:52	1
Total Kjeldahl Nitrogen (EPA 351.2)	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:13	1
Nitrate Nitrite as N (EPA 353.2)	0.435		0.100	0.0800	mg/L			10/18/24 18:49	1
Total Phosphorus as P (EPA 365.1)	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:23	1
Total Organic Carbon (SW846 9060A)	1.39		1.00	0.500	mg/L			10/17/24 23:11	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			10/11/24 08:52	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	655		5.00	2.50	mg/L			10/16/24 17:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	655		5.00	2.50	mg/L			10/16/24 17:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.00		5.00	2.50	mg/L			10/16/24 17:04	1
Total Dissolved Solids (SM 2540C)	3100		250	210	mg/L			10/10/24 16:19	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-436852/3
Matrix: Water
Analysis Batch: 436852

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			10/18/24 11:54	1
Sulfate	<1.00		1.00	0.420	mg/L			10/18/24 11:54	1

Lab Sample ID: LCS 310-436852/4
Matrix: Water
Analysis Batch: 436852

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.522		mg/L		95	90 - 110
Sulfate	10.0	9.979		mg/L		100	90 - 110

Lab Sample ID: 310-292487-4 MS
Matrix: Water
Analysis Batch: 436852

Client Sample ID: MW-204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	21.5		25.0	46.29		mg/L		99	80 - 120
Sulfate	144		25.0	169.2	4	mg/L		99	80 - 120

Lab Sample ID: 310-292487-4 MSD
Matrix: Water
Analysis Batch: 436852

Client Sample ID: MW-204
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	21.5		25.0	45.86		mg/L		97	80 - 120	1	15
Sulfate	144		25.0	168.5	4	mg/L		97	80 - 120	0	15

Lab Sample ID: MB 310-437195/3
Matrix: Water
Analysis Batch: 437195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			10/22/24 10:15	1
Sulfate	<1.00		1.00	0.420	mg/L			10/22/24 10:15	1

Lab Sample ID: LCS 310-437195/4
Matrix: Water
Analysis Batch: 437195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.599		mg/L		96	90 - 110
Sulfate	10.0	10.01		mg/L		100	90 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-436015/1-A
Matrix: Water
Analysis Batch: 436382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436015

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	<0.0500		0.0500	0.0210	mg/L		10/14/24 10:00	10/15/24 17:01	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		10/14/24 10:00	10/15/24 17:01	1
Calcium	<0.500		0.500	0.190	mg/L		10/14/24 10:00	10/15/24 17:01	1
Chromium	<0.00500		0.00500	0.00120	mg/L		10/14/24 10:00	10/15/24 17:01	1
Lead	<0.000500		0.000500	0.000260	mg/L		10/14/24 10:00	10/15/24 17:01	1
Magnesium	<0.500		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:01	1
Potassium	<0.500		0.500	0.150	mg/L		10/14/24 10:00	10/15/24 17:01	1
Selenium	<0.00500		0.00500	0.00140	mg/L		10/14/24 10:00	10/15/24 17:01	1
Sodium	<1.00		1.00	0.480	mg/L		10/14/24 10:00	10/15/24 17:01	1

Lab Sample ID: LCS 310-436015/2-A
Matrix: Water
Analysis Batch: 436382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2231		mg/L		112	80 - 120
Calcium	2.00	2.001		mg/L		100	80 - 120
Chromium	0.100	0.1088		mg/L		109	80 - 120
Lead	0.200	0.2123		mg/L		106	80 - 120
Magnesium	2.00	2.022		mg/L		101	80 - 120
Potassium	2.00	2.045		mg/L		102	80 - 120
Selenium	0.400	0.4198		mg/L		105	80 - 120
Sodium	2.00	2.222		mg/L		111	80 - 120

Lab Sample ID: 310-292487-1 MS
Matrix: Water
Analysis Batch: 436382

Client Sample ID: MW-201
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Aluminum	<0.0500		0.200	0.2141		mg/L		107	75 - 125
Arsenic	0.00160	J	0.200	0.2356		mg/L		117	75 - 125
Calcium	104		2.00	105.5	4	mg/L		85	75 - 125
Chromium	<0.00500		0.100	0.1082		mg/L		108	75 - 125
Lead	<0.000500		0.200	0.2081		mg/L		104	75 - 125
Magnesium	49.5		2.00	52.13	4	mg/L		133	75 - 125
Potassium	23.2		2.00	25.26	4	mg/L		104	75 - 125
Selenium	<0.00500		0.400	0.4338		mg/L		108	75 - 125
Sodium	25.2		2.00	27.38	4	mg/L		108	75 - 125

Lab Sample ID: 310-292487-1 MSD
Matrix: Water
Analysis Batch: 436382

Client Sample ID: MW-201
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Aluminum	<0.0500		0.200	0.2147		mg/L		107	75 - 125	0	20
Arsenic	0.00160	J	0.200	0.2357		mg/L		117	75 - 125	0	20
Calcium	104		2.00	104.2	4	mg/L		19	75 - 125	1	20
Chromium	<0.00500		0.100	0.1083		mg/L		108	75 - 125	0	20

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QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 310-292487-1 MSD
Matrix: Water
Analysis Batch: 436382

Client Sample ID: MW-201
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Lead	<0.000500		0.200	0.2075		mg/L		104	75 - 125	0	20
Magnesium	49.5		2.00	51.39	4	mg/L		96	75 - 125	1	20
Potassium	23.2		2.00	25.12	4	mg/L		97	75 - 125	1	20
Selenium	<0.00500		0.400	0.4327		mg/L		108	75 - 125	0	20
Sodium	25.2		2.00	27.07	4	mg/L		92	75 - 125	1	20

Lab Sample ID: 310-292487-11 DU
Matrix: Water
Analysis Batch: 436382

Client Sample ID: MW-102R No Purge
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Aluminum	<0.0500		<0.0500		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Calcium	446		448.0		mg/L		0.4	20
Chromium	0.00357	J	<0.00500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20

Lab Sample ID: 310-292487-11 DU
Matrix: Water
Analysis Batch: 437043

Client Sample ID: MW-102R No Purge
Prep Type: Total/NA
Prep Batch: 436015

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Magnesium	247		259.1		mg/L		5	20
Potassium	13.0		13.58		mg/L		4	20
Sodium	52.4		55.04		mg/L		5	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-436252/1-A
Matrix: Water
Analysis Batch: 436366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436252

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia as N	<0.500		0.500	0.210	mg/L		10/15/24 08:37	10/15/24 18:23	1

Lab Sample ID: LCS 310-436252/2-A
Matrix: Water
Analysis Batch: 436366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436252

Analyte	Spike	LCS		Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Ammonia as N	4.00	3.714		mg/L		93	90 - 110

Lab Sample ID: MB 310-436266/1-A
Matrix: Water
Analysis Batch: 436366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436266

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia as N	<0.500		0.500	0.210	mg/L		10/15/24 09:52	10/15/24 18:47	1

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QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 310-436266/2-A
Matrix: Water
Analysis Batch: 436366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	4.00	3.712		mg/L		93	90 - 110

Lab Sample ID: MB 310-436411/1-A
Matrix: Water
Analysis Batch: 436506

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.210	mg/L		10/16/24 09:32	10/16/24 18:31	1

Lab Sample ID: LCS 310-436411/2-A
Matrix: Water
Analysis Batch: 436506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436411

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	4.00	3.900		mg/L		97	90 - 110

Lab Sample ID: MB 310-436436/1-A
Matrix: Water
Analysis Batch: 436506

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.210	mg/L		10/16/24 11:22	10/16/24 18:54	1

Lab Sample ID: LCS 310-436436/2-A
Matrix: Water
Analysis Batch: 436506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	4.00	3.824		mg/L		96	90 - 110

Lab Sample ID: MB 310-436758/1-A
Matrix: Water
Analysis Batch: 436836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.210	mg/L		10/18/24 11:08	10/18/24 18:49	1

Lab Sample ID: LCS 310-436758/2-A
Matrix: Water
Analysis Batch: 436836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	4.00	3.745		mg/L		94	90 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-435893/1-A
 Matrix: Water
 Analysis Batch: 436033

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 435893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00	0.570	mg/L		10/11/24 05:04	10/11/24 21:04	1

Lab Sample ID: LCS 310-435893/2-A
 Matrix: Water
 Analysis Batch: 436033

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 435893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Kjeldahl Nitrogen	4.01	3.674		mg/L		92	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 310-436833/119
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			10/18/24 23:30	1

Lab Sample ID: MB 310-436833/20
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			10/18/24 18:16	1

Lab Sample ID: MB 310-436833/48
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			10/18/24 19:02	1

Lab Sample ID: MB 310-436833/91
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100	0.0800	mg/L			10/18/24 22:44	1

Lab Sample ID: LCS 310-436833/164
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	2.061		mg/L		100	90 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 310-436833/21
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	2.147		mg/L		104	90 - 110

Lab Sample ID: LCS 310-436833/82
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.07	2.070		mg/L		100	90 - 110

Lab Sample ID: 310-292487-1 MS
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: MW-201
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	<0.100	F1	1.00	0.8684	F1	mg/L		87	90 - 110

Lab Sample ID: 310-292487-1 MSD
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: MW-201
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	<0.100	F1	1.00	0.8446	F1	mg/L		84	90 - 110	3	19

Lab Sample ID: 310-292487-2 MS
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: MW-202R
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	0.139		1.00	1.056		mg/L		92	90 - 110

Lab Sample ID: 310-292487-2 MSD
 Matrix: Water
 Analysis Batch: 436833

Client Sample ID: MW-202R
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.139		1.00	1.054		mg/L		92	90 - 110	0	19

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 310-436168/1-A
 Matrix: Water
 Analysis Batch: 436204

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 436168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.100		0.100	0.0670	mg/L		10/14/24 14:16	10/14/24 22:18	1

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 310-436168/2-A
 Matrix: Water
 Analysis Batch: 436204

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 436168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	1.00	0.9252		mg/L		92	90 - 110

Lab Sample ID: MB 310-436170/1-A
 Matrix: Water
 Analysis Batch: 436204

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 436170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	<0.100		0.100	0.0670	mg/L		10/14/24 14:35	10/14/24 22:30	1

Lab Sample ID: LCS 310-436170/2-A
 Matrix: Water
 Analysis Batch: 436204

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 436170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Phosphorus as P	1.00	0.9470		mg/L		95	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 310-436638/11
 Matrix: Water
 Analysis Batch: 436638

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00	0.500	mg/L			10/16/24 16:57	1

Lab Sample ID: LCS 310-436638/12
 Matrix: Water
 Analysis Batch: 436638

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.58		mg/L		106	85 - 115

Lab Sample ID: 310-292487-9 MS
 Matrix: Water
 Analysis Batch: 436638

Client Sample ID: LDR-3
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	0.680	J F1	4.99	3.893	F1	mg/L		64	85 - 115

Lab Sample ID: MB 310-436872/12
 Matrix: Water
 Analysis Batch: 436872

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00	0.500	mg/L			10/17/24 20:47	1

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 310-436872/13
 Matrix: Water
 Analysis Batch: 436872

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.48		mg/L		105	85 - 115

Method: I-3765-85 - Residue, Non-filterable (TSS)

Lab Sample ID: MB 310-435918/1
 Matrix: Water
 Analysis Batch: 435918

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			10/11/24 08:52	1

Lab Sample ID: LCS 310-435918/2
 Matrix: Water
 Analysis Batch: 435918

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	108.0		mg/L		108	81 - 116

Lab Sample ID: MB 310-435958/1
 Matrix: Water
 Analysis Batch: 435958

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			10/11/24 11:31	1

Lab Sample ID: LCS 310-435958/2
 Matrix: Water
 Analysis Batch: 435958

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	105.0		mg/L		105	81 - 116

Lab Sample ID: MB 310-436002/1
 Matrix: Water
 Analysis Batch: 436002

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			10/11/24 13:36	1

Lab Sample ID: LCS 310-436002/2
 Matrix: Water
 Analysis Batch: 436002

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	98.00		mg/L		98	81 - 116

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 310-436510/2
 Matrix: Water
 Analysis Batch: 436510

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	1000	973.8		mg/L		97	86 - 111

Lab Sample ID: LCS 310-436510/25
 Matrix: Water
 Analysis Batch: 436510

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	1000	982.4		mg/L		98	86 - 111

Lab Sample ID: 310-292487-3 DU
 Matrix: Water
 Analysis Batch: 436510

Client Sample ID: MW-203R
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	342		342.0		mg/L		0.06	16
Bicarbonate Alkalinity as CaCO3	342		342.0		mg/L		0.06	
Carbonate Alkalinity as CaCO3	<5.00		<5.00		mg/L		NC	

Lab Sample ID: 310-292487-8 DU
 Matrix: Water
 Analysis Batch: 436510

Client Sample ID: LDR-2
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	676		678.1		mg/L		0.4	16
Bicarbonate Alkalinity as CaCO3	676		678.1		mg/L		0.4	
Carbonate Alkalinity as CaCO3	<5.00		<5.00		mg/L		NC	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 310-435878/1
 Matrix: Water
 Analysis Batch: 435878

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	42.0	mg/L			10/10/24 16:19	1

Lab Sample ID: LCS 310-435878/2
 Matrix: Water
 Analysis Batch: 435878

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1038		mg/L		104	88 - 110

QC Sample Results

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 310-436022/1
Matrix: Water
Analysis Batch: 436022

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	42.0	mg/L			10/11/24 16:52	1

Lab Sample ID: LCS 310-436022/2
Matrix: Water
Analysis Batch: 436022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1022		mg/L		102	88 - 110

Lab Sample ID: 310-292487-7 DU
Matrix: Water
Analysis Batch: 436022

Client Sample ID: LDR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2810		2790		mg/L		0.7	16

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

HPLC/IC

Analysis Batch: 436852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-4	MW-204	Total/NA	Water	9056A	
310-292487-5	MW-205	Total/NA	Water	9056A	
310-292487-6	MW-206	Total/NA	Water	9056A	
310-292487-7	LDR-1	Total/NA	Water	9056A	
310-292487-8	LDR-2	Total/NA	Water	9056A	
310-292487-9	LDR-3	Total/NA	Water	9056A	
310-292487-10	MW-D	Total/NA	Water	9056A	
310-292487-11	MW-102R No Purge	Total/NA	Water	9056A	
310-292487-11	MW-102R No Purge	Total/NA	Water	9056A	
310-292487-12	MW-103R No Purge	Total/NA	Water	9056A	
MB 310-436852/3	Method Blank	Total/NA	Water	9056A	
LCS 310-436852/4	Lab Control Sample	Total/NA	Water	9056A	
310-292487-4 MS	MW-204	Total/NA	Water	9056A	
310-292487-4 MSD	MW-204	Total/NA	Water	9056A	

Analysis Batch: 437195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	9056A	
310-292487-2	MW-202R	Total/NA	Water	9056A	
310-292487-3	MW-203R	Total/NA	Water	9056A	
MB 310-437195/3	Method Blank	Total/NA	Water	9056A	
LCS 310-437195/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 436015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	3005A	
310-292487-2	MW-202R	Total/NA	Water	3005A	
310-292487-3	MW-203R	Total/NA	Water	3005A	
310-292487-4	MW-204	Total/NA	Water	3005A	
310-292487-5	MW-205	Total/NA	Water	3005A	
310-292487-6	MW-206	Total/NA	Water	3005A	
310-292487-7	LDR-1	Total/NA	Water	3005A	
310-292487-8	LDR-2	Total/NA	Water	3005A	
310-292487-9	LDR-3	Total/NA	Water	3005A	
310-292487-10	MW-D	Total/NA	Water	3005A	
310-292487-11	MW-102R No Purge	Total/NA	Water	3005A	
310-292487-12	MW-103R No Purge	Total/NA	Water	3005A	
MB 310-436015/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-436015/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-292487-1 MS	MW-201	Total/NA	Water	3005A	
310-292487-1 MSD	MW-201	Total/NA	Water	3005A	
310-292487-11 DU	MW-102R No Purge	Total/NA	Water	3005A	

Analysis Batch: 436181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	SM 2340B	
310-292487-2	MW-202R	Total/NA	Water	SM 2340B	
310-292487-3	MW-203R	Total/NA	Water	SM 2340B	
310-292487-4	MW-204	Total/NA	Water	SM 2340B	

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QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Metals (Continued)

Analysis Batch: 436181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-5	MW-205	Total/NA	Water	SM 2340B	
310-292487-6	MW-206	Total/NA	Water	SM 2340B	
310-292487-7	LDR-1	Total/NA	Water	SM 2340B	
310-292487-8	LDR-2	Total/NA	Water	SM 2340B	
310-292487-9	LDR-3	Total/NA	Water	SM 2340B	
310-292487-10	MW-D	Total/NA	Water	SM 2340B	
310-292487-11	MW-102R No Purge	Total/NA	Water	SM 2340B	
310-292487-12	MW-103R No Purge	Total/NA	Water	SM 2340B	

Analysis Batch: 436382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	6020B	436015
310-292487-2	MW-202R	Total/NA	Water	6020B	436015
310-292487-3	MW-203R	Total/NA	Water	6020B	436015
310-292487-4	MW-204	Total/NA	Water	6020B	436015
310-292487-5	MW-205	Total/NA	Water	6020B	436015
310-292487-6	MW-206	Total/NA	Water	6020B	436015
310-292487-7	LDR-1	Total/NA	Water	6020B	436015
310-292487-8	LDR-2	Total/NA	Water	6020B	436015
310-292487-9	LDR-3	Total/NA	Water	6020B	436015
310-292487-10	MW-D	Total/NA	Water	6020B	436015
310-292487-11	MW-102R No Purge	Total/NA	Water	6020B	436015
310-292487-12	MW-103R No Purge	Total/NA	Water	6020B	436015
MB 310-436015/1-A	Method Blank	Total/NA	Water	6020B	436015
LCS 310-436015/2-A	Lab Control Sample	Total/NA	Water	6020B	436015
310-292487-1 MS	MW-201	Total/NA	Water	6020B	436015
310-292487-1 MSD	MW-201	Total/NA	Water	6020B	436015
310-292487-11 DU	MW-102R No Purge	Total/NA	Water	6020B	436015

Analysis Batch: 437043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-7	LDR-1	Total/NA	Water	6020B	436015
310-292487-8	LDR-2	Total/NA	Water	6020B	436015
310-292487-9	LDR-3	Total/NA	Water	6020B	436015
310-292487-10	MW-D	Total/NA	Water	6020B	436015
310-292487-11	MW-102R No Purge	Total/NA	Water	6020B	436015
310-292487-12	MW-103R No Purge	Total/NA	Water	6020B	436015
310-292487-11 DU	MW-102R No Purge	Total/NA	Water	6020B	436015

General Chemistry

Analysis Batch: 435878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-3	MW-203R	Total/NA	Water	SM 2540C	
310-292487-5	MW-205	Total/NA	Water	SM 2540C	
310-292487-6	MW-206	Total/NA	Water	SM 2540C	
310-292487-11	MW-102R No Purge	Total/NA	Water	SM 2540C	
310-292487-12	MW-103R No Purge	Total/NA	Water	SM 2540C	
MB 310-435878/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-435878/2	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

General Chemistry

Prep Batch: 435893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	351.2	
310-292487-2	MW-202R	Total/NA	Water	351.2	
310-292487-3	MW-203R	Total/NA	Water	351.2	
310-292487-4	MW-204	Total/NA	Water	351.2	
310-292487-5	MW-205	Total/NA	Water	351.2	
310-292487-6	MW-206	Total/NA	Water	351.2	
310-292487-7	LDR-1	Total/NA	Water	351.2	
310-292487-8	LDR-2	Total/NA	Water	351.2	
310-292487-9	LDR-3	Total/NA	Water	351.2	
310-292487-10	MW-D	Total/NA	Water	351.2	
310-292487-11	MW-102R No Purge	Total/NA	Water	351.2	
310-292487-12	MW-103R No Purge	Total/NA	Water	351.2	
MB 310-435893/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-435893/2-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 435918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-5	MW-205	Total/NA	Water	I-3765-85	
310-292487-6	MW-206	Total/NA	Water	I-3765-85	
310-292487-11	MW-102R No Purge	Total/NA	Water	I-3765-85	
310-292487-12	MW-103R No Purge	Total/NA	Water	I-3765-85	
MB 310-435918/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-435918/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 435958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-3	MW-203R	Total/NA	Water	I-3765-85	
MB 310-435958/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-435958/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 436002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	I-3765-85	
310-292487-2	MW-202R	Total/NA	Water	I-3765-85	
310-292487-4	MW-204	Total/NA	Water	I-3765-85	
310-292487-7	LDR-1	Total/NA	Water	I-3765-85	
310-292487-8	LDR-2	Total/NA	Water	I-3765-85	
310-292487-9	LDR-3	Total/NA	Water	I-3765-85	
310-292487-10	MW-D	Total/NA	Water	I-3765-85	
MB 310-436002/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-436002/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 436022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	SM 2540C	
310-292487-2	MW-202R	Total/NA	Water	SM 2540C	
310-292487-4	MW-204	Total/NA	Water	SM 2540C	
310-292487-7	LDR-1	Total/NA	Water	SM 2540C	
310-292487-8	LDR-2	Total/NA	Water	SM 2540C	
310-292487-9	LDR-3	Total/NA	Water	SM 2540C	
310-292487-10	MW-D	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

General Chemistry (Continued)

Analysis Batch: 436022 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-436022/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-436022/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-292487-7 DU	LDR-1	Total/NA	Water	SM 2540C	

Analysis Batch: 436033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	351.2	435893
310-292487-2	MW-202R	Total/NA	Water	351.2	435893
310-292487-3	MW-203R	Total/NA	Water	351.2	435893
310-292487-4	MW-204	Total/NA	Water	351.2	435893
310-292487-5	MW-205	Total/NA	Water	351.2	435893
310-292487-6	MW-206	Total/NA	Water	351.2	435893
310-292487-7	LDR-1	Total/NA	Water	351.2	435893
310-292487-8	LDR-2	Total/NA	Water	351.2	435893
310-292487-9	LDR-3	Total/NA	Water	351.2	435893
310-292487-10	MW-D	Total/NA	Water	351.2	435893
310-292487-11	MW-102R No Purge	Total/NA	Water	351.2	435893
310-292487-12	MW-103R No Purge	Total/NA	Water	351.2	435893
MB 310-435893/1-A	Method Blank	Total/NA	Water	351.2	435893
LCS 310-435893/2-A	Lab Control Sample	Total/NA	Water	351.2	435893

Prep Batch: 436168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-3	MW-203R	Total/NA	Water	365.2/365.3/365	
310-292487-4	MW-204	Total/NA	Water	365.2/365.3/365	
310-292487-5	MW-205	Total/NA	Water	365.2/365.3/365	
310-292487-6	MW-206	Total/NA	Water	365.2/365.3/365	
310-292487-7	LDR-1	Total/NA	Water	365.2/365.3/365	
310-292487-8	LDR-2	Total/NA	Water	365.2/365.3/365	
310-292487-9	LDR-3	Total/NA	Water	365.2/365.3/365	
310-292487-12	MW-103R No Purge	Total/NA	Water	365.2/365.3/365	
MB 310-436168/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-436168/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Prep Batch: 436170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	365.2/365.3/365	
310-292487-2	MW-202R	Total/NA	Water	365.2/365.3/365	
310-292487-10	MW-D	Total/NA	Water	365.2/365.3/365	
310-292487-11	MW-102R No Purge	Total/NA	Water	365.2/365.3/365	
MB 310-436170/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-436170/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 436204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	365.1	436170
310-292487-2	MW-202R	Total/NA	Water	365.1	436170
310-292487-3	MW-203R	Total/NA	Water	365.1	436168
310-292487-4	MW-204	Total/NA	Water	365.1	436168
310-292487-5	MW-205	Total/NA	Water	365.1	436168
310-292487-6	MW-206	Total/NA	Water	365.1	436168

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

General Chemistry (Continued)

Analysis Batch: 436204 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-7	LDR-1	Total/NA	Water	365.1	436168
310-292487-8	LDR-2	Total/NA	Water	365.1	436168
310-292487-9	LDR-3	Total/NA	Water	365.1	436168
310-292487-10	MW-D	Total/NA	Water	365.1	436170
310-292487-11	MW-102R No Purge	Total/NA	Water	365.1	436170
310-292487-12	MW-103R No Purge	Total/NA	Water	365.1	436168
MB 310-436168/1-A	Method Blank	Total/NA	Water	365.1	436168
MB 310-436170/1-A	Method Blank	Total/NA	Water	365.1	436170
LCS 310-436168/2-A	Lab Control Sample	Total/NA	Water	365.1	436168
LCS 310-436170/2-A	Lab Control Sample	Total/NA	Water	365.1	436170

Prep Batch: 436252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	350.1	
310-292487-2	MW-202R	Total/NA	Water	350.1	
310-292487-3	MW-203R	Total/NA	Water	350.1	
310-292487-4	MW-204	Total/NA	Water	350.1	
310-292487-5	MW-205	Total/NA	Water	350.1	
310-292487-7	LDR-1	Total/NA	Water	350.1	
310-292487-8	LDR-2	Total/NA	Water	350.1	
MB 310-436252/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-436252/2-A	Lab Control Sample	Total/NA	Water	350.1	

Prep Batch: 436266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-6	MW-206	Total/NA	Water	350.1	
MB 310-436266/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-436266/2-A	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 436366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	350.1	436252
310-292487-2	MW-202R	Total/NA	Water	350.1	436252
310-292487-3	MW-203R	Total/NA	Water	350.1	436252
310-292487-4	MW-204	Total/NA	Water	350.1	436252
310-292487-5	MW-205	Total/NA	Water	350.1	436252
310-292487-6	MW-206	Total/NA	Water	350.1	436266
310-292487-7	LDR-1	Total/NA	Water	350.1	436252
310-292487-8	LDR-2	Total/NA	Water	350.1	436252
MB 310-436252/1-A	Method Blank	Total/NA	Water	350.1	436252
MB 310-436266/1-A	Method Blank	Total/NA	Water	350.1	436266
LCS 310-436252/2-A	Lab Control Sample	Total/NA	Water	350.1	436252
LCS 310-436266/2-A	Lab Control Sample	Total/NA	Water	350.1	436266

Prep Batch: 436411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-9	LDR-3	Total/NA	Water	350.1	
310-292487-11	MW-102R No Purge	Total/NA	Water	350.1	
310-292487-12	MW-103R No Purge	Total/NA	Water	350.1	
MB 310-436411/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-436411/2-A	Lab Control Sample	Total/NA	Water	350.1	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

General Chemistry

Prep Batch: 436436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-436436/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-436436/2-A	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 436506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-9	LDR-3	Total/NA	Water	350.1	436411
310-292487-11	MW-102R No Purge	Total/NA	Water	350.1	436411
310-292487-12	MW-103R No Purge	Total/NA	Water	350.1	436411
MB 310-436411/1-A	Method Blank	Total/NA	Water	350.1	436411
MB 310-436436/1-A	Method Blank	Total/NA	Water	350.1	436436
LCS 310-436411/2-A	Lab Control Sample	Total/NA	Water	350.1	436411
LCS 310-436436/2-A	Lab Control Sample	Total/NA	Water	350.1	436436

Analysis Batch: 436510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	SM 2320B	
310-292487-2	MW-202R	Total/NA	Water	SM 2320B	
310-292487-3	MW-203R	Total/NA	Water	SM 2320B	
310-292487-4	MW-204	Total/NA	Water	SM 2320B	
310-292487-5	MW-205	Total/NA	Water	SM 2320B	
310-292487-6	MW-206	Total/NA	Water	SM 2320B	
310-292487-7	LDR-1	Total/NA	Water	SM 2320B	
310-292487-8	LDR-2	Total/NA	Water	SM 2320B	
310-292487-9	LDR-3	Total/NA	Water	SM 2320B	
310-292487-10	MW-D	Total/NA	Water	SM 2320B	
310-292487-11	MW-102R No Purge	Total/NA	Water	SM 2320B	
310-292487-12	MW-103R No Purge	Total/NA	Water	SM 2320B	
LCS 310-436510/2	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 310-436510/25	Lab Control Sample	Total/NA	Water	SM 2320B	
310-292487-3 DU	MW-203R	Total/NA	Water	SM 2320B	
310-292487-8 DU	LDR-2	Total/NA	Water	SM 2320B	

Analysis Batch: 436638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	9060A	
310-292487-2	MW-202R	Total/NA	Water	9060A	
310-292487-3	MW-203R	Total/NA	Water	9060A	
310-292487-4	MW-204	Total/NA	Water	9060A	
310-292487-5	MW-205	Total/NA	Water	9060A	
310-292487-6	MW-206	Total/NA	Water	9060A	
310-292487-7	LDR-1	Total/NA	Water	9060A	
310-292487-8	LDR-2	Total/NA	Water	9060A	
310-292487-9	LDR-3	Total/NA	Water	9060A	
310-292487-10	MW-D	Total/NA	Water	9060A	
310-292487-11	MW-102R No Purge	Total/NA	Water	9060A	
MB 310-436638/11	Method Blank	Total/NA	Water	9060A	
LCS 310-436638/12	Lab Control Sample	Total/NA	Water	9060A	
310-292487-9 MS	LDR-3	Total/NA	Water	9060A	

QC Association Summary

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

General Chemistry

Prep Batch: 436758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-10	MW-D	Total/NA	Water	350.1	
MB 310-436758/1-A	Method Blank	Total/NA	Water	350.1	
LCS 310-436758/2-A	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 436833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-1	MW-201	Total/NA	Water	353.2	
310-292487-2	MW-202R	Total/NA	Water	353.2	
310-292487-3	MW-203R	Total/NA	Water	353.2	
310-292487-4	MW-204	Total/NA	Water	353.2	
310-292487-5	MW-205	Total/NA	Water	353.2	
310-292487-6	MW-206	Total/NA	Water	353.2	
310-292487-7	LDR-1	Total/NA	Water	353.2	
310-292487-8	LDR-2	Total/NA	Water	353.2	
310-292487-9	LDR-3	Total/NA	Water	353.2	
310-292487-10	MW-D	Total/NA	Water	353.2	
310-292487-11	MW-102R No Purge	Total/NA	Water	353.2	
310-292487-12	MW-103R No Purge	Total/NA	Water	353.2	
MB 310-436833/119	Method Blank	Total/NA	Water	353.2	
MB 310-436833/20	Method Blank	Total/NA	Water	353.2	
MB 310-436833/48	Method Blank	Total/NA	Water	353.2	
MB 310-436833/91	Method Blank	Total/NA	Water	353.2	
LCS 310-436833/164	Lab Control Sample	Total/NA	Water	353.2	
LCS 310-436833/21	Lab Control Sample	Total/NA	Water	353.2	
LCS 310-436833/82	Lab Control Sample	Total/NA	Water	353.2	
310-292487-1 MS	MW-201	Total/NA	Water	353.2	
310-292487-1 MSD	MW-201	Total/NA	Water	353.2	
310-292487-2 MS	MW-202R	Total/NA	Water	353.2	
310-292487-2 MSD	MW-202R	Total/NA	Water	353.2	

Analysis Batch: 436836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-10	MW-D	Total/NA	Water	350.1	436758
MB 310-436758/1-A	Method Blank	Total/NA	Water	350.1	436758
LCS 310-436758/2-A	Lab Control Sample	Total/NA	Water	350.1	436758

Analysis Batch: 436872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-292487-12	MW-103R No Purge	Total/NA	Water	9060A	
MB 310-436872/12	Method Blank	Total/NA	Water	9060A	
LCS 310-436872/13	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-201

Lab Sample ID: 310-292487-1

Date Collected: 10/08/24 11:37

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	437195	ZRI4	EET CF	10/22/24 13:05
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:15
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:15
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:28
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:12
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 19:05
Total/NA	Prep	365.2/365.3/365			436170	T5AC	EET CF	10/14/24 14:35
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:35
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 00:10
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 10:51
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Client Sample ID: MW-202R

Lab Sample ID: 310-292487-2

Date Collected: 10/08/24 10:58

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	437195	ZRI4	EET CF	10/22/24 13:17
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:25
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:25
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:35
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:13
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:47
Total/NA	Prep	365.2/365.3/365			436170	T5AC	EET CF	10/14/24 14:35
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:35
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 00:46
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 11:00
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Client Sample ID: MW-203R

Lab Sample ID: 310-292487-3

Date Collected: 10/07/24 16:42

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	437195	ZRI4	EET CF	10/22/24 13:29

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-203R

Lab Sample ID: 310-292487-3

Date Collected: 10/07/24 16:42

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:27
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:27
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:30
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:12
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:52
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:26
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 01:22
Total/NA	Analysis	I-3765-85		1	435958	HE7K	EET CF	10/11/24 11:31
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 11:09
Total/NA	Analysis	SM 2540C		1	435878	ENB7	EET CF	10/10/24 16:19

Client Sample ID: MW-204

Lab Sample ID: 310-292487-4

Date Collected: 10/08/24 10:25

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	436852	HE7K	EET CF	10/18/24 15:32
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:29
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:29
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:44
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:10
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:53
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:25
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 01:58
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 11:28
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Client Sample ID: MW-205

Lab Sample ID: 310-292487-5

Date Collected: 10/07/24 17:27

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	436852	HE7K	EET CF	10/18/24 16:19

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-205

Lab Sample ID: 310-292487-5

Date Collected: 10/07/24 17:27

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:31
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:31
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:42
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:13
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:55
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:22
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 02:35
Total/NA	Analysis	I-3765-85		1	435918	HE7K	EET CF	10/11/24 08:52
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 11:38
Total/NA	Analysis	SM 2540C		1	435878	ENB7	EET CF	10/10/24 16:19

Client Sample ID: MW-206

Lab Sample ID: 310-292487-6

Date Collected: 10/07/24 16:08

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	436852	HE7K	EET CF	10/18/24 16:35
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:34
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:34
Total/NA	Prep	350.1			436266	MQ8M	EET CF	10/15/24 09:52
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:56
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:11
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:57
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:25
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 03:11
Total/NA	Analysis	I-3765-85		1	435918	HE7K	EET CF	10/11/24 08:52
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 11:47
Total/NA	Analysis	SM 2540C		1	435878	ENB7	EET CF	10/10/24 16:19

Client Sample ID: LDR-1

Lab Sample ID: 310-292487-7

Date Collected: 10/08/24 12:14

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	436852	HE7K	EET CF	10/18/24 16:50

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-1

Lab Sample ID: 310-292487-7

Date Collected: 10/08/24 12:14

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:45
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		4	437043	NFT2	EET CF	10/21/24 15:36
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/21/24 15:36
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:33
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:11
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 22:58
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:26
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 10:24
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 15:47
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Client Sample ID: LDR-2

Lab Sample ID: 310-292487-8

Date Collected: 10/08/24 13:05

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		50	436852	HE7K	EET CF	10/18/24 17:06
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:47
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		4	437043	NFT2	EET CF	10/21/24 15:38
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/21/24 15:38
Total/NA	Prep	350.1			436252	MQ8M	EET CF	10/15/24 08:37
Total/NA	Analysis	350.1		1	436366	ZJX4	EET CF	10/15/24 18:35
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:08
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 23:03
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:21
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 11:00
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 15:59
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: LDR-3

Lab Sample ID: 310-292487-9

Date Collected: 10/08/24 14:10

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	436852	HE7K	EET CF	10/18/24 17:21
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:49
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		7	437043	NFT2	EET CF	10/21/24 15:40
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/21/24 15:40
Total/NA	Prep	350.1			436411	A3GU	EET CF	10/16/24 09:32
Total/NA	Analysis	350.1		1	436506	ZJX4	EET CF	10/16/24 18:50
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:09
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 23:05
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:23
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 11:37
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 16:24
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Client Sample ID: MW-D

Lab Sample ID: 310-292487-10

Date Collected: 10/08/24 10:24

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	436852	HE7K	EET CF	10/18/24 18:08
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:52
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	437043	NFT2	EET CF	10/21/24 15:51
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/15/24 17:52
Total/NA	Prep	350.1			436758	A3GU	EET CF	10/18/24 11:08
Total/NA	Analysis	350.1		1	436836	ZJX4	EET CF	10/18/24 19:09
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:09
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 18:46
Total/NA	Prep	365.2/365.3/365			436170	T5AC	EET CF	10/14/24 14:35
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:36
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 07:24
Total/NA	Analysis	I-3765-85		1	436002	HE7K	EET CF	10/11/24 13:36
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 16:35
Total/NA	Analysis	SM 2540C		1	436022	MDU9	EET CF	10/11/24 16:52

Lab Chronicle

Client: SCS Engineers
 Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Client Sample ID: MW-102R No Purge

Lab Sample ID: 310-292487-11

Date Collected: 10/07/24 15:17

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	436852	HE7K	EET CF	10/18/24 18:24
Total/NA	Analysis	9056A		5	436852	HE7K	EET CF	10/19/24 13:41
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:54
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		4	437043	NFT2	EET CF	10/21/24 15:53
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/21/24 15:53
Total/NA	Prep	350.1			436411	A3GU	EET CF	10/16/24 09:32
Total/NA	Analysis	350.1		1	436506	ZJX4	EET CF	10/16/24 18:52
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:09
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 18:47
Total/NA	Prep	365.2/365.3/365			436170	T5AC	EET CF	10/14/24 14:35
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:36
Total/NA	Analysis	9060A		1	436638	DGU1	EET CF	10/17/24 08:00
Total/NA	Analysis	I-3765-85		1	435918	HE7K	EET CF	10/11/24 08:52
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 16:45
Total/NA	Analysis	SM 2540C		1	435878	ENB7	EET CF	10/10/24 16:19

Client Sample ID: MW-103R No Purge

Lab Sample ID: 310-292487-12

Date Collected: 10/07/24 14:41

Matrix: Water

Date Received: 10/10/24 10:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	436852	HE7K	EET CF	10/18/24 18:39
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		1	436382	NFT2	EET CF	10/15/24 17:58
Total/NA	Prep	3005A			436015	F5MW	EET CF	10/14/24 10:00
Total/NA	Analysis	6020B		4	437043	NFT2	EET CF	10/21/24 15:58
Total/NA	Analysis	SM 2340B		1	436181	HE7K	EET CF	10/21/24 15:58
Total/NA	Prep	350.1			436411	A3GU	EET CF	10/16/24 09:32
Total/NA	Analysis	350.1		1	436506	ZJX4	EET CF	10/16/24 18:52
Total/NA	Prep	351.2			435893	W9YR	EET CF	10/11/24 05:04
Total/NA	Analysis	351.2		1	436033	ZJX4	EET CF	10/11/24 21:13
Total/NA	Analysis	353.2		1	436833	ZJX4	EET CF	10/18/24 18:49
Total/NA	Prep	365.2/365.3/365			436168	T5AC	EET CF	10/14/24 14:16
Total/NA	Analysis	365.1		1	436204	ZJX4	EET CF	10/14/24 22:23
Total/NA	Analysis	9060A		1	436872	DGU1	EET CF	10/17/24 23:11
Total/NA	Analysis	I-3765-85		1	435918	HE7K	EET CF	10/11/24 08:52
Total/NA	Analysis	SM 2320B		1	436510	MDU9	EET CF	10/16/24 17:04
Total/NA	Analysis	SM 2540C		1	435878	ENB7	EET CF	10/10/24 16:19

Lab Chronicle

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

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Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

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Method Summary

Client: SCS Engineers
Project/Site: Heidelberg CKD Monofill - Fall 2024

Job ID: 310-292487-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET CF
365.1	Phosphorus, Total	EPA	EET CF
9060A	Organic Carbon, Total (TOC)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2320B	Alkalinity	SM	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
350.1	Distillation, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
365.2/365.3/365	Phosphorus, Total	EPA	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Environment Testing
America



310-292487 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/10/24</u>	TIME <u>1053</u>	Received By: <u>XB</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input checked="" type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID:</i>			
Multiple Coolers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler # _____ of _____</i>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.2</u>		Corrected Temp (°C): <u>1.2</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE. If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			





Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/10/24</u>	TIME <u>10:53</u>	Received By: <u>JL</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input checked="" type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u> <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>3.9</u>		Corrected Temp (°C): <u>3.9</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>6/10/24</u>	TIME <u>1053</u>	Received By: <u>XB</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input checked="" type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>4</u>
Cooler Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.1</u>		Corrected Temp (°C): <u>1.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			





Environment Testing
America

Place COC scanning label
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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>9CS</u>			
City/State.	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE/	TIME	Received By
	<u>10/10/24</u>	<u>10:58</u>	<u>XB</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input checked="" type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID:</i>			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>4</u> of <u>4</u></i>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>3.1</u>		Corrected Temp (°C): <u>3.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Client Information		Lab PM Miller, Samuel	Carrier Tracking No(s)	COC No 310-97979-26665 2													
Client Contact: Kevin Jensen		E-Mail: Samuel.Miller@et.eurofins.com	State of Origin	Page: Page 2 of 2													
Company: SCS Engineers		IOWSID	Job #:														
Address: 1690 All State Court, Suite 100		Due Date Requested:															
City: West Des Moines		TAT Requested (days):															
State, Zip: IA, 50265		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No															
Phone: 515-368-3155(Tel)		PO #: Purchase Order not required															
Email: kjensen@scsengineers.com		WO #:															
Project Name: Heidelberg CKD Monofill - Fall 2024		Project #: 31005782															
Site: Heidelberg Materials CKD Monofill		SSOW#:															
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, L=leachate, A=air)	Field Filtered Sample (Yes or No)	Total Alkalinity	Ammonia-Nitrogen	Chloride	Nitrate/Nitrite	Sulfate	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Organic Carbon	Total Suspended Solids	6020 Metals (Al, As, Ca, Cr, Pb, Mg, K, Se, Na)	Total Number of Containers	Special Instructions/Note:
MW-201	10-8-24	1137	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-202R	10-8-24	1058	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-203R	10-7-24	1642	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-204	10-8-24	1025	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-205	10-7-24	1727	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-206	10-7-24	1608	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
LDR-1	10-8-24	1214	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
LDR-2	10-8-24	1305	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
LDR-3	10-8-24	1410	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
SW-1				Water	X	X	X	X	X	X	X	X	X	X	X	X	
MW-D	10-8-24	1025	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)																	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																	
Special Instructions/QC Requirements:																	
Empty Kit Relinquished by																	
Date: _____ Time: _____																	
Relinquished by <i>Korner Both</i> Company <i>SCS</i>																	
Date/Time: 10/10/24 12:00																	
Relinquished by <i>Cole Tesar</i> Company <i>SCS</i>																	
Date/Time: 10/10/24 10:54																	
Relinquished by _____ Company _____																	
Date/Time: _____																	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
Custody Seal No																	
Cooler Temperature(s) °C and Other Remarks:																	
Received by _____ Date/Time: 10/10/24 / 1053 Company _____																	
Received by _____ Date/Time: _____ Company _____																	
Received by _____ Date/Time: _____ Company _____																	
Method of Shipment:																	



Eurofins Cedar Falls

3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214

eurofins

Client Information Client Contact: Kevin Jensen Company: SCS Engineers Address: 1690 All State Court, Suite 100 City: West Des Moines State, Zip: IA, 50265 Phone: 515-368-3155(Tel) Email: kjensen@scsengineers.com Project Name: Heidelberg CKD Monofill - Fall 2024 Site: Heidelberg Materials CKD Monofill		Lab PM: Miller, Samuel E-Mail: Samuel.Miller@et.eurofins.com Camer Tracking No(s): 310-97979-26665 1 State of Origin: Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: Purchase Order not required WO #:		Analysis Requested Total Alkalinity Ammonia-Nitrogen Chloride Hardness Nitrate/Nitrite Total Phosphorus Sulfate Total Dissolved Solids Total Kjeldahl Nitrogen Total Organic Carbon Total Suspended Solids 6020 Metals (Al, As, Ca, Cr, Pb, Mg, K, Se, Na) Total Number of Containers	
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MSMSD (Yes or No) <input checked="" type="checkbox"/>		Preservation Codes: S - H2SO4 N - None D - HNO3 Other:	
Sample Identification MW-101R - No Purge MW-102R - No Purge MW-103R - No Purge MW-101R - Recharge MW-102R - Recharge MW-103R - Recharge	Sample Date 10-7-24 10-7-24 10-7-24	Sample Time 1517 1441	Sample Type (C=Comp, G=grab) 6 6
Matrix (W=water, S=solid, O=wastewat, I=I ₂ -base, A=Air) Water Water Water Water Water Water		Preservation Code: Water Water Water Water Water Water	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: Date: Time: Method of Shipment:			
Relinquished by: <i>Kevin Jensen</i> Date/Time: 10/14/24 10:23		Received by: <i>[Signature]</i> Date/Time: 10/16/24 1053 Company: SCS	
Relinquished by: <i>Cele Tesar</i> Date/Time: 10/10/24 1054 Company: SCS		Received by: Date/Time: Company:	
Relinquished by: Date/Time: Company:		Received by: Date/Time: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-292487-1

Login Number: 292487


List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bunker, Xavier M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Appendix B-2
Data Validation

Completed by: Semir Omerovic
 Lab Report Date: 5/10/2024
 Site Name: Heidelberg CKD Monofill
 Lab Report Number: 310-280174-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody	X		
Temperature	X		
Preservation		X	Method 6020B: The following samples were received with insufficient preservations: Phase 1,2,3 Sump Composite. The maximum amount of preservative was added by the laboratory, but the sample remained strongly basic. No further attempt was made to acidify the sample, as it would have diluted the sample. This does not meet regulatory requirements.
Condition	X		
Reporting Limits		X	Method 353.2: The following sample was diluted due to the nature of the sample matrix: MW-201. Elevated reporting limits (RLs) were provided
Case Narrative	X		
Holding Times		X	Method 9056A_ORGFM_48H: The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-101R-No Purge, MW-102R-No Purge, MW-103R-No Purge, MW-201, MW-202R, MW-203R, MW-204, and MW-D.

Analytical Sensitivity and Blanks

Method Blank Detections	X		
Trip Blank Detections			X

Accuracy

ICV/CCV	X		
LCS/LCSD	X		
MS/MSD	X		
Surrogates (organics only)	X		

Precision

QA/QC Sample RPDs	X		
Field Duplicates	X		The duplicate sample was collected from MW-204 during the fall 2024 event. All parameters had <50% relative difference. Constituents with J flag were not considered for the duplicate sample comparisons.

Completed by: Semir Omerovic
 Lab Report Date: 10/25/2024
 Site Name: Heidelberg CKD Monofill
 Lab Report Number: 310-292487-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody	X		
Temperature	X		
Preservation	X		
Condition	X		
Reporting Limits	X		
Case Narrative	X		
Holding Times	X		

Analytical Sensitivity and Blanks


Method Blank Detections	X		
Trip Blank Detections		X	

Accuracy

ICV/CCV	X		
LCS/LCSD	X		
MS/MSD		X	MS/MSD results were outside recovery limits for calcium, magnesium, potassium, and sodium associated with analysis batch 436382. MS/MSD results were outside recovery limits for sulfate associated with analysis batch 436852. MS/MSD recovery exceeds control limits for nitrogen-ammonia associated with analysis batch 436833. MS/MSD recovery exceeds control limits for total organic carbon associated with analysis batch 436638.
Surrogates (organics only)	X		

Precision

QA/QC Sample RPDs	X		
Field Duplicates	X		The duplicate sample was collected from MW-204 during the fall 2024 event. All parameters had <50% relative difference. Constituents with J flag were not considered for the duplicate sample comparisons.



Appendix C
Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry

Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99P

Total Metals Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-202R UPG	MW-205 UPG	PHASE1-2,3SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4	
Aluminum, mg/L (CAS NO - 7429-90-5)	4/29/2015	N/A	N/A	0.333	0.0412	N/A	0.047	<0.05	N/A	N/A	N/A	0.0074	0.0254	<0.05	0.0113	N/A	
	11/9/2015	<0.1	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	0.161	
	4/19/2016	0.62	N/A	0.0445	<0.05	N/A	0.489	<0.05	0.184	0.0333	<0.05	0.121	<0.05	N/A	N/A	0.0505	
	10/13/2016	0.137	N/A	<0.05	<0.05	N/A	0.0375	<0.05	<0.05	0.0444	0.0345	0.0494	<0.05	N/A	N/A	0.0465	
	4/26/2017	0.126	N/A	<0.05	<0.05	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	10/12/2017	0.116	N/A	<0.05	<0.05	N/A	0.114	<0.05	0.153	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	4/25/2018	N/A	0.564	<0.05	<0.05	<2	0.125	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0428	
	10/18/2018	N/A	0.294	<0.05	<0.05	N/A	<0.05	<0.05	0.0464	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	0.273	
	4/26/2019	N/A	0.0926	<0.05	<0.05	0.01	0.562	<0.05	0.0966	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.206	
	10/25/2019	<0.05	0.146	<0.05	<0.05	N/A	2.28	<0.05	0.0472	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.129	
	4/16/2020	<0.05	0.152	<0.05	<0.05	0.48	0.674	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.979	
	10/22/2020	0.0032	N/A	<0.05	<0.05	N/A	<0.05	<0.05	0.0409	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.35	
	4/22/2021	<0.05	N/A	<0.05	<0.05	10.8	3.6	<0.2	0.0893*	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	0.235	
	10/21/2021	N/A	N/A	<0.05	<0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/21/2021	N/A	N/A	<0.05	<0.05	N/A	0.107	0.0174*	0.0544	0.0226*	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	
	4/28/2022	0.679	0.0366*	<0.05	<0.05	0.54	0.351	<0.2	<0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	0.0852*	
	10/27/2022	N/A	N/A	<0.05	<0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/27/2022	0.0797	N/A	0.0366*	<0.05	N/A	0.495	<0.05	0.0361*	0.0181*	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/27/2023	<0.05	<0.05	<0.05	<0.05	0.455*	0.0239*	<0.05	0.0466*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0216*	
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/19/2023	<0.05	N/A	<0.05	<0.05	N/A	0.0554	<0.05	0.0249*	<0.05	<0.05	0.0295*	<0.05	<0.05	<0.05	N/A	
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/29/2024	0.158	0.0531	<0.05	<0.05	<1.25	0.0232	<0.2	0.0265*	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0248*	
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/7/2024	N/A	N/A	<0.05	<0.05	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Arsenic, mg/L (CAS NO - 7440-38-2)	4/29/2015	N/A	N/A	<0.002	<0.002	N/A	<0.002	0.00339	<0.002	N/A	N/A	0.00174	<0.002	<0.002	<0.002	N/A
		11/9/2015	<0.001	N/A	<0.001	<0.001	N/A	<0.001	N/A	<0.001	N/A	<0.001	0.00291	<0.002	<0.002	<0.002	0.003
		4/19/2016	0.00255	N/A	0.000557	<0.002	N/A	0.00401	0.00404	0.00617	0.00108	<0.002	0.000558	<0.002	N/A	N/A	0.00157
10/11/2016		0.00273	N/A	<0.002	<0.002	N/A	0.000689	0.00742	0.0061	0.00103	<0.002	0.003	<0.002	N/A	N/A	0.00121	
4/26/2017		N/A	0.00305	<0.002	<0.002	N/A	<0.002	0.00206	0.00338	<0.002	<0.002	0.00181	<0.002	<0.002	<0.002	0.00135	
10/12/2017		0.00139	N/A	<0.002	<0.002	N/A	0.000802	0.00192	0.00982	<0.002	<0.002	0.00226	<0.002	<0.002	<0.002	0.00097	
4/25/2018		N/A	0.00946	<0.002	<0.002	0.127	<0.002	0.00078	0.000807	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.000622	
10/19/2018		N/A	0.00052	<0.002	<0.002	N/A	0.00056	0.00067	0.00067	<0.002	<0.002	0.00098	<0.002	<0.002	<0.002	0.0021	
4/26/2019		N/A	0.00471	<0.002	<0.002	0.403	0.00145	0.00252	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00181	
10/25/2019		<0.002	0.00513	<0.002	<0.002	N/A	<0.008	0.00104	0.00209	<0.002	<0.002	0.00204	<0.002	<0.002	<0.002	0.00112	
4/16/2020		<0.002	0.00463	<0.002	<0.002	0.261	<0.002	0.00162	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00255	
10/22/2020		<0.002	N/A	<0.002	<0.002	N/A	0.0037	0.00122	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00138*	
4/22/2021		<0.002	N/A	<0.002	<0.002	0.349	0.00294	0.000894*	<0.002	<0.002	<0.002	0.00096*	<0.002	<0.002	<0.002	0.00158*	
10/21/2021		N/A	N/A	<0.002	<0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/21/2021		0.00155	0.00238	<0.002	<0.002	N/A	0.00147*	<0.002	0.00091*	<0.002	<0.002	0.0014*	<0.002	<0.002	<0.002	N/A	
10/21/2021		N/A	N/A	<0.002	<0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/28/2022		0.00189*	0.00374	<0.002	<0.002	0.154	<0.008	<0.008	<0.008	<0.008	<0.008	0.00234	<0.002	<0.002	<0.002	0.0008	
4/28/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/27/2022		0.00152*	N/A	<0.002	<0.002	N/A	0.00337	<0.002	0.000983*	<0.002	<0.002	0.00182*	<0.002	<0.002	<0.002	N/A	
10/27/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/27/2023		<0.002	0.00097	<0.002	<0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.002	
4/27/2023		0.00165	0.00097	<0.002	<0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0008*	
4/27/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/19/2023		0.000621*	N/A	<0.002	<0.002	N/A	0.00072*	0.00068*	0.000898*	<0.002	<0.002	0.00535	0.000645*	<0.002	<0.002	N/A	
10/19/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/29/2024		0.00216	0.00559	<0.002	<0.002	0.16	<0.002	<0.008	<0.002	0.000713*	<0.002	<0.002	<0.002	<0.002	<0.002	0.000678*	
4/29/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/7/2024		N/A	N/A	<0.002	<0.002	N/A	0.000843*	<0.002	<0.002	<0.002	<0.002	0.000561	<0.002	<0.002	<0.002	N/A	
10/7/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Calcium, mg/L (CAS NO - 7440-70-2)		4/29/2015	N/A	N/A	248	76.2	N/A	374	359	N/A	N/A	N/A	63.1	85.6	110	80.1	74.7
	6/17/2015	225	N/A	N/A	N/A	N/A	420	413	N/A	N/A	506	505	N/A	N/A	N/A	N/A	
	11/9/2015	172	N/A	71	74.9	N/A	410	409	N/A	N/A	486	490	64	92.1	119	81.8	
	4/19/2016	250	N/A	85	79.6	N/A	440	438	259	460	482	62.7	85.2	N/A	N/A	73.5	
	10/13/2016	130	N/A	78.5	79.4	N/A	431	457	335	452	512	66.2	71.3	N/A	N/A	36.1	
	4/26/2017	119	N/A	75.4	85.4	N/A	431	457	432	497	514	90.3	113	113	88.9	31.2	
	10/12/2017	154	N/A	75.4	77.1	N/A	417	447	371	445	459	131	164	106	79.9	135	
	4/25/2018	N/A	112	78	79.8	15.5	367	443	445	435	524	117	76.3	102	87.2	53.1	
	10/18/2018	N/A	111	72.7	74.9	N/A	477	429	472	487	519	122	18.4	100	90.1	40.8	
	4/26/2019	N/A	99.9	79.3	83.8	33	494	435	621	549	550	144	76.1	111	96.7	63.7	
	10/25/2019	131	N/A	74.6	76.7	N/A	537	427	538	493	454	145	54	106	84.5	83.3	
	4/16/2020	371.1	N/A	77.6	82.1	24.8	444	445	445	493	494	130	76.2	130	88.1	33.7	
	10/22/2020	134	N/A	68.1	73.8	N/A	441	442	563	403	409						

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Summary of Groundwater Chemistry
 Leigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99P

Total Metals Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE2.3SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP UPG	MW-103R-NP UPG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4	
Chromium, mg/L (CAS NO - 7440-47-3)	10/25/2019	<0.005	<0.005	<0.005	<0.005	N/A	0.00633	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	4/16/2020	<0.005	<0.005	<0.005	<0.005	0.451	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/22/2020	<0.005	N/A	<0.005	<0.005	N/A	0.0137	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	4/22/2021	<0.005	N/A	<0.005	<0.005	0.246	0.00982	<0.005	<0.005	<0.005	<0.005	0.0022*	<0.005	<0.005	<0.005	<0.005	
	10/21/2021	<0.005	N/A	<0.005	<0.005	N/A	0.0037*	<0.005	<0.005	<0.005	<0.005	N/A	N/A	N/A	N/A	N/A	
	10/21/2021	N/A	N/A	<0.005	<0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/28/2022	<0.005	<0.005	<0.005	<0.005	0.203*	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/27/2022	<0.005	N/A	<0.005	<0.005	N/A	0.00472*	<0.005	0.00492*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/27/2023	<0.005	<0.005	<0.005	<0.005	0.269	<0.005	<0.005	0.00384*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/19/2023	<0.005	<0.005	<0.005	<0.005	N/A	0.0451	<0.005	<0.005	<0.005	<0.005	0.00245*	<0.005	<0.005	<0.005	<0.005	
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/29/2024	<0.005	<0.005	<0.005	<0.005	0.141	0.00411*	<0.02	0.0343	<0.005	<0.005	0.00181*	<0.005	<0.005	<0.005	<0.005	
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00299*	<0.005	<0.005	0.00222*	<0.005	<0.005	<0.005	<0.005	
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Lead, mg/L (CAS NO - 7439-92-1)	4/29/2015	N/A	N/A	0.00154	0.000255	N/A	0.00127	<0.0005	N/A	N/A	N/A	0.000159	0.000415	0.000111	0.000108	N/A
		11/9/2015	<0.004	<0.004	<0.004	<0.004	N/A	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00499	<0.004	<0.004
		4/19/2016	0.00473	N/A	0.000237	0.000269	N/A	0.00381	<0.0005	<0.0025	0.000375	0.000224	0.000386	0.000411	N/A	N/A	0.000319
		10/11/2016	0.000960	N/A	<0.0005	<0.0005	N/A	0.000959	<0.0005	<0.0005	0.000949	<0.0005	N/A	N/A	N/A	N/A	0.000211
		4/16/2017	N/A	0.000654	<0.0005	<0.0005	N/A	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000544
		10/12/2017	0.00106	N/A	0.00045	<0.0005	N/A	<0.0005	<0.0005	0.00577	0.000514	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000528
		4/25/2018	N/A	0.00191	0.000485	<0.0005	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000343
		10/18/2018	N/A	0.000552	<0.0005	<0.0005	N/A	<0.0005	<0.0005	<0.0005	<0.002	<0.002	<0.0005	0.000289	<0.0005	0.000541	0.00112
		4/26/2019	N/A	<0.0005	<0.0005	<0.0005	0.0392	0.000904	<0.0005	<0.0005	<0.0005	<0.0005	0.000992	<0.0005	<0.0005	<0.0005	0.000874
		10/25/2019	<0.0005	<0.0005	<0.0005	<0.0005	N/A	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4/16/2020		<0.0005	<0.0005	<0.0005	<0.0005	0.0286	0.000918	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000599	
10/22/2020		<0.0005	<0.0005	<0.0005	<0.0005	N/A	0.00235	<0.0005	0.000198	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000556	
4/22/2021		<0.0005	N/A	<0.0005	<0.0005	0.133	0.00177	<0.0005	0.00031*	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000271*	
10/21/2021		N/A	<0.0005	<0.0005	<0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/21/2021		0.000638	<0.0005	<0.0005	<0.0005	N/A	0.000657	<0.0005	0.000373*	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10/21/2021		N/A	N/A	<0.0005	<0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/28/2022		0.00045*	<0.0005	<0.0005	<0.0005	0.009	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
4/28/2022		N/A	N/A	<0.0005	<0.0005	N/A	N/A	N/A	N/A	N/A	N/A	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10/27/2022		0.00031*	N/A	<0.0005	<0.0005	N/A	0.00159	<0.0005	0.000277*	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	N/A	
10/27/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/27/2023		<0.0005	<0.0005	<0.0005	<0.0005	0.0054*	<0.0005	<0.0005	0.000431*	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
4/27/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/19/2023		<0.0005	N/A	<0.0005	<0.0005	N/A	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00026	0.000451*	<0.0005	0.000497*	N/A	
10/19/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/29/2024		0.000587	<0.0005	<0.0005	<0.0005	<0.0125	<0.0005	<0.0005	<0.0005	0.000261*	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
4/29/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10/7/2024		N/A	N/A	<0.0005	<0.0005	N/A	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10/7/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Magnesium, mg/L (CAS NO - 7439-95-4)	4/29/2015	N/A	N/A	89.9	37.9	N/A	225	154	N/A	N/A	N/A	34.9	59.4	81.6	46.2	23.4	
	6/17/2015	N/A	N/A	111	37.9	N/A	233	177	N/A	N/A	N/A	31.3	54.4	78.2	45.4	N/A	
	11/9/2015	111	N/A	33.6	37.9	N/A	242	179	N/A	262	326	34.4	53.2	69.2	46.7	43.4	
	4/19/2016	126	N/A	33.2	35.2	N/A	227	169	109	244	286	32.4	58.5	N/A	N/A	24.6	
	10/11/2016	55.8	N/A	32.2	33.7	N/A	217	174	140	205	276	31.3	52.2	N/A	N/A	13.5	
	4/26/2017	N/A	N/A	37.1	37.4	N/A	235	203	194	250	305	42.8	57.9	57.8	39.7	18.1	
	10/12/2017	88.7	N/A	31.3	32.9	N/A	203	195	221	221	274	51.1	50.8	34.3	37.8	37.8	
	4/25/2018	N/A	28.8	32.8	32.8	N/A	230	186	215	236	291	57.6	61.4	56.6	35.8	38.1	
	10/18/2018	N/A	57.4	31.4	34	N/A	243	182	221	250	294	61.6	59.3	50.3	46.7	15.4	
	4/26/2019	N/A	47.8	33	37.3	4.69	251	208	233	258	298	74.1	57.2	53.3	41.7	17.9	
	10/25/2019	68.3	44.4	31.9	34.9	N/A	271	203	264	226	268	65.6	53.6	50.6	37	20.7	
	4/16/2020	80.5	47.1	33.3	36.6	4.64	240	205	303	264	307	61	53.2	53.7	39.8	17	
	10/22/2020	71.6	N/A	29.5	32.9	N/A	245	208	290	216	267	51.8	46.9	47.4	35.5	18.3	
	4/22/2021	78	N/A	34.3	35.9	44.5	239	197	235	235	258	64.8	56	55.8	38.1	20.7	
	4/22/2021	N/A	N/A	33.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/21/2021	73	42.2	31.6	33.8	N/A	282	236	354	270	326	58.5	52.7	50.6	35.3	N/A	
	10/21/2021	N/A	N/A	33.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/28/2022	70.2	42.3	32.2	33.5	22.5	224	196	285	203	239	52.2	53.1	51.8	37.3	15.5	
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10/27/2022	86.5	N/A	39.4	35	N/A	277	246	369	295	386	45.4	55.0	48	34	N/A	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/27/2023	74.9	41.7	32.5	34.2	<10	232	214									

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Summary of Groundwater Chemistry

Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99P

Total Metals Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE1,2,3SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4 DNG	
Total Suspended Solids, mg/L (CAS NO - TSS)	4/25/2013	N/A	N/A	141	N/A	N/A	668	9.7	N/A	N/A	N/A	10	<5	N/A	N/A	<5	
	10/1/2013	N/A	N/A	<5	8	N/A	480	<5	N/A	N/A	N/A	7.3	<5	<5	<5	108	
	4/15/2014	N/A	N/A	<5	26.3	N/A	27.7	<5	N/A	N/A	N/A	7.3	6	<5	<5	17	
	10/7/2014	N/A	N/A	<5	5	N/A	38	7.3	N/A	N/A	N/A	14.8	<2.5	<2.5	<2.5	5.7	
	4/29/2015	N/A	N/A	131	5.63	N/A	11	<5	N/A	N/A	N/A	16.4	4.38	2.75	<1.88	116	
	6/17/2015	34.2	N/A	N/A	N/A	N/A	6840	40	N/A	17.3	4	N/A	N/A	N/A	N/A	N/A	
	11/9/2015	3.3	N/A	3.5	<1.9	N/A	71.5	<1.9	N/A	2.1	8.1	6.4	<1.9	<1.9	<1.9	215	
	4/19/2016	81.2	N/A	15.1	10.8	N/A	378	4.5	13.1	9.5	8.25	33.9	3.75	N/A	N/A	16.3	
	10/11/2016	44	N/A	9	5.88	N/A	33.1	32.8	7.63	4.13	20.4	2.63	N/A	N/A	N/A	9.25	
	4/26/2017	N/A	234	2	1.63	N/A	1.63	13.9	10.4	2.88	1.75	4.75	<1.88	1.88	<1.88	14.5	
	10/12/2017	66.6	N/A	9.87	7	N/A	528	3.38	1590	1.38	2.25	7.37	0.625	1.38	0.25	20.2	
	4/25/2018	N/A	209	4.13	3.5	81	40.7	1.5	13.8	1.5	2.13	1	<1.88	1.13	<1.88	7.14	
	10/18/2018	N/A	129	2.38	1.5	N/A	10.8	4.13	18.3	1.5	1.38	3.25	0.75	1.75	<1.88	66.3	
	4/26/2019	N/A	35.9	1.63	1.38	254	59.5	1.13	3.38	0.875	0.875	0.75	<1.88	0.75	<1.88	17	
	10/25/2019	14.6	45.3	4	0.875	N/A	150	0.75	3.87	2.25	2.25	4.88	<5	1	<1.88	8.37	
	4/16/2020	4.62	33.1	1.75	0.875	344	29.8	<1.88	2.25	0.875	1.88	2.38	<1.88	1.38	<1.88	32	
	10/22/2020	30.8	N/A	3.63	0.75	N/A	355	<1.88	6.13	1	<1.88	<1.88	<1.88	0.75	<1.88	21.8	
	4/22/2021	3.75	N/A	1.25*	0.75*	1310	113	1.25*	3.87	1.25*	0.875*	4.38	<1.88	1.25*	<1.88	<1.88	17.6
	4/22/2021	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/21/2021	111	15	2.63	2.5	N/A	228	2.75	10.8	2.13	1.38*	5	<1.88	<1.88	0.875*	N/A	
	10/21/2021	N/A	N/A	N/A	2.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/28/2022	112	8.25	0.75*	2.25	1460	578	2.5	9.75	7.75	2.5	7.5	<1.88	1.63*	<1.88	13.3	
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.63	N/A	N/A	N/A	N/A	N/A
	10/27/2022	388	N/A	2.38	1.5	N/A	970	15.1	<1.88	4	2.13	9	6.63	3.13	1.38*	N/A	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/27/2023	8.25	3.87	2.13	1.25*	75	22.4	2.63	14.1	1.13*	<1.88	3.75	<1.88	1.13*	<1.88	10.6	
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.13*	N/A	N/A
	10/19/2023	4.13	N/A	4.25	1.75*	N/A	74.5	2.5	3.87	1.38*	1*	5.88	1.25*	1.13*	0.875*	N/A	
	10/19/2023	368	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.38*	N/A	N/A
	4/29/2024	368	12.8	2.75	2.63	372	32.4	<5	4.13	3.75	<1.88	<1.88	<1.88	1.88	<1.88	5.37	
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.37	N/A	N/A
	10/7/2024	N/A	N/A	1.5*	1.5*	N/A	11.2	1.88	<1.88	<1.88	<1.88	<1.88	<1.88	<1.88	<1.88	<1.88	N/A
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1.88	N/A	N/A

Note: * indicates 'flag', Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

Denotes Detection.

Denotes Confirmed Outlier, Statistically Excluded.

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.

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Summary of Groundwater Chemistry
 Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99

Other Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE1.2SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4 DNG		
Alkalinity, Total [CaCO ₃], mg/L (CAS NO - TALK)	4/25/2013	N/A	N/A	271	N/A	N/A	634	604	N/A	N/A	N/A	353	384	N/A	N/A	N/A		
	10/1/2013	N/A	N/A	289	372	N/A	655	630	N/A	N/A	N/A	356	366	351	382	N/A		
	4/15/2014	N/A	N/A	306	341	N/A	454	568	N/A	N/A	N/A	316	326	331	345	N/A		
	10/7/2014	N/A	N/A	341	361	N/A	578	614	N/A	N/A	N/A	320	346	348	361	N/A		
	4/29/2015	N/A	N/A	356	362	N/A	541	561	N/A	N/A	N/A	325	351	351	361	N/A		
	9/27/2015	484	N/A	N/A	N/A	N/A	623	659	N/A	541	635	N/A	N/A	N/A	N/A	N/A		
	11/9/2015	454	N/A	330	341	N/A	573	624	N/A	537	614	341	335	335	356	387		
	4/19/2016	474	N/A	371	371	N/A	546	896	340	494	618	330	361	N/A	N/A	N/A		
	10/11/2016	385	N/A	333	342	N/A	570	803	394	365	580	328	304	N/A	N/A	N/A		
	4/26/2017	N/A	397	345	350	N/A	530	680	505	623	649	350	314	355	366	396		
	10/12/2017	398	N/A	345	358	N/A	286	716	548	623	633	355	326	358	365	398		
	4/25/2018	N/A	378	340	328	4860	551	675	378	637	643	356	349	356	373	398		
	10/18/2018	N/A	371	345	345	N/A	597	1070	367	613	628	350	330	345	350	339		
	4/26/2019	N/A	356	327	337	7030	530	627	574	599	604	327	312	337	347	218		
	10/25/2019	438	381	350	361	N/A	644	850	633	659	664	371	361	355	376	258		
	4/16/2020	390	380	356	342	7240	523	760	618	637	665	342	318	342	342	228		
	10/22/2020	412	N/A	350	361	N/A	608	829	613	675	664	317	330	361	381	212		
	4/22/2021	380	N/A	325	336	7030	323	642	632	612	602	296	306	326	336	217		
	4/22/2021	N/A	N/A	326	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	10/21/2021	474	412	371	340	N/A	659	773	649	651	670	391	381	361	381	N/A		
	10/21/2021	N/A	N/A	N/A	361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	4/28/2022	412	372	353	363	5050	578	627	657	686	647	323	323	382	372	274		
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	372	N/A	N/A	N/A	N/A		
	10/27/2022	388	N/A	363	354	N/A	637	617	637	637	636	345	405	367	367	N/A		
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	4/27/2023	394	348	333	330	4860	554	587	611	613	621	324	323	352	383			
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	10/19/2023	367	N/A	321	335	N/A	609	651	582	621	628	335	259	327	346	N/A		
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	4/29/2024	N/A	364	342	328	5230	649	785	692	686	688	350	378	342	356			
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	10/7/2024	N/A	N/A	342	344	N/A	652	676	632	653	655	364	318	346	361	N/A		
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	Bicarbonate, mg/L (CAS NO - BICARB)	6/17/2015	484	N/A	N/A	N/A	N/A	N/A	N/A	N/A	541	633	N/A	N/A	N/A	N/A	N/A	
		4/26/2019	N/A	356	337	337	< 25	530	827	574	599	604	327	337	347	218		
		4/26/2020	N/A	388	356	372	< 25	521	760	518	645	645	318	318	347	228		
		4/22/2021	380	N/A	326	336	< 20	523	642	602	632	602	296	306	326	217		
		4/22/2021	N/A	N/A	326	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		10/21/2021	474	412	371	361	N/A	659	773	649	651	670	391	381	361	381	N/A	
		10/21/2021	N/A	N/A	N/A	340	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		4/28/2022	412	372	353	363	< 25	578	627	657	686	647	323	323	382	372	274	
		4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	345	N/A	N/A	N/A	N/A	
10/27/2022		388	N/A	363	354	N/A	637	617	637	637	636	345	405	367	367	N/A		
10/27/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
4/27/2023		394	348	333	330	< 50	554	587	611	613	621	325	324	323	352	183		
4/27/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
10/19/2023		367	N/A	321	335	N/A	609	651	582	621	628	335	249	327	346	N/A		
10/19/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
4/29/2024		N/A	364	342	328	< 25	649	785	692	686	688	350	378	342	356			
4/29/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
10/7/2024		N/A	N/A	342	344	N/A	652	676	632	653	655	364	318	346	361	N/A		
10/7/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Carbonate, mg/L (CAS NO - CARB)		6/17/2015	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	
		4/26/2019	N/A	< 5	< 5	< 5	2380	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
		4/26/2020	< 10	< 10	< 5	< 5	2420	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		4/22/2021	N/A	N/A	< 5	< 10	3090	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		4/22/2021	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		10/21/2021	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		10/21/2021	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		4/28/2022	< 10	< 10	< 10	< 10	2270	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		4/28/2022	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		10/27/2022	< 10	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
		10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	
		4/27/2023	< 5	< 5	< 5	< 5	3020	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
		4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	
		10/19/2023	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	10.2	< 5	< 5	N/A	
		10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	
		4/29/2024	< 5	N/A	< 5	< 5	2780	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
		4/29/2024	N/A	N/A	< 5	N/A	2780	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
		10/7/2024	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	165	< 5	< 5	N/A	
		10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	
		Ammonia as N, mg/L (CAS NO - 7664-41-7)	4/24/2001	N/A	N/A	0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	0.29	N/A	N/A	N/A
			7/25/2001	N/A	N/A	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.34	0.28	N/A	N/A	N/A
			10/22/2001	N/A	N/A	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.18	0.31	N/A	N/A	N/A
			1/8/2002	N/A	N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.25	< 0.25	N/A	N/A	N/A
	4/24/2002		N/A	N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.25	< 0.25	N/A	N/A	N/A	
	10/23/2003		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	1.5	N/A	N/A	
	4/27/2004		0.46	N/A	0.38	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.24	N/A	N/A	N/A	< 0.2	
	7/29/2004		0.31	N/A	0.47	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.31	< 0.2	N/A	N/A	< 0.2	
	10/29/2004		0.31	N/A	0.36	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.31	< 0.2	N/A	N/A	< 0.2	
	4/26/2005		< 0.2	N/A	0.38	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	< 0.2	N/A	N/A	N/A	N/A	
	10/24/2005		0.292	N/A	0.39	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	N/A	< 0.2	N/A	N/A	< 0.2	
	4/24/2006		< 0.2	N/A	0.71	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	N/A	< 0.2	N/A	N/A	< 0.2	
	10/25/2006		0.31	N/A	0.52	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.379	0.25	N/A	N/A	N/A	
	4/24/2007		< 0.2	N/A	0.52	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	
	10/31/2007		N/A	N/A	0.36	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	
	10/30/2008		< 0.2	N/A	0.313	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	
	4/16/2009		< 0.2	N/A	0.389	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.767	N/A	N/A	N/A	N/A	
	10/12/2009		N/A	N/A	0.448	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	0.807	< 0.2	N/A	N/A	N/A	
	4/16/2010		< 0.2	N/A	0.459	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A</						

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Summary of Groundwater Chemistry
Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99

Other Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE2.3SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4 DNG	
Ammonia as N, mg/l (CAS NO - 7664-41-7)	10/4/2012	N/A	N/A	0.457	N/A	N/A	N/A	N/A	N/A	<0.2	<0.2	0.64	<0.2	N/A	N/A	N/A	
	11/1/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.2	<0.2	N/A	N/A	N/A	N/A	N/A	
	4/25/2013	N/A	N/A	0.399	N/A	N/A	<0.2	<0.2	N/A	N/A	N/A	0.368	<0.2	N/A	N/A	N/A	
	10/1/2013	N/A	N/A	0.953	0.225	N/A	<0.2	<0.2	N/A	N/A	N/A	0.344	<0.2	0.451	<0.2	N/A	
	1/5/2014	N/A	0.402	0.217	N/A	N/A	<0.2	<0.2	N/A	N/A	N/A	0.405	<0.2	0.405	0.405	N/A	
	10/2/2014	N/A	N/A	0.318	0.224	N/A	0.200	<0.2	N/A	N/A	N/A	0.486	<0.2	0.378	0.217	<0.2	
	4/29/2015	N/A	N/A	0.464	0.258	N/A	<0.2	<0.2	N/A	N/A	N/A	0.407	0.093	0.404	0.124	<0.2	
	11/9/2015	<0.2	N/A	0.327	<0.2	N/A	0.603	<0.2	N/A	<0.2	<0.2	0.432	<0.2	0.312	<0.2	<0.2	
	4/19/2016	0.108	N/A	0.214	0.189	N/A	<0.2	0.274	<0.2	<0.2	<0.2	0.127	N/A	N/A	N/A	<0.2	
	10/1/2016	0.132	N/A	0.244	0.212	N/A	0.608	0.633	0.236	<0.2	<0.2	0.58	0.106	N/A	N/A	<0.2	
	4/26/2017	N/A	0.348	0.255	0.229	N/A	<0.2	<0.2	0.275	<0.2	<0.2	0.391	0.155	0.322	0.141	0.141	
	10/12/2017	<0.2	N/A	0.194	0.18	N/A	<0.2	<0.2	0.35	<0.2	<0.2	0.31	<0.2	0.228	0.183	0.13	
	4/25/2018	N/A	0.192	0.363	0.244	2.19	<0.2	<0.2	0.381	0.115	<0.2	<0.2	0.167	0.195	0.123	0.122	
	10/18/2018	N/A	0.161	0.259	0.248	N/A	0.233	<0.2	0.485	<0.2	<0.2	<0.2	0.131	0.248	0.214	<0.2	
	4/26/2019	N/A	0.115	0.218	0.207	6.95	<0.2	<0.2	0.256	<0.2	<0.2	0.153	0.102	0.21	<0.2	0.188	
	10/25/2019	0.189	0.232	0.247	0.247	N/A	0.503	<0.2	0.45	0.19	<0.2	1.04	0.155	0.212	0.239	0.111	
	4/16/2020	<0.2	0.195	0.302	0.275	5.9	<0.2	<0.2	0.42	<0.2	<0.2	0.413	0.193	0.243	<0.2	0.8955	
	10/22/2020	<0.2	N/A	0.229	0.377	N/A	0.26	<0.2	0.206	<0.2	0.114	0.242	0.195	0.316	0.243	0.225	
	4/21/2021	<0.2	N/A	0.225	0.229	6.32	0.0795*	<0.2	0.213*	<0.2	<0.2	0.104*	0.268*	0.169*	<0.2	<0.2	
	4/22/2021	N/A	N/A	0.329	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/21/2021	0.0887*	0.162*	0.229	0.212	N/A	0.155*	<0.2	0.424	0.0841*	<0.2	0.779	0.128*	0.246	0.188*	N/A	
	10/21/2021	N/A	N/A	N/A	0.199*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/28/2022	0.113*	0.175*	0.23	0.206	5.84	<0.2	<0.2	0.206	<0.2	<0.2	0.499	0.113*	0.258	0.153*	<0.2	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.498	N/A	N/A	N/A	N/A	
	10/27/2022	<0.2	N/A	0.175*	0.155*	N/A	0.617	<0.2	0.633	<0.2	<0.2	0.589	<0.2	0.223	0.161*	<0.2	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.156*	
	4/27/2023	<0.2	0.243	0.279	0.263	4.11	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.181*	0.313	<0.2	<0.2	
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.297	N/A	N/A	
	10/19/2023	<0.2	N/A	0.165*	0.207	N/A	0.385	<0.2	0.654	<0.2	<0.2	0.625	<0.2	0.255	0.133*	N/A	
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	<0.2	<0.2	N/A	N/A	N/A	N/A	0.285	N/A	N/A	
	4/29/2024	0.216	0.235	0.239	0.233	5.89	<0.2	<0.2	0.222	<0.2	0.325*	0.147*	0.329	0.497	0.335*	<0.2	
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.414	N/A	N/A	
	10/7/2024	N/A	N/A	0.218*	0.221*	N/A	0.411*	<0.5	<0.5	<0.5	<0.5	0.602	<0.5	0.263*	0.719	N/A	
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.379*	N/A	N/A	
	Chloride, mg/L (CAS NO - 16887-00-6)	4/24/2001	N/A	N/A	4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	4.6	N/A	N/A	N/A
		7/25/2001	N/A	N/A	4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	24	N/A	N/A	N/A
		10/22/2001	N/A	N/A	4.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.1	6.7	N/A	N/A	N/A
		1/8/2002	3	N/A	1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.41	1.9	N/A	N/A	N/A
		4/24/2002	5.3	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.8	5.2	N/A	N/A	N/A
		10/23/2003	19	N/A	6.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.6	3.2	8.3	N/A	N/A
		4/27/2004	22	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.7	<5	N/A	N/A	74.4
		7/20/2004	10.8	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.8	5.9	24	N/A	48.4
		10/29/2004	13.2	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.8	<5	N/A	N/A	N/A
		4/26/2005	7.5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A
		10/34/2005	6.14	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	36.8
		4/24/2006	6.02	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	28.6
		10/25/2006	9.4	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A
4/24/2007		6.67	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	24.1	
10/1/2007		3.98	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.84	<5	N/A	N/A	20.7	
10/30/2008		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A	
4/16/2009		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A	
10/12/2009		N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A	
10/12/2009		N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	N/A	N/A	N/A	
4/16/2010		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	5.97	N/A	N/A	
10/7/2010		6.6	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.99	5.21	7.9	N/A	N/A	
4/21/2011		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	6.86	N/A	N/A	
10/11/2011		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.4	6.54	5.24	10.9	N/A	
4/24/2012		<5	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	11.8	N/A	N/A	
10/4/2012		N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	7.88	<5	13.7	N/A	
11/1/2012		N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<5	14.7	N/A	N/A	
4/25/2013		N/A	N/A	<5	N/A	N/A	26.2	18.7	N/A	N/A	N/A	<5	<5	14.7	N/A	N/A	
10/1/2013		N/A	N/A	87.1	<5	<5	25	13.7	N/A	N/A	N/A	<5	<5	16.4	35.9	<5	
4/15/2014		N/A	N/A	41	<5	N/A	27.2	14.3	N/A	N/A	N/A	<5	<5	19.2	35.3	<5	
10/2/2014		N/A	N/A	18	<5	N/A	28.9	28.2	N/A	N/A	N/A	5.42	21.8	36.3	<5	N/A	
4/29/2015		N/A	N/A	17.8	3.92	N/A	30.4	36.1	N/A	N/A	N/A	4.48	20.3	36.9	3.99	23.4	
6/17/2015		3.77	N/A	N/A	N/A	N/A	29.5	24.1	N/A	N/A	N/A	4.8	15.5	N/A	N/A	N/A	
11/9/2015		7.74	N/A	29.1	24.3	N/A	35.8	37.2	N/A	N/A	<5	14.2	<5	36.7	40.9	38.8	
10/19/2016		2.95	N/A	3.98	3.16	2.66	28.1	20.2	N/A	N/A	4.09	12.3	4.41	18.7	N/A	17.6	
10/11/2016		2.59	N/A	8.8	3.66	N/A	248	28.7	3.27	3.27	3.27	3.1	16.7	N/A	27.9	N/A	
4/26/2017		N/A	3.86	6.69	4.07	N/A	31	154	27.2	19.1	15.5	12.4	17.2	33.9	4.92	26.9	
10/12/2017		5.22	N/A	9.55	5.34	N/A	29.4	88.1	33.5	4.85	17.5	43.8	19.9	41.1	4.04	21.9	
4/25/2018		N/A	3.75	17.2	4	3710	32.3	84.1	58.1	5.37	14.5	33.9	17	20.5	5.08	63.5	
10/18/2018		N/A	2.82	6.82	2.84	N/A	30.4	247	92	3.99	14.8	41.2	14.8	24.8	2.86	32.4	
4/25/2019		N/A	3.75	2.46	3.86	2.66	29.3	21.9	14.2	3.96	13.9	54.3	15	19.9	3.87	20.1	
10/25/2019		4.34	3.74	5.15	4.05	N/A	32.9	205	230	5.36	15.1	58.6	17.1	21.9	4.3	31.9	
4/16/2020		4.24	4.31	4.84	4.82	2580	4.64	233	230	5.4	15.6	47.7	16.8	22	4.9	58.8	
10/22/2020		3.37	N/A	3.07	3.33	N/A	28.9	197	202	4.41	13.9	40.1	14.4	20.6	3.58	74.8	
4/22/2021		3.06*	N/A	2.67*	3.18*	6740	30.3	168	340	4.37*	13.8	41.5	14.8	21.2	3.32*		

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Summary of Groundwater Chemistry
 Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99P

Other Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE2.2SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4	
Nitrate/Nitrite as N, mg/L (CAS NO - 1594-56-5xx)	4/25/2013	N/A	N/A	<0.1	N/A	N/A	<0.1	<0.1	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A	N/A	
	10/1/2013	N/A	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A	N/A	
	4/15/2014	N/A	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A	N/A	
	10/7/2014	N/A	N/A	<0.1	<0.1	N/A	0.174	<0.1	N/A	N/A	N/A	<0.1	<0.1	<0.1	<0.1	N/A	
	4/2/2015	N/A	N/A	<0.1	<0.1	N/A	0.356	<0.1	N/A	N/A	N/A	<0.1	<0.1	<0.1	<0.1	N/A	
	4/2/2015	0.353	N/A	<0.1	<0.1	N/A	0.354	0.0759	N/A	0.141	0.236	N/A	N/A	N/A	N/A	N/A	
	11/9/2015	<0.1	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
	4/19/2016	<0.1	N/A	<0.1	<0.1	N/A	0.248	<0.1	<0.1	0.167	0.518	0.212	<0.1	N/A	N/A	0.0922	
	10/11/2016	<0.1	N/A	<0.1	<0.1	N/A	0.0923	<0.1	<0.1	<0.1	0.273	<0.1	<0.1	N/A	N/A	0.132	
	4/26/2017	N/A	<0.1	<0.1	<0.1	N/A	0.163	0.0973	<0.1	0.0942	0.305	<0.1	<0.1	<0.1	<0.1	0.159	
	10/12/2017	0.31	N/A	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	0.511	0.511	<0.1	<0.1	<0.1	<0.1	0.144	
	4/25/2018	N/A	<0.1	<0.1	<0.1	N/A	0.227	0.0988	<0.1	0.137	0.379	0.333	<0.1	<0.1	<0.1	0.309	
	10/18/2018	N/A	<0.1	<0.1	<0.1	N/A	<0.1	0.521	<0.5	<0.1	0.303	<0.1	<0.1	<0.1	<0.1	0.387	
	4/26/2019	N/A	<0.1	<0.1	<0.1	N/A	2.07	0.12	0.246	0.0735	0.126	0.393	0.467	<0.1	0.0664	<0.1	0.151
	10/25/2019	<0.1	<0.1	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	<0.1	0.275	<0.1	<0.1	0.0861	<0.1	<0.1	<0.1
	4/16/2020	0.0817	<0.1	<0.1	<0.1	N/A	2.53	0.211	0.463	<0.1	0.0719	0.358	<0.1	<0.1	0.0862	0.407	<0.1
	10/22/2020	0.113	N/A	<0.1	<0.1	N/A	<0.1	0.441	0.0729	<0.1	0.28	<0.1	<0.1	<0.1	<0.1	0.0851*	<0.1
	4/22/2021	0.332	N/A	<0.1	<0.1	N/A	3.24	0.132	0.132	0.0775*	0.138	0.4	0.459	<0.1	<0.1	0.126	<0.1
	4/22/2021	N/A	N/A	<0.1	<0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/21/2021	<0.1	<0.1	<0.1	<0.1	N/A	<0.1	0.0803*	0.112	<0.1	0.277	<0.1	<0.1	<0.1	<0.1	<0.1	N/A
	10/21/2021	N/A	N/A	N/A	<0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/28/2022	0.0428*	0.0347*	<0.1	<0.1	N/A	1.08	0.107	0.0786*	0.233	0.0981*	0.376	<0.1	0.0331*	<0.1	0.0569*	0.192
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	<0.1	<0.1	N/A	N/A	N/A
	10/27/2022	0.065*	N/A	<0.1	<0.1	N/A	<0.1	0.0707*	0.076*	<0.1	0.268*	<0.1	0.0508*	<0.1	<0.1	<0.1	N/A
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	N/A
	4/27/2023	<0.1	<0.1	<0.1	<0.1	N/A	1.01	0.115	<0.1	0.491	<0.1	0.307	0.478	<0.1	<0.1	0.0877*	0.296
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	N/A	N/A
	10/19/2023	0.199	N/A	<0.1	<0.1	N/A	<0.1	0.124	0.213	<0.1	0.37	0.0573*	0.0578*	<0.1	<0.1	N/A	N/A
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A
	4/29/2024	<0.1	<0.1	<0.1	<0.1	N/A	1.55	0.379	<0.1	0.996*	0.0916*	0.349	<0.1	<0.1	<0.1	<0.1	<0.1
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A
	10/7/2024	N/A	N/A	<0.1	<0.1	N/A	<0.1	0.0862*	0.408	<0.1	0.435	<0.1	0.139	<0.1	<0.1	<0.1	N/A
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.1	<0.1	N/A	N/A
	pH, S.U. (CAS NO - PH)	10/22/2001	N/A	N/A	8.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.27	7.25	N/A	N/A	N/A
		1/8/2002	N/A	N/A	8.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.31	7.33	N/A	N/A	N/A
		4/24/2002	N/A	N/A	7.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.7	8.65	N/A	N/A	N/A
		10/23/2003	N/A	N/A	8.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.15	7.21	N/A	N/A	N/A
		7/20/2004	8.55	N/A	7.95	N/A	N/A	N/A	N/A	N/A	8.59	N/A	8.64	8.64	N/A	N/A	8.67
		10/29/2004	7.52	N/A	9.58	N/A	N/A	N/A	N/A	N/A	7.15	N/A	8.35	8.42	N/A	N/A	N/A
		10/31/2007	N/A	N/A	10.7	N/A	N/A	N/A	N/A	N/A	7.84	N/A	8.3	8.4	N/A	N/A	8.5
10/30/2008		7.98	N/A	9.51	N/A	N/A	N/A	N/A	N/A	7.53	N/A	9.03	N/A	N/A	N/A	N/A	
4/26/2009		7.88	N/A	9.64	N/A	N/A	N/A	N/A	N/A	7.78	N/A	8.95	9.96	N/A	N/A	7.8	
10/12/2009		8.79	N/A	9.79	N/A	N/A	N/A	N/A	N/A	7.84	N/A	8.44	8.48	N/A	N/A	8.8	
4/16/2010		8.03	N/A	10.79	N/A	N/A	9.22	8.07	N/A	N/A	N/A	8.7	8.75	N/A	N/A	N/A	
10/7/2010		8.15	N/A	7.61	N/A	N/A	7.55	7.52	N/A	N/A	N/A	7.34	7.24	N/A	N/A	N/A	
4/21/2011		7.87	N/A	7.74	N/A	N/A	7.17	7.04	N/A	N/A	N/A	7.62	6.78	N/A	N/A	N/A	
10/11/2011		N/A	N/A	11.14	N/A	N/A	7.81	7.63	N/A	N/A	N/A	8.33	7.31	7.56	N/A	N/A	N/A
4/24/2012		8.05	N/A	8.81	N/A	N/A	7.82	7.85	N/A	7.37	8.08	7.37	7.17	N/A	N/A	N/A	N/A
10/12/2012		N/A	N/A	10.2	N/A	N/A	7.88	8.09	N/A	8.37	8.37	8.75	8.56	N/A	N/A	N/A	N/A
4/25/2013		N/A	N/A	9.96	N/A	N/A	7.26	7.3	N/A	N/A	N/A	7.41	7.81	N/A	N/A	N/A	N/A
10/1/2013		N/A	N/A	8.34	7.61	N/A	7.31	7.07	N/A	N/A	N/A	7.93	7.75	7.74	7.63	N/A	N/A
4/15/2014		N/A	N/A	8.83	8.42	N/A	6.95	6.49	N/A	N/A	N/A	7.49	7.49	6.9	7.45	7.91	N/A
10/2/2014		N/A	N/A	7.69	7.36	N/A	6.94	6.8	N/A	N/A	N/A	7.47	7.67	7.45	7.91	N/A	N/A
4/29/2015		N/A	N/A	7.39	7.38	N/A	7.1	6.48	N/A	N/A	N/A	7.4	7.39	7	7.04	7.74	7.74
4/17/2015		7.28	N/A	7.9	N/A	N/A	7.49	7.15	N/A	7.79	6.77	6.77	6.77	N/A	N/A	N/A	N/A
11/9/2015		7.3	N/A	7.05	7.08	N/A	6.58	6.46	N/A	6.66	6.78	7.13	7.09	7.07	7.07	7.43	7.43
4/19/2016		7.19	N/A	6.69	7.25	N/A	6.94	6.49	7.51	6.68	6.6	7.08	7.05	N/A	N/A	7.44	7.44
10/11/2016		7.19	N/A	7.2	7.22	N/A	6.5	6.8	6.95	6.76	6.6	7.25	7.47	N/A	N/A	7.68	7.68
4/26/2017		N/A	7.64	7.24	7.18	N/A	6.96	6.71	6.76	7.22	6.97	7.23	7.43	7.35	7.27	8.23	8.23
10/12/2017		7.3	N/A	7.36	7.27	N/A	6.71	6.61	6.89	6.83	7.01	7.23	7.6	7.27	7.23	8.02	8.02
4/25/2018		N/A	7.59	N/A	7.12	13.38	8.24	6.91	6.74	6.92	6.76	7.87	8.04	7.87	7.3	7.94	7.94
10/18/2018		N/A	7.34	N/A	6.01	N/A	6.66	6.78	6.6	6.98	6.7	6.98	7.51	7.1	7.08	8.31	8.31
4/26/2019		6.98	7.19	7.27	7.23	13.37	7.19	7.01	6.76	6.74	6.8	7.33	7.53	7.33	7.25	7.93	7.93
10/25/2019		7	N/A	7.07	6.99	N/A	6.57	6.56	6.52	6.58	6.69	6.96	7.34	7.03	6.97	7.49	7.49
4/16/2020		7.04	7.02	7.12	7.03	13.38	7.01	6.89	6.55	6.63	6.69	6.94	7.14	7.03	7.18	8.67	8.67
10/22/2020		7.06	N/A	7.15	7.07	N/A	6.54	6.53	6.5	6.54	6.67	6.94	7.07	7.07	7.04	8.48	8.48
4/22/2021		7.05	N/A	7.16	7.13	13.87	7.02	6.82	6.59	6.72	6.87	7.78	7.49	7.08	7.11	8.87	8.87
10/21/2021		6.91	6.98	7.11	7.11	N/A	6.51	6.44	6.37	6.51	6.48	7.18	7.41	7.06	7.06	N/A	N/A
4/28/2022		7.09	6.98	7.09	7.11	N/A	7.01	6.81	6.52	6.7	6.7	7.36	7.07	7.36	7.07	7.29	7.29
10/27/2022		7.07	N/A	7.13	7.1	N/A	6.56	6.55	6.44	6.6	6.61	7.1	8.35	7.1	7.06	N/A	N/A
4/27/2023		8.19	7.76	7.58	8.02	N/A	7.78	7.47	7.26	7.91	7.9	8.54	8.46	7.66	8	N/A	N/A
10/19/2023		6.96	N/A	7.03	6.99	N/A	7.34	6.33	6.4	6.54	6.6	7.19	8.64	6.93	6.92	N/A	N/A
4/29/2024		7.05	6.98	7.08	6.99	N/A	6.79	6.56	6.57	6.73	6.72	8.01	7.42	6.98	6.98	7.24	7.24
10/7/2024	N/A	N/A	7.09	6.96	N/A	6.82	6.24	6.32	6.46	6.68	7.25	6.89	6.86	6.86	N/A	N/A	
Phosphorus, mg/L (CAS NO - 7723-14-0)	4/25/2013	N/A	N/A	<0.1	N/A	N/A	0.168	<0.1	N/A	N/A	<0.1	<0.1	<0.1	N/A	N/A	N/A	
	10/1/2013	N/A	N/A	<0.1	<0.1	N/A	<0.1	0.105	<0.1	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	N/A	
	4/15/2014	N/A	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	N/A	
	10/2/2014	N/A	N/A	<0.1	<0.1	N/A	<0.1	<0.1	N/A	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	N/A	
	4/29/2015	N/A	N/A	0.394	<0.1	N/A	<0.1	<0.1	<0.1	N/A	0.095	<0.1	<0.1	<0.1	<0.1	<0.1	N/A
	11/9/2015	<0.1	N/A	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	N/A	0.191	0.234	<0.1	<0.1	<0.1	<0.1	0.227
	4/19/2016																

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Summary of Groundwater Chemistry

Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99P

Other Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE-2,3SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4 DNG		
Phosphorus, mg/L (CAS NO - 7723-14-0)	4/28/2022	0.0648*	< 0.1	< 0.1	< 0.1	4.21	0.277	< 0.1	< 0.1	< 0.1	< 0.1	0.25	< 0.1	< 0.1	< 0.1	< 0.1	0.0819*	
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.197	N/A	N/A	N/A	N/A	N/A	
	10/27/2022	0.0426*	N/A	< 0.1	< 0.1	N/A	0.381	< 0.1	< 0.1	< 0.1	< 0.1	0.0757*	< 0.1	< 0.1	< 0.1	< 0.1	N/A	
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/21/2024	< 0.1	< 0.1	< 0.1	< 0.1	6.98	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2023	< 0.1	N/A	< 0.1	< 0.1	N/A	0.101	< 0.1	< 0.1	< 0.1	< 0.1	0.079*	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	N/A
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2024	< 0.1	< 0.1	< 0.1	< 0.1	2.46	0.0818*	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/7/2024	N/A	N/A	< 0.1	< 0.1	N/A	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	N/A
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Specific Conductance, umhos/cm (CAS NO - SPECCON)	10/22/2001	N/A	N/A	572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	667	856	N/A	N/A	N/A
		1/8/2002	N/A	N/A	398	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	460	601	N/A	N/A	N/A
		4/24/2002	N/A	N/A	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	643	808	N/A	N/A	N/A
		10/23/2003	N/A	N/A	549	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	635	1097	N/A	N/A	N/A
		4/21/2004	2400	N/A	350	N/A	N/A	N/A	N/A	N/A	3500	N/A	640	N/A	N/A	N/A	N/A	1500
		7/20/2004	3000	N/A	430	N/A	N/A	N/A	N/A	N/A	3000	N/A	450	N/A	N/A	N/A	N/A	1300
		10/29/2004	2400	N/A	310	N/A	N/A	N/A	N/A	N/A	3300	N/A	540	N/A	920	N/A	N/A	N/A
		10/31/2007	N/A	N/A	238	N/A	N/A	N/A	N/A	N/A	2410	N/A	449	N/A	N/A	N/A	N/A	677
		10/30/2008	1778	N/A	469	N/A	N/A	N/A	N/A	N/A	2560	N/A	478	N/A	N/A	N/A	N/A	N/A
		4/16/2009	1760	N/A	4520	N/A	N/A	N/A	N/A	N/A	2730	N/A	5710	4650	N/A	N/A	N/A	N/A
		10/12/2009	N/A	N/A	1180	N/A	N/A	N/A	N/A	N/A	3700	N/A	5800	7380	N/A	N/A	N/A	N/A
		4/15/2010	1668	N/A	717	N/A	N/A	N/A	692	1062	N/A	N/A	685	N/A	N/A	N/A	N/A	N/A
10/7/2010		1355	N/A	584	N/A	N/A	1710	1205	N/A	N/A	N/A	617	692	N/A	N/A	N/A	N/A	
4/21/2011		1306	N/A	521	N/A	N/A	2240	1320	N/A	N/A	N/A	593	724	N/A	N/A	N/A	N/A	
10/11/2011		N/A	N/A	209	N/A	N/A	1990	1471	N/A	N/A	N/A	2480	544	781	N/A	N/A	N/A	
4/24/2012		1461	N/A	415	N/A	N/A	1908	1384	N/A	N/A	1973	1784	623	809	N/A	N/A	N/A	
10/4/2012		N/A	N/A	485	N/A	N/A	1974	1487	N/A	N/A	2710	2680	594	748	N/A	N/A	N/A	
4/25/2013		N/A	N/A	398	N/A	N/A	1760	1000	N/A	N/A	N/A	454	618	N/A	N/A	N/A	N/A	
10/1/2013		N/A	N/A	941	N/A	747	N/A	2870	1930	N/A	N/A	N/A	704	953	1158	823	N/A	
4/15/2014		N/A	N/A	738	N/A	573	N/A	2780	1900	N/A	N/A	N/A	645	879	1087	722	N/A	
10/2/2014		N/A	N/A	676	N/A	725	N/A	2910	2500	N/A	N/A	N/A	693	952	1130	664	N/A	
4/29/2015		N/A	N/A	779	N/A	655	N/A	2662	2273	N/A	N/A	N/A	609	819	1039	694	905	
6/17/2015		1969	N/A	N/A	N/A	N/A	2648	2320	N/A	3972	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1/19/2015		2586	N/A	652	N/A	N/A	2582	2314	N/A	2995	N/A	3319	684	867	1084	667	1344	
4/19/2016		3260	N/A	1112	1186	N/A	5164	8096	3423	5817	6570	10920	N/A	N/A	N/A	N/A	1506	
10/11/2016		1680	N/A	630	668	N/A	3231	5465	2850	3266	3774	687	794	N/A	N/A	N/A	744	
4/26/2017		N/A	978	486	508	N/A	2384	2607	2342	2494	2842	584	669	843	586	394	N/A	
10/12/2017		1473	N/A	617	634	N/A	2336	3240	2774	2997	3575	1078	726	946	669	1443	N/A	
4/25/2018		N/A	899	N/A	N/A	N/A	33073	3890	2942	3890	3297	4288	N/A	N/A	N/A	N/A	N/A	
10/18/2018		N/A	1186	N/A	N/A	N/A	3181	5283	3788	3127	3977	5895	N/A	N/A	N/A	N/A	748	
4/25/2019		310	629	628	658	N/A	3246	3099	4350	3472	4386	799	944	702	854	925	N/A	
10/25/2019		1079	N/A	650	688	N/A	3291	4080	4198	3212	3665	1388	783	944	718	986	N/A	
4/16/2020		895.8	738.5	595.7	634.4	3999	2951.1	4051.3	4086.8	2974.6	3354.7	1136	891	671	1098	N/A	N/A	
10/22/2020		903.3	N/A	600.8	636.9	N/A	3147.8	3957.3	4050.1	3015.1	3392.2	1081.1	724.8	901.5	672.2	1356	N/A	
4/22/2021		920.1	N/A	599.1	627.8	3999	2994	3445.7	4199.5	2945.8	3316.2	1069.2	768.5	889	664.7	1364	N/A	
10/21/2021		819	698.7	552.2	578.7	N/A	2837.8	3292.9	4041.5	2724.9	3048.4	1036	678.6	830.2	610.8	N/A	N/A	
4/28/2022		878.9	N/A	621.8	621.8	N/A	3071.5	3167.1	4252.3	2922.3	3262.3	926.3	626.9	666.7	656.9	N/A	N/A	
10/27/2022		875.6	N/A	570.5	609.7	N/A	3072.5	3213	4710	2879.1	3223.7	626.6	680.1	643.6	N/A	N/A	N/A	
4/27/2023		905.9	725	588	614.7	N/A	3005.5	3184.3	5059	2832.7	3158.4	838.1	747.6	899.1	653	N/A	N/A	
10/19/2023		882.2	N/A	539.1	574	N/A	26.7	3001.1	4864.6	2678.9	2977.9	638.8	596	824.1	608.2	N/A	N/A	
4/29/2024		1354.4	782.8	573.1	603.2	N/A	2907.2	3070.2	5350.3	2826	2880.7	763.1	748.1	862.3	638.9	1590	N/A	
10/7/2024		N/A	N/A	625.3	659.5	N/A	3351.9	3456.4	6082.7	3110.1	3463.3	951.8	680.3	954.1	706.9	N/A	N/A	
Sulfate, mg/L (CAS NO - 14808-79-8)		4/25/2013	N/A	N/A	< 5	N/A	N/A	1138	639	N/A	N/A	N/A	11.7	63.4	N/A	N/A	N/A	
		10/1/2013	N/A	N/A	9.16	13.2	N/A	1190	489	N/A	N/A	N/A	11.4	97.2	189	44.2	N/A	
		4/15/2014	N/A	N/A	< 5	12.5	N/A	1190	584	N/A	N/A	N/A	16.1	108	188	33.8	N/A	
		10/2/2014	N/A	N/A	< 5	14.1	N/A	1280	939	N/A	N/A	N/A	21.4	116	192	38.2	N/A	
		4/29/2015	N/A	N/A	< 5	15.8	N/A	1180	974	N/A	N/A	N/A	19.5	104	195	26.2	183	
		6/17/2015	755	N/A	N/A	N/A	N/A	1250	989	N/A	1810	1990	N/A	N/A	N/A	N/A	N/A	
		1/19/2015	672	N/A	< 5	15.2	N/A	1460	1010	N/A	1740	1930	16.1	108	183	31.8	N/A	
		4/19/2016	376	N/A	< 5	11.6	N/A	1420	1830	847	1690	1960	22.5	97.2	N/A	N/A	115	
		10/11/2016	164	N/A	< 5	12.8	N/A	1520	1410	1320	1630	2110	17	101	N/A	N/A	115	
		4/26/2017	N/A	157	< 5	18.5	N/A	1460	1420	1750	1670	2110	58.9	106	184	29.6	119	
		10/12/2017	457	N/A	< 5	17.1	N/A	1280	1410	1760	1640	2110	238	110	175	30.1	461	
		4/25/2018	N/A	85.6	< 5	20.8	9050	1600	1440	1870	1580	2090	193	101	138	30.3	256	
		10/18/2018	N/A	109	< 5	19.3	N/A	1580	1530	1970	1570	2200	247	89.5	139	26.6	135	
		4/25/2019	N/A	78.2	< 5	18.8	2480	1660	1490	2130	1770	2160	210	136	27.1	143		
		10/25/2019	267	75.5	< 5	17.9	N/A	1430	1890	1550	1880	304	93.7	140	25.8	187		
	4/16/2020	234	67.6	< 5	19.1	7370	158	1430	2060	1550	1890	243	107	147	27	214		
	10/22/2020	218	N/A	< 5	17.1	N/A	1590	1410	1990	1530	1820	210	106	146	25.3	260		
	4/22/2021	244	N/A	< 5	16.7	20100	1570	1440	2310	1670	2080	232	98.1	151	25.9	287		
	10/21/2021	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/28/2022	289	71.4	< 5	18.3	N/A	1600	144										

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Summary of Groundwater Chemistry

Lehigh-Mason City Cement Manufacturing Waste Landfill - 17-SDP-08-99R


Other Constituents	Sample Date	MW-101R-NP UPG	MW-101R-RC UPG	MW-203R UPG	MW-205 UPG	PHASE1.2,SUMP-C UPG	LDR-1 DNG	LDR-2 DNG	LDR-3 DNG	MW-102R-NP DNG	MW-103R-NP DNG	MW-201 DNG	MW-202R DNG	MW-204 DNG	MW-206 DNG	SW-1/OUTFALL4 DNG	
Total Kjeldahl Nitrogen, mg/L (CAS NO - TKN)	10/18/2018	N/A	0.51	0.499	0.442	N/A	0.43	0.566	0.751	0.36	<1	0.403	0.342	0.341	0.484	1.49	
	4/26/2019	N/A	<1	0.508	0.489	N/A	0.645	<1	0.444	<1	<1	0.552	<1	0.552	<1	1.33	
	10/25/2019	<1	<1	<1	<1	N/A	0.634	<1	0.559	<1	<1	1.16	<1	<1	<1	0.683	
	4/16/2020	<1	<1	0.497	0.448	N/A	15.6	<1	0.61	<1	<1	0.677	0.533	0.622	<1	0.96	
	10/22/2020	<1	N/A	0.498	<1	N/A	1.84	<1	<1	<1	<1	0.616	<1	0.463	<1	0.804*	
	4/22/2021	N/A	N/A	<1	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/21/2021	<1	<1	<1	<1	N/A	0.479*	<1	<1	<1	<1	0.851*	<1	<1	<1	<1	N/A
	10/21/2021	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/28/2022	<1	<1	<1	<1	N/A	9.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.846*
	4/28/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/27/2022	<1	N/A	<1	<1	N/A	0.851*	<1	0.707*	<1	<1	0.774*	<1	0.427*	0.46*	N/A	N/A
	10/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	4/27/2023	<1	<1	<1	<1	N/A	10.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.01
	4/27/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	10/19/2023	<1	N/A	<1	<1	N/A	N/A	<1	<1	<1	<1	0.646*	<1	<1	<1	<1	N/A
	10/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	4/29/2024	<1	<1	<1	<1	N/A	0.68	<1	<1	<1	<1	<1	<1	<1	<1	<1	N/A
	4/29/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	10/7/2024	N/A	N/A	<1	<1	N/A	<1	<1	0.617*	<1	<1	0.601*	<1	<1	<1	<1	N/A
	10/7/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	Total Organic Carbon, mg/L (CAS NO - TOC)	4/25/2013	N/A	N/A	1.84	N/A	N/A	<1	1.4	N/A	N/A	N/A	1	<1	N/A	N/A	N/A
		10/1/2013	N/A	N/A	1.58	<1	N/A	<1	1.44	N/A	N/A	N/A	1.01	<1	1.47	<1	N/A
		4/15/2014	N/A	N/A	<1	<1	N/A	<1	1.35	N/A	N/A	N/A	<1	<1	1.2	<1	N/A
		10/2/2014	N/A	N/A	<1	<1	N/A	<1	1.14	N/A	N/A	N/A	<1	<1	<1	<1	N/A
		4/29/2015	N/A	N/A	1.14	0.724	N/A	0.786	1.28	N/A	N/A	N/A	1.05	1.01	1.34	0.765	6.9
		11/9/2015	<1	N/A	<1	<1	N/A	<1	1.19	N/A	<1	<1	<1	<1	1.05	<1	14.4
		4/19/2016	2.24	N/A	5.51	3.87	N/A	17.5	2.81	13.2	2.84	2.75	14	2.28	N/A	N/A	13.4
		10/11/2016	1.22	N/A	0.947	0.657	N/A	0.842	0.7	7.86	0.962	0.701	1.21	0.934	N/A	N/A	5.89
		4/26/2017	N/A	0.636	0.652	0.59	N/A	0.808	1.39	1.96	0.751	0.661	1.13	0.761	1.35	0.811	4.58
		10/12/2017	0.888	N/A	0.994	0.729	N/A	0.731	1.27	6.04	1.08	0.776	1.62	0.926	1.26	0.737	7.8
		4/25/2018	N/A	0.68	0.808	0.656	22.5	0.957	1.29	4.45	1.54	0.692	1.44	0.82	0.977	0.729	5.77
		10/18/2018	N/A	0.965	1.05	0.964	N/A	1.25	2.12	4.69	1.65	1.31	1.81	1.1	1.24	0.952	3.9
		4/26/2019	N/A	1.38	0.825	0.671	58.4	1.02	1.84	3.33	0.858	0.722	1.87	0.904	1.05	0.859	4.1
10/25/2019		0.852	0.812	1.05	0.861	N/A	1.31	1.94	3.41	1.26	1	2.15	1.07	1.19	0.843	5.58	
4/16/2020		0.886	0.846	1.33	1.23	N/A	1.47	2.31	2.78	1.26	1.04	2.62	1.54	1.54	1.44	5.35	
10/22/2020		0.708	N/A	0.818	0.856	N/A	0.943	1.44	3.98	0.885	0.69	1.22	0.978	0.8	0.67	5.67	
4/22/2021		1.54	N/A	1.41	1.19	123	1.06	7.91	1.36	1.5	1.31	2.11	1.45	1.46	1.2	1.92	
4/22/2021		N/A	N/A	1.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10/21/2021		1.04	2.03	1.39	1.1	N/A	1.93	2.83	3.67	1.43	2.45	2.45	1.76	1.84	1.6	N/A	
10/21/2021		N/A	N/A	N/A	1.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/28/2022		2.13	1.89	1.75	1.49	85.7	2.78	4.07	4.64	3.4	3.96	2.95	1.85	2.58	2.05	8.96	
4/28/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10/27/2022		0.866*	N/A	1.05	0.966*	N/A	1.24	1.56	2.11	1.24	0.996*	1.62	0.969*	1.24	0.978*	N/A	
10/27/2022		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.991*	N/A
4/27/2023		0.878*	0.91*	1.02	0.91*	55.7	1.06	1.43	1.78	1.05	0.782*	1.34	1.01	1.1	0.897*	6.8	
4/27/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.1	N/A	N/A
10/19/2023		0.866*	N/A	0.971*	0.899*	N/A	1.13	1.97	3.88	1.3	0.787*	1.49	1.01	1.17	0.948*	N/A	
10/19/2023		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.27	N/A	N/A
4/29/2024		0.996*	0.982*	1.17	1.02	40.3	1.32	1.41	0.956*	1.34	1.06	1.48	1.54	1.73	1.04	5.2	
4/29/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.32	N/A	N/A
10/7/2024		N/A	N/A	1.23	1.16	N/A	1.41	1.24	0.68*	1.52	1.39	1.62	1.09	1.35	1.13	1.13	N/A
10/7/2024		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.43	N/A	N/A

Note: * indicates 'f flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.



Appendix D
Statistical Report

Attachment A
Trend Test ($\alpha=0.01$)

Trend Test

CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM Printed 10/29/2024, 12:17 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
Alkalinity, Total [CaCO3] (mg/L)	LDR-1	25.74	10	21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	LDR-2	6.714	2	21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	LDR-3	8.568	2	21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-101R-NP (bg)	-36.08	-15	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-102R-NP	4.538	10	21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-103R-NP	-6.62	-4	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-201	-8.786	-4	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-202R	-15.59	-8	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-203R (bg)	-4.991	-5	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-204	-5.839	-2	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-205 (bg)	-2.813	-8	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	MW-206	-6.385	-5	-21	No	8	0	0.01	NP
Alkalinity, Total [CaCO3] (mg/L)	SW-1/OUTFALL4	8.551	4	21	No	8	0	0.01	NP
Aluminum (mg/L)	LDR-1	-0.1336	-14	-21	No	8	12.5	0.01	NP
Aluminum (mg/L)	LDR-3	-0.01919	-18	-21	No	8	25	0.01	NP
Aluminum (mg/L)	MW-101R-NP (bg)	0.0006351	3	21	No	8	37.5	0.01	NP
Aluminum (mg/L)	SW-1/OUTFALL4	-0.05491	-14	-21	No	8	0	0.01	NP
Ammonia as N (mg/L)	LDR-1	0.02349	9	21	No	8	37.5	0.01	NP
Ammonia as N (mg/L)	LDR-3	0.01973	6	21	No	8	25	0.01	NP
Ammonia as N (mg/L)	MW-101R-NP (bg)	0	8	21	No	8	62.5	0.01	NP
Ammonia as N (mg/L)	MW-201	-0.01186	-1	-21	No	8	25	0.01	NP
Ammonia as N (mg/L)	MW-202R	0.04166	9	21	No	8	37.5	0.01	NP
Ammonia as N (mg/L)	MW-203R (bg)	0.002441	2	21	No	8	0	0.01	NP
Ammonia as N (mg/L)	MW-204	0.02231	14	21	No	8	0	0.01	NP
Ammonia as N (mg/L)	MW-205 (bg)	0.00568	8	21	No	8	0	0.01	NP
Ammonia as N (mg/L)	MW-206	0.04652	4	21	No	8	12.5	0.01	NP
Ammonia as N (mg/L)	SW-1/OUTFALL4	-0.00376	-10	-21	No	8	50	0.01	NP
Arsenic (mg/L)	LDR-1	-0.0005949	-15	-21	No	8	37.5	0.01	NP
Arsenic (mg/L)	MW-101R-NP (bg)	0.00003382	3	21	No	8	25	0.01	NP
Arsenic (mg/L)	MW-201	0.00004367	5	21	No	8	25	0.01	NP
Arsenic (mg/L)	SW-1/OUTFALL4	-0.0001189	-6	-21	No	8	12.5	0.01	NP
Bicarbonate (mg/L)	LDR-1	25.74	10	21	No	8	0	0.01	NP
Bicarbonate (mg/L)	LDR-2	6.714	2	21	No	8	0	0.01	NP
Bicarbonate (mg/L)	LDR-3	8.568	2	21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-101R-NP (bg)	-15.27	-11	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-102R-NP	4.279	8	21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-103R-NP	-10.16	-8	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-201	-8.786	-4	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-202R	-39	-14	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-203R (bg)	-4.991	-5	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-204	-5.839	-2	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-205 (bg)	-2.813	-8	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	MW-206	-6.385	-5	-21	No	8	0	0.01	NP
Bicarbonate (mg/L)	SW-1/OUTFALL4	18.62	3	14	No	6	0	0.01	NP
Calcium (mg/L)	LDR-1	14.81	8	21	No	8	0	0.01	NP
Calcium (mg/L)	LDR-2	17.17	6	21	No	8	0	0.01	NP
Calcium (mg/L)	LDR-3	49.9	14	21	No	8	0	0.01	NP
Calcium (mg/L)	MW-101R-NP (bg)	1.096	6	21	No	8	0	0.01	NP
Calcium (mg/L)	MW-102R-NP	-0.594	-2	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-103R-NP	8.628	4	21	No	8	0	0.01	NP

Trend Test

CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM Printed 10/29/2024, 12:17 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Calcium (mg/L)	MW-201	-13.67	-14	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-202R	-17.66	-8	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-203R (bg)	-1.391	-10	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-204	-0.5856	-2	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-205 (bg)	-0.8083	-6	-21	No	8	0	0.01	NP
Calcium (mg/L)	MW-206	-0.4125	-2	-21	No	8	0	0.01	NP
Calcium (mg/L)	SW-1/OUTFALL4	-0.9964	0	21	No	8	0	0.01	NP
Carbonate (mg/L)	MW-202R	0	3	21	No	8	75	0.01	NP
Chloride (mg/L)	LDR-1	0.2037	4	21	No	8	0	0.01	NP
Chloride (mg/L)	LDR-2	-3.28	-6	-21	No	8	0	0.01	NP
Chloride (mg/L)	LDR-3	111.2	26	21	Yes	8	0	0.01	NP
Chloride (mg/L)	MW-101R-NP (bg)	0.0223	0	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-102R-NP	0.01557	0	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-103R-NP	1.844	20	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-201	-3.875	-18	-21	No	8	0	0.01	NP
Chloride (mg/L)	MW-202R	-0.5238	-3	-21	No	8	0	0.01	NP
Chloride (mg/L)	MW-203R (bg)	-0.2416	-6	-21	No	8	0	0.01	NP
Chloride (mg/L)	MW-204	0.8774	14	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-205 (bg)	0.03311	0	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-206	-0.2006	-3	-21	No	8	0	0.01	NP
Chloride (mg/L)	SW-1/OUTFALL4	6.849	14	21	No	8	0	0.01	NP
Chromium (mg/L)	LDR-1	-0.0007722	-3	-21	No	8	37.5	0.01	NP
Chromium (mg/L)	LDR-3	0.0001534	5	21	No	8	50	0.01	NP
Chromium (mg/L)	SW-1/OUTFALL4	0	5	21	No	8	87.5	0.01	NP
Lead (mg/L)	LDR-1	-0.0002579	-16	-21	No	8	62.5	0.01	NP
Lead (mg/L)	MW-101R-NP (bg)	0	2	21	No	8	50	0.01	NP
Lead (mg/L)	MW-201	0	3	21	No	8	87.5	0.01	NP
Lead (mg/L)	SW-1/OUTFALL4	-0.00004223	-7	-21	No	8	50	0.01	NP
Magnesium (mg/L)	LDR-1	4.743	4	21	No	8	0	0.01	NP
Magnesium (mg/L)	LDR-2	14.18	12	21	No	8	0	0.01	NP
Magnesium (mg/L)	LDR-3	39.27	16	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-101R-NP (bg)	0.4718	1	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-102R-NP	4	5	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-103R-NP	9.519	6	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-201	-3.454	-10	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-202R	2.266	8	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-203R (bg)	-0.04986	-1	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-204	0.9238	6	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-205 (bg)	0.4556	11	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-206	0.8786	5	21	No	8	0	0.01	NP
Magnesium (mg/L)	SW-1/OUTFALL4	0.4348	2	21	No	8	0	0.01	NP
Nitrate/Nitrite as N (mg/L)	LDR-1	0	0	21	No	8	50	0.01	NP
Nitrate/Nitrite as N (mg/L)	LDR-2	-0.01262	-9	-21	No	8	25	0.01	NP
Nitrate/Nitrite as N (mg/L)	LDR-3	0.1463	14	21	No	8	0	0.01	NP
Nitrate/Nitrite as N (mg/L)	MW-101R-NP (bg)	-0.004977	-3	-21	No	8	37.5	0.01	NP
Nitrate/Nitrite as N (mg/L)	MW-102R-NP	0	-8	-21	No	8	62.5	0.01	NP
Nitrate/Nitrite as N (mg/L)	MW-103R-NP	0.02196	6	21	No	8	0	0.01	NP
Nitrate/Nitrite as N (mg/L)	MW-201	0	0	21	No	8	62.5	0.01	NP
Nitrate/Nitrite as N (mg/L)	MW-202R	0.00352	12	21	No	8	50	0.01	NP
Nitrate/Nitrite as N (mg/L)	SW-1/OUTFALL4	0.006815	1	21	No	8	25	0.01	NP

Trend Test

CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM Printed 10/29/2024, 12:17 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
pH (S.U.)	LDR-1	-0.04085	-2	-21	No	8	0	0.01	NP
pH (S.U.)	LDR-2	-0.1087	-10	-21	No	8	0	0.01	NP
pH (S.U.)	LDR-3	-0.05125	-6	-21	No	8	0	0.01	NP
pH (S.U.)	MW-101R-NP (bg)	0.002483	1	21	No	8	0	0.01	NP
pH (S.U.)	MW-102R-NP	-0.04051	-4	-21	No	8	0	0.01	NP
pH (S.U.)	MW-103R-NP	-0.0001257	0	21	No	8	0	0.01	NP
pH (S.U.)	MW-201	0.01431	2	21	No	8	0	0.01	NP
pH (S.U.)	MW-202R	0.476	10	21	No	8	0	0.01	NP
pH (S.U.)	MW-203R (bg)	-0.0255	-13	-21	No	8	0	0.01	NP
pH (S.U.)	MW-204	-0.04306	-11	-21	No	8	0	0.01	NP
pH (S.U.)	MW-205 (bg)	-0.04544	-16	-21	No	8	0	0.01	NP
pH (S.U.)	MW-206	-0.04433	-11	-21	No	8	0	0.01	NP
pH (S.U.)	SW-1/OUTFALL4	-0.03267	-2	-21	No	8	0	0.01	NP
Phosphorus, Total [as P] (mg/L)	LDR-1	-0.08244	-15	-21	No	8	25	0.01	NP
Phosphorus, Total [as P] (mg/L)	MW-201	0	0	21	No	8	50	0.01	NP
Phosphorus, Total [as P] (mg/L)	SW-1/OUTFALL4	-0.005034	-9	-21	No	8	25	0.01	NP
Potassium (mg/L)	LDR-1	1.454	8	21	No	8	0	0.01	NP
Potassium (mg/L)	LDR-2	-36.53	-20	-21	No	8	0	0.01	NP
Potassium (mg/L)	LDR-3	109.5	24	21	Yes	8	0	0.01	NP
Potassium (mg/L)	MW-101R-NP (bg)	-0.05245	-9	-21	No	8	0	0.01	NP
Potassium (mg/L)	MW-102R-NP	-0.2148	-5	-21	No	8	0	0.01	NP
Potassium (mg/L)	MW-103R-NP	0.3439	7	21	No	8	0	0.01	NP
Potassium (mg/L)	MW-201	-3.675	-16	-21	No	8	0	0.01	NP
Potassium (mg/L)	MW-202R	0.2369	6	21	No	8	0	0.01	NP
Potassium (mg/L)	MW-203R (bg)	-0.2384	-14	-21	No	8	0	0.01	NP
Potassium (mg/L)	MW-204	-0.388	-4	-21	No	8	0	0.01	NP
Potassium (mg/L)	MW-205 (bg)	0.1611	2	21	No	8	0	0.01	NP
Potassium (mg/L)	MW-206	-0.05574	-4	-21	No	8	0	0.01	NP
Potassium (mg/L)	SW-1/OUTFALL4	15.62	6	21	No	8	0	0.01	NP
Selenium (mg/L)	MW-201	0	3	21	No	8	87.5	0.01	NP
Sodium (mg/L)	LDR-1	-0.0522	0	21	No	8	0	0.01	NP
Sodium (mg/L)	LDR-2	-6.554	-16	-21	No	8	0	0.01	NP
Sodium (mg/L)	LDR-3	6.716	12	21	No	8	0	0.01	NP
Sodium (mg/L)	MW-101R-NP (bg)	-0.777	-6	-21	No	8	0	0.01	NP
Sodium (mg/L)	MW-102R-NP	-1.914	-8	-21	No	8	0	0.01	NP
Sodium (mg/L)	MW-103R-NP	-1.99	-4	-21	No	8	0	0.01	NP
Sodium (mg/L)	MW-201	-1.169	-12	-21	No	8	0	0.01	NP
Sodium (mg/L)	MW-202R	5.811	6	21	No	8	0	0.01	NP
Sodium (mg/L)	MW-203R (bg)	-0.202	-4	-21	No	8	0	0.01	NP
Sodium (mg/L)	MW-204	0.2006	2	21	No	8	0	0.01	NP
Sodium (mg/L)	MW-205 (bg)	0.1012	2	21	No	8	0	0.01	NP
Sodium (mg/L)	MW-206	-0.06901	-3	-21	No	8	0	0.01	NP
Sodium (mg/L)	SW-1/OUTFALL4	0.6414	8	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	LDR-1	30.75	4	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	LDR-2	-54.68	-6	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	LDR-3	467.6	24	21	Yes	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-101R-NP (bg)	13.42	4	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-102R-NP	-25.06	-4	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-103R-NP	-69.33	-8	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-201	-94.31	-18	-21	No	8	0	0.01	NP

Trend Test

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Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Specific Conductance (umhos/cm)	MW-202R	-10.9	-8	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-203R (bg)	-2.082	-2	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-204	5.804	4	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-205 (bg)	-3.335	-2	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-206	-2.211	-2	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	SW-1/OUTFALL4	182.3	20	21	No	8	0	0.01	NP
Sulfate (mg/L)	LDR-1	2.507	1	21	No	8	0	0.01	NP
Sulfate (mg/L)	LDR-2	-27.98	-15	-21	No	8	0	0.01	NP
Sulfate (mg/L)	LDR-3	20.72	2	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-101R-NP (bg)	18.37	8	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-102R-NP	-32.59	-14	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-103R-NP	-33.67	-23	-21	Yes	8	0	0.01	NP
Sulfate (mg/L)	MW-201	-29.69	-22	-21	Yes	8	0	0.01	NP
Sulfate (mg/L)	MW-202R	-3.901	-6	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-204	-0.7436	-4	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-205 (bg)	-0.02888	-4	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-206	0.8725	10	21	No	8	0	0.01	NP
Sulfate (mg/L)	SW-1/OUTFALL4	18.44	12	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	LDR-1	90.7	14	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	LDR-2	94.5	18	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	LDR-3	324.1	24	21	Yes	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-101R-NP (bg)	14.73	7	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-102R-NP	22.25	2	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-103R-NP	51.45	3	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-201	-55.16	-18	-21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-202R	-3.495	-6	-21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-203R (bg)	16.02	12	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-204	17.79	14	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-205 (bg)	15.75	12	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	MW-206	18.21	12	21	No	8	0	0.01	NP
Total Dissolved Solids (mg/L)	SW-1/OUTFALL4	18.68	4	21	No	8	0	0.01	NP
Total Hardness (mg/L)	LDR-1	38.61	6	21	No	8	0	0.01	NP
Total Hardness (mg/L)	LDR-2	111.6	6	21	No	8	0	0.01	NP
Total Hardness (mg/L)	LDR-3	248.9	14	21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-101R-NP (bg)	11.09	4	21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-102R-NP	-30.89	-2	-21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-103R-NP	36	5	21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-201	-49.1	-16	-21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-202R	-22.06	-10	-21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-203R (bg)	-5.318	-10	-21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-204	1.962	2	21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-205 (bg)	-1.898	-4	-21	No	8	0	0.01	NP
Total Hardness (mg/L)	MW-206	3.285	6	21	No	8	0	0.01	NP
Total Hardness (mg/L)	SW-1/OUTFALL4	-7.066	-4	-21	No	8	0	0.01	NP
Total Kjeldahl Nitrogen (mg/L)	SW-1/OUTFALL4	-0.1057	-10	-21	No	8	12.5	0.01	NP
Total Organic Carbon (mg/L)	LDR-1	0.04058	3	21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	LDR-2	-0.828	-24	-21	Yes	8	0	0.01	NP
Total Organic Carbon (mg/L)	LDR-3	-0.7624	-14	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-101R-NP (bg)	-0.008719	-1	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-102R-NP	-0.04431	-2	-21	No	8	0	0.01	NP

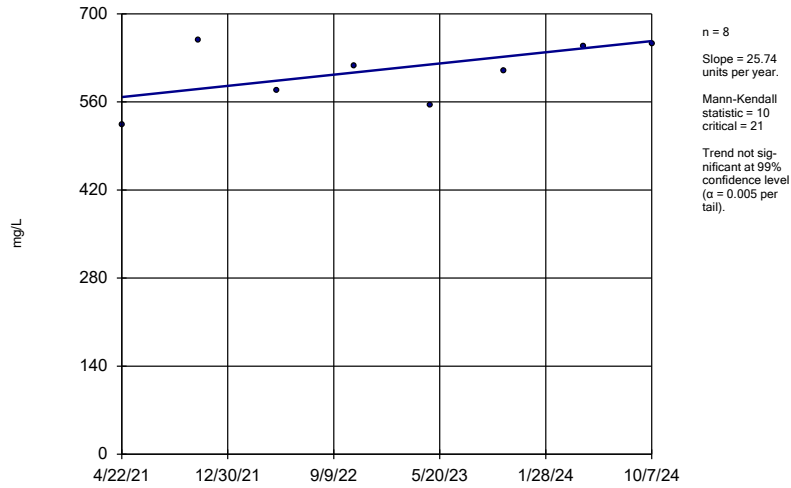
Trend Test

CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM Printed 10/29/2024, 12:17 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
Total Organic Carbon (mg/L)	MW-103R-NP	-0.2085	-4	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-201	-0.2286	-11	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-202R	-0.1352	-5	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-203R (bg)	-0.08909	-10	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-204	-0.08696	-8	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-205 (bg)	-0.06442	-8	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	MW-206	-0.06909	-4	-21	No	8	0	0.01	NP
Total Organic Carbon (mg/L)	SW-1/OUTFALL4	0.3988	6	21	No	8	0	0.01	NP

Sen's Slope Estimator

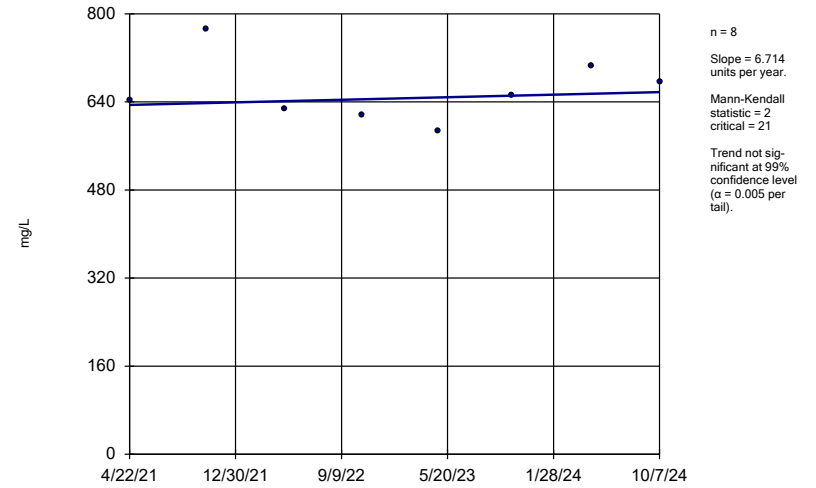
LDR-1



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

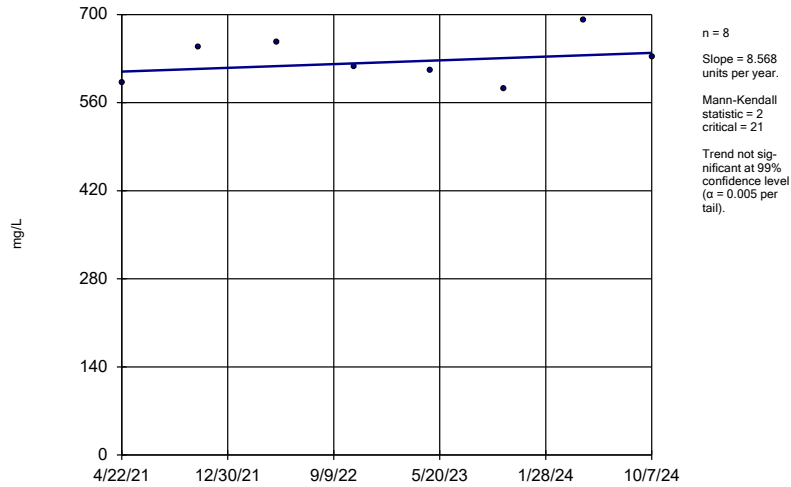
LDR-2



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

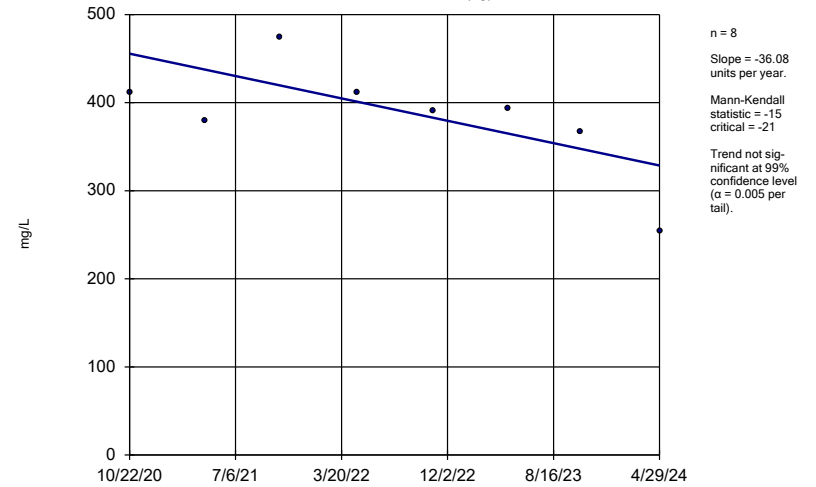
LDR-3



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

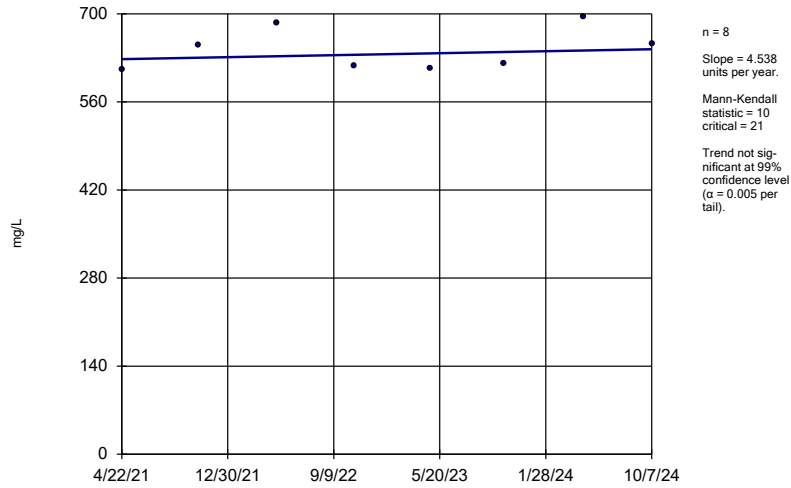
MW-101R-NP (bg)



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

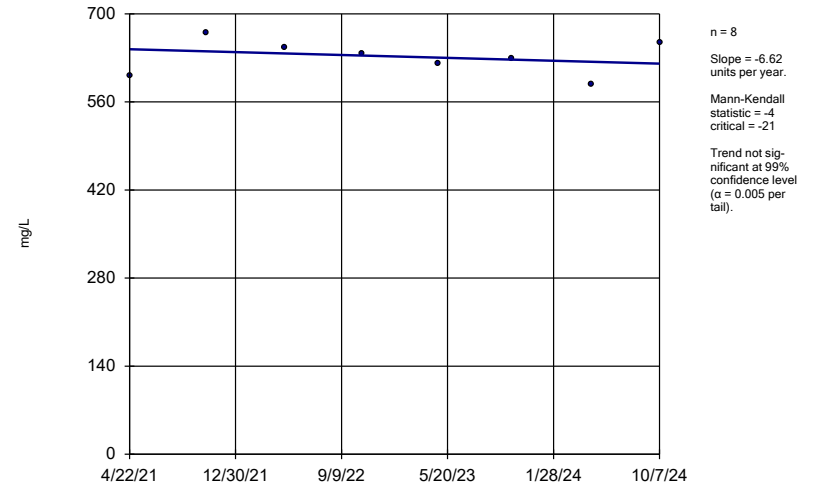
MW-102R-NP



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

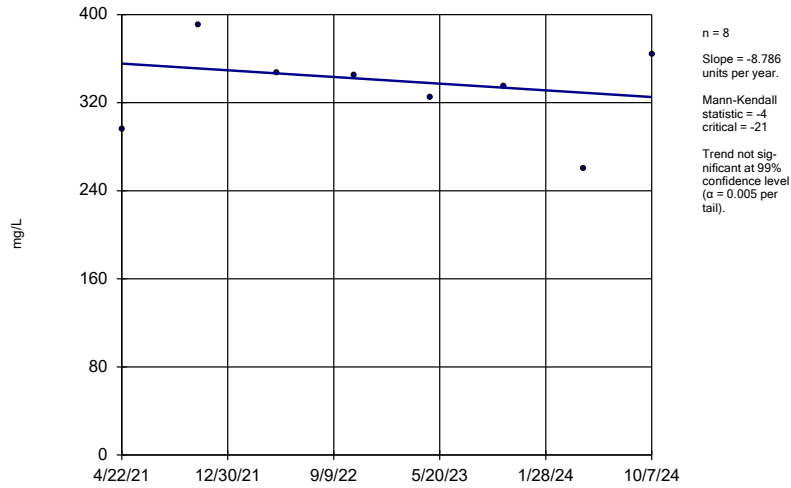
MW-103R-NP



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

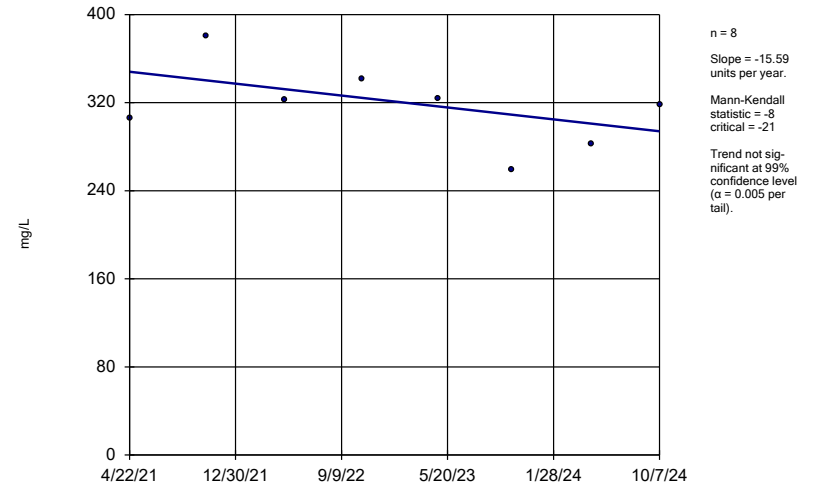
MW-201



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

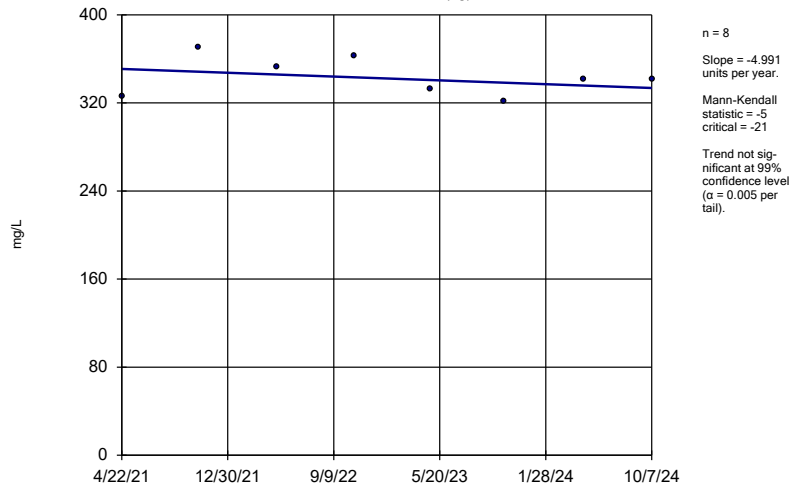
MW-202R



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

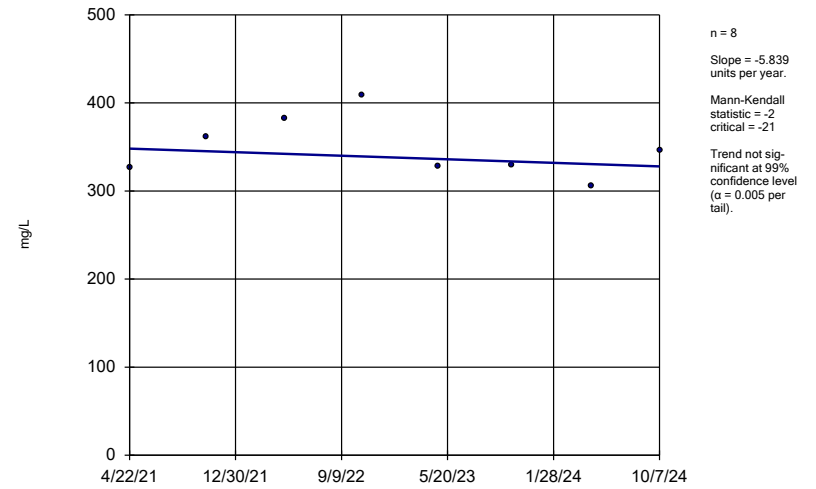
MW-203R (bg)



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

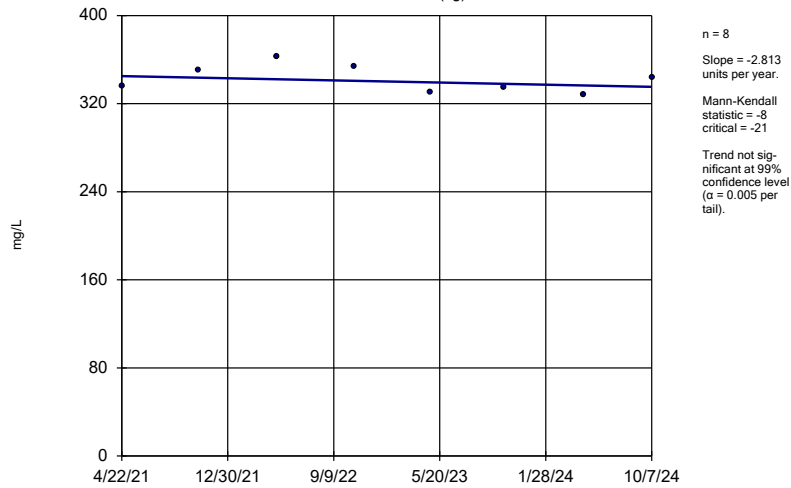
MW-204



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

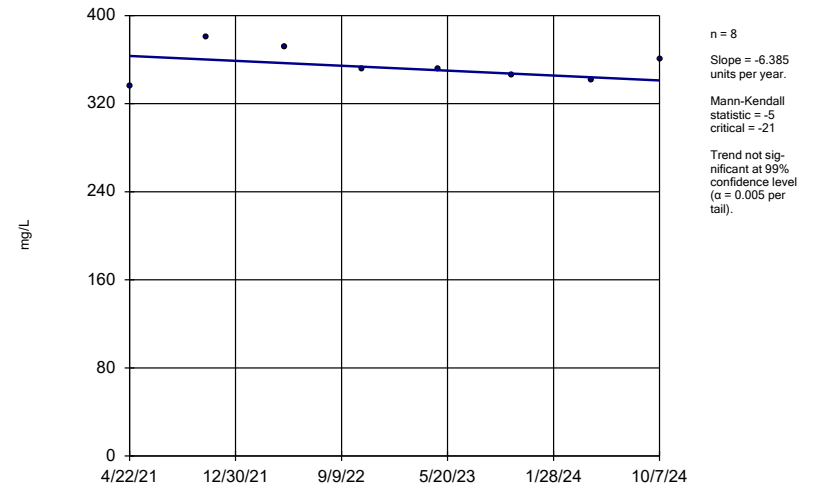
MW-205 (bg)



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

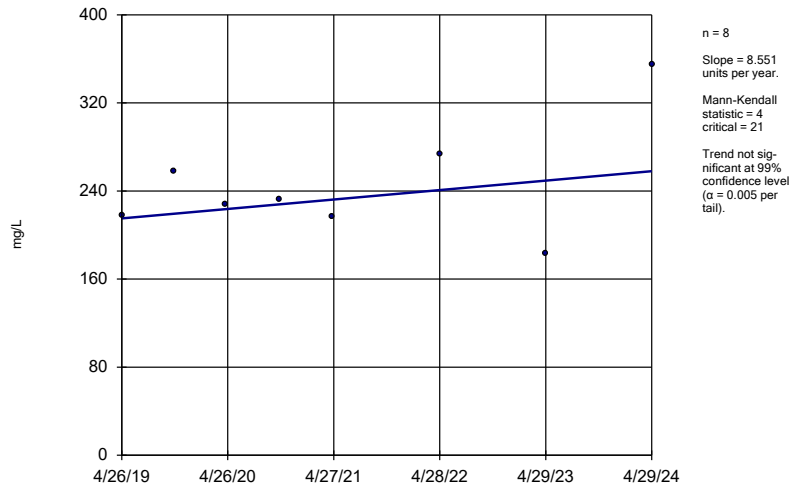
MW-206



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

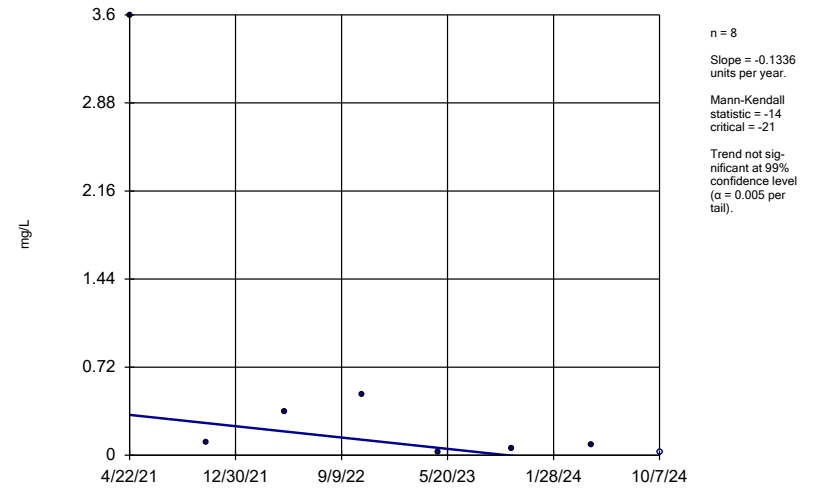
SW-1/OUTFALL4



Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

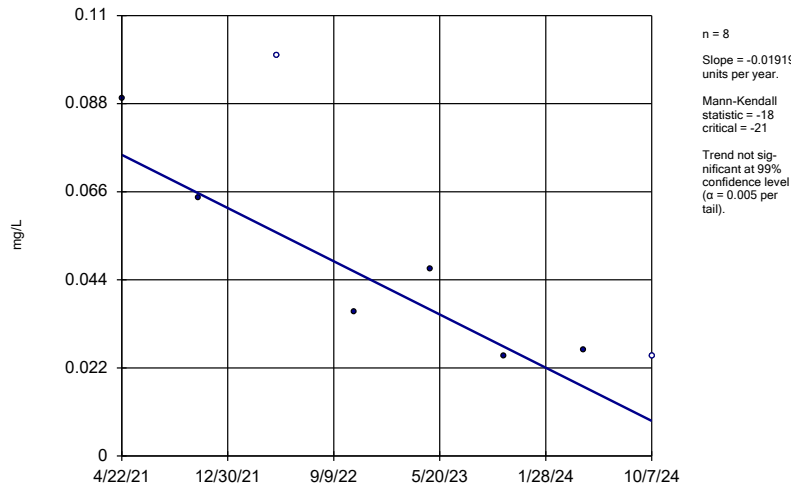
LDR-1



Constituent: Aluminum Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

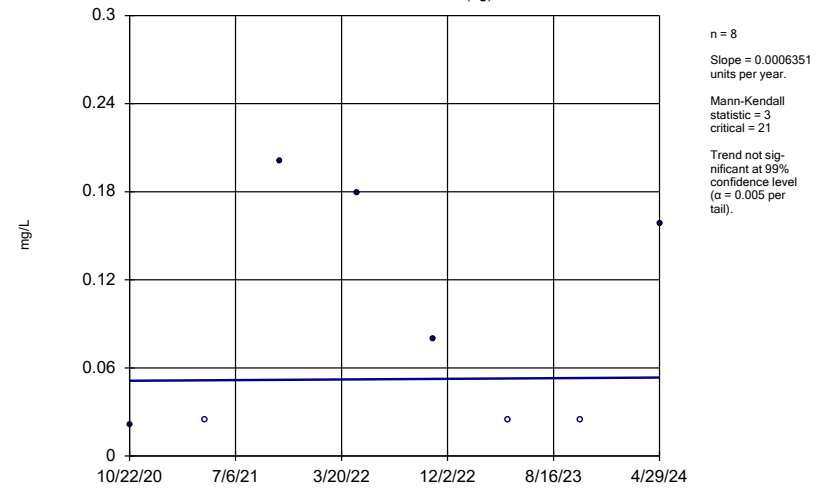
LDR-3



Constituent: Aluminum Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

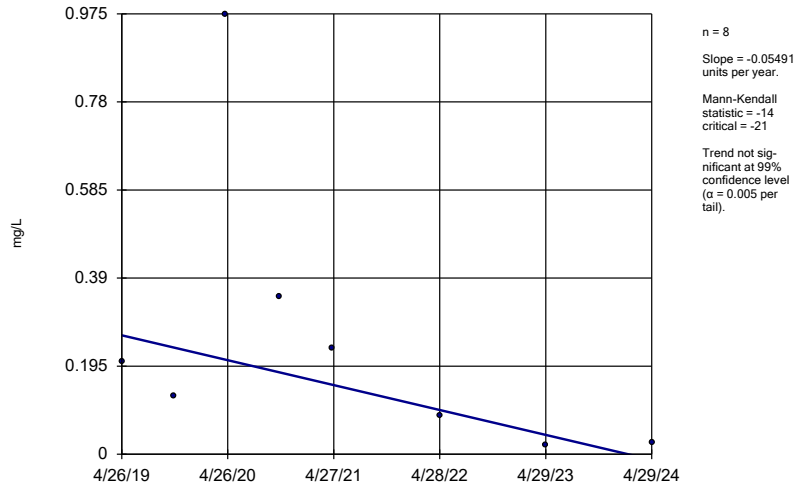
MW-101R-NP (bg)



Constituent: Aluminum Analysis Run 10/29/2024 12:11 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

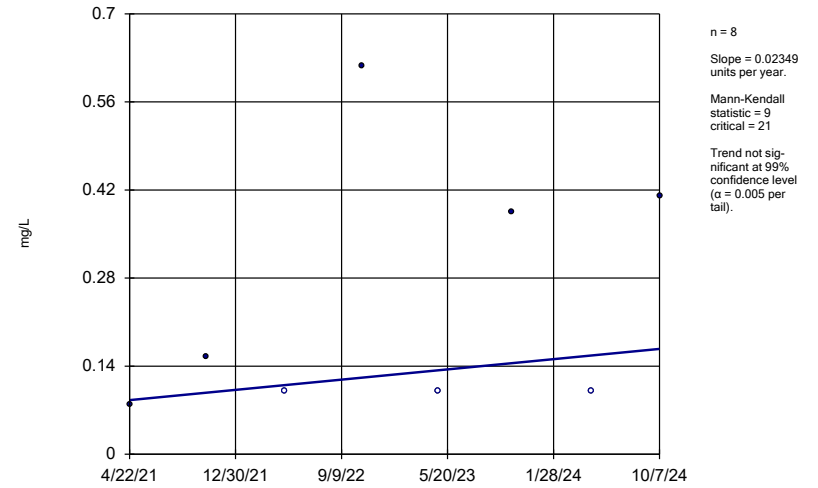
SW-1/OUTFALL4



Constituent: Aluminum Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

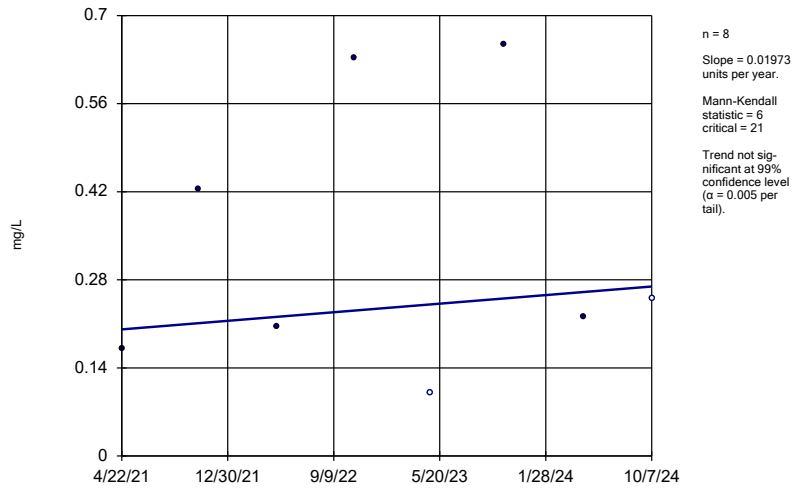
LDR-1



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

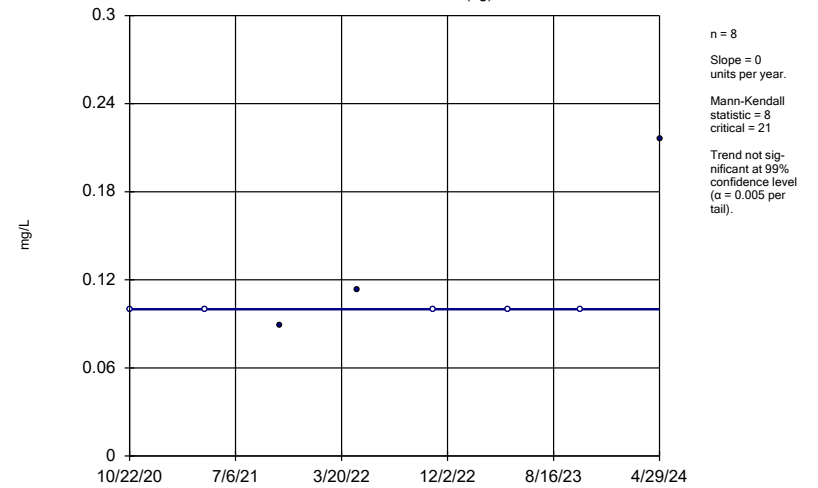
LDR-3



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

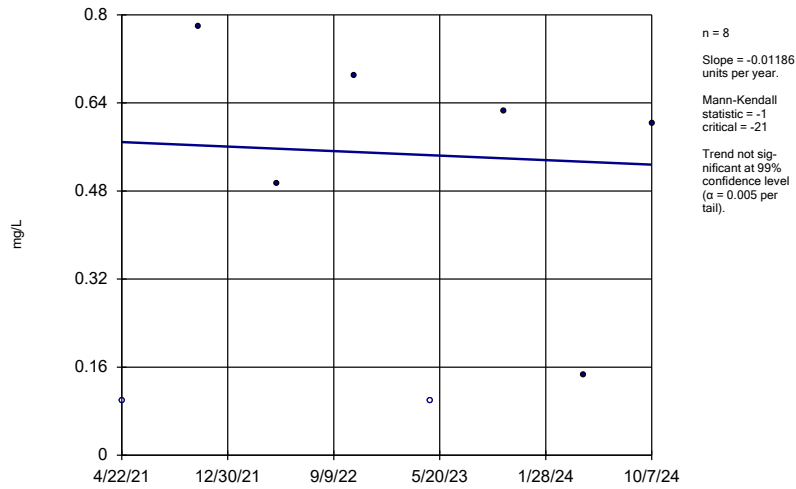
MW-101R-NP (bg)



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

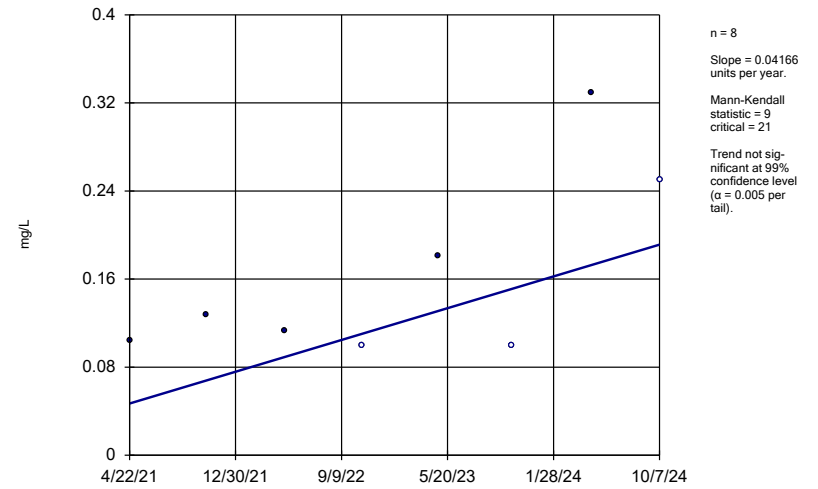
MW-201



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

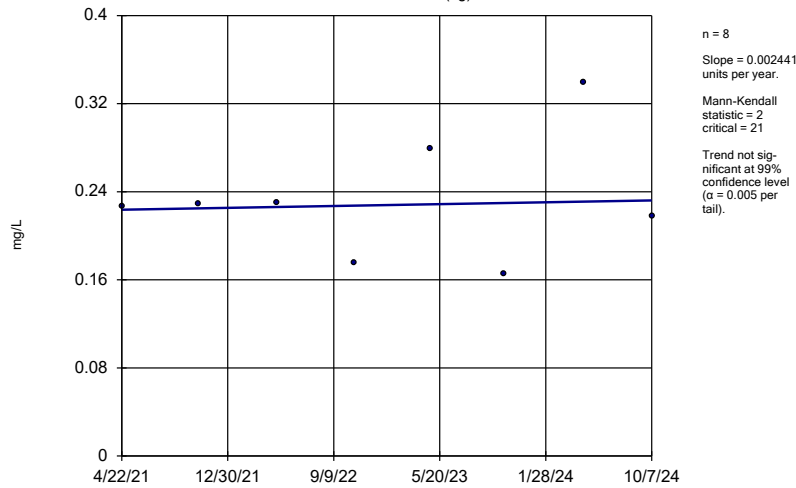
MW-202R



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

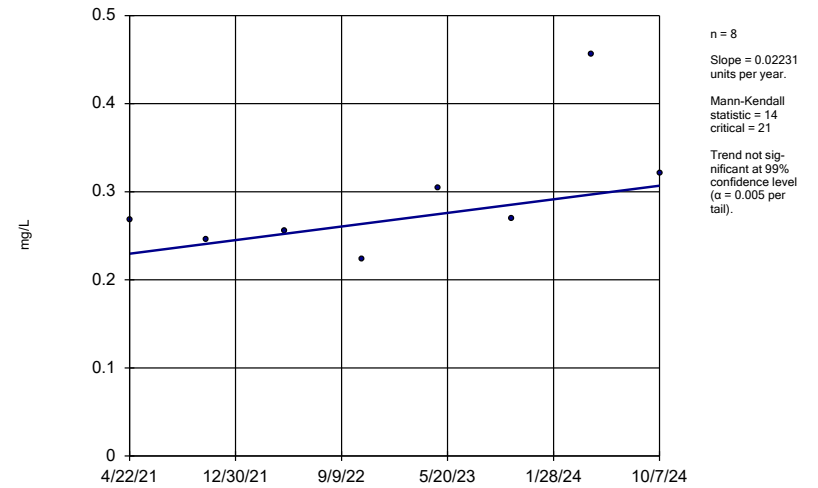
MW-203R (bg)



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

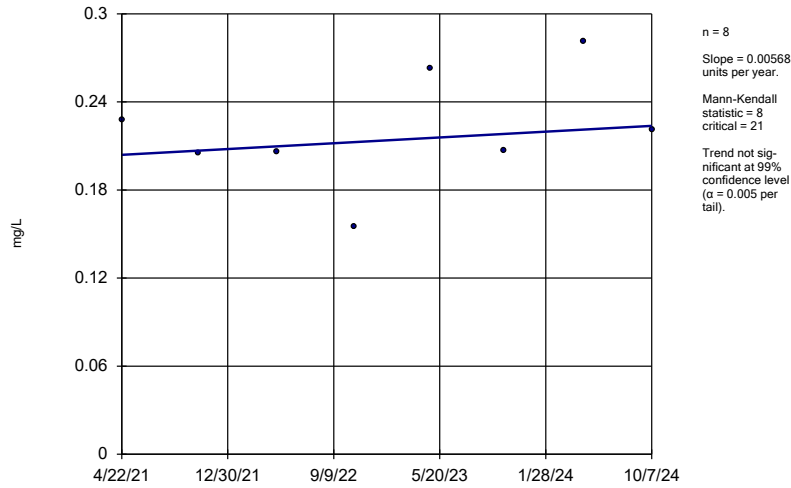
MW-204



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

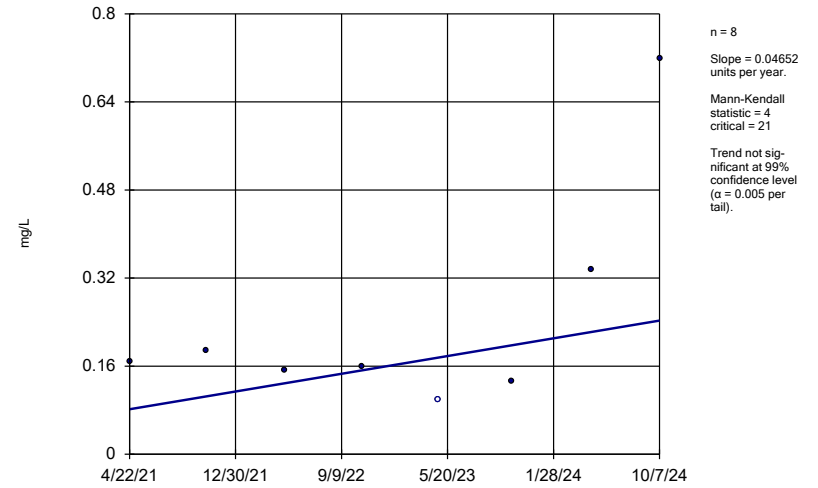
MW-205 (bg)



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

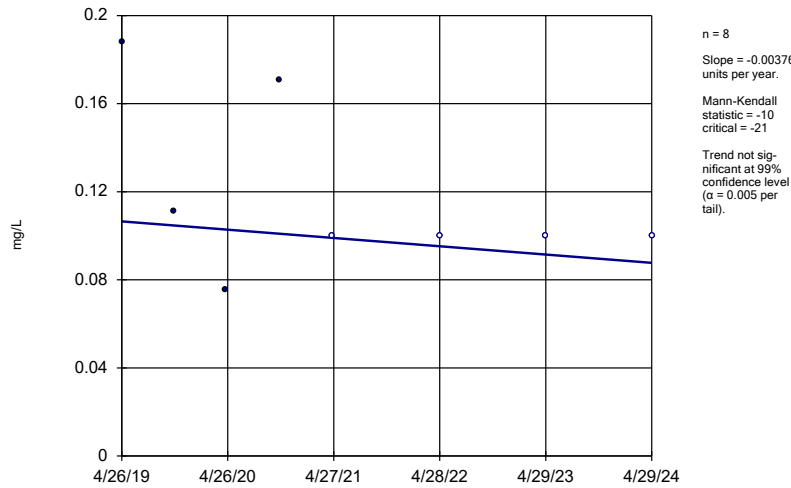
MW-206



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

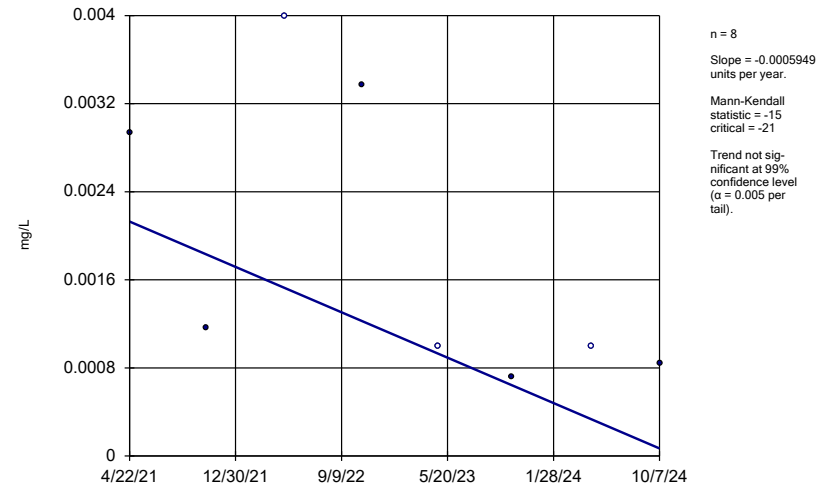
SW-1/OUTFALL4



Constituent: Ammonia as N Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

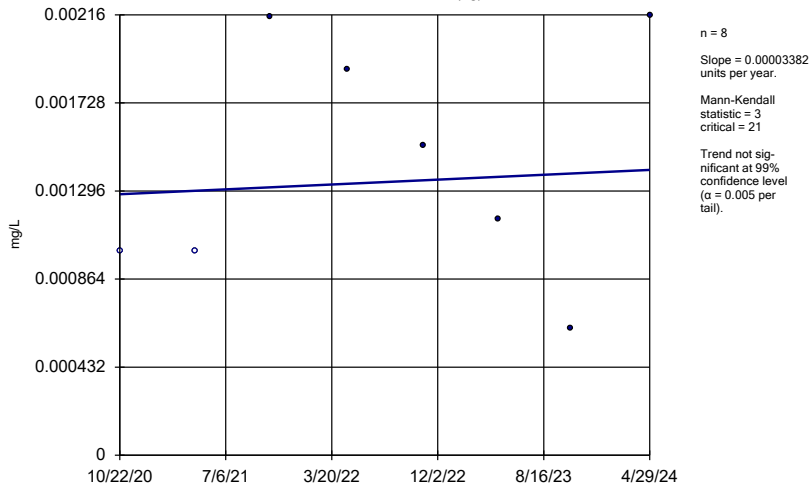
LDR-1



Constituent: Arsenic Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

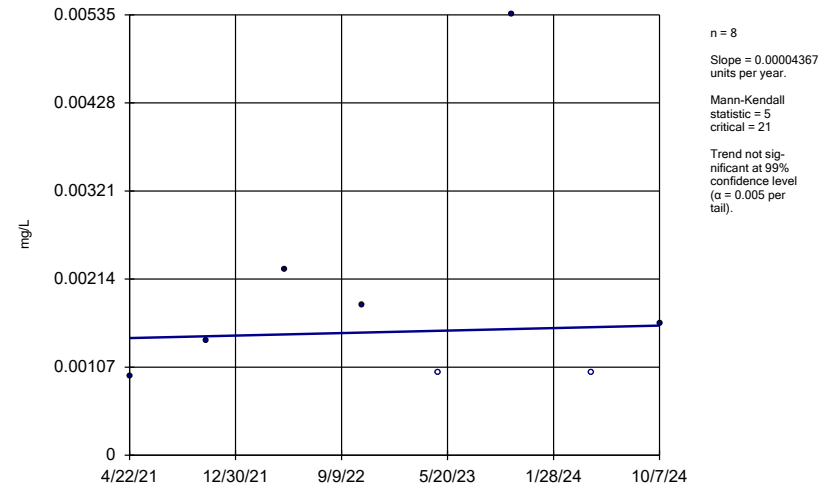
MW-101R-NP (bg)



Constituent: Arsenic Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

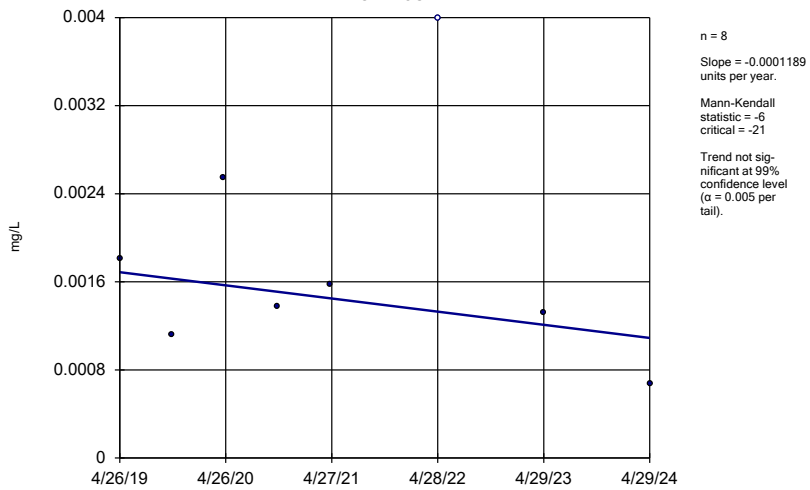
MW-201



Constituent: Arsenic Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

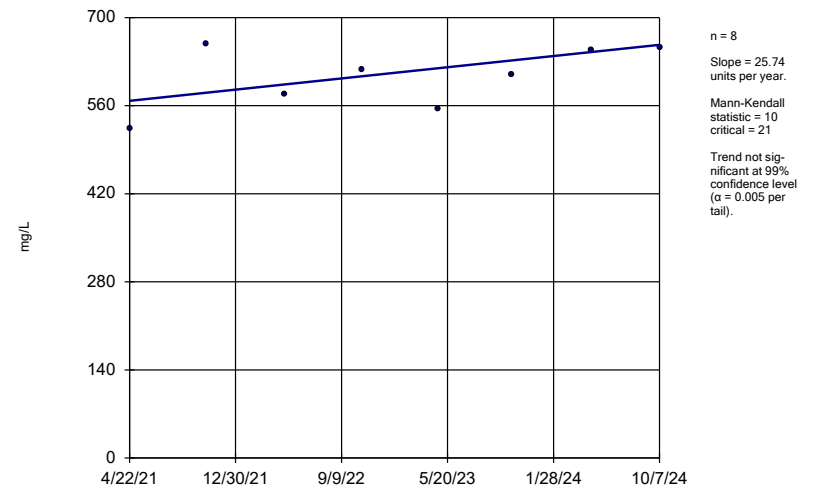
SW-1/OUTFALL4



Constituent: Arsenic Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

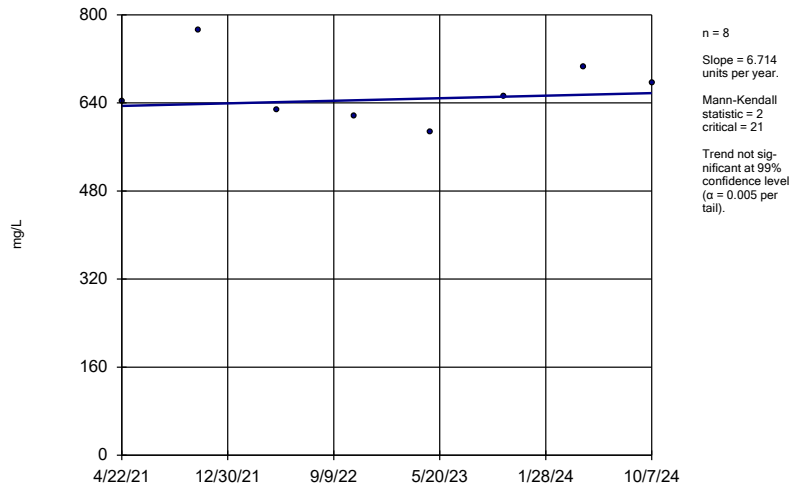
LDR-1



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

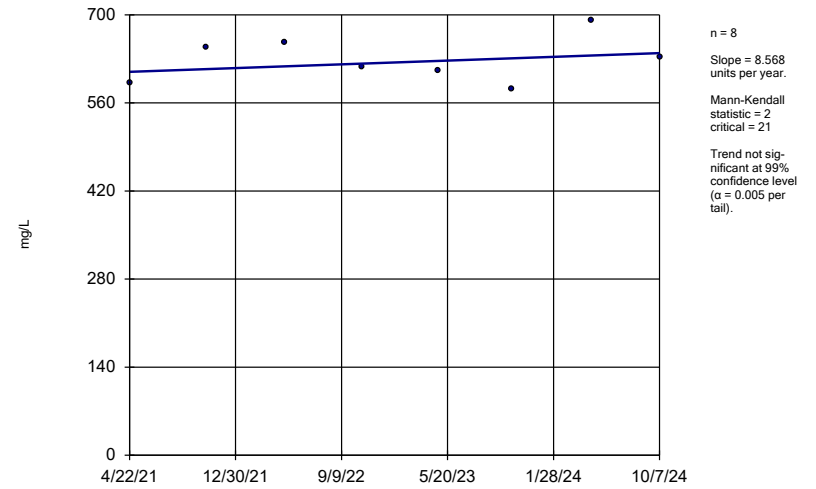
LDR-2



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

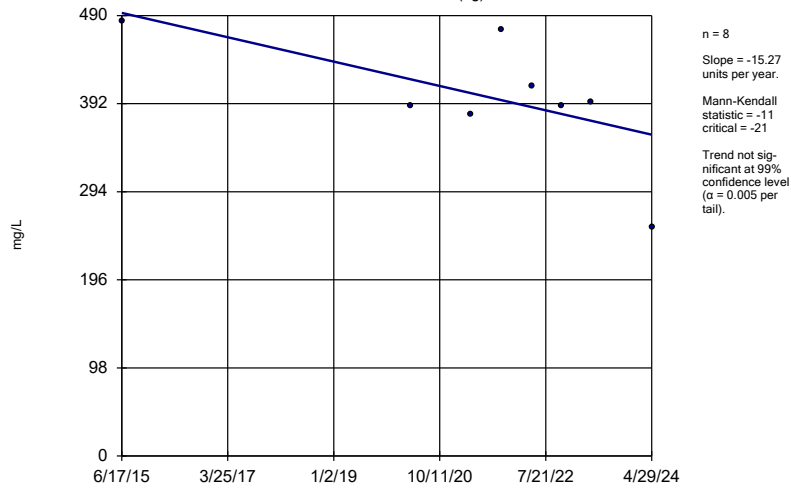
LDR-3



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

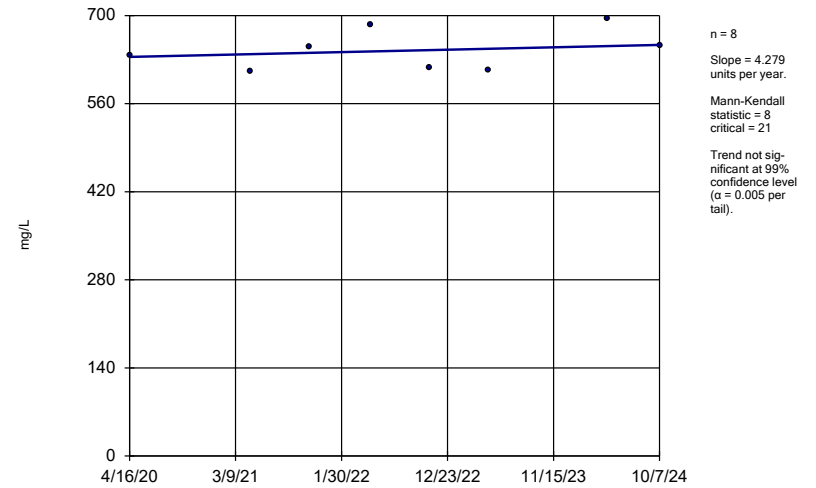
MW-101R-NP (bg)



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

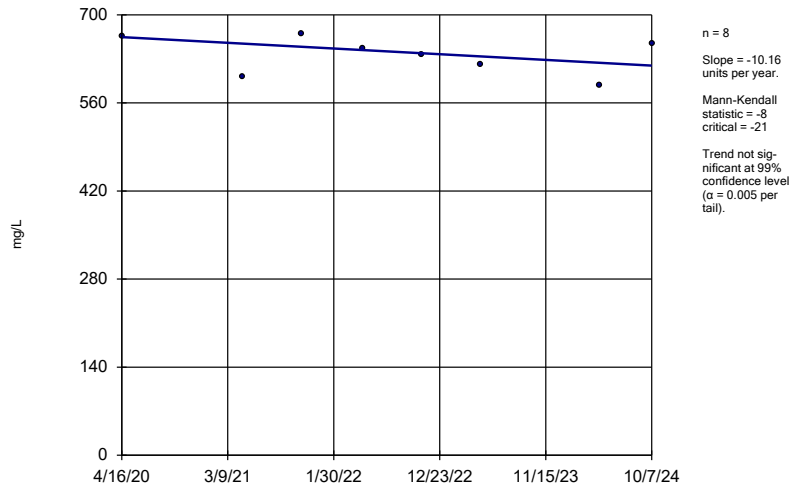
MW-102R-NP



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

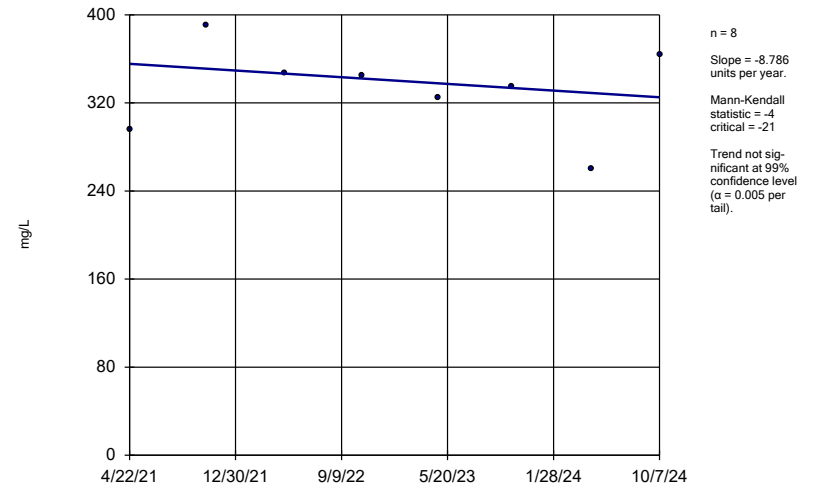
MW-103R-NP



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

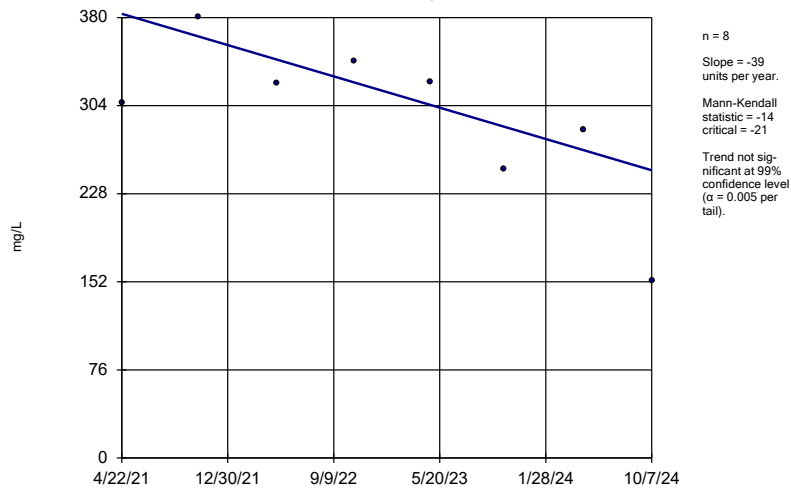
MW-201



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

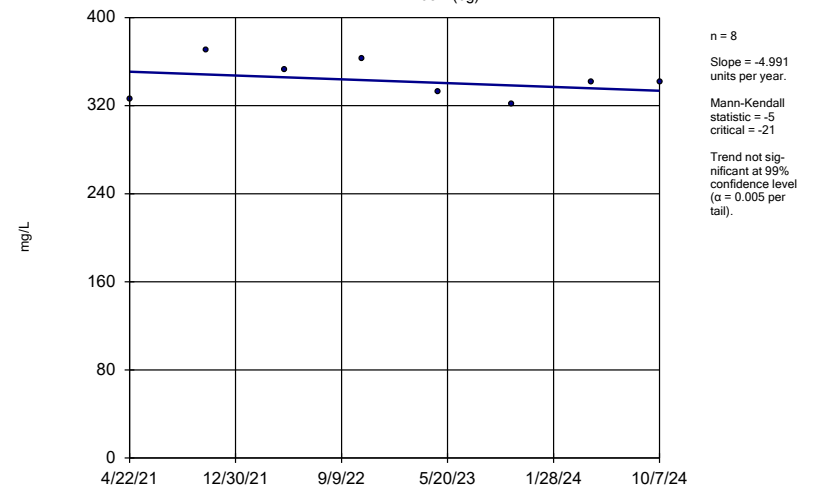
MW-202R



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

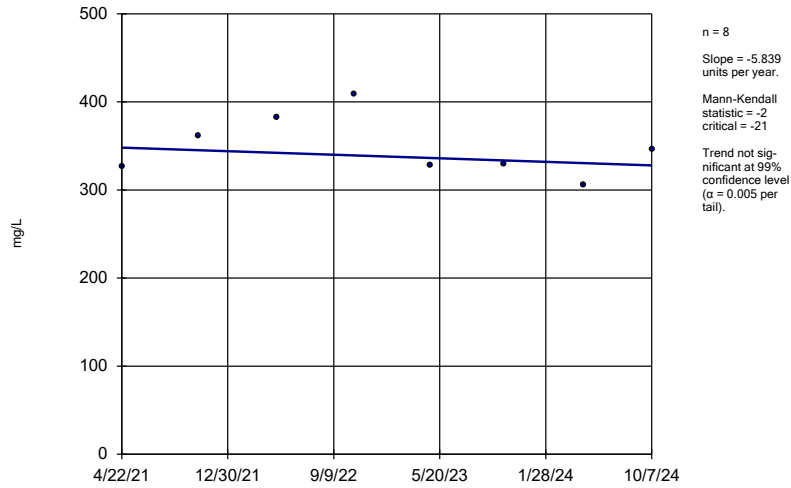
MW-203R (bg)



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

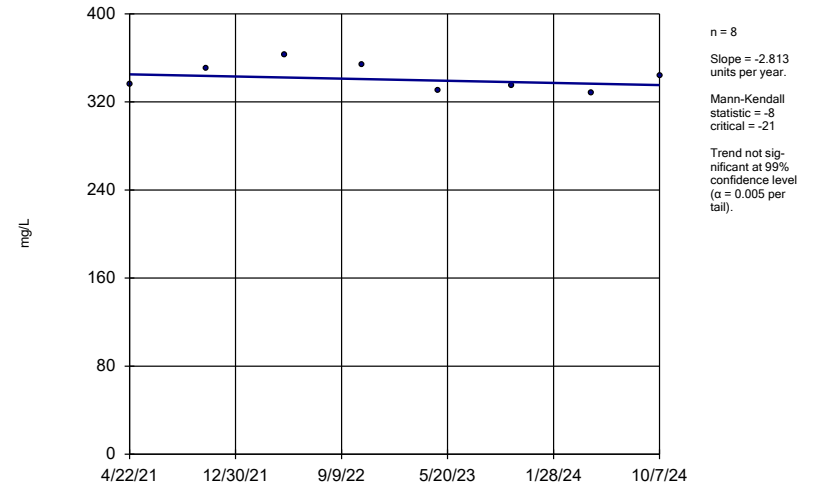
MW-204



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

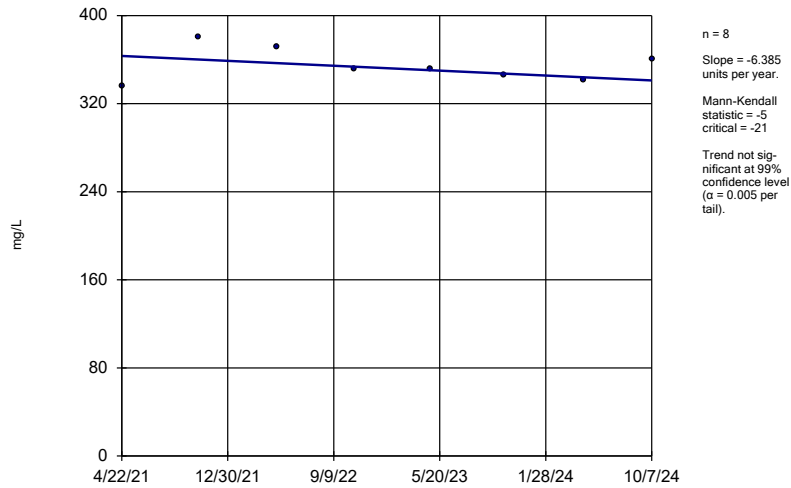
MW-205 (bg)



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

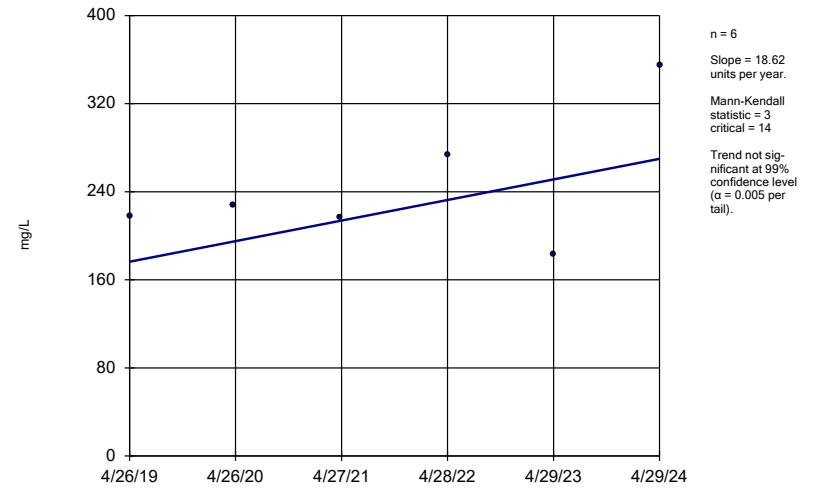
MW-206



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

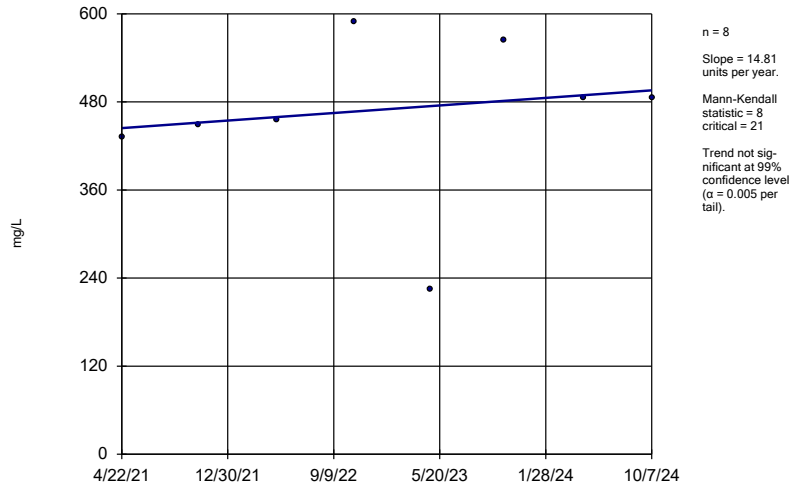
SW-1/OUTFALL4



Constituent: Bicarbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

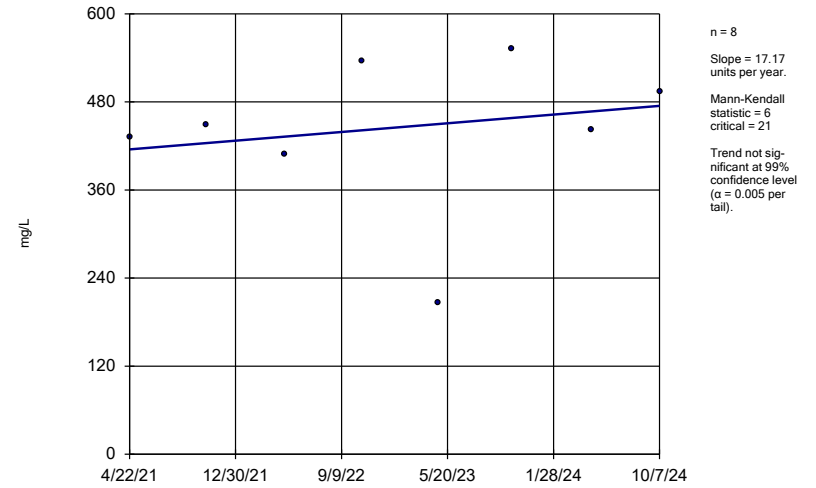
LDR-1



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

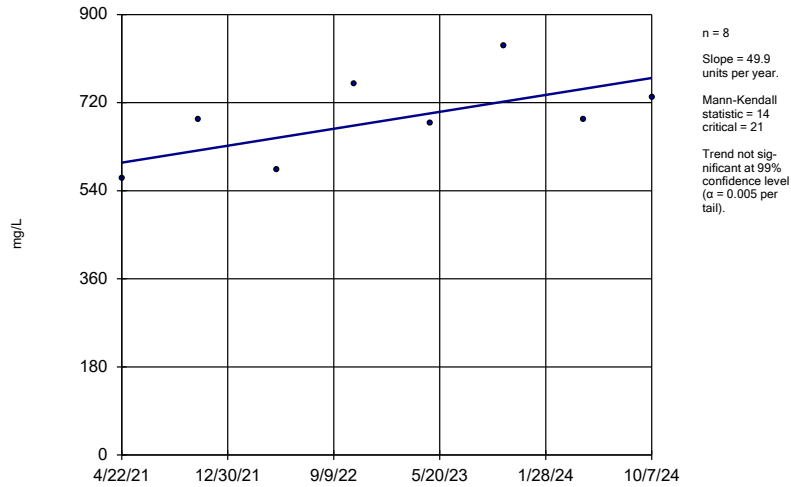
LDR-2



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

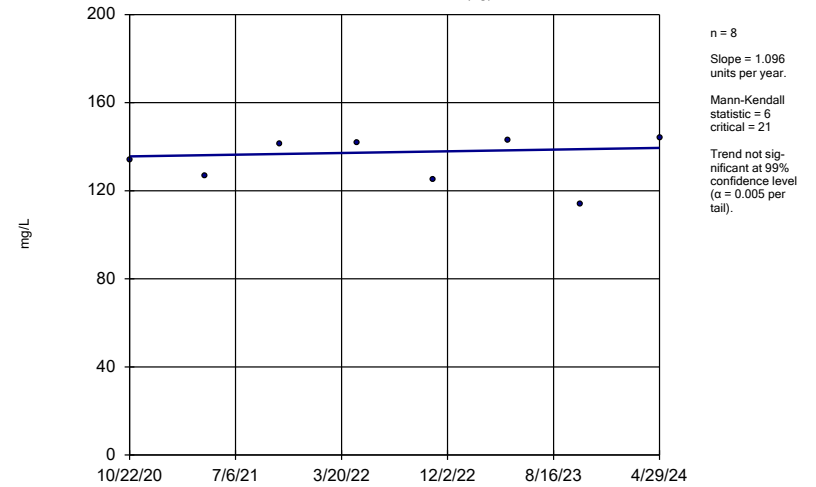
LDR-3



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

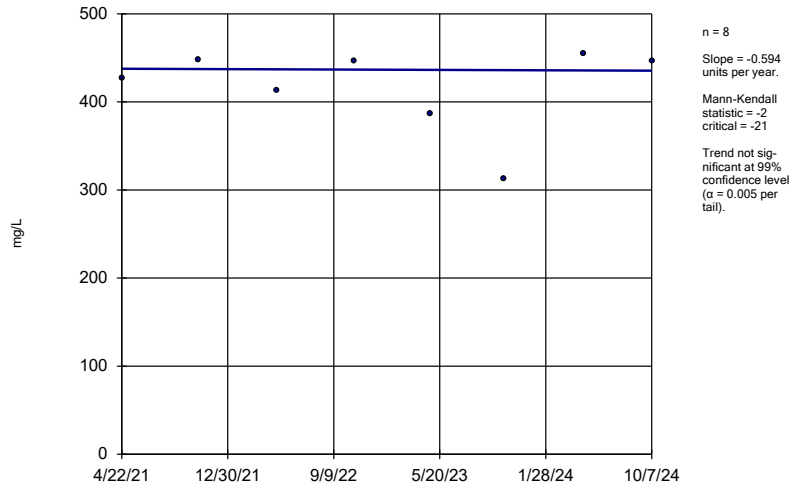
MW-101R-NP (bg)



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

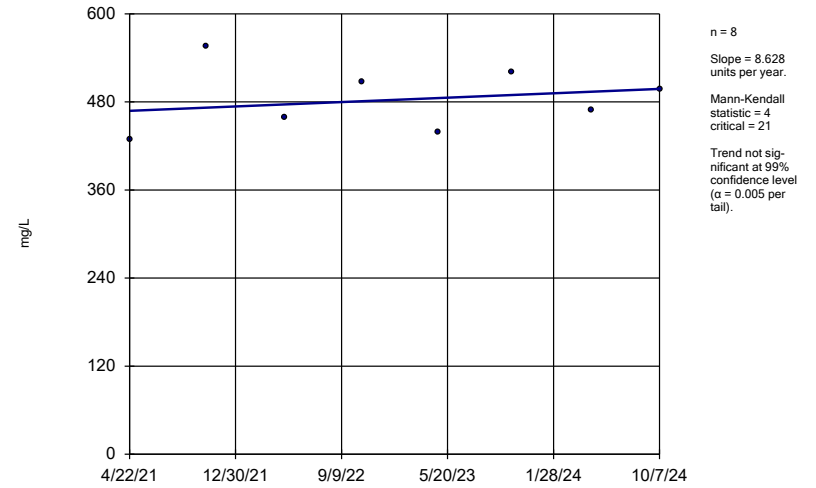
MW-102R-NP



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

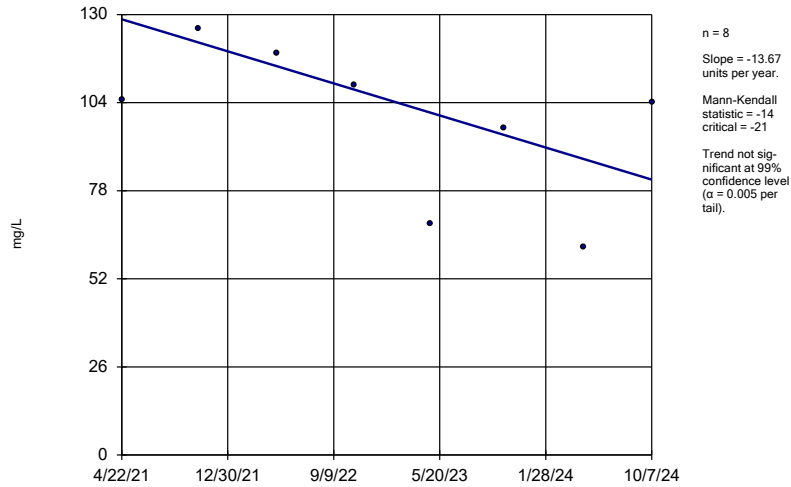
MW-103R-NP



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

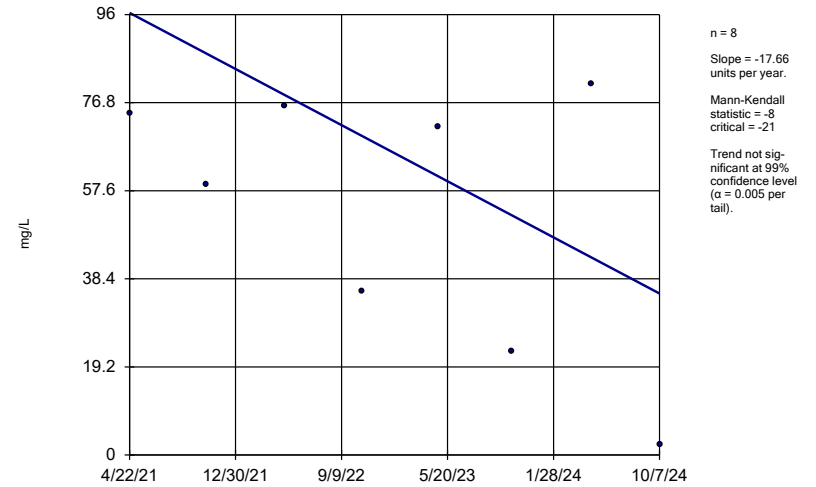
MW-201



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

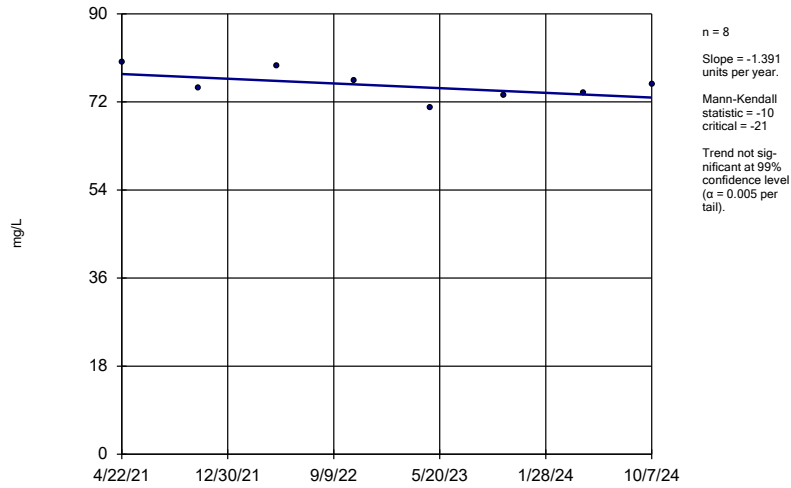
MW-202R



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

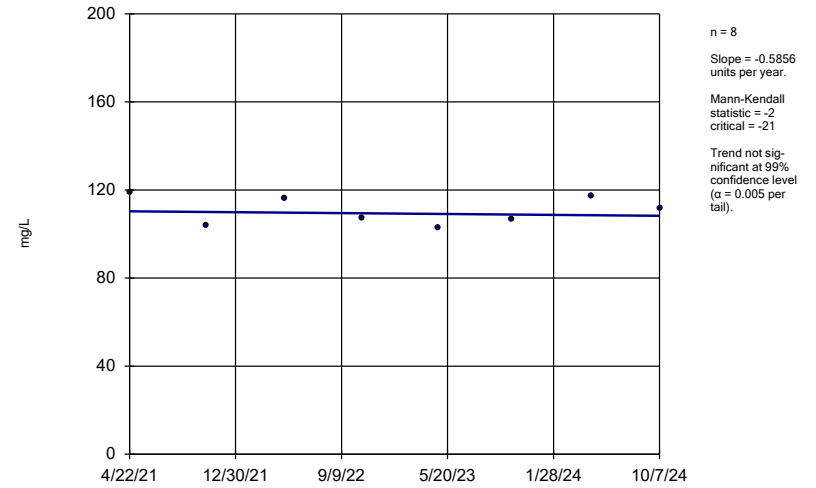
MW-203R (bg)



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

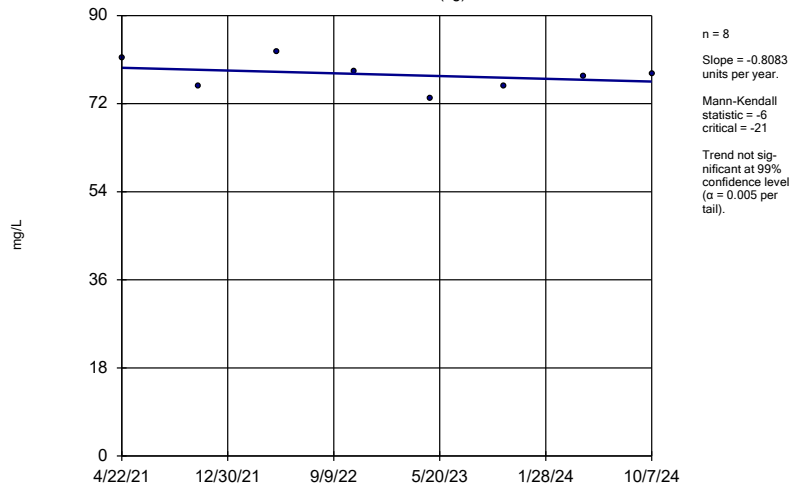
MW-204



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

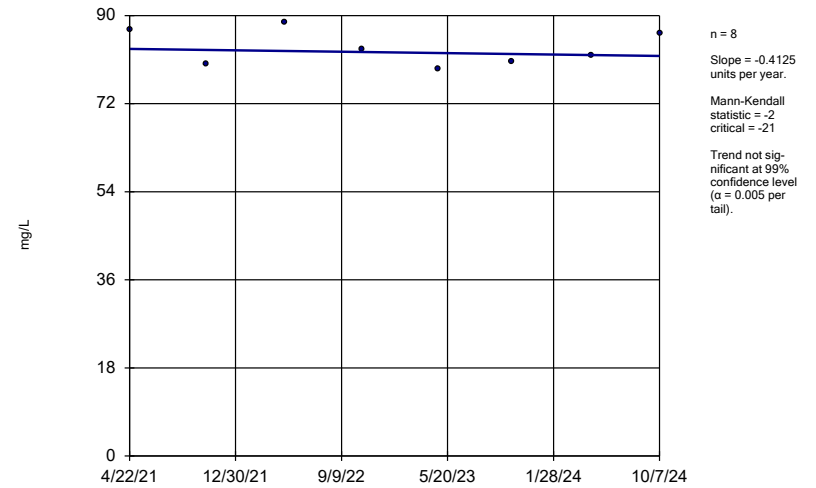
MW-205 (bg)



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

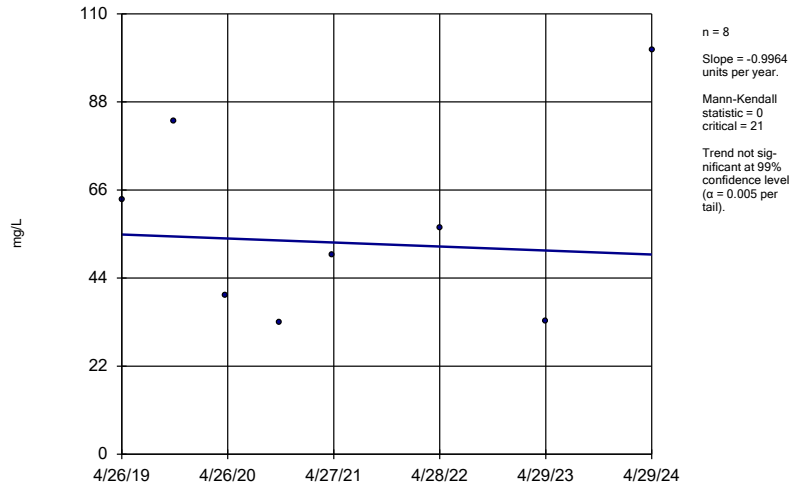
MW-206



Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

SW-1/OUTFALL4

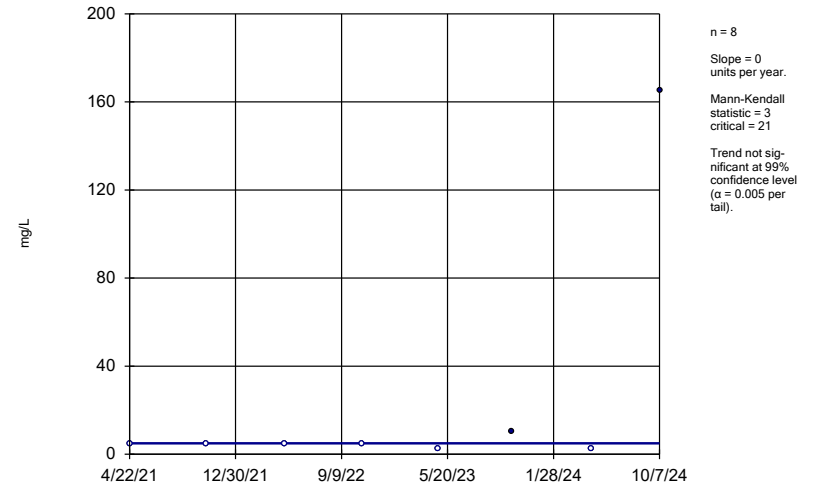


Constituent: Calcium Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Hollow symbols indicate censored values.

Sen's Slope Estimator

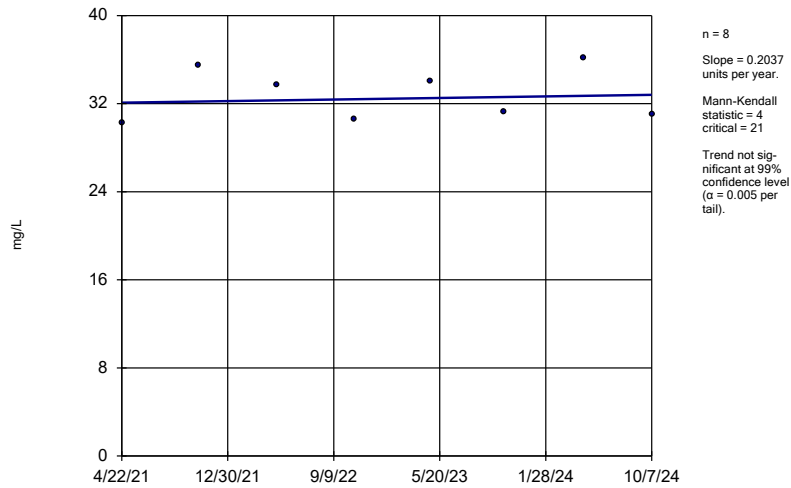
MW-202R



Constituent: Carbonate Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

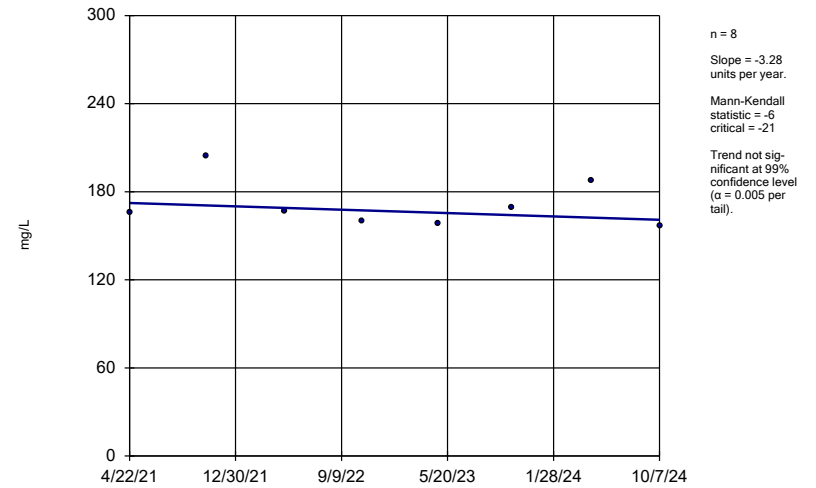
LDR-1



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

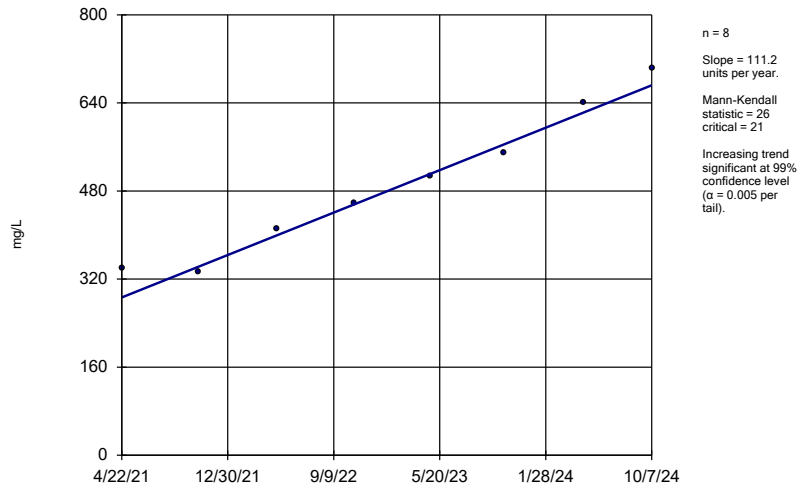
LDR-2



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

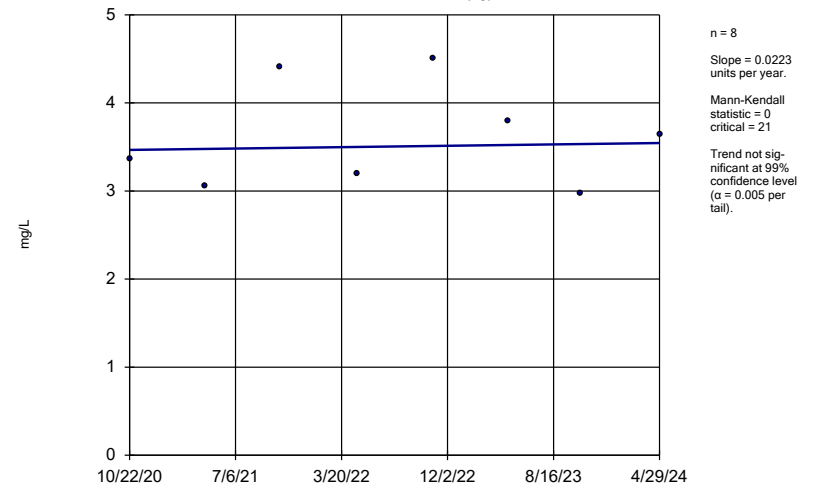
LDR-3



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

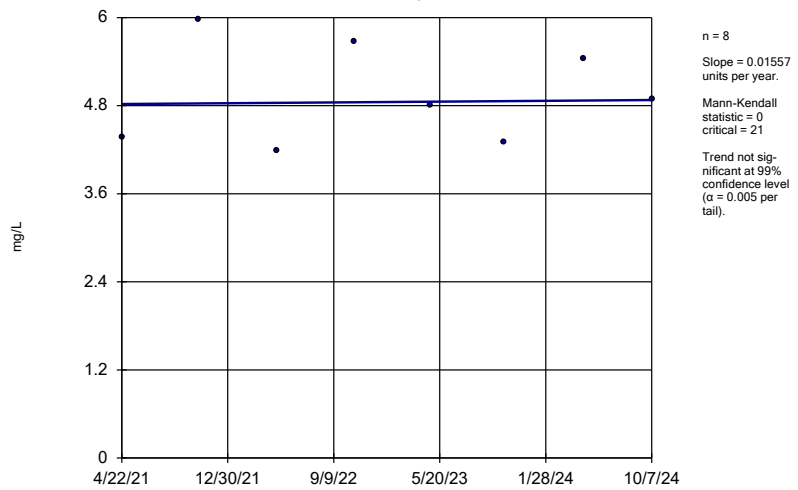
MW-101R-NP (bg)



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

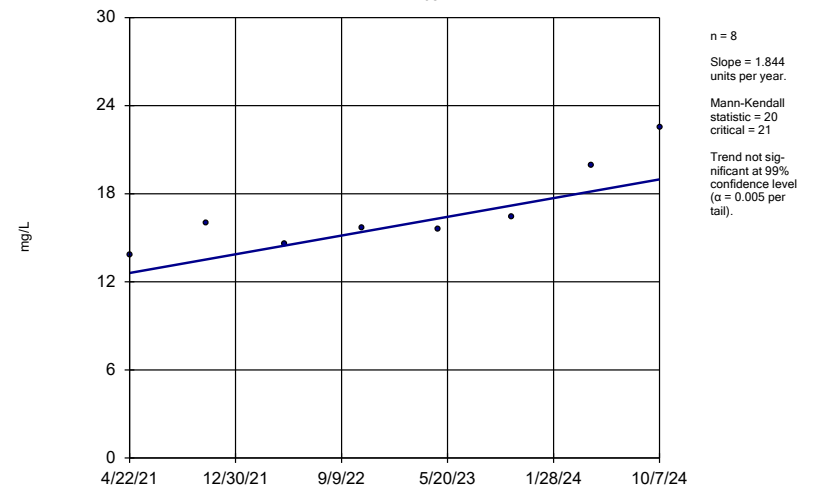
MW-102R-NP



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

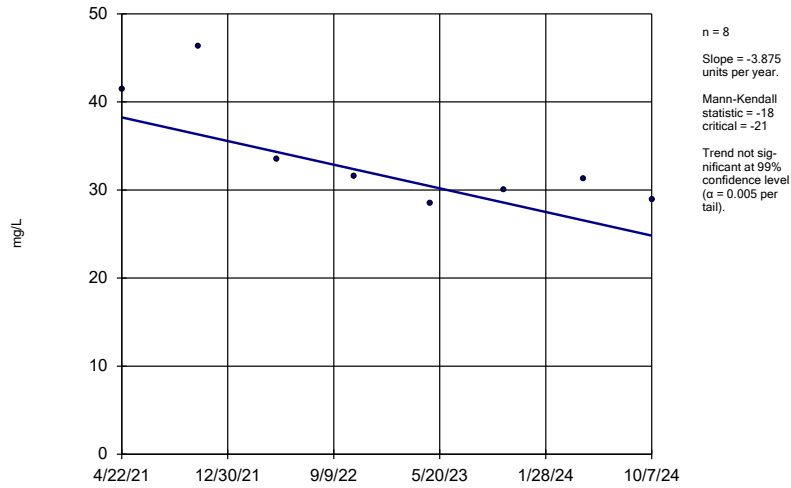
MW-103R-NP



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

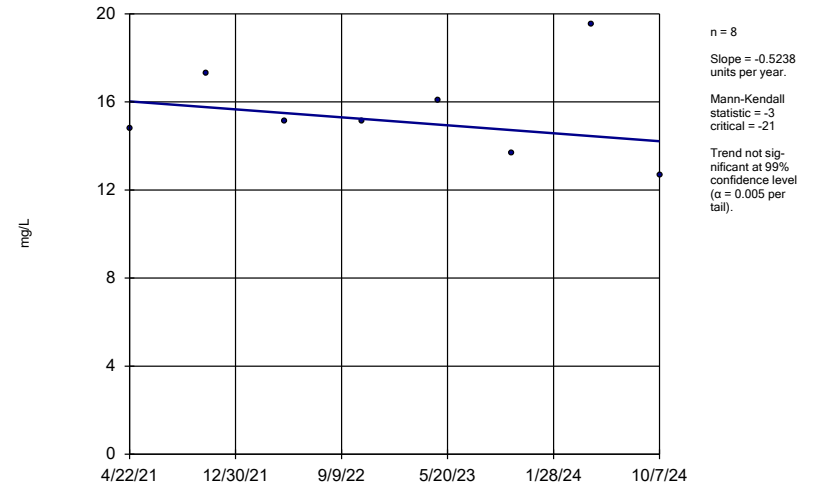
MW-201



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

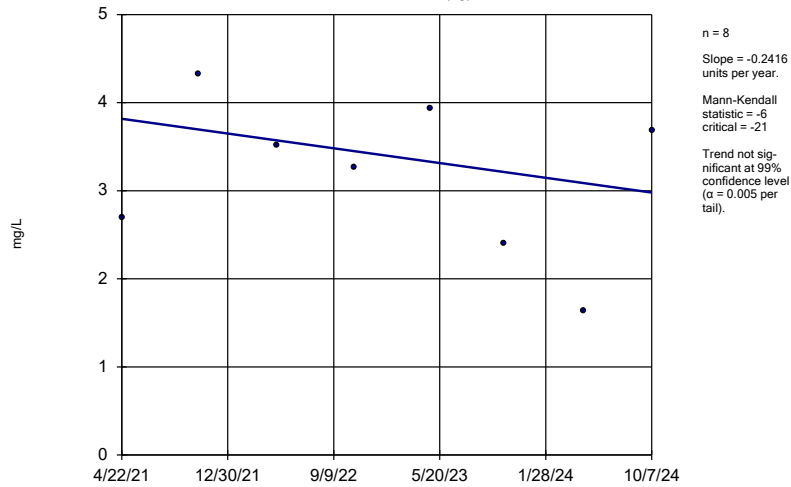
MW-202R



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

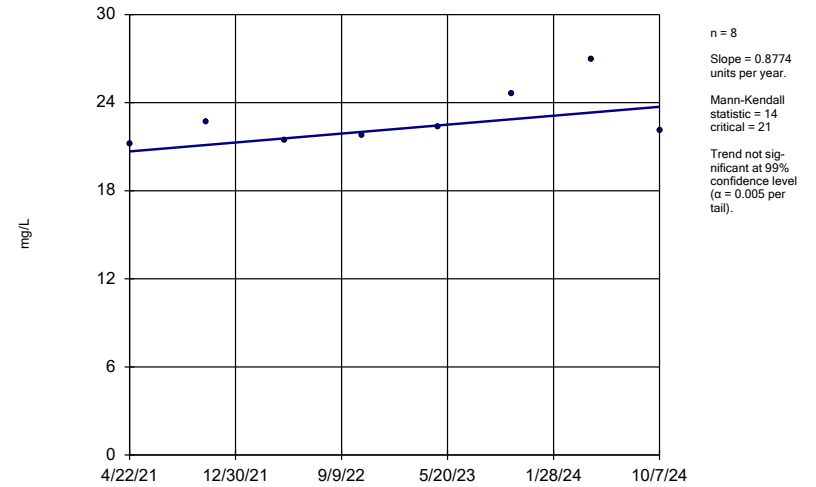
MW-203R (bg)



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

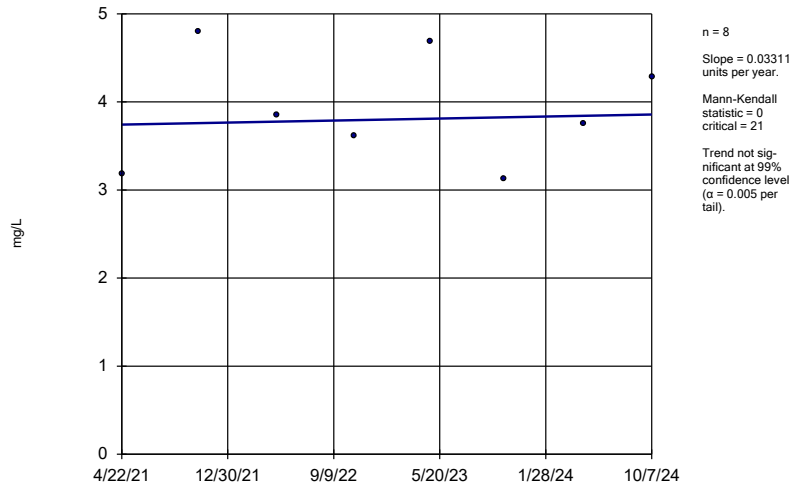
MW-204



Constituent: Chloride Analysis Run 10/29/2024 12:12 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

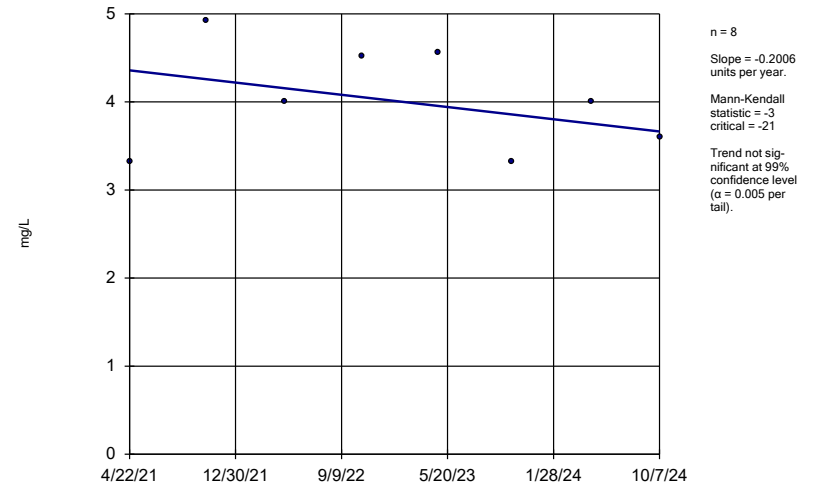
MW-205 (bg)



Constituent: Chloride Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

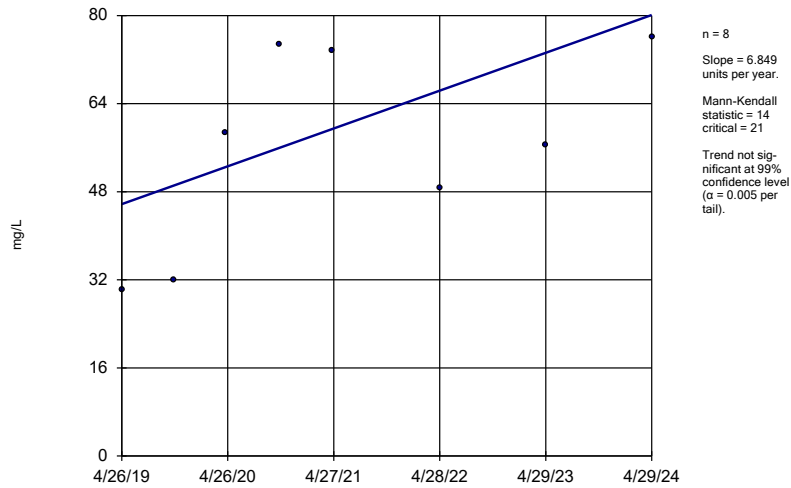
MW-206



Constituent: Chloride Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

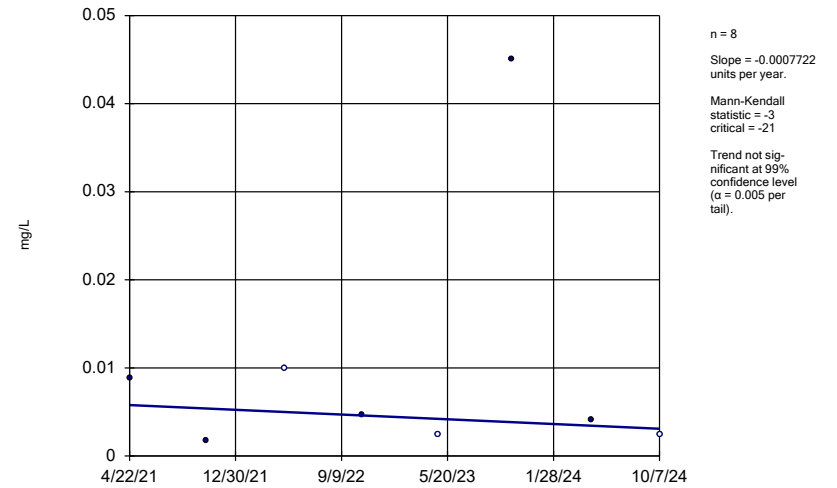
SW-1/OUTFALL4



Constituent: Chloride Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

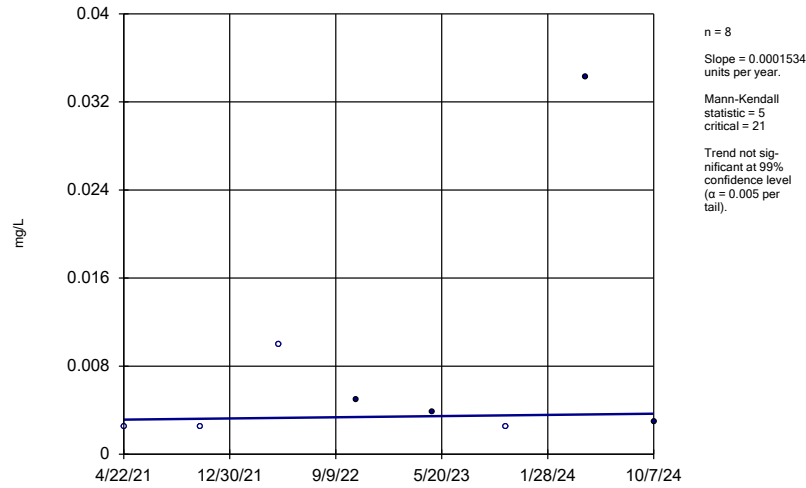
LDR-1



Constituent: Chromium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

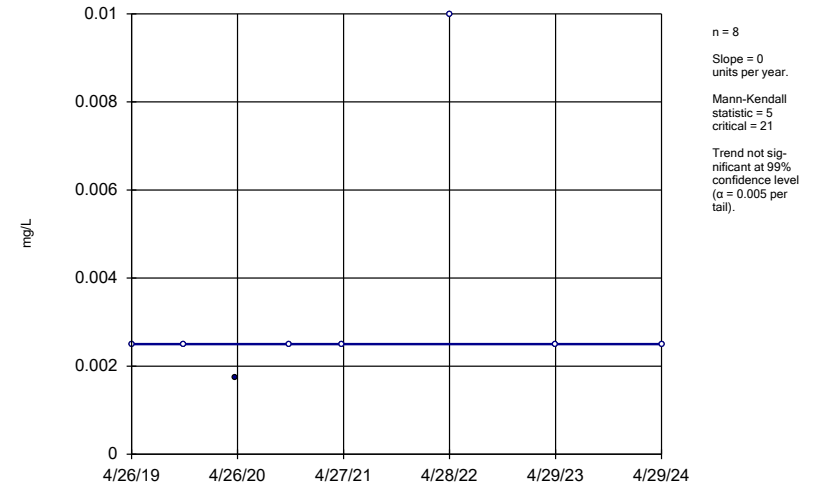
LDR-3



Constituent: Chromium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

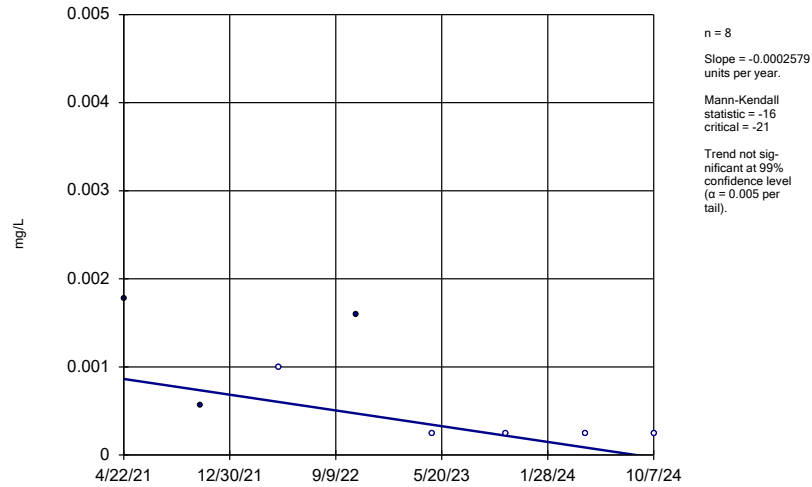
SW-1/OUTFALL4



Constituent: Chromium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

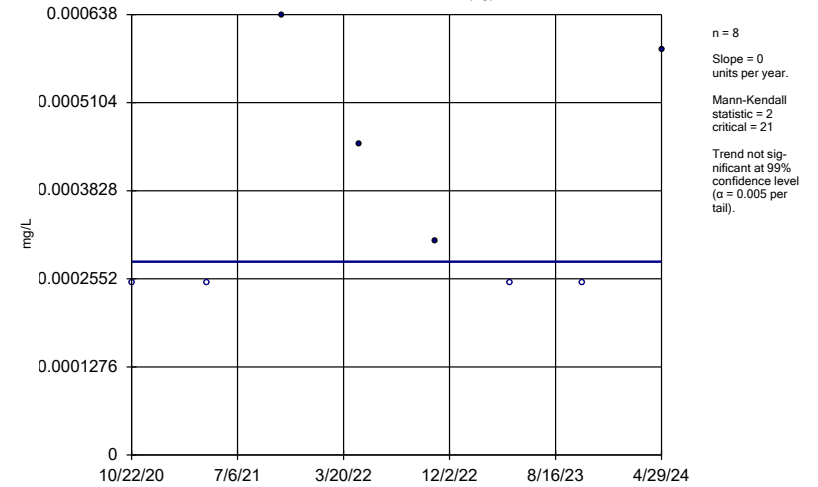
LDR-1



Constituent: Lead Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

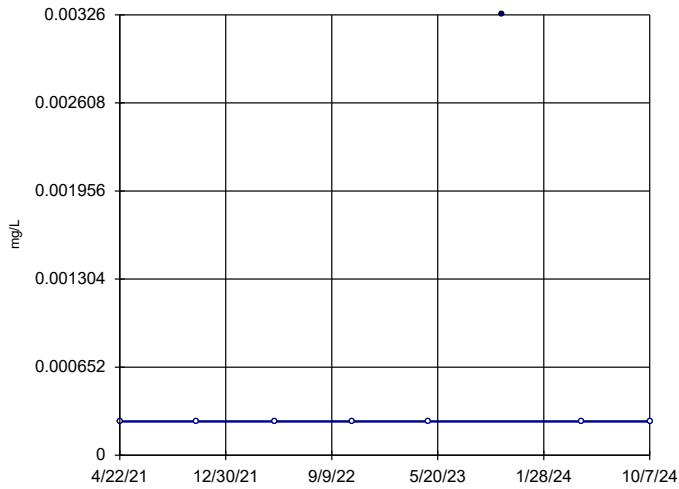
MW-101R-NP (bg)



Constituent: Lead Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

MW-201

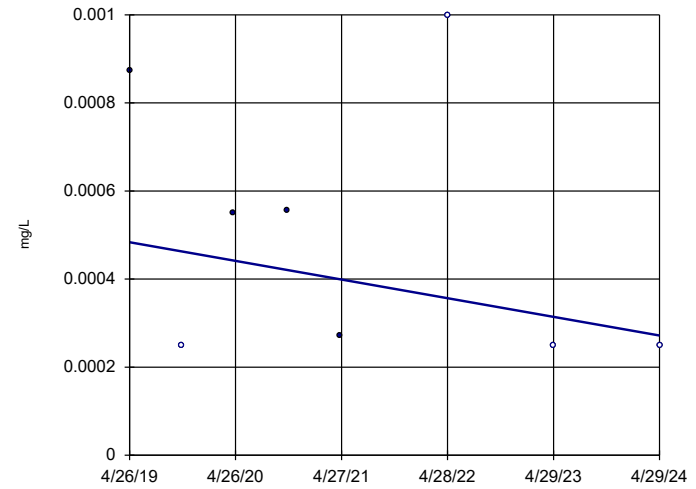


n = 8
Slope = 0
units per year.
Mann-Kendall
statistic = 3
critical = 21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lead Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

SW-1/OUTFALL4

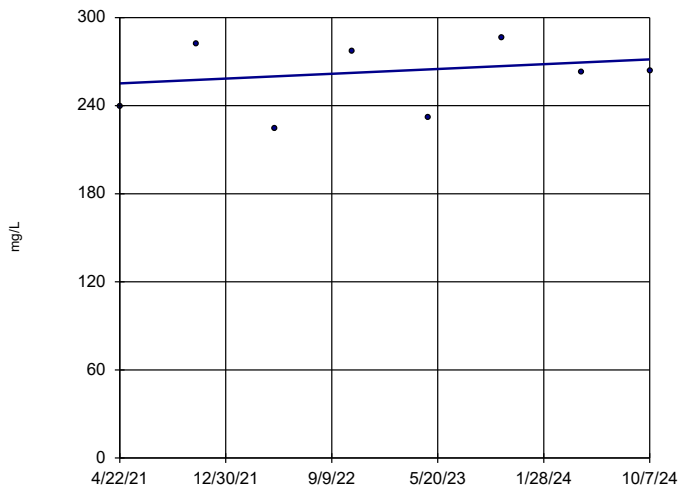


n = 8
Slope = -0.00004223
units per year.
Mann-Kendall
statistic = -7
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lead Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-1

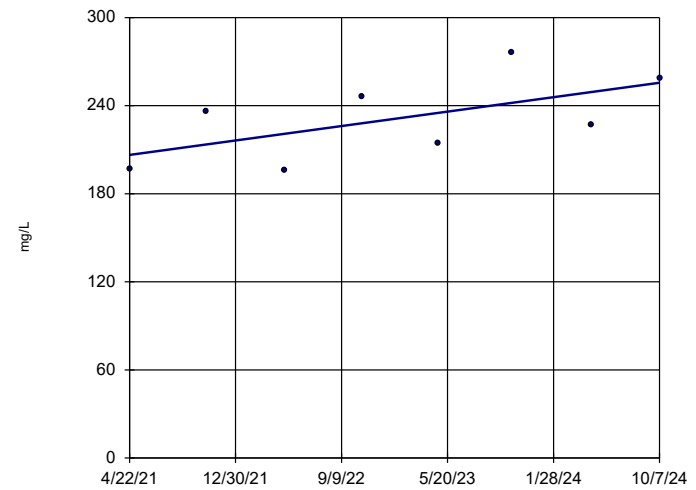


n = 8
Slope = 4.743
units per year.
Mann-Kendall
statistic = 4
critical = 21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-2

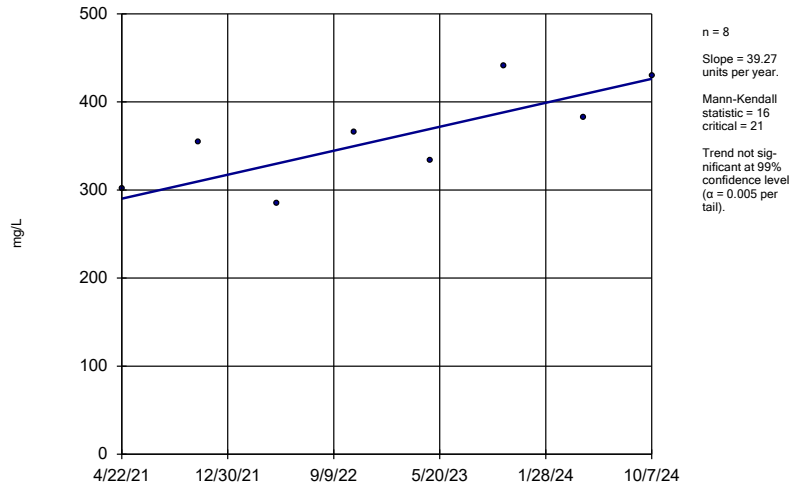


n = 8
Slope = 14.18
units per year.
Mann-Kendall
statistic = 12
critical = 21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

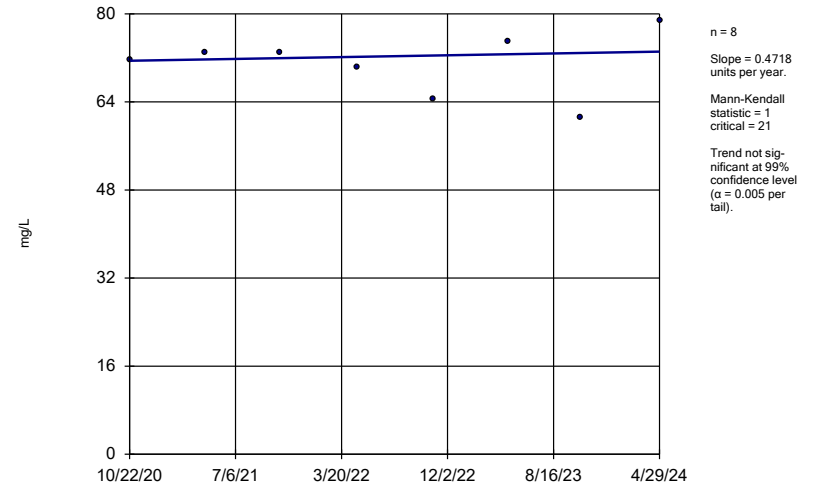
LDR-3



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

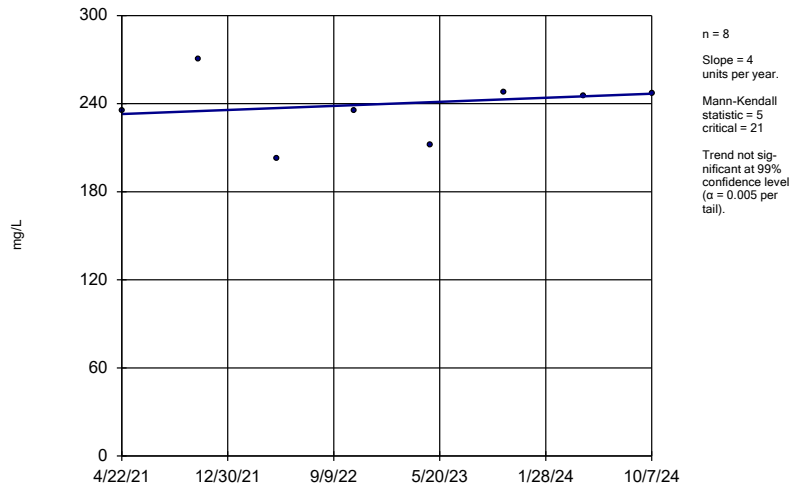
MW-101R-NP (bg)



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

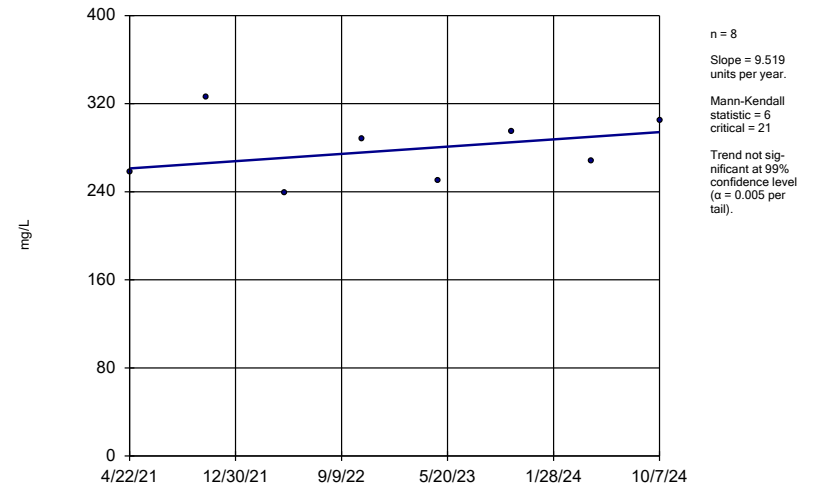
MW-102R-NP



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

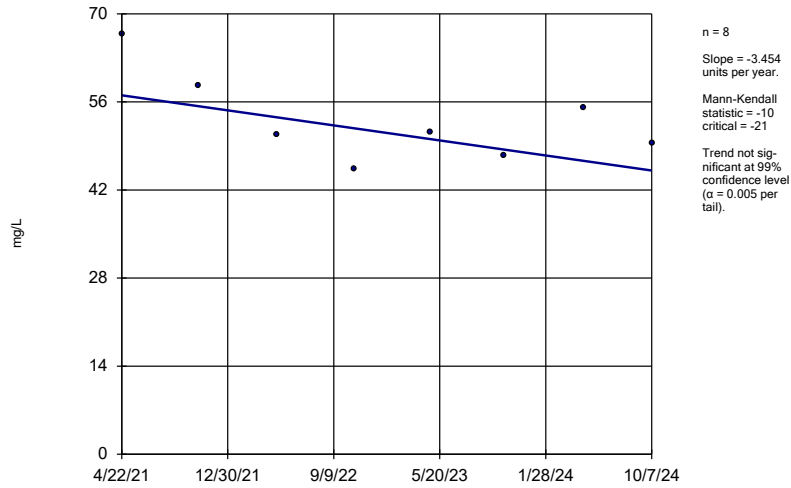
MW-103R-NP



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

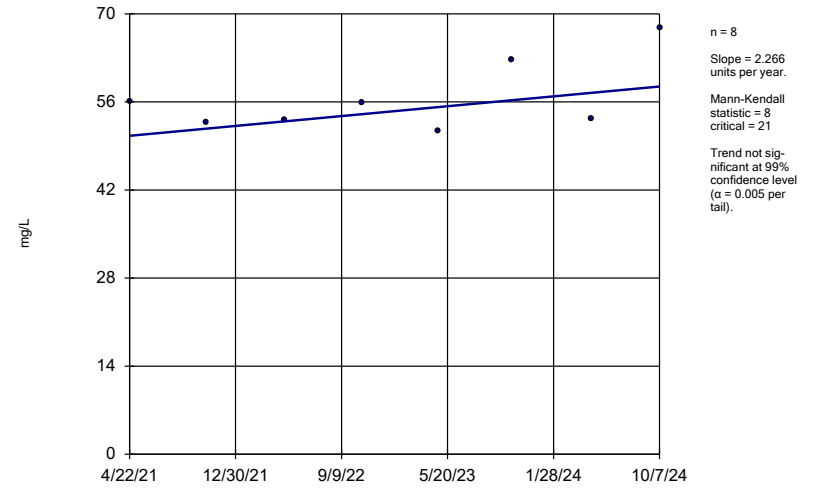
MW-201



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

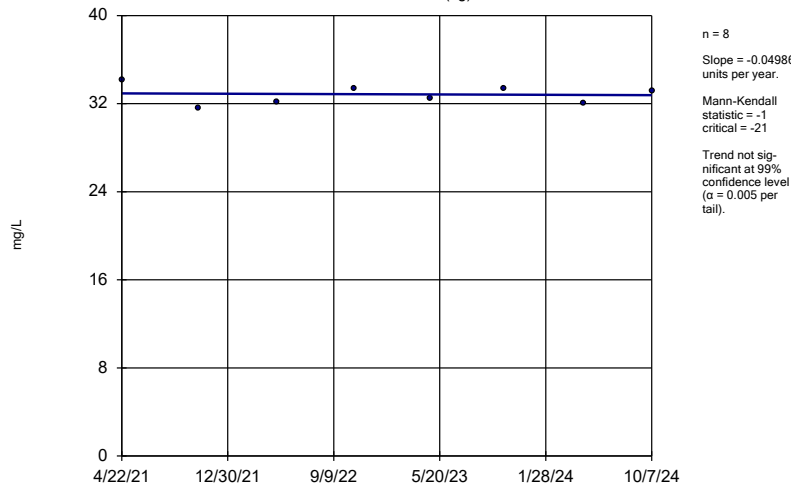
MW-202R



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

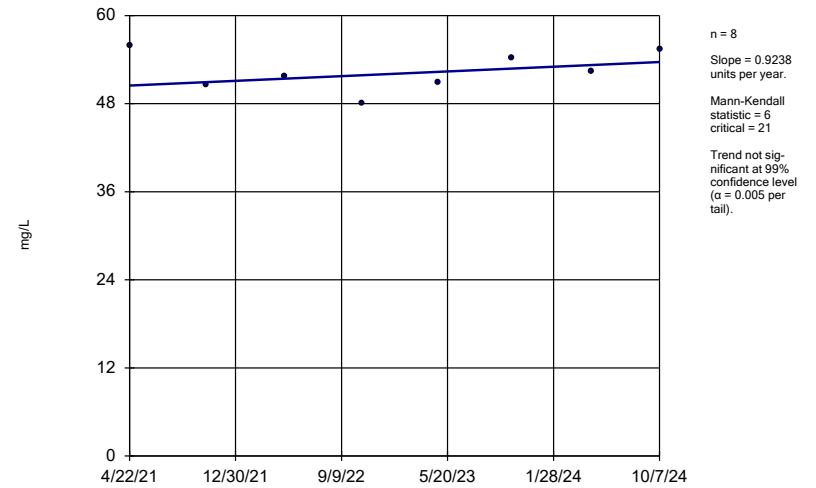
MW-203R (bg)



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

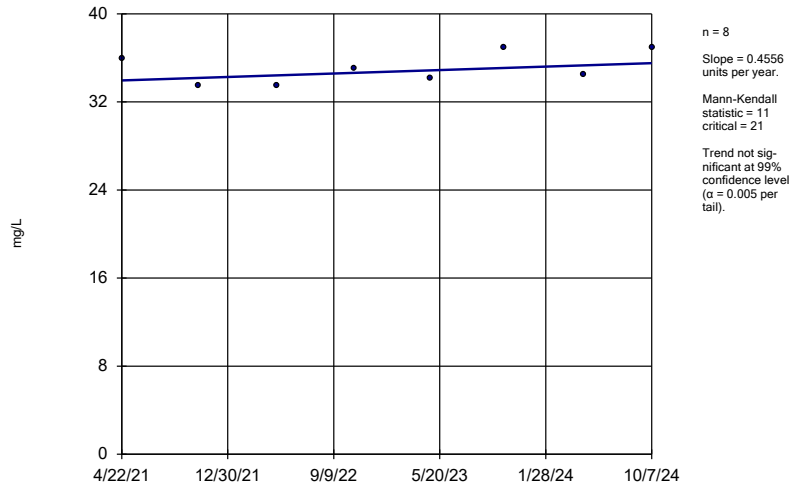
MW-204



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

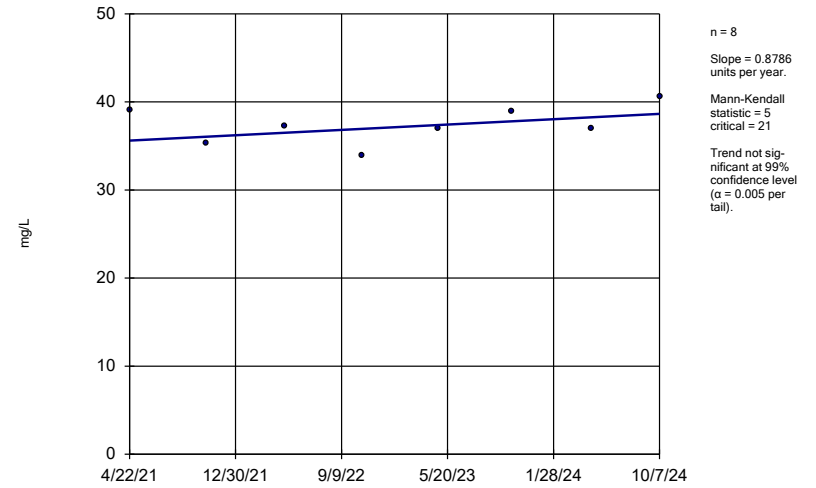
MW-205 (bg)



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

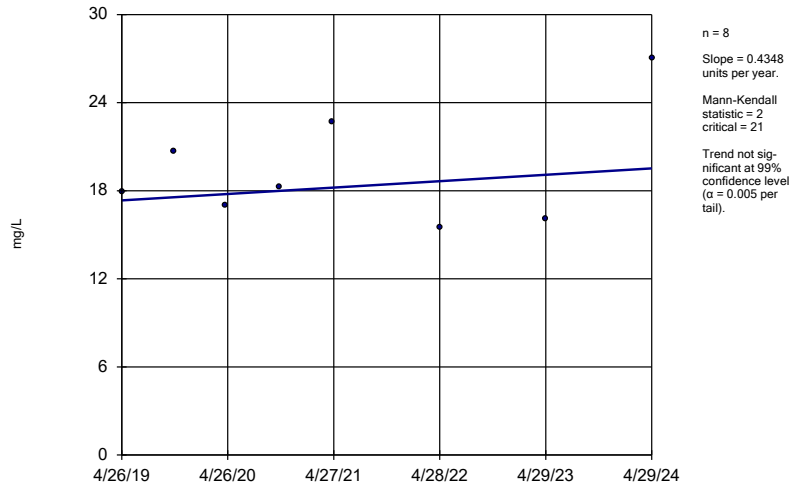
MW-206



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

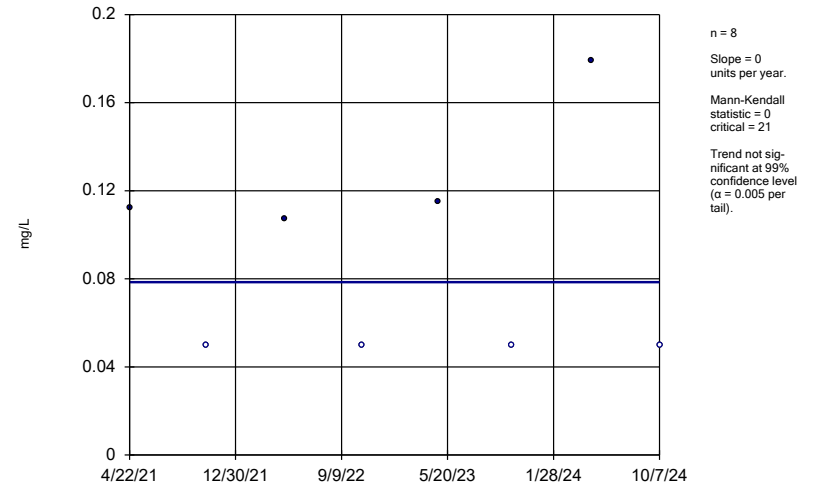
SW-1/OUTFALL4



Constituent: Magnesium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

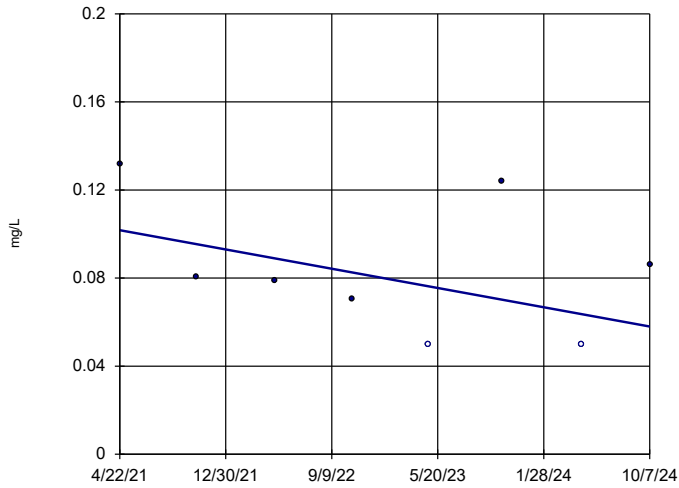
LDR-1



Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-2

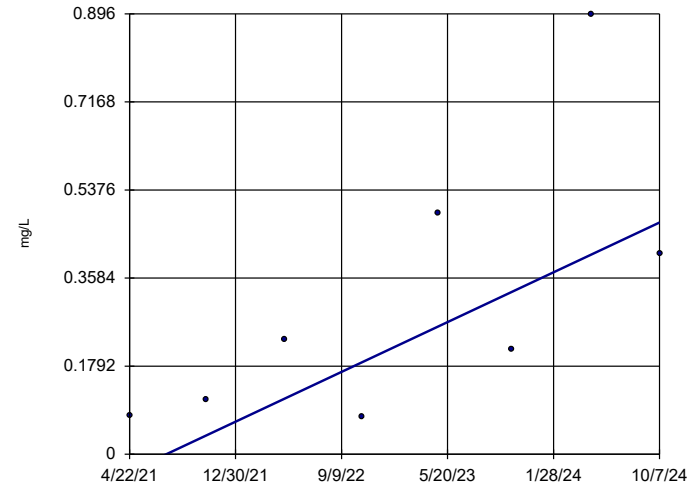


n = 8
Slope = -0.01262
units per year.
Mann-Kendall
statistic = -9
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-3

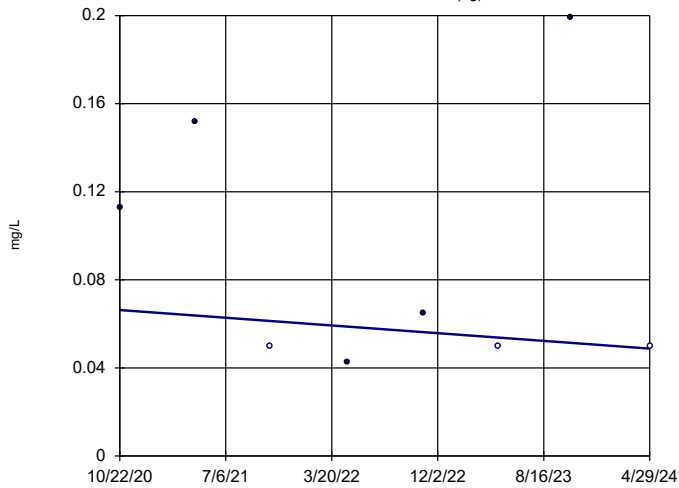


n = 8
Slope = 0.1463
units per year.
Mann-Kendall
statistic = 14
critical = 21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

MW-101R-NP (bg)

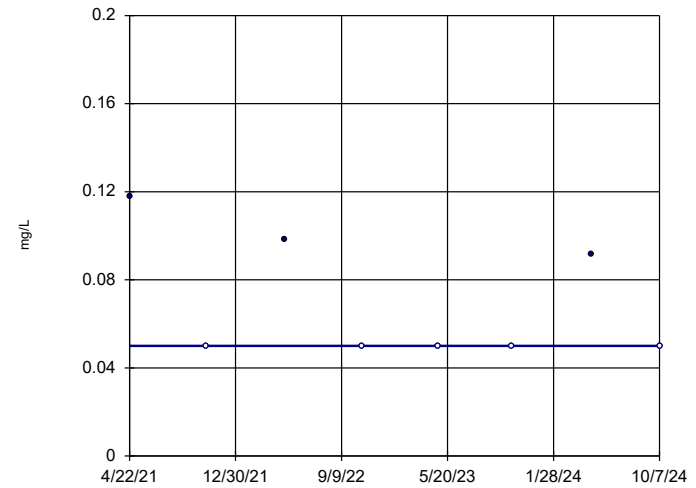


n = 8
Slope = -0.004977
units per year.
Mann-Kendall
statistic = -3
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

MW-102R-NP

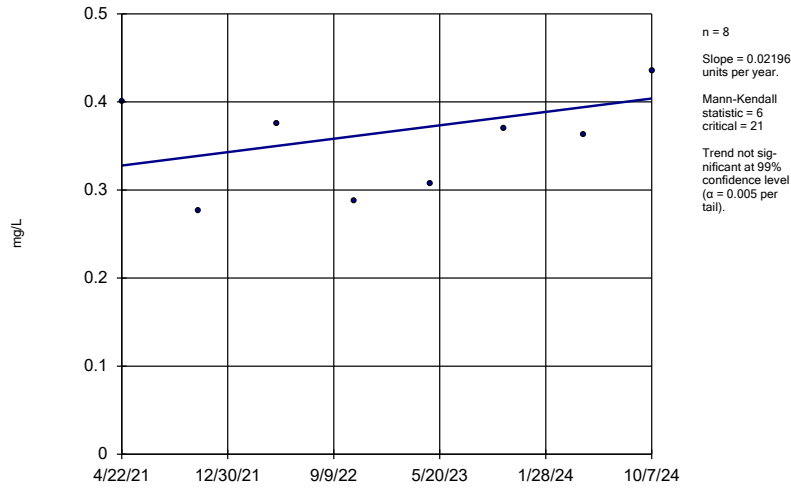


n = 8
Slope = 0
units per year.
Mann-Kendall
statistic = -8
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

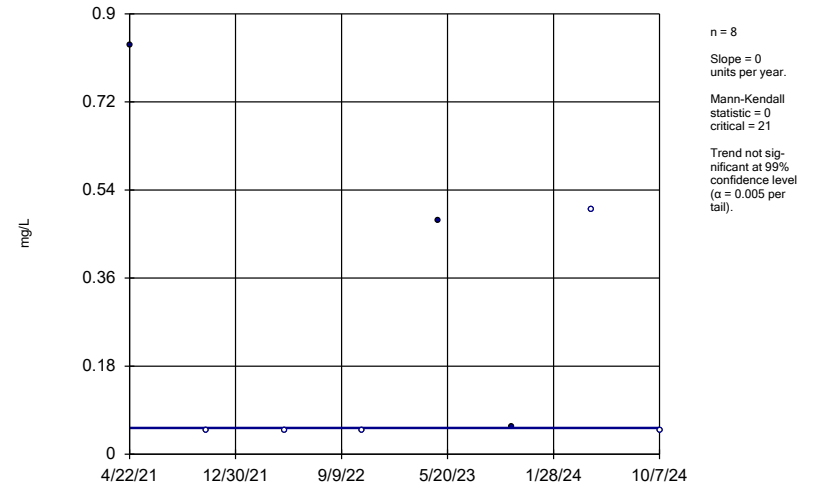
MW-103R-NP



Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

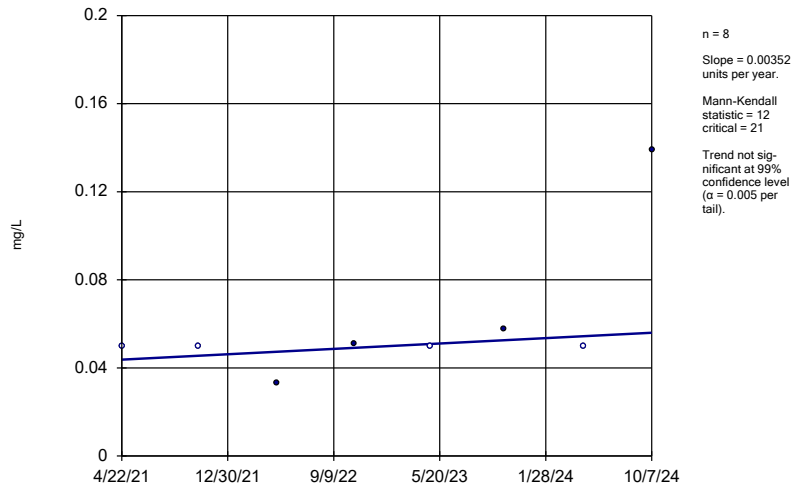
MW-201



Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

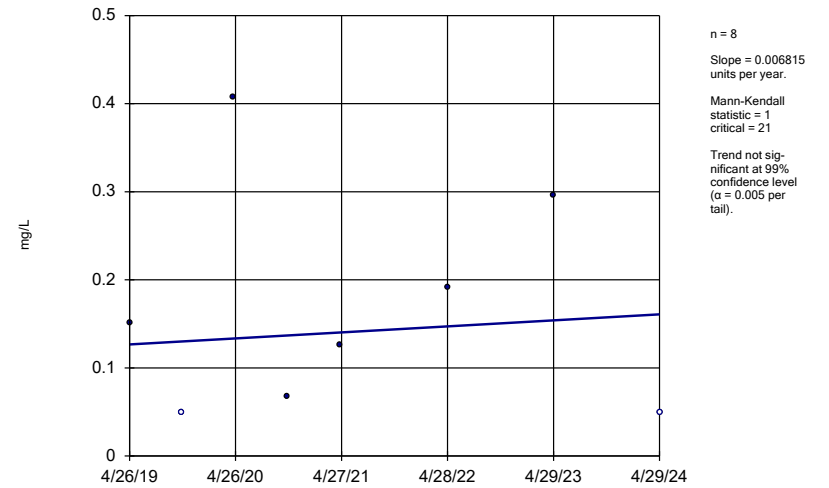
MW-202R



Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

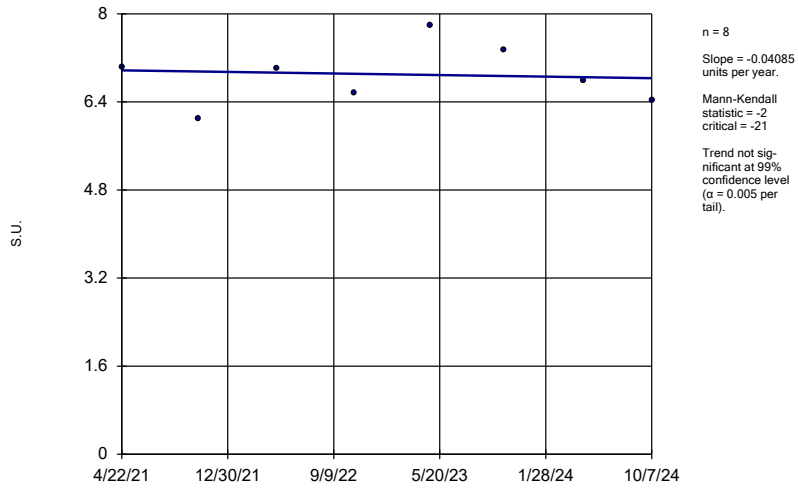
SW-1/OUTFALL4



Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

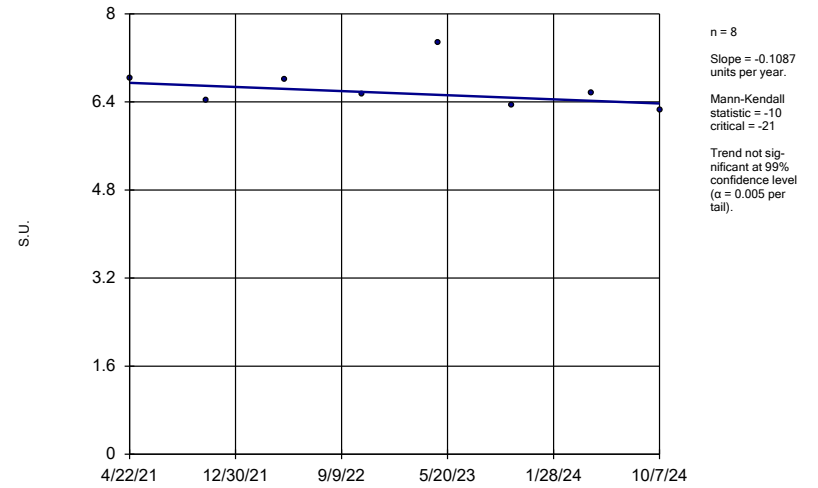
LDR-1



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

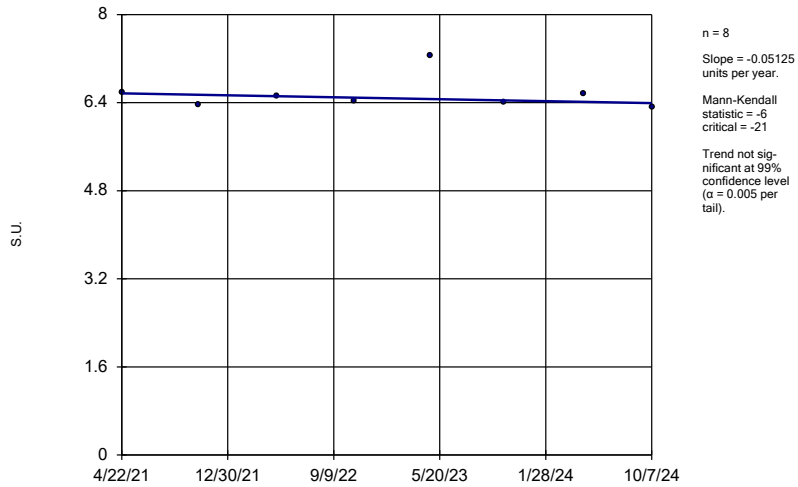
LDR-2



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

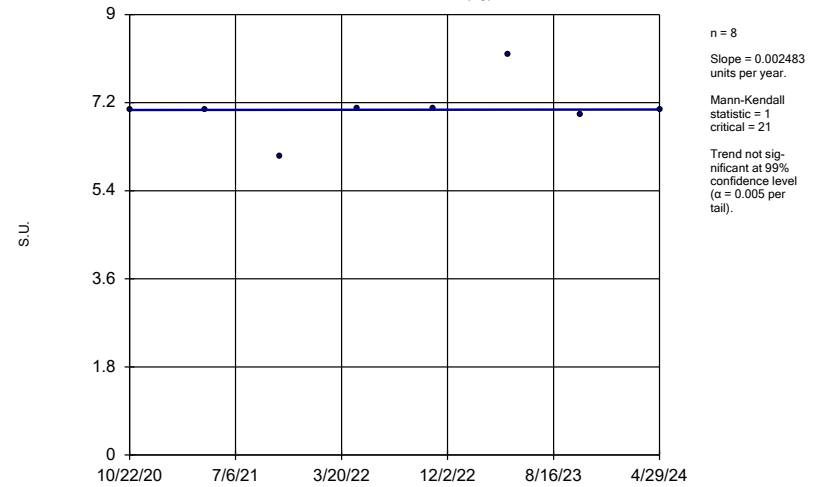
LDR-3



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

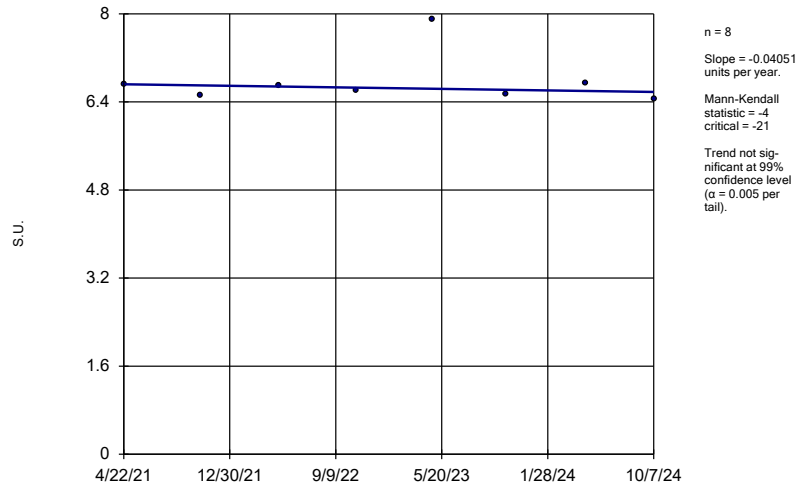
MW-101R-NP (bg)



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

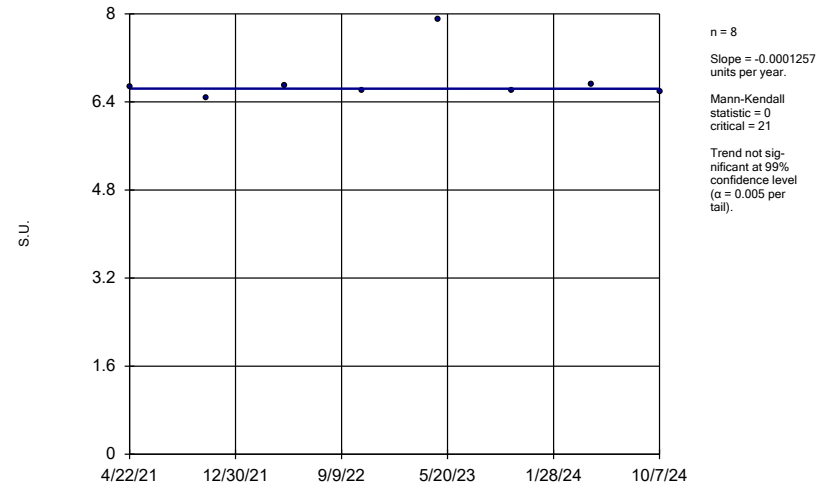
MW-102R-NP



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

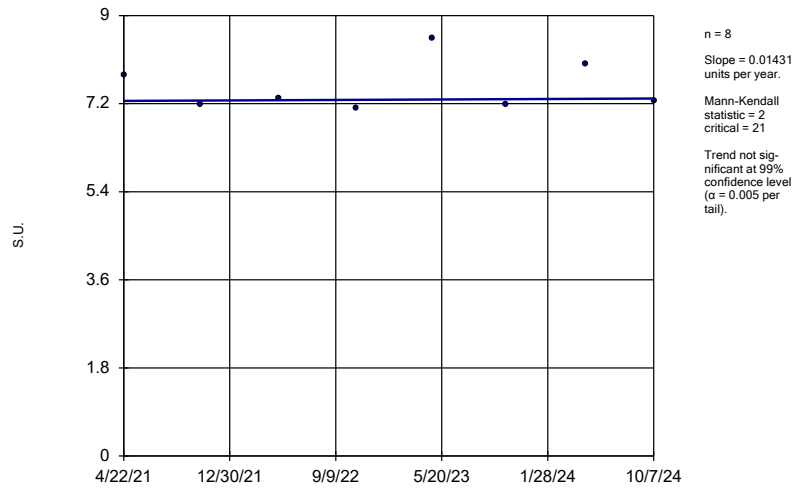
MW-103R-NP



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

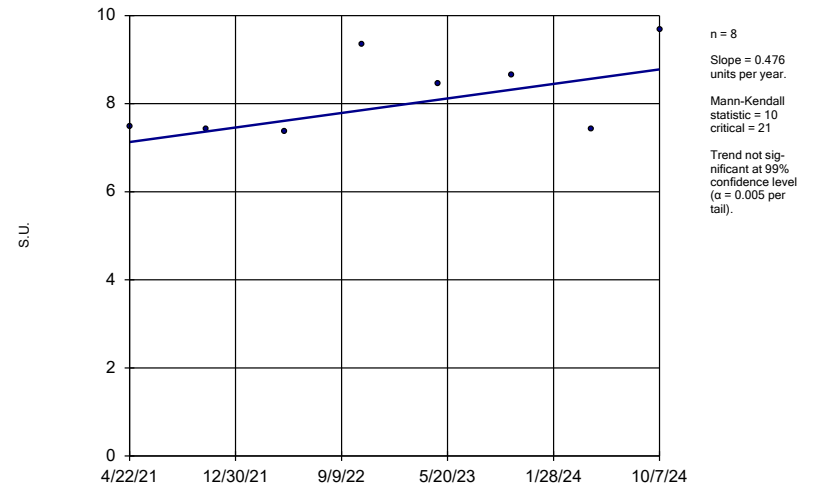
MW-201



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

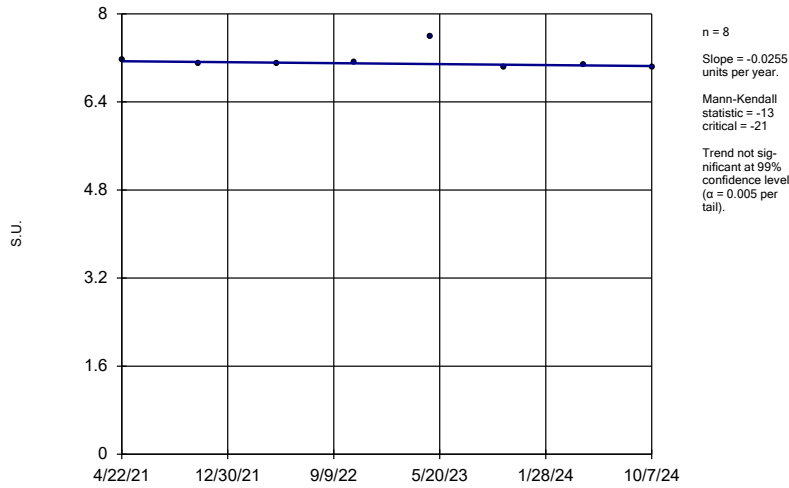
MW-202R



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

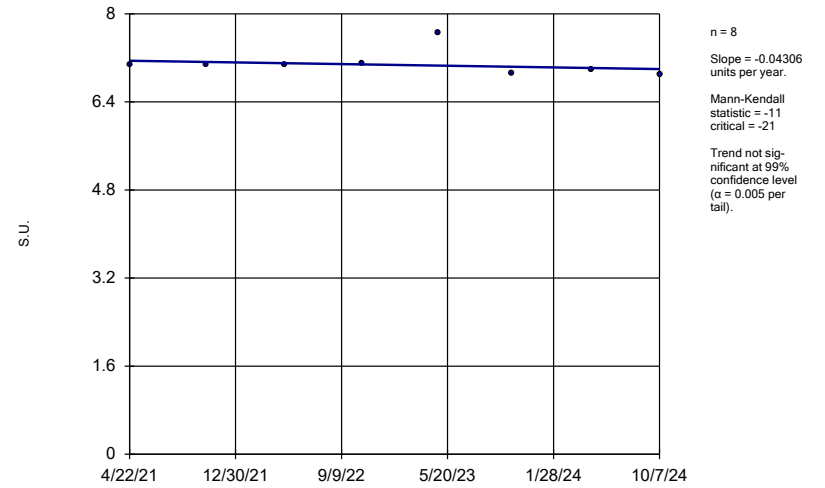
MW-203R (bg)



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

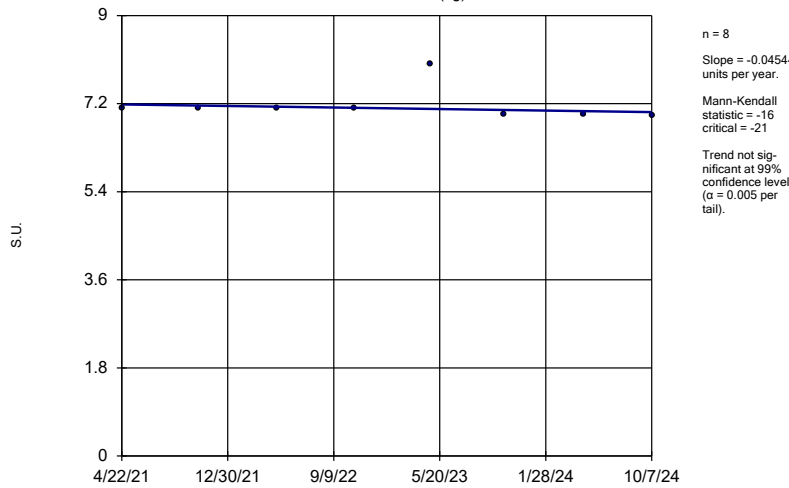
MW-204



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

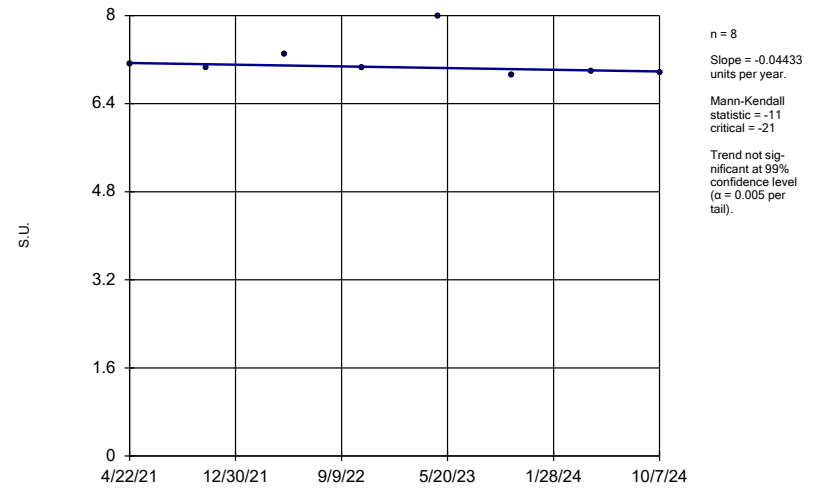
MW-205 (bg)



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

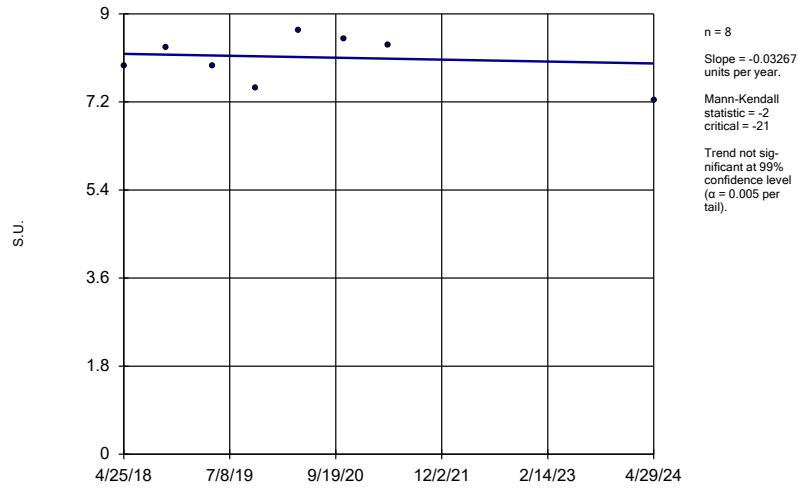
MW-206



Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

SW-1/OUTFALL4

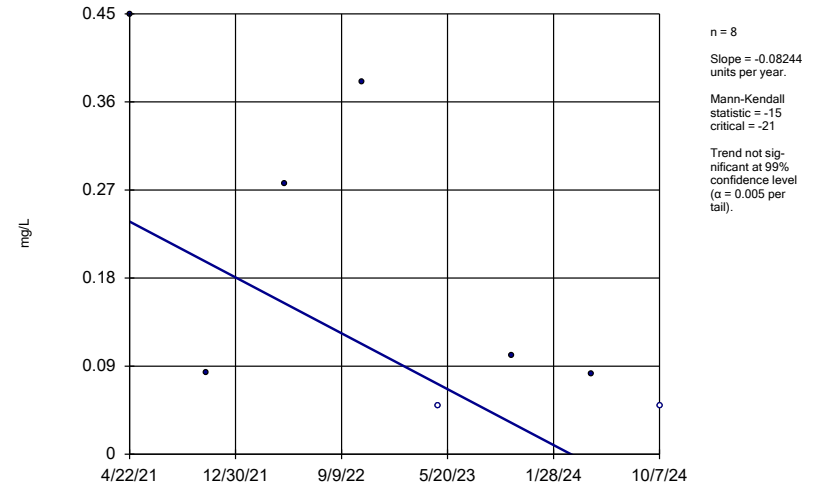


Constituent: pH Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Hollow symbols indicate censored values.

Sen's Slope Estimator

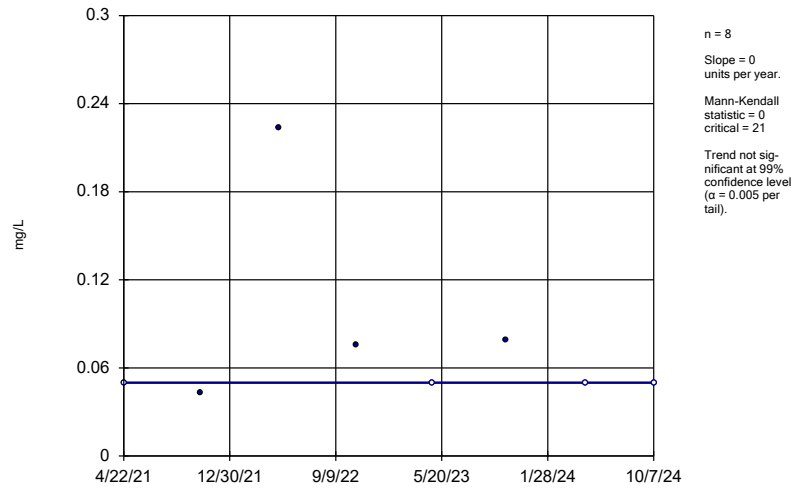
LDR-1



Constituent: Phosphorus, Total [as P] Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

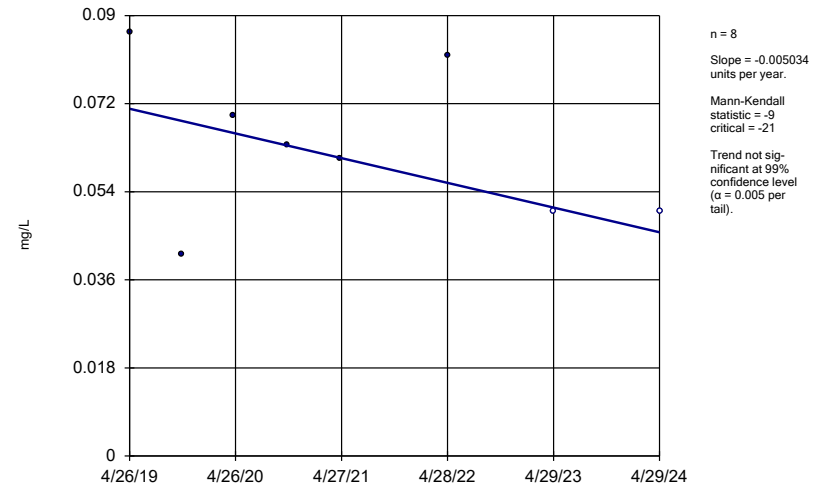
MW-201



Constituent: Phosphorus, Total [as P] Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

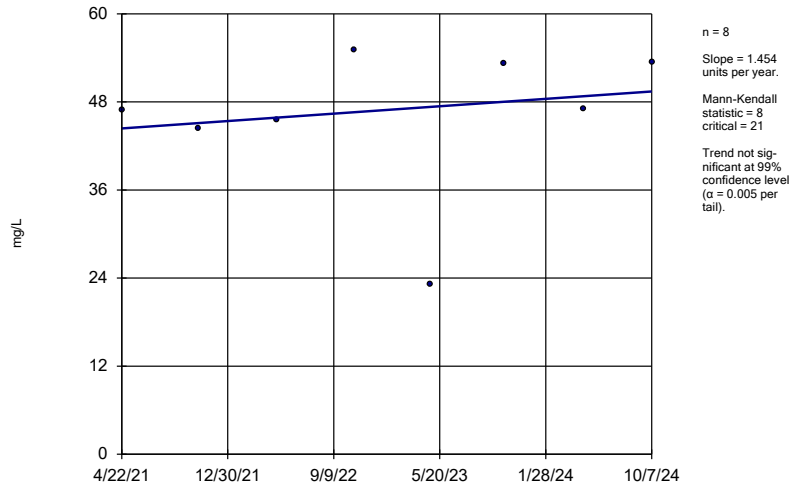
SW-1/OUTFALL4



Constituent: Phosphorus, Total [as P] Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kend
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

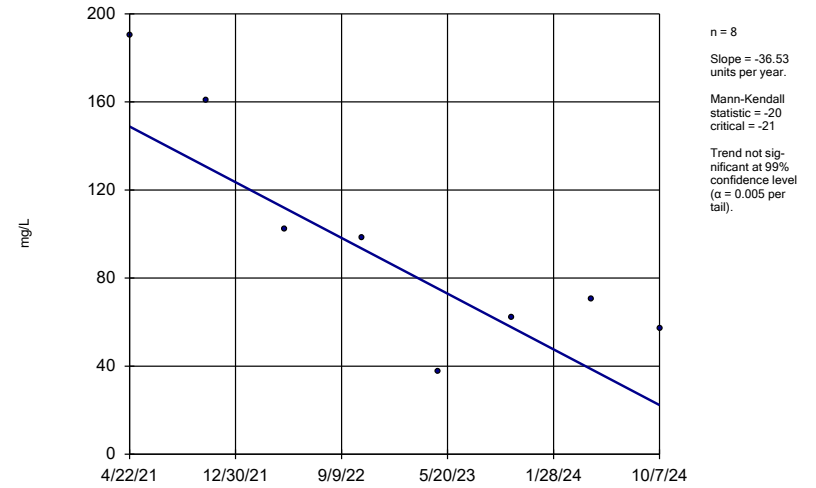
LDR-1



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

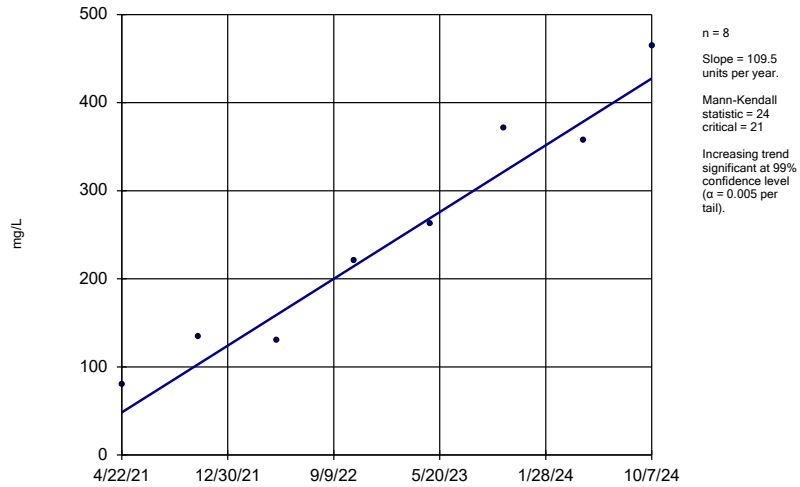
LDR-2



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

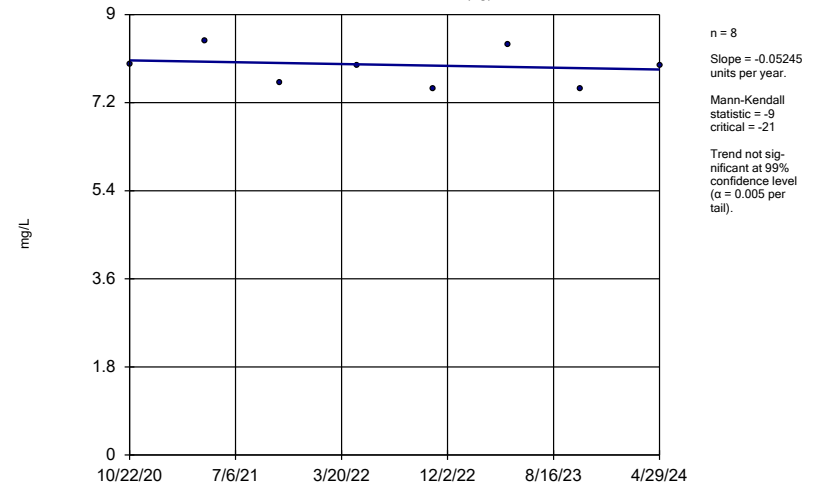
LDR-3



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

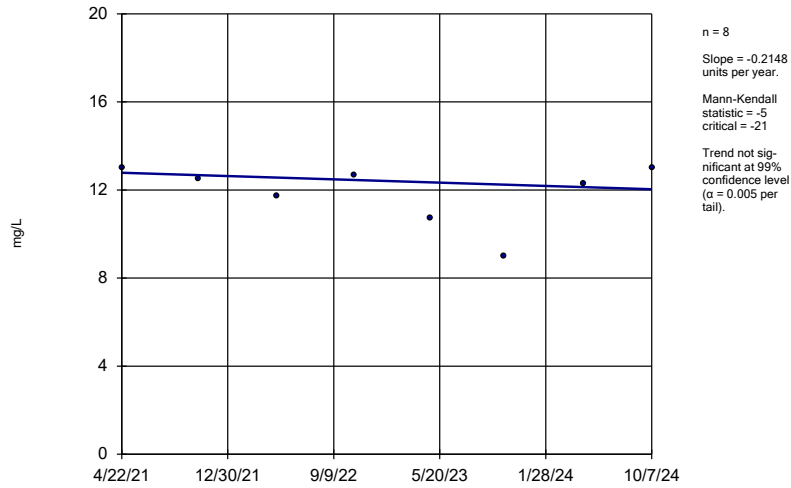
MW-101R-NP (bg)



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

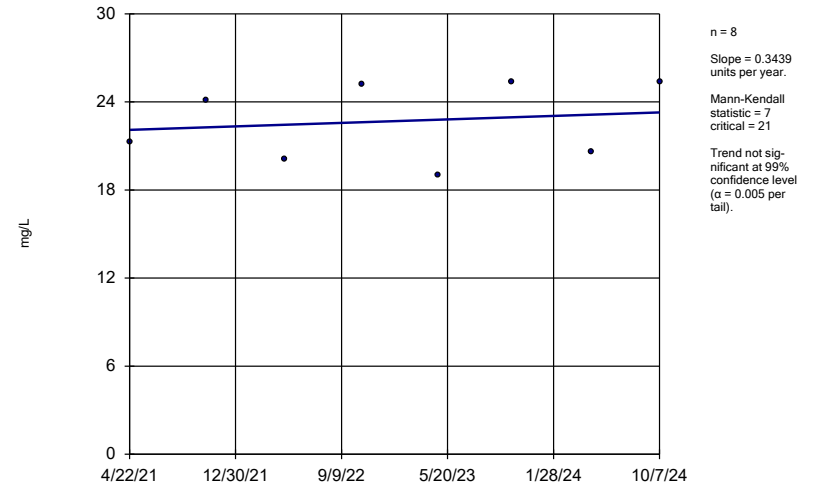
MW-102R-NP



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

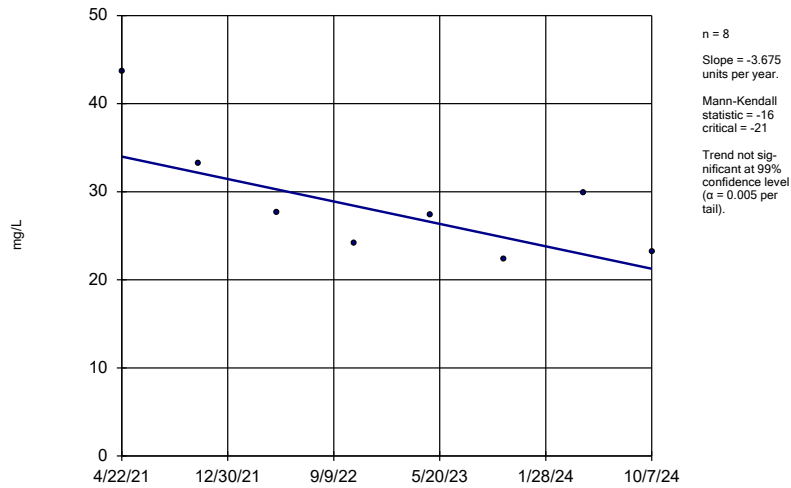
MW-103R-NP



Constituent: Potassium Analysis Run 10/29/2024 12:13 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

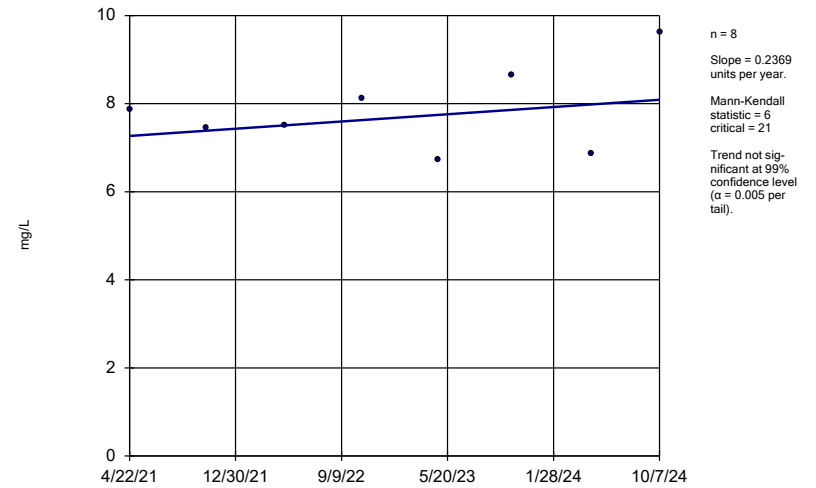
MW-201



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

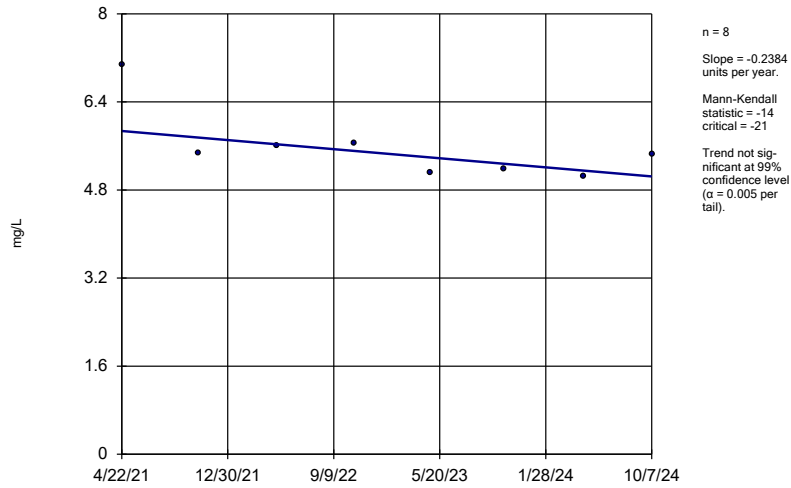
MW-202R



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

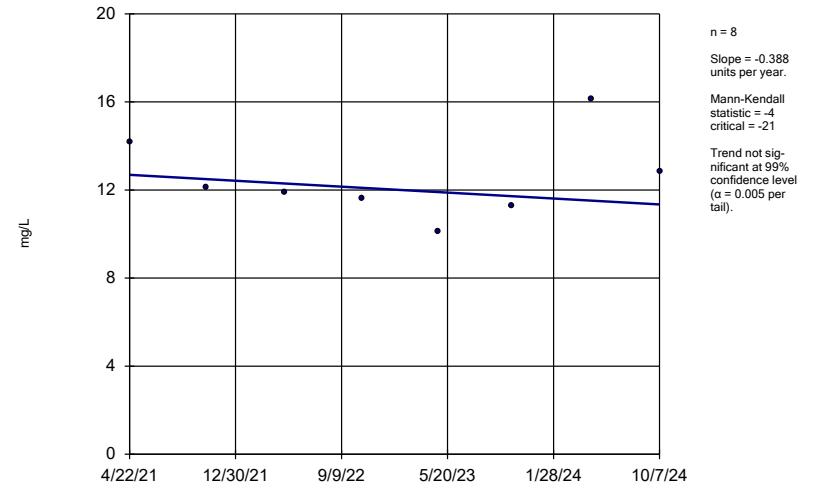
MW-203R (bg)



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

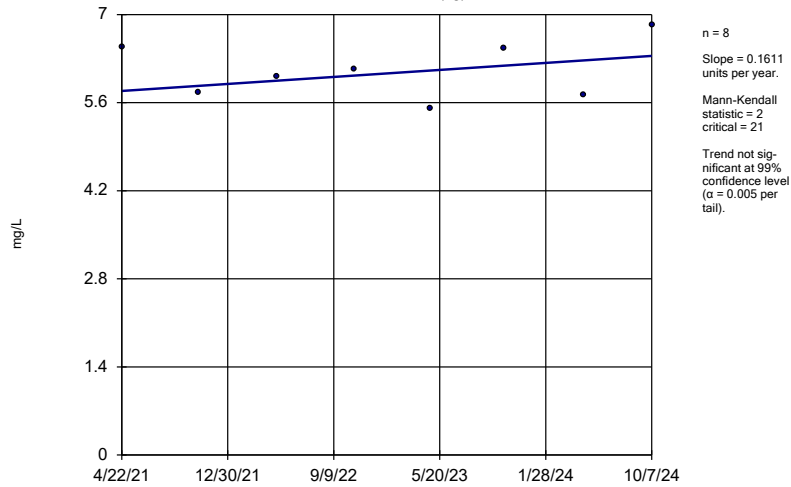
MW-204



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

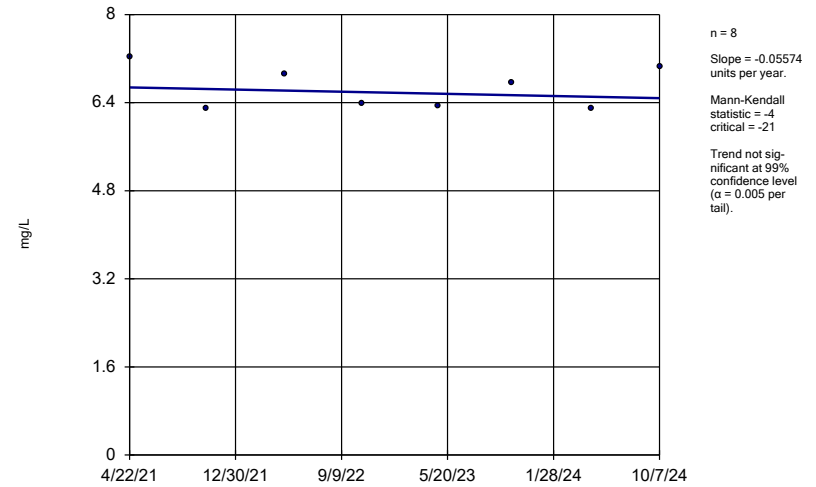
MW-205 (bg)



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

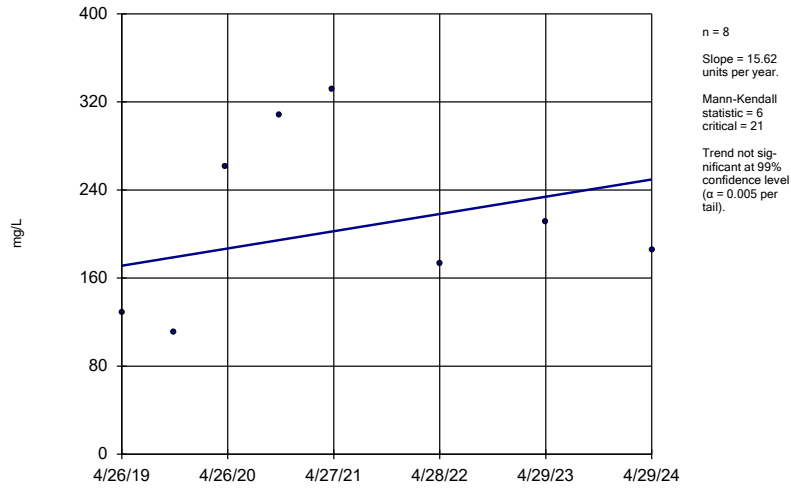
MW-206



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

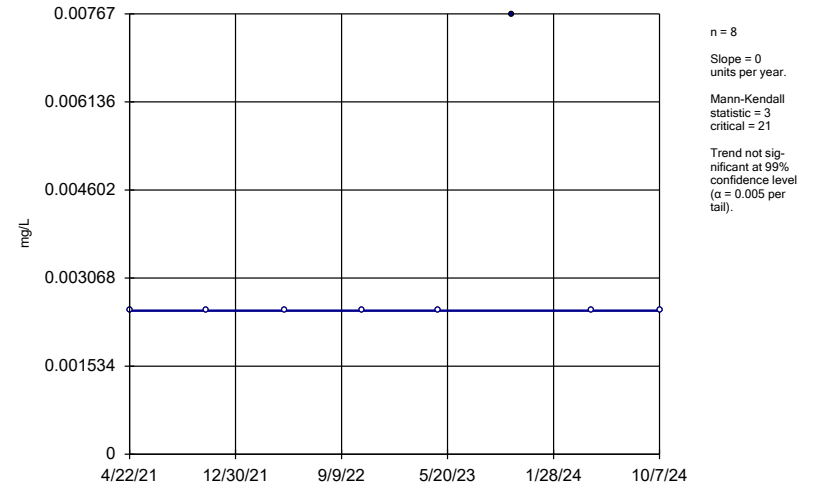
SW-1/OUTFALL4



Constituent: Potassium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

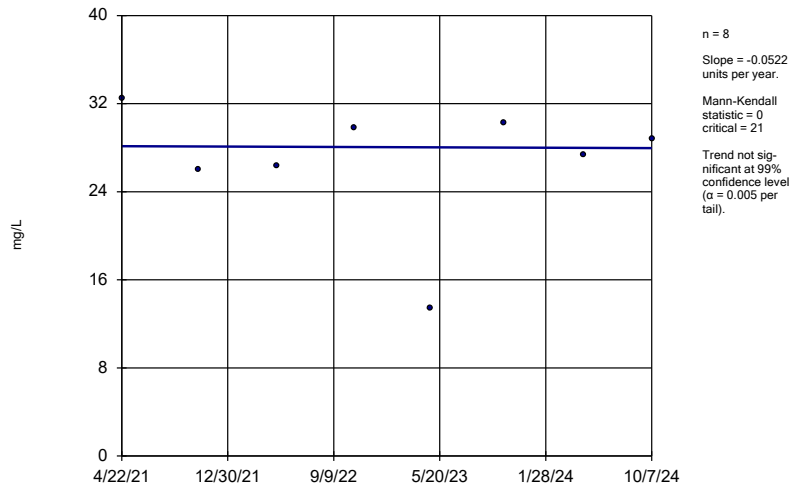
MW-201



Constituent: Selenium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

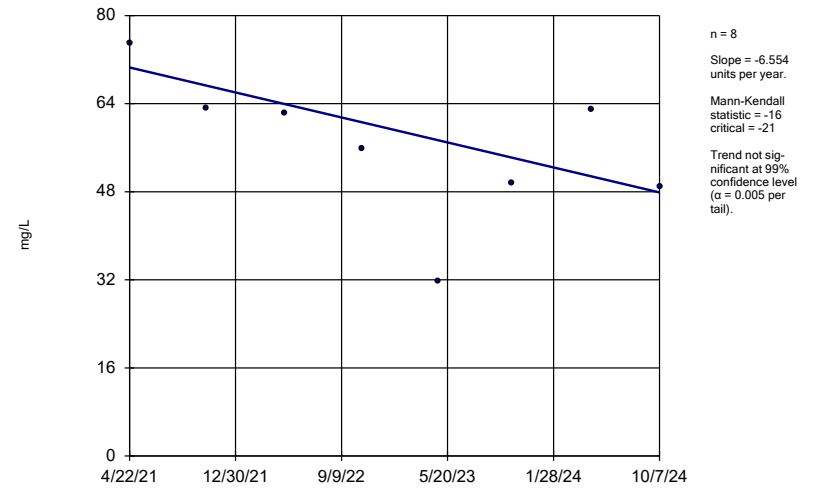
LDR-1



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

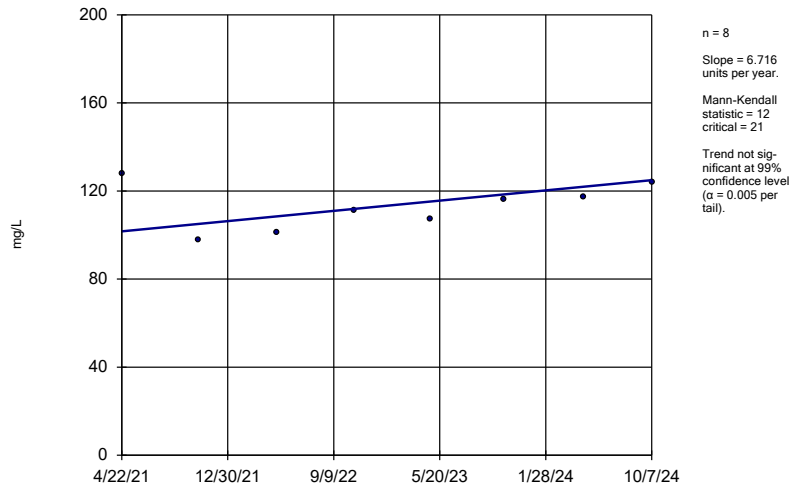
LDR-2



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

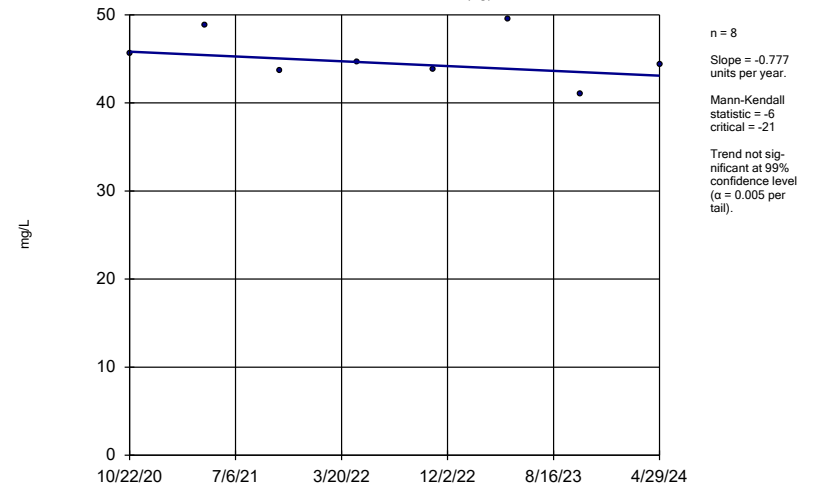
LDR-3



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

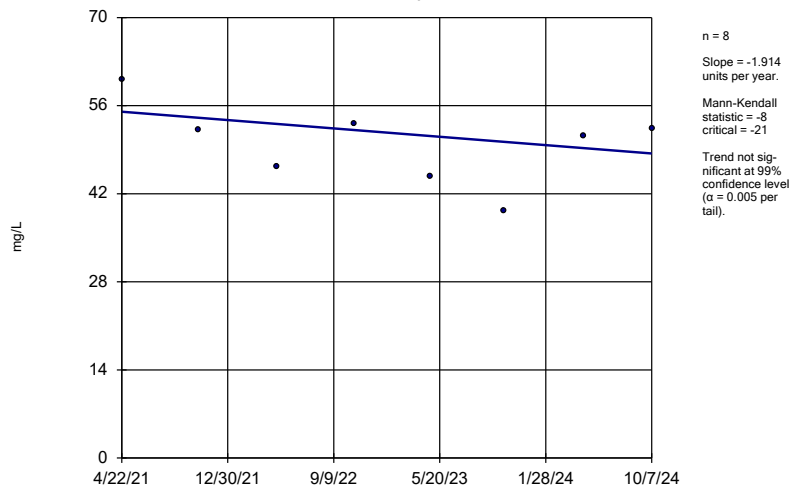
MW-101R-NP (bg)



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

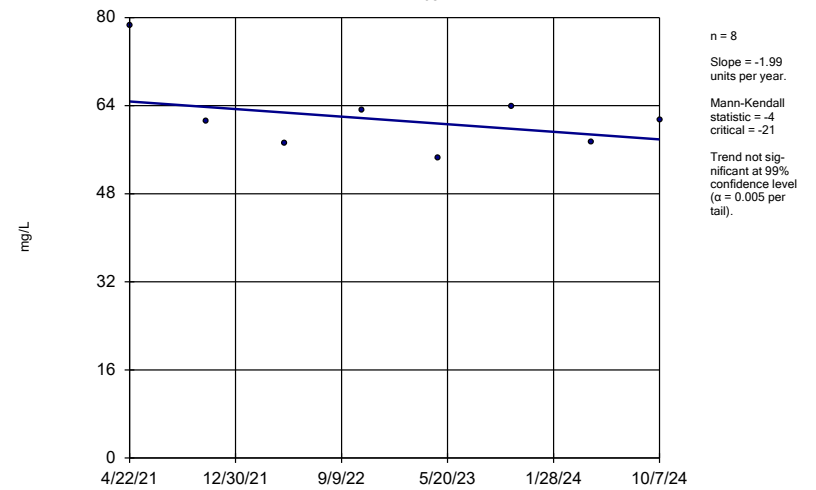
MW-102R-NP



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

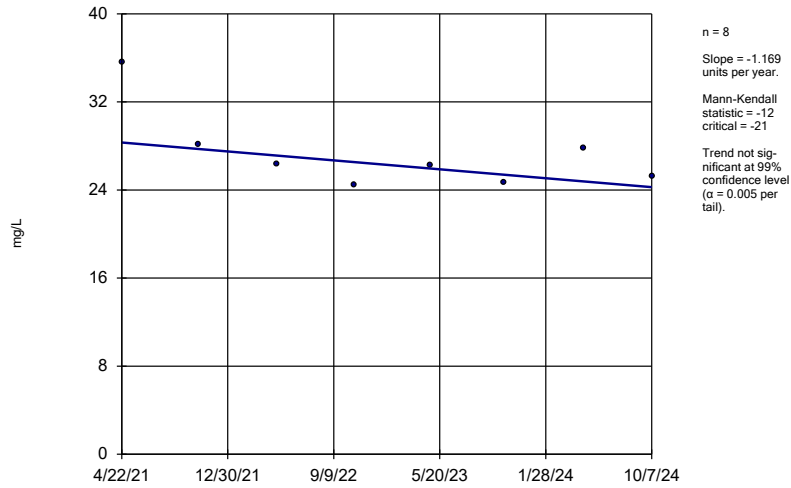
MW-103R-NP



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

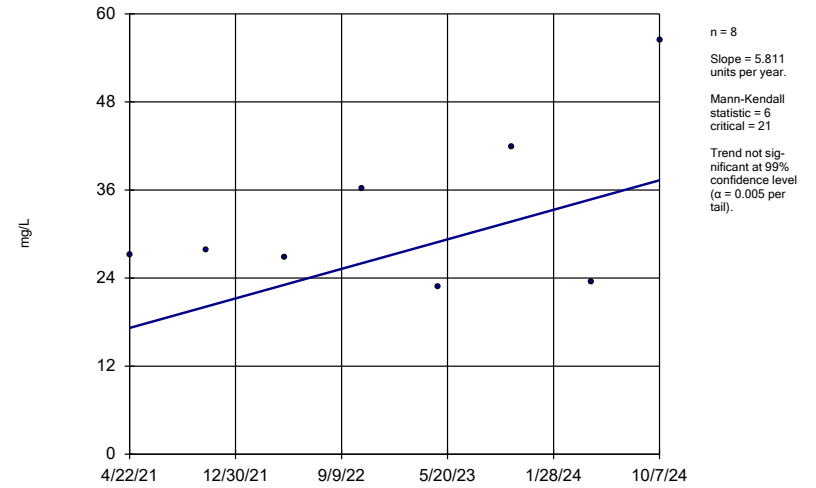
MW-201



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

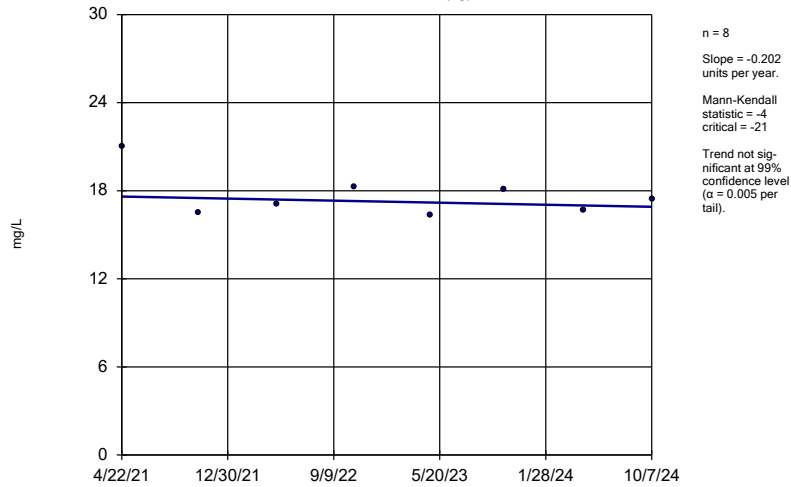
MW-202R



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

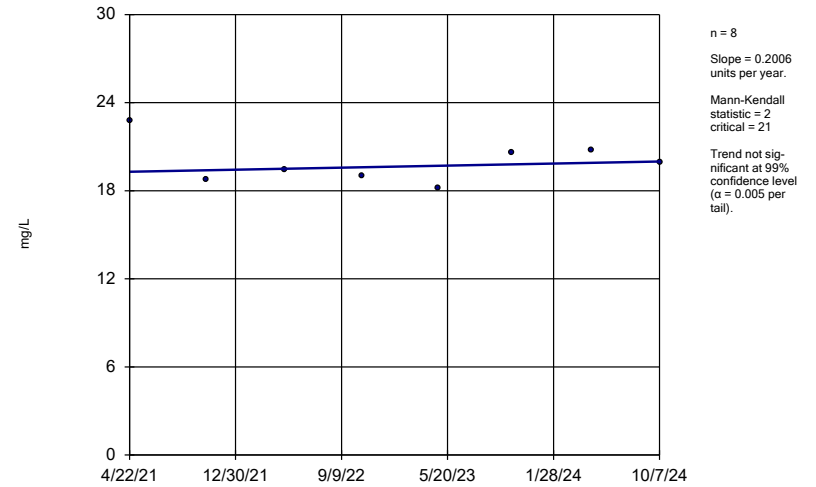
MW-203R (bg)



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

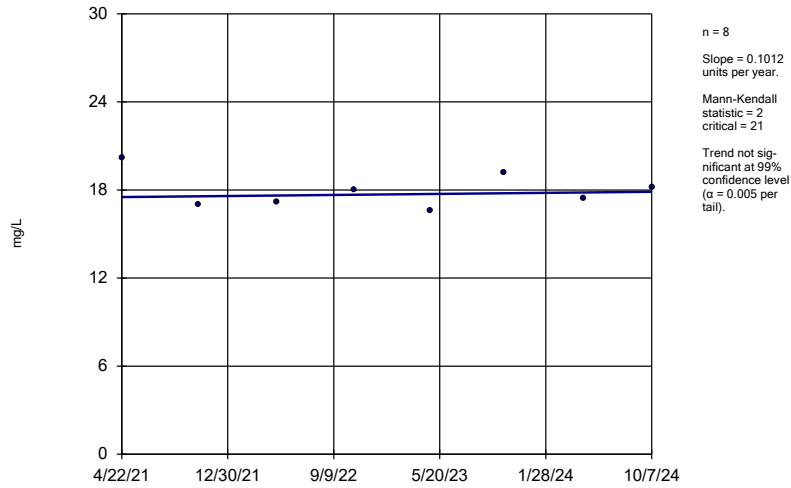
MW-204



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

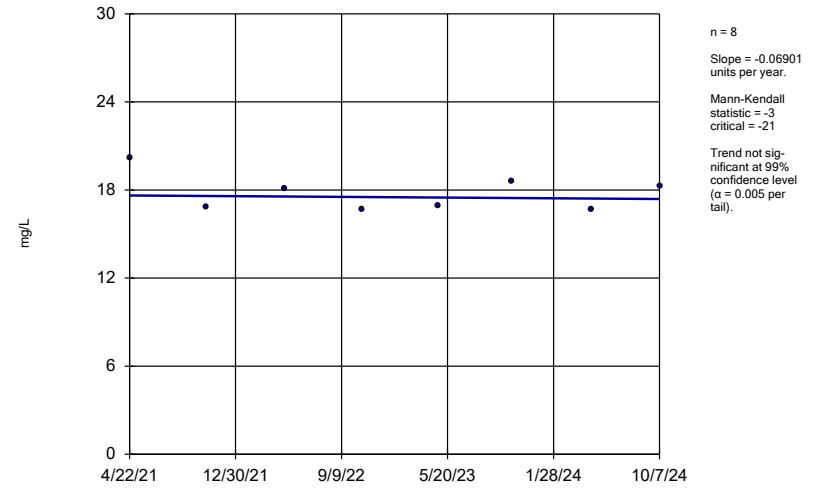
MW-205 (bg)



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

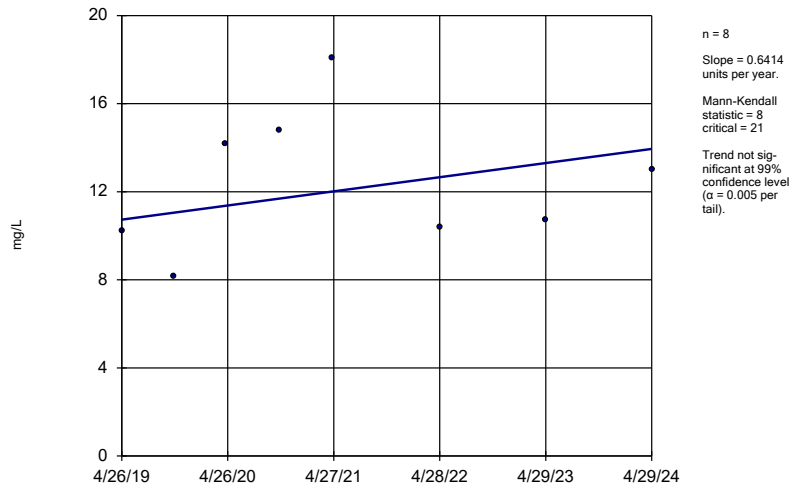
MW-206



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

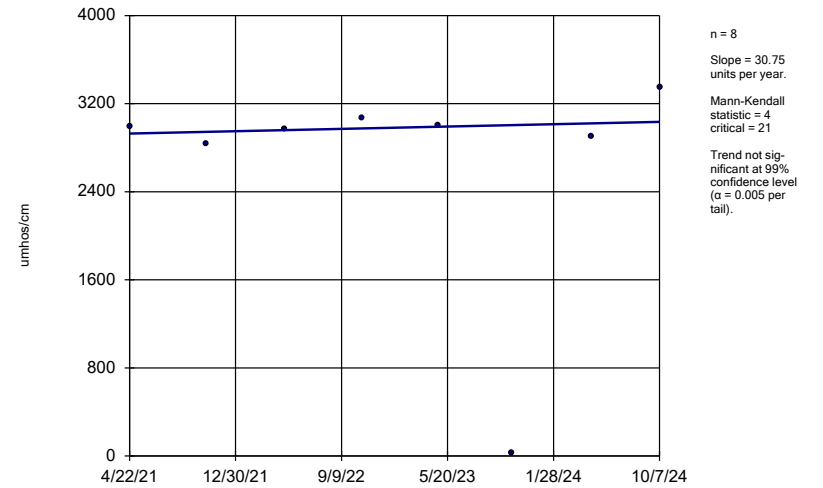
SW-1/OUTFALL4



Constituent: Sodium Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

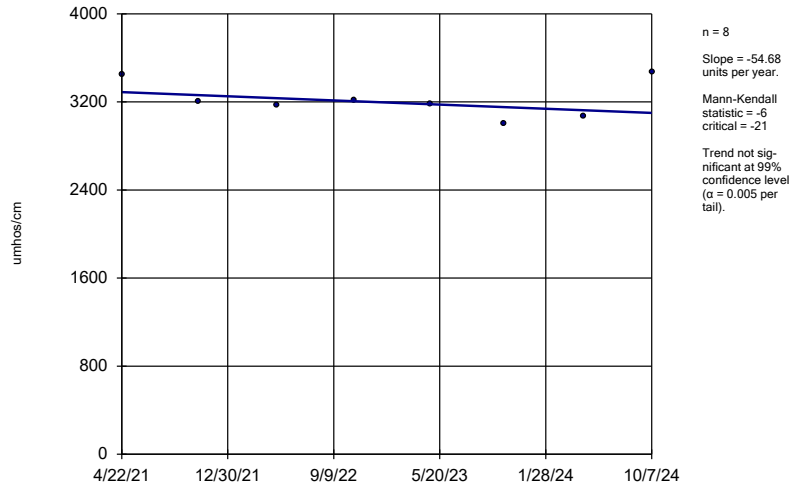
LDR-1



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

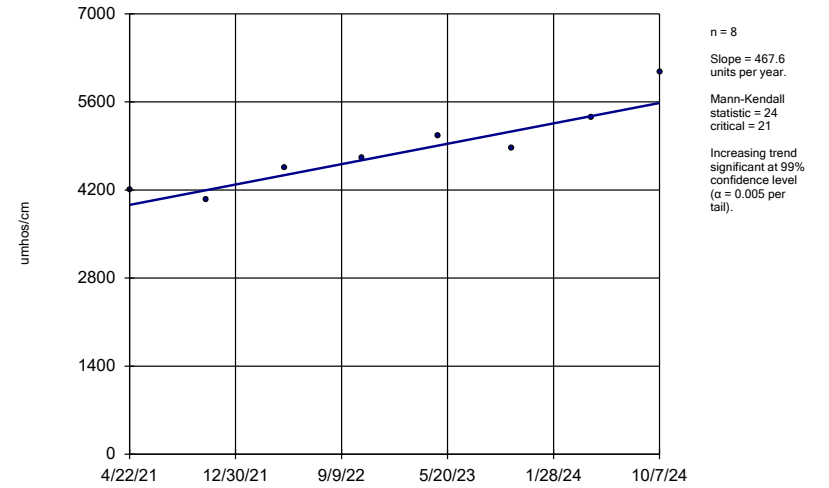
LDR-2



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

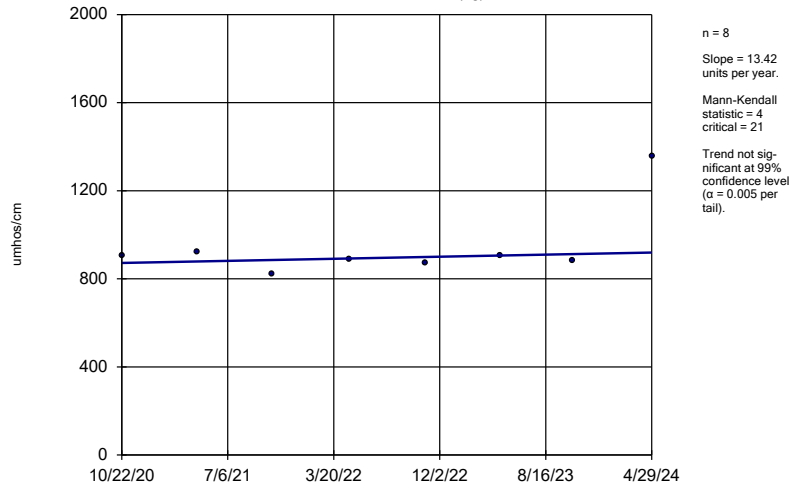
LDR-3



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

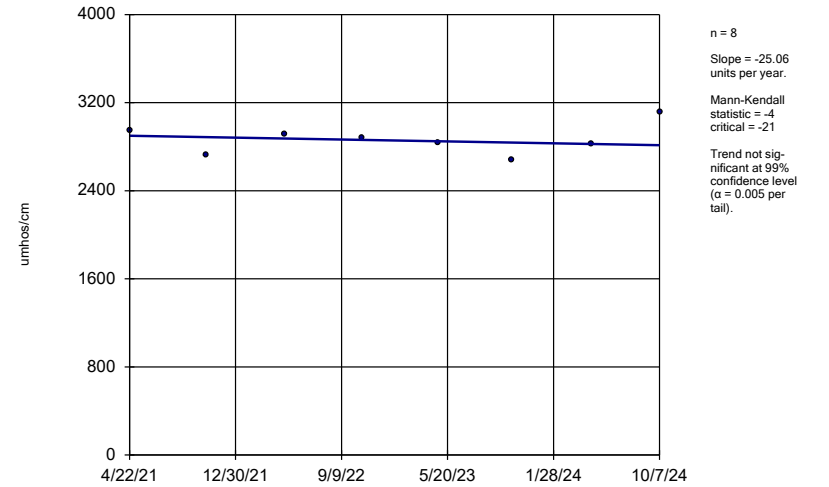
MW-101R-NP (bg)



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

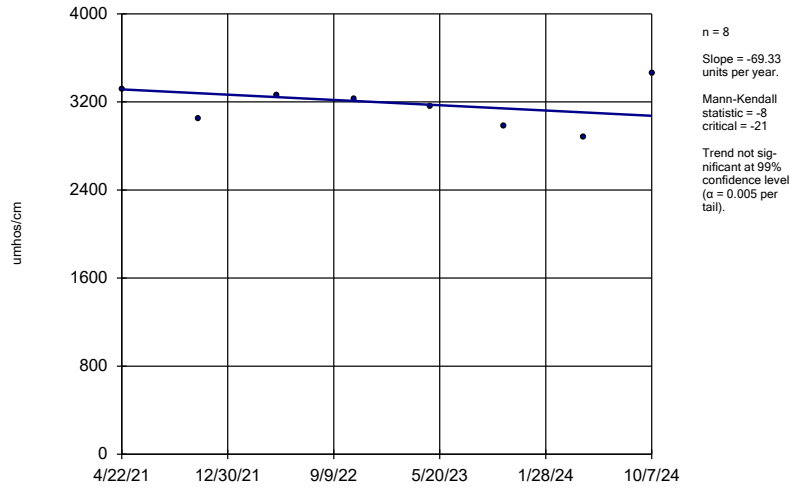
MW-102R-NP



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

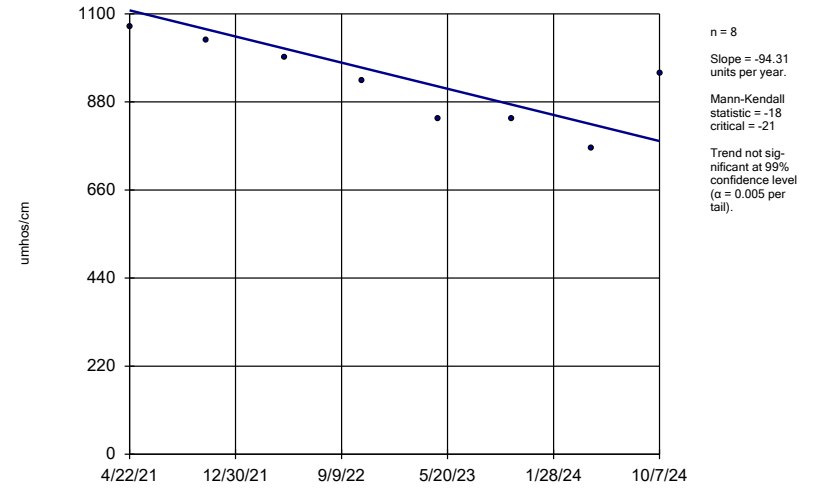
MW-103R-NP



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

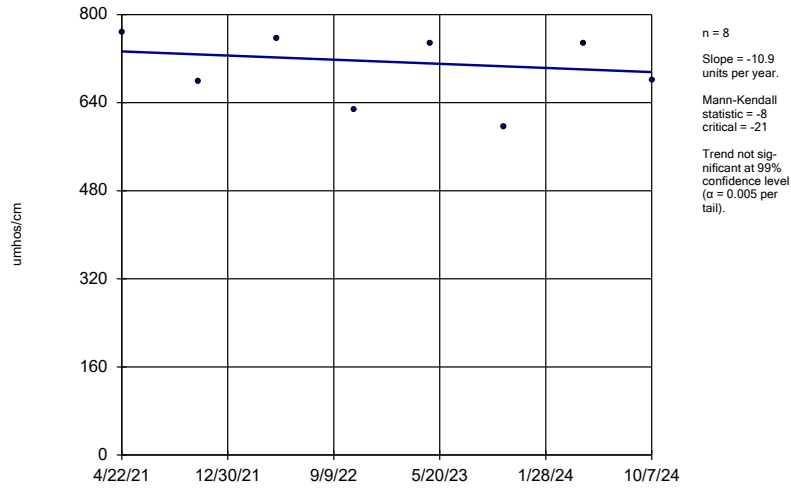
MW-201



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

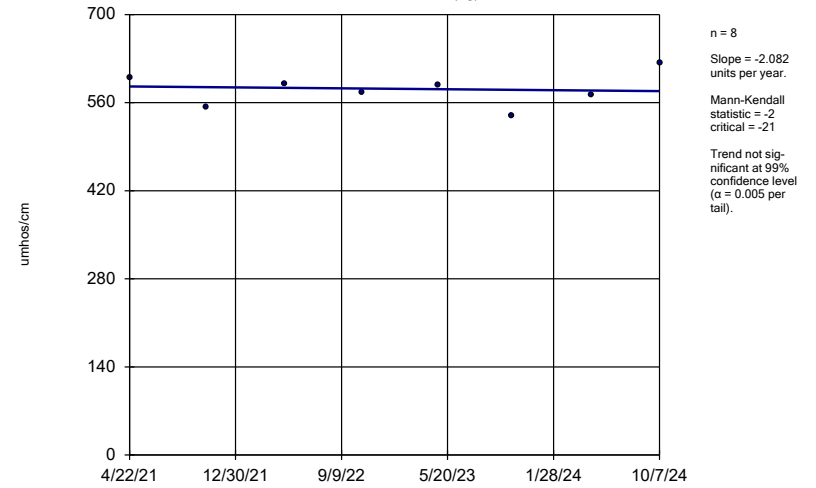
MW-202R



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

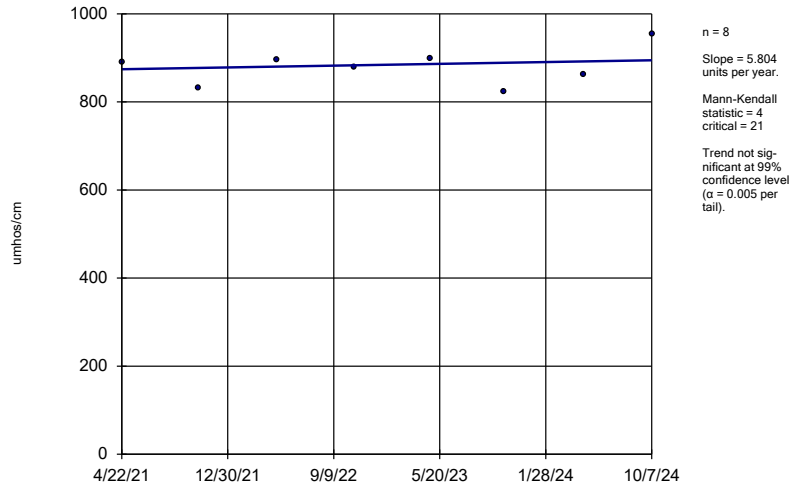
MW-203R (bg)



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

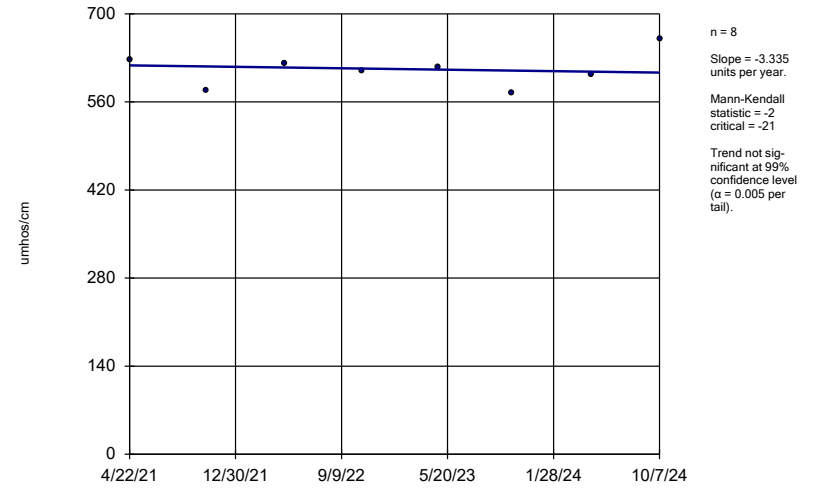
MW-204



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

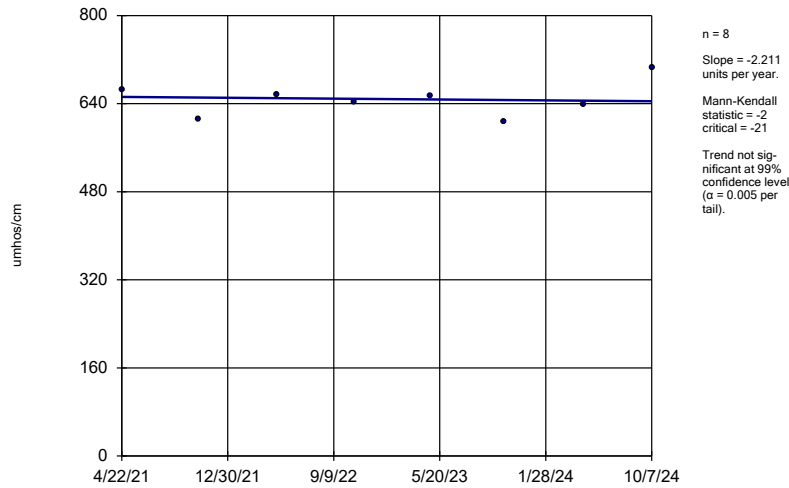
MW-205 (bg)



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

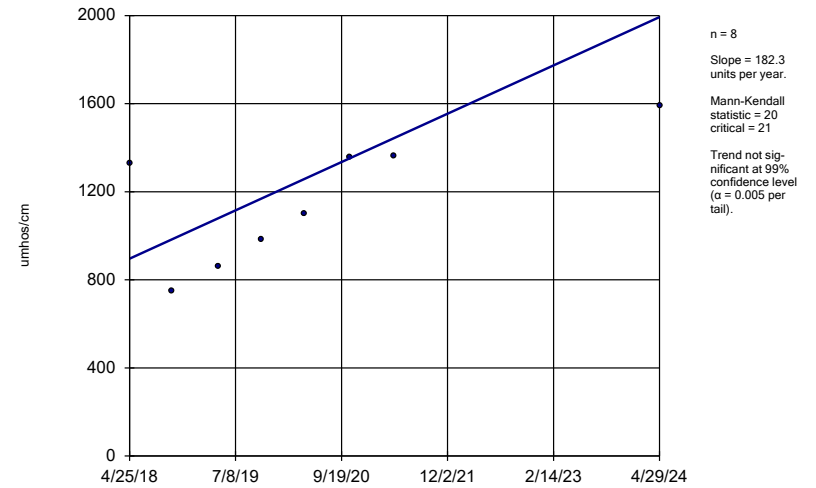
MW-206



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

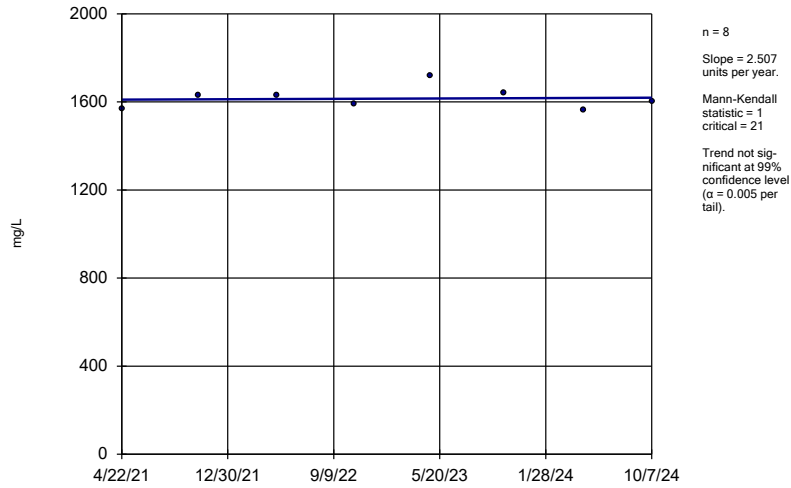
SW-1/OUTFALL4



Constituent: Specific Conductance Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

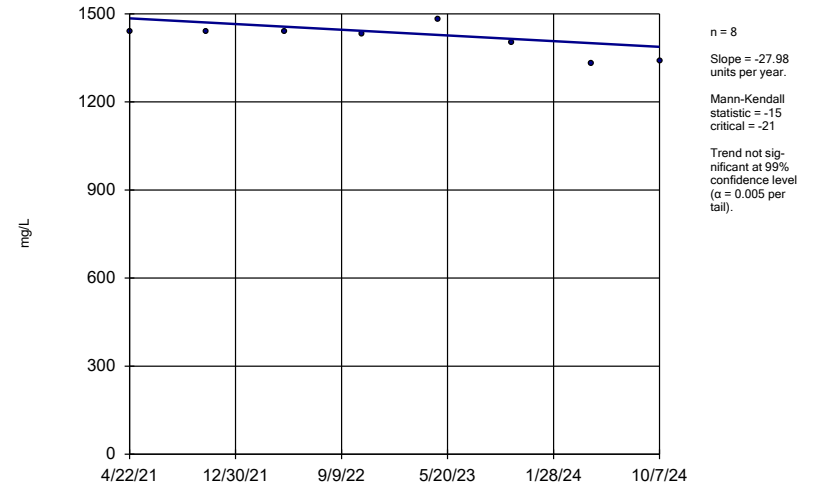
LDR-1



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

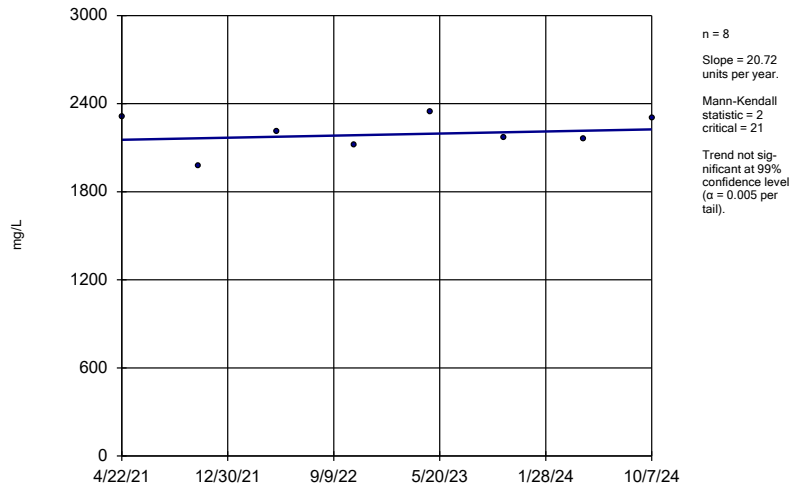
LDR-2



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

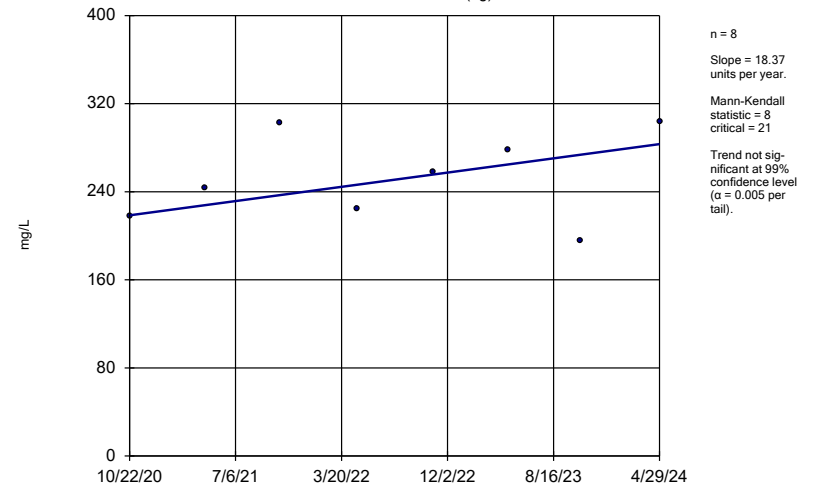
LDR-3



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

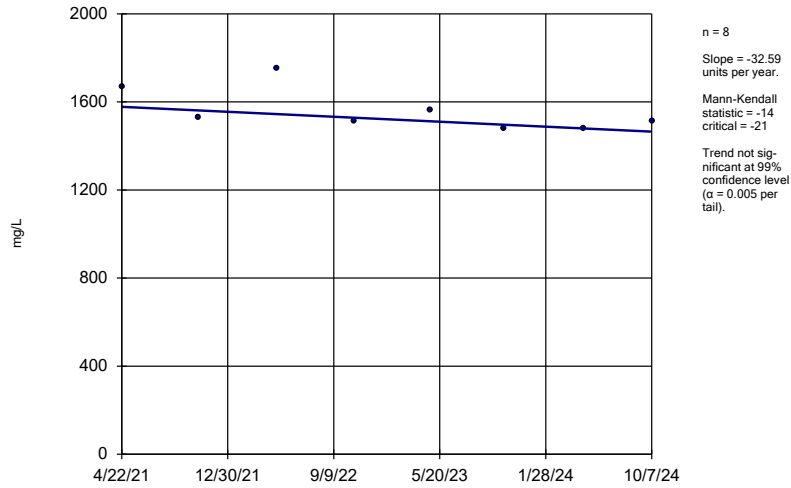
MW-101R-NP (bg)



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

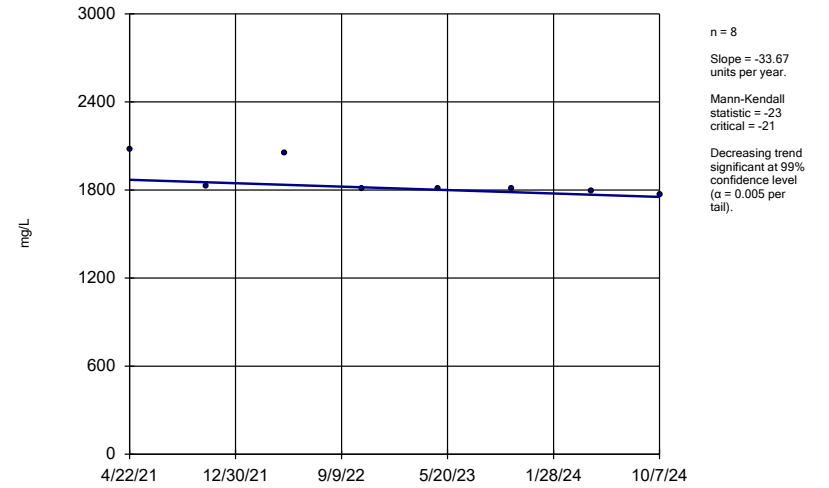
MW-102R-NP



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

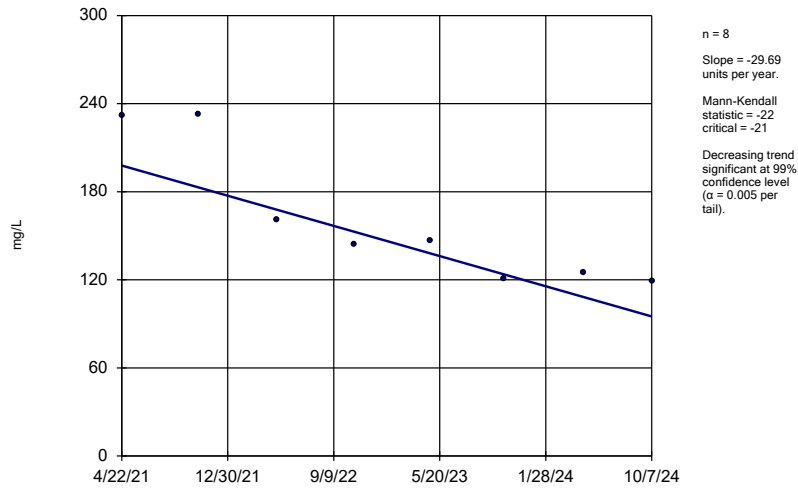
MW-103R-NP



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

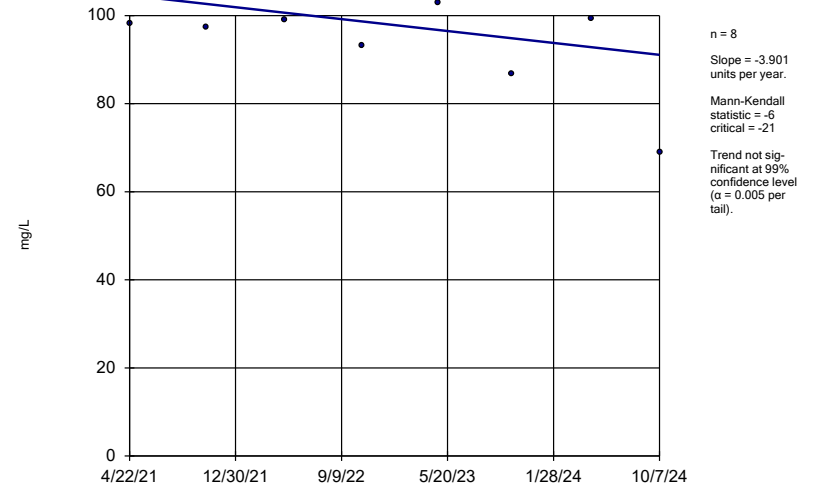
MW-201



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

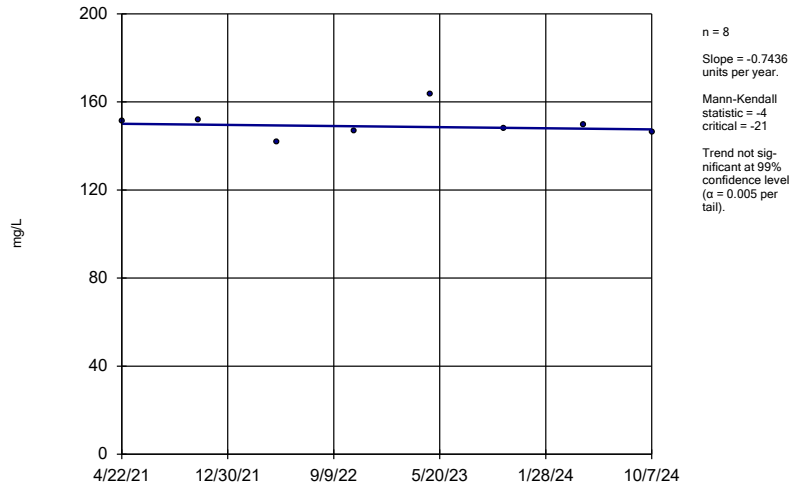
MW-202R



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

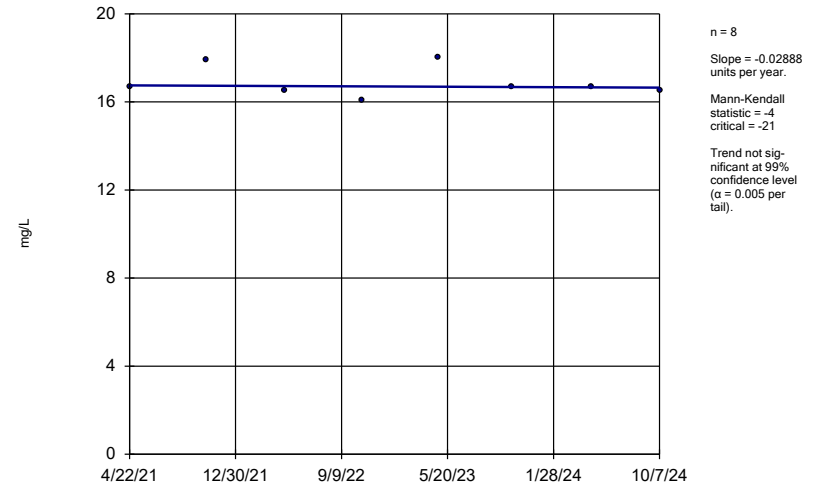
MW-204



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

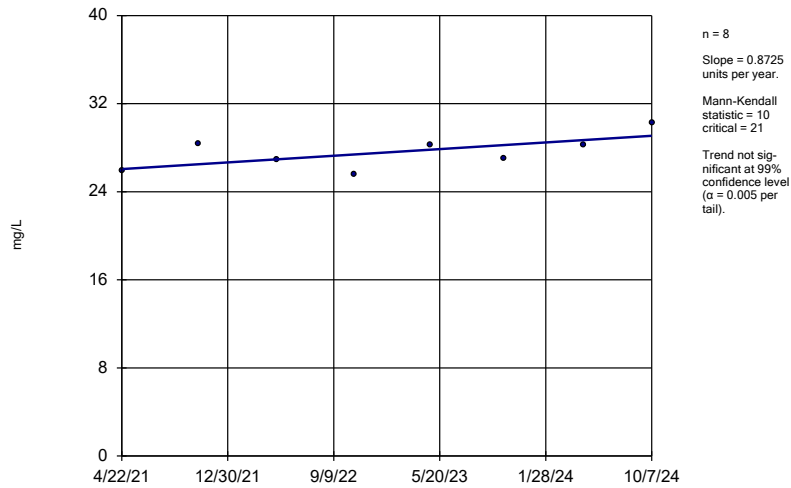
MW-205 (bg)



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

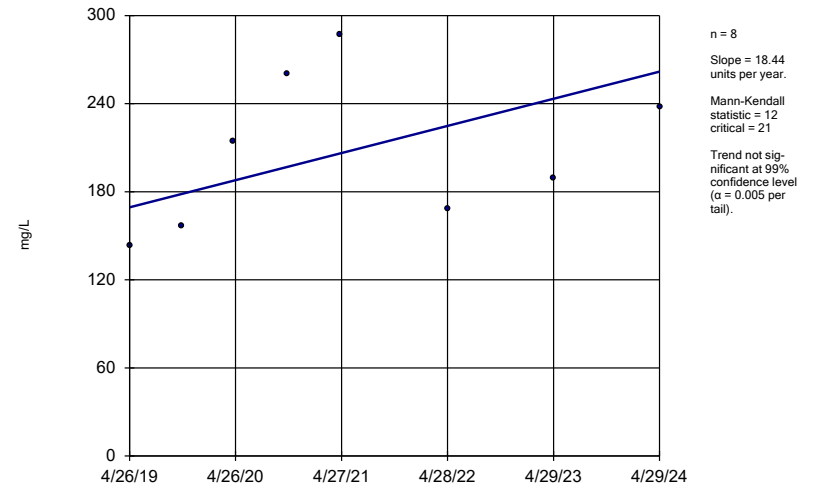
MW-206



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

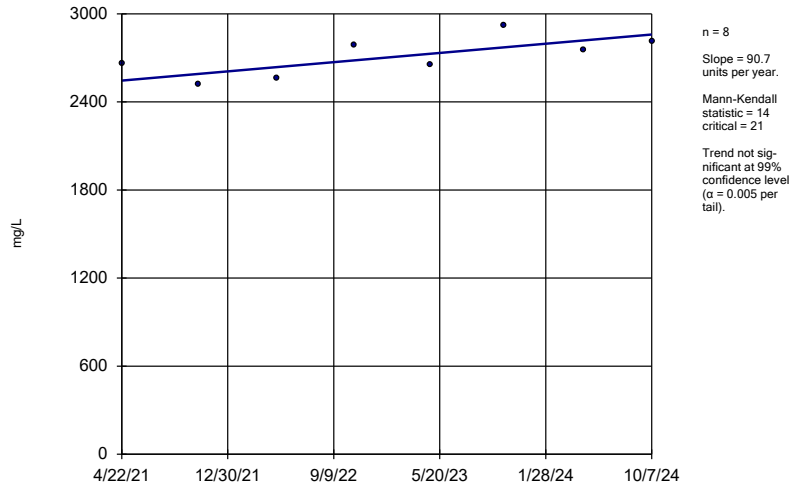
SW-1/OUTFALL4



Constituent: Sulfate Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

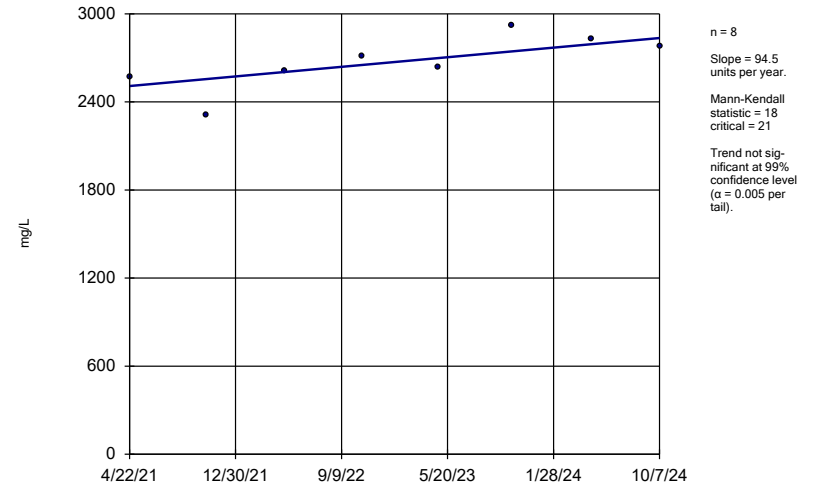
LDR-1



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

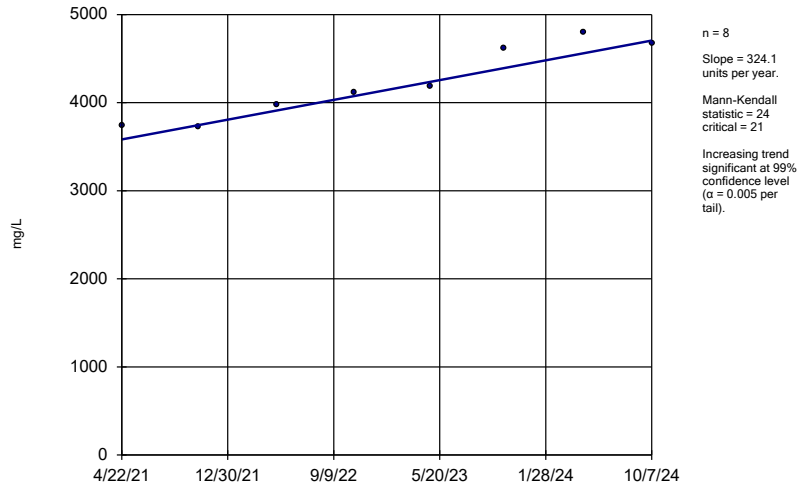
LDR-2



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

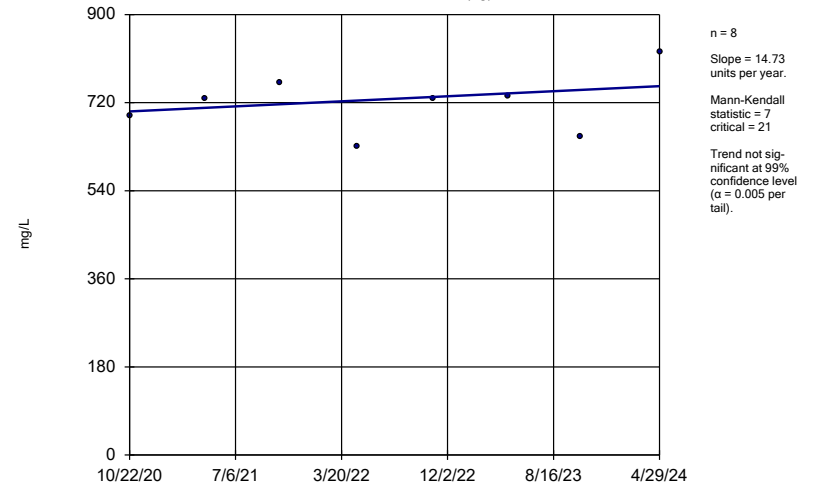
LDR-3



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

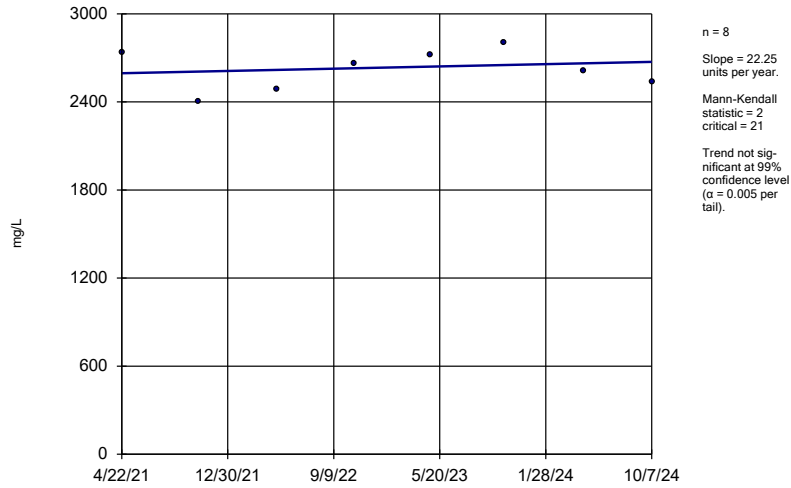
MW-101R-NP (bg)



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

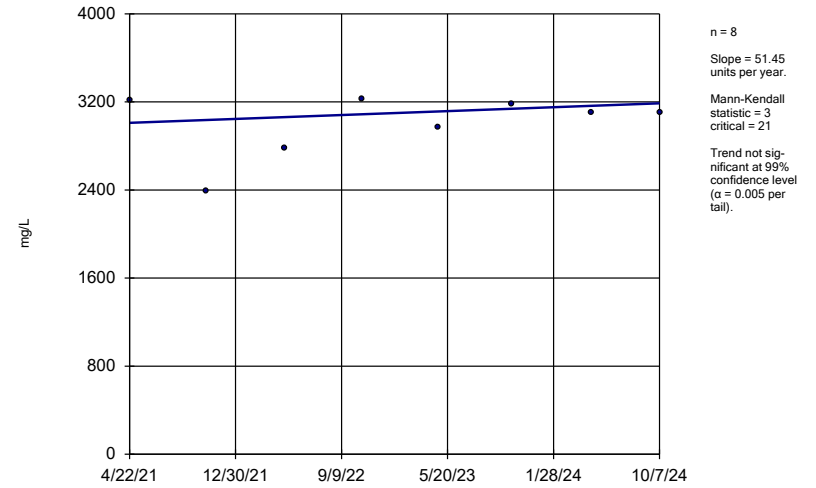
MW-102R-NP



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

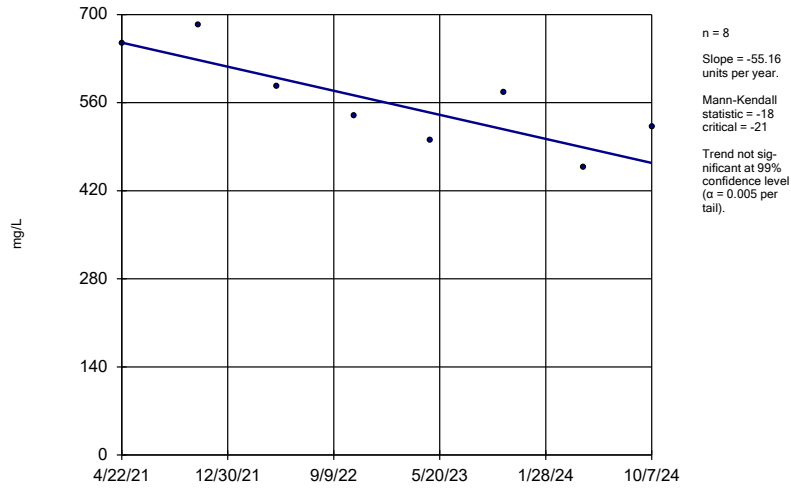
MW-103R-NP



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

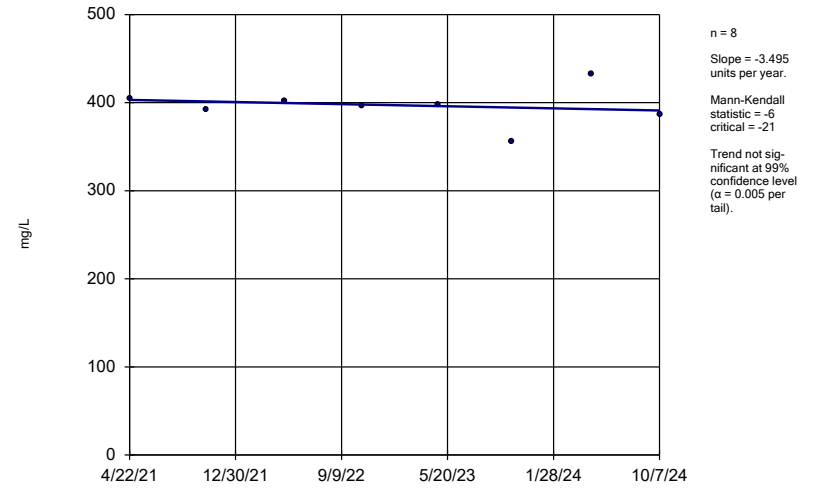
MW-201



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

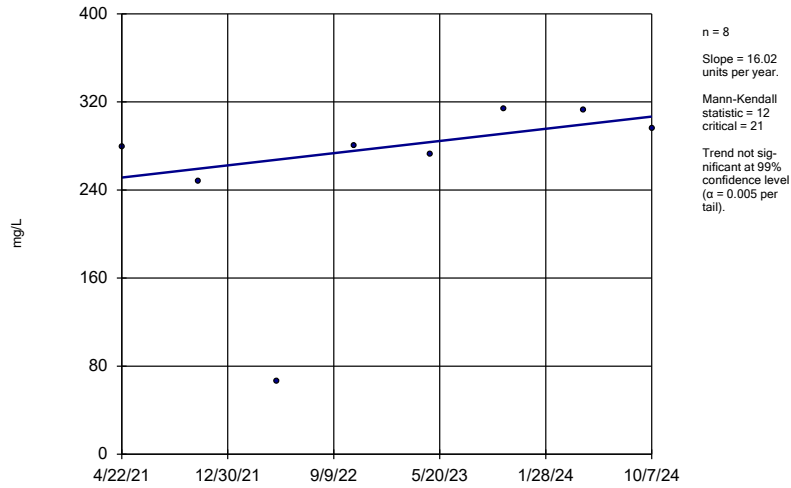
MW-202R



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:14 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

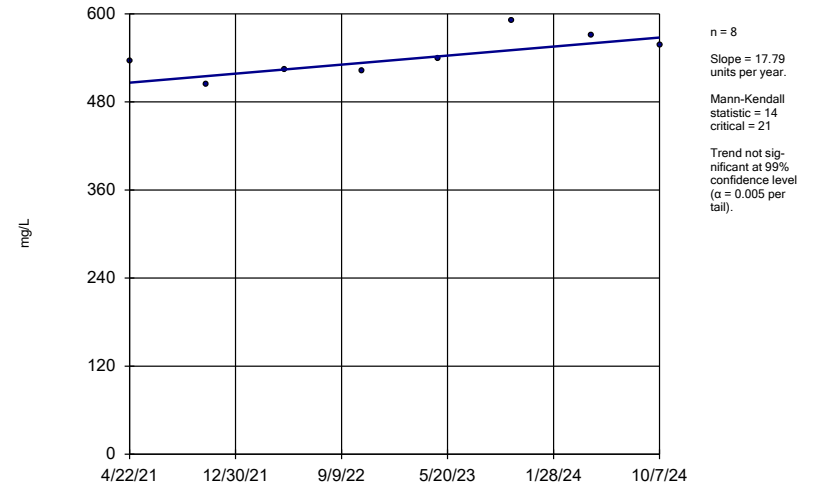
MW-203R (bg)



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

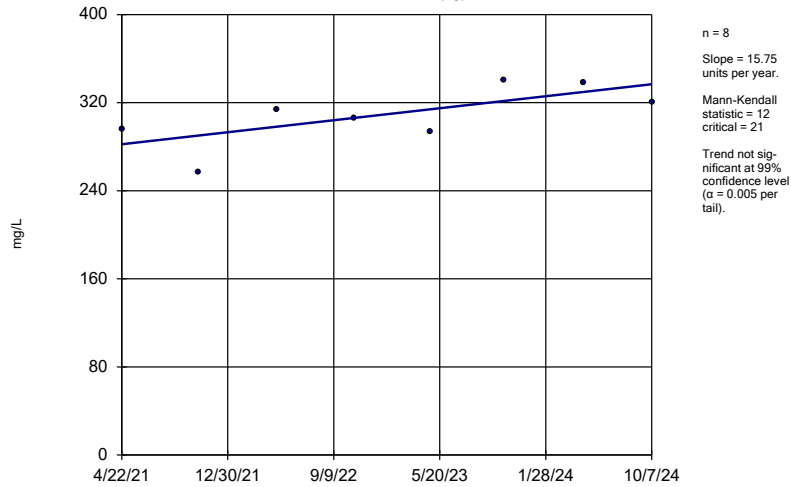
MW-204



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

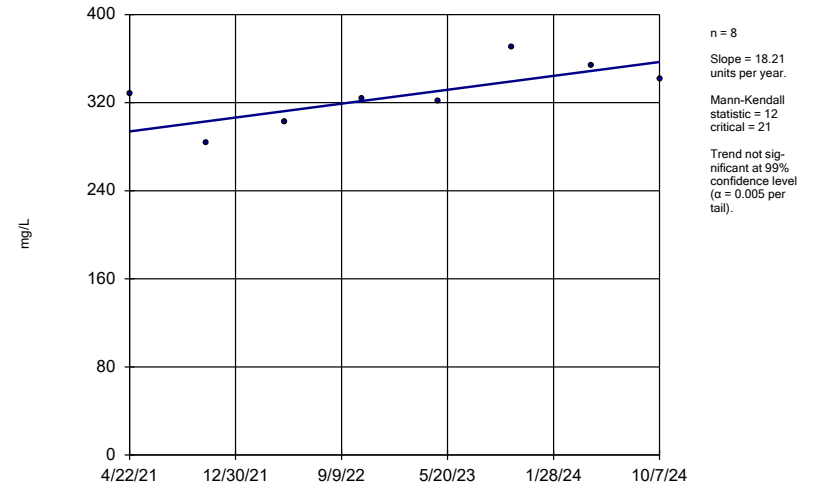
MW-205 (bg)



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

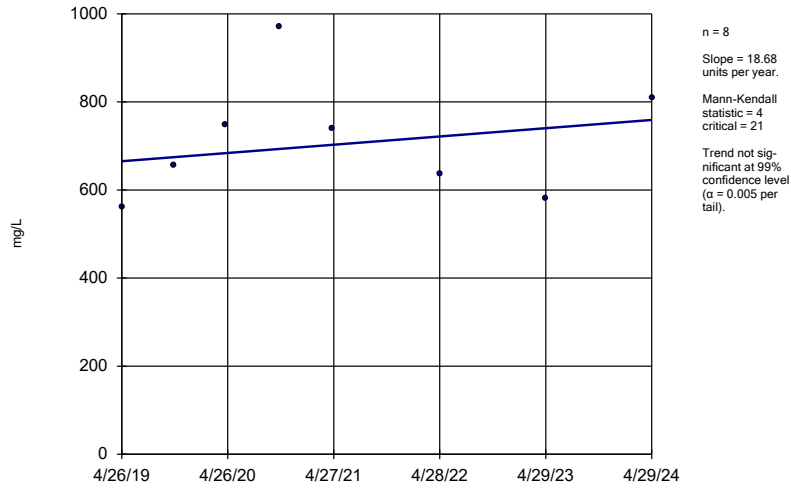
MW-206



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

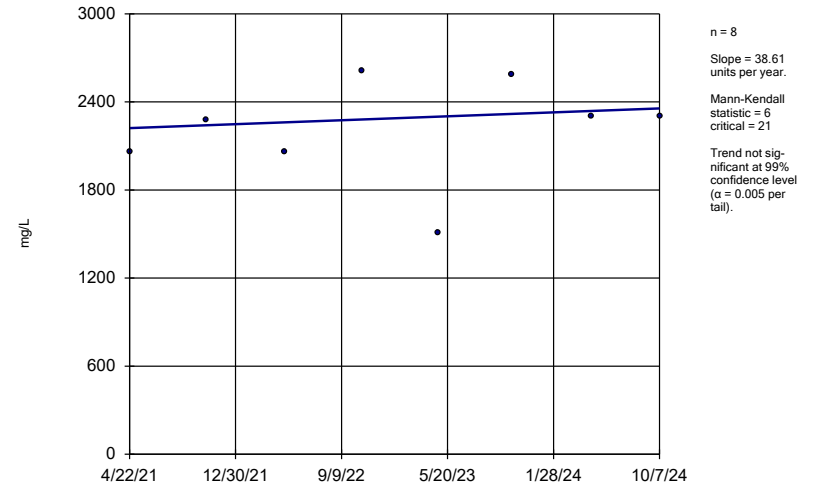
SW-1/OUTFALL4



Constituent: Total Dissolved Solids Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

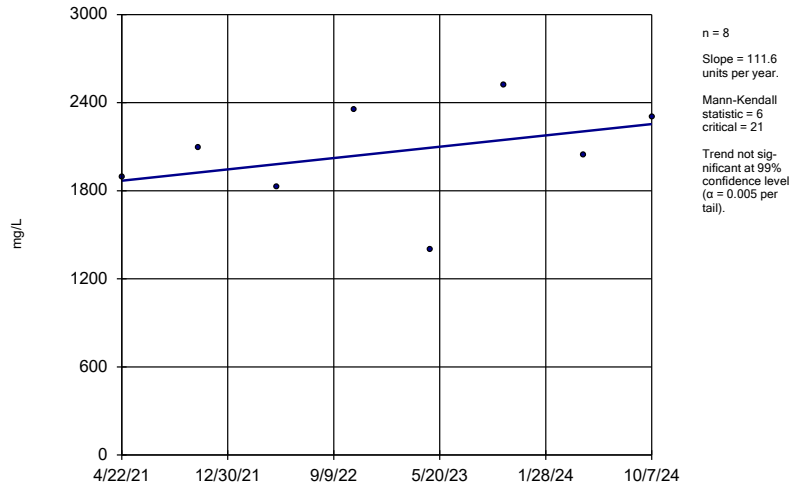
LDR-1



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

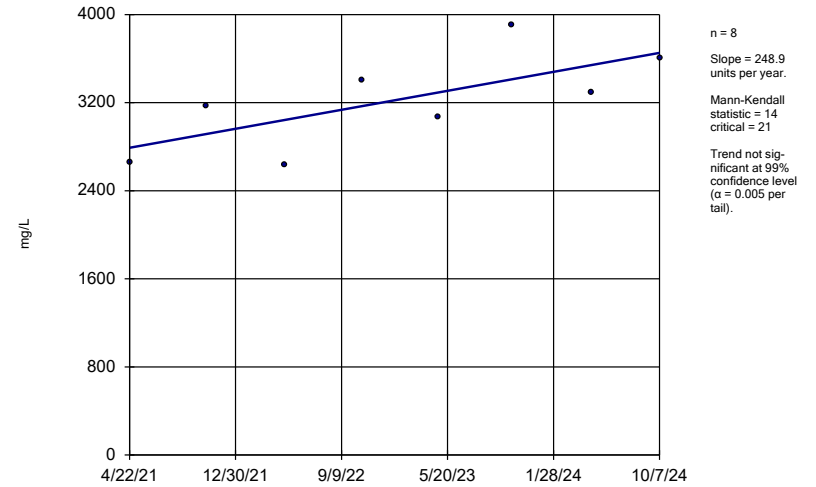
LDR-2



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

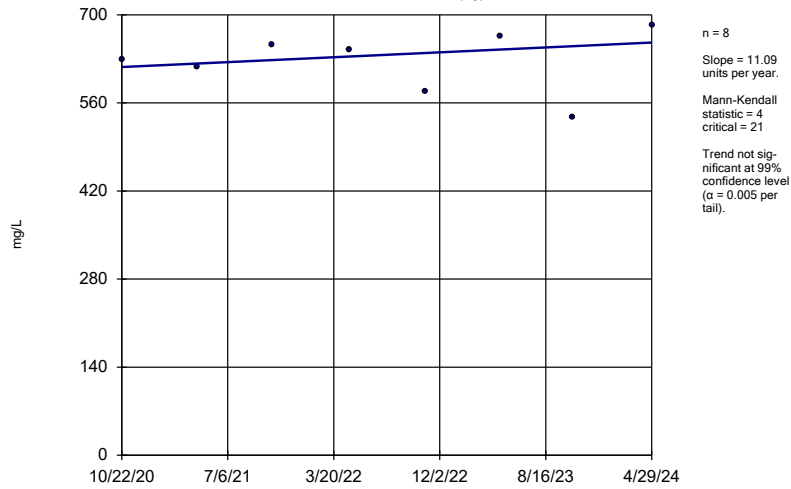
LDR-3



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

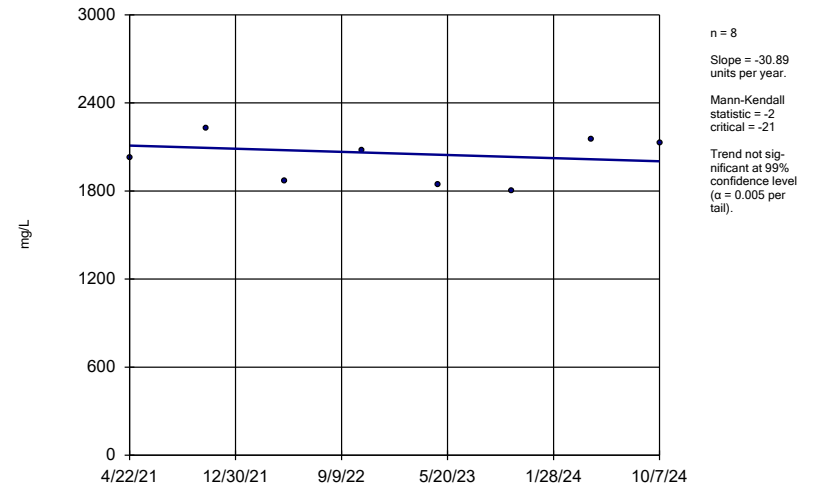
MW-101R-NP (bg)



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

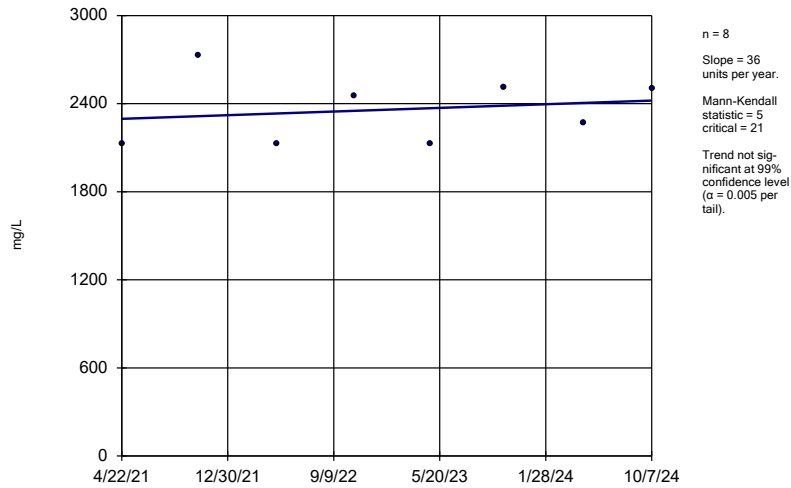
MW-102R-NP



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

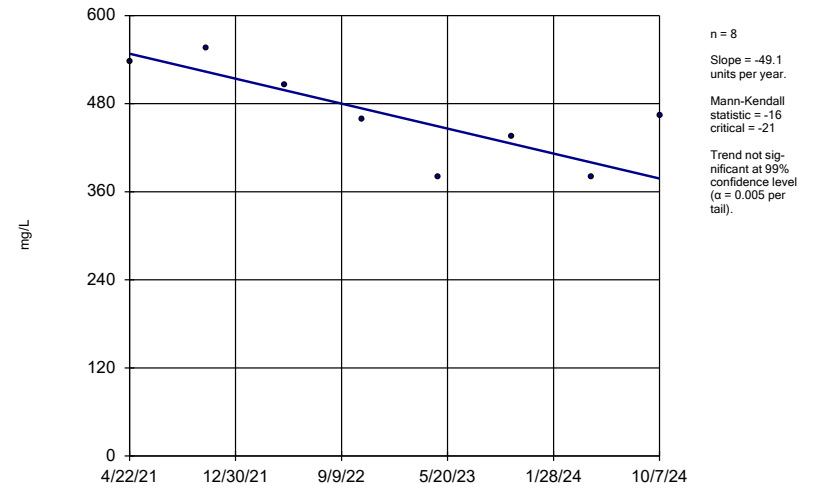
MW-103R-NP



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

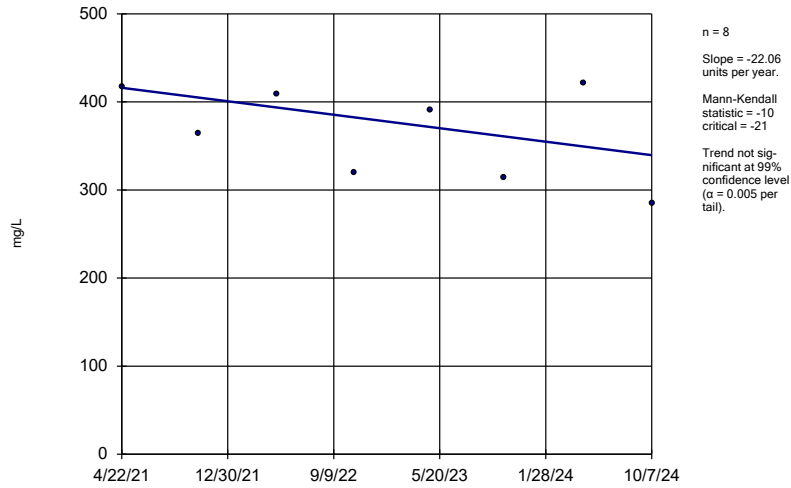
MW-201



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

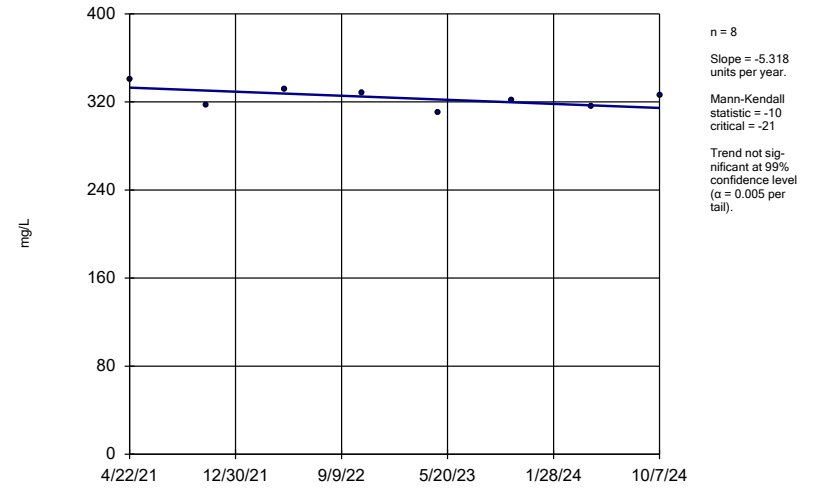
MW-202R



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

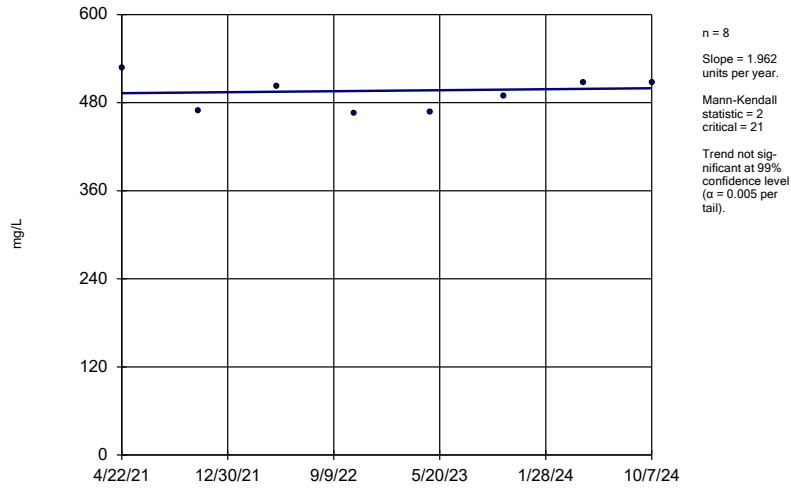
MW-203R (bg)



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

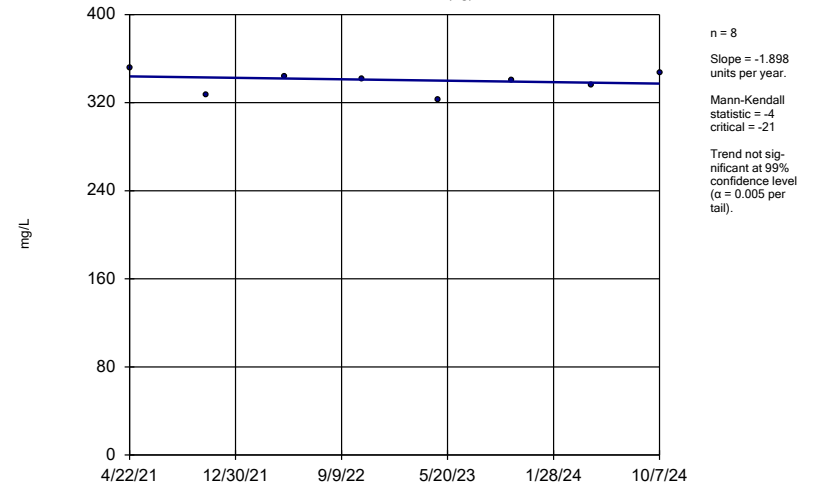
MW-204



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

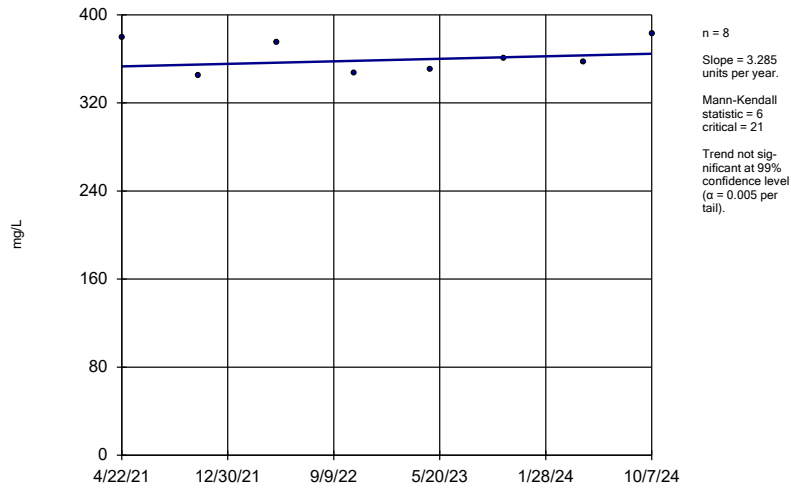
MW-205 (bg)



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

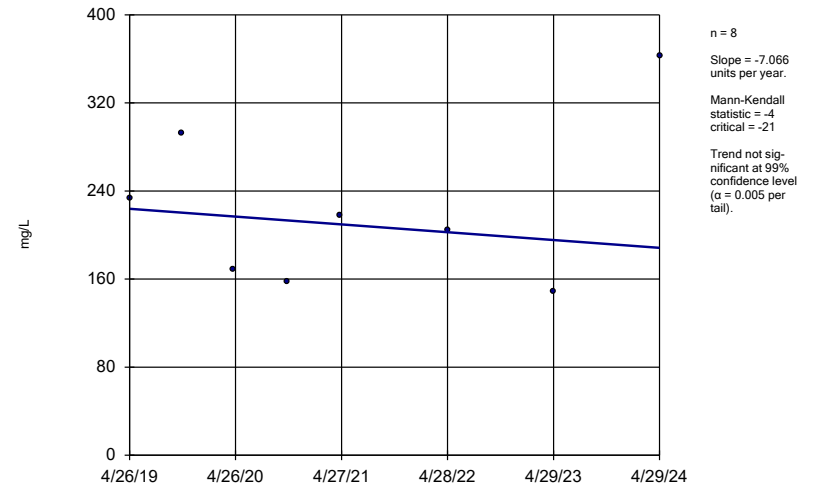
MW-206



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

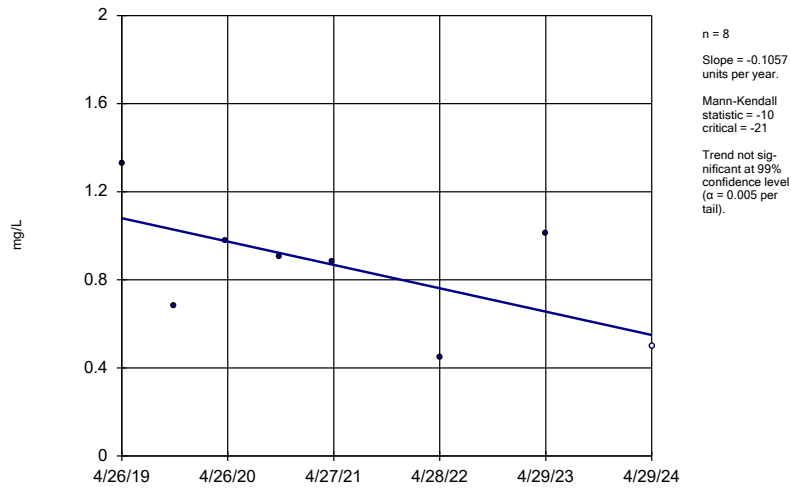
SW-1/OUTFALL4



Constituent: Total Hardness Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

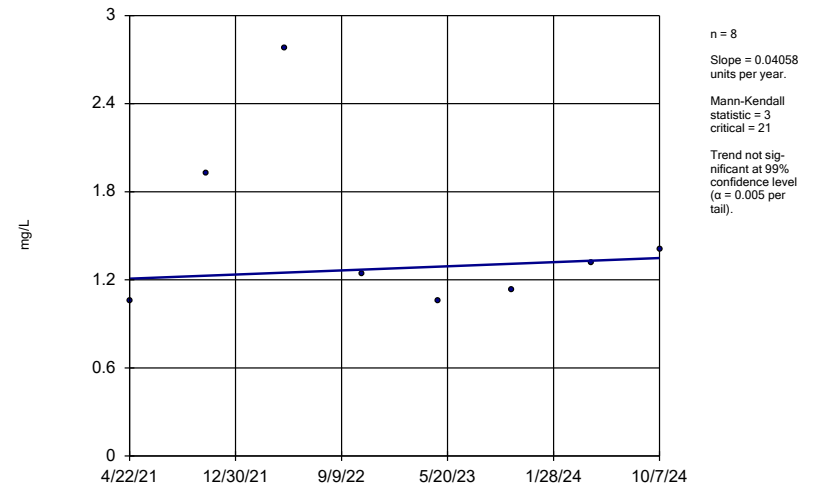
SW-1/OUTFALL4



Constituent: Total Kjeldahl Nitrogen Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

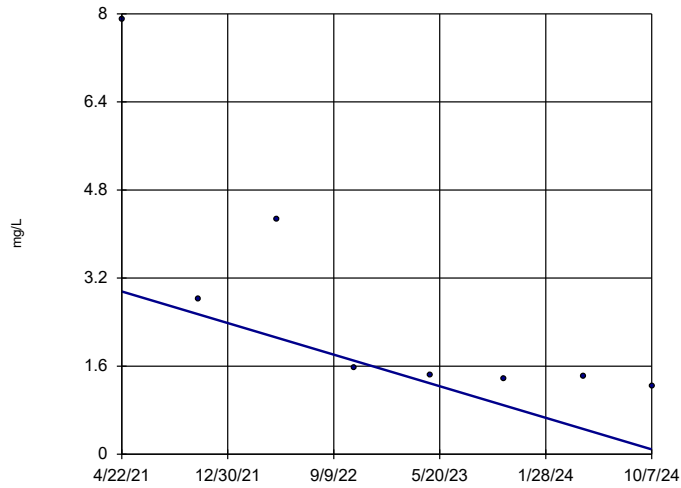
LDR-1



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-2

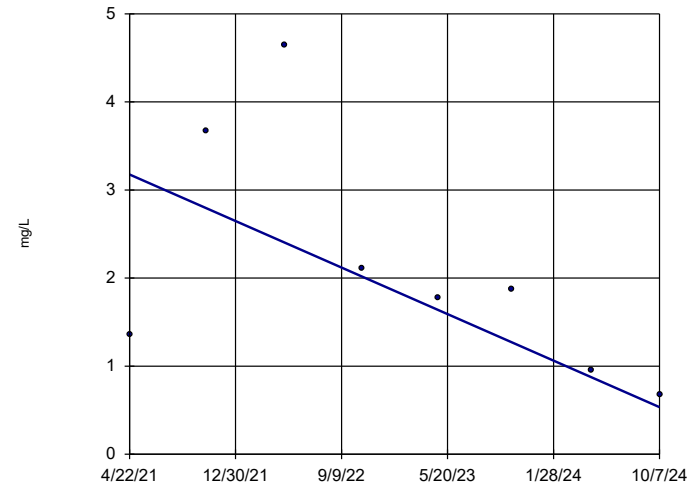


n = 8
 Slope = -0.828
 units per year.
 Mann-Kendall
 statistic = -24
 critical = -21
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

LDR-3

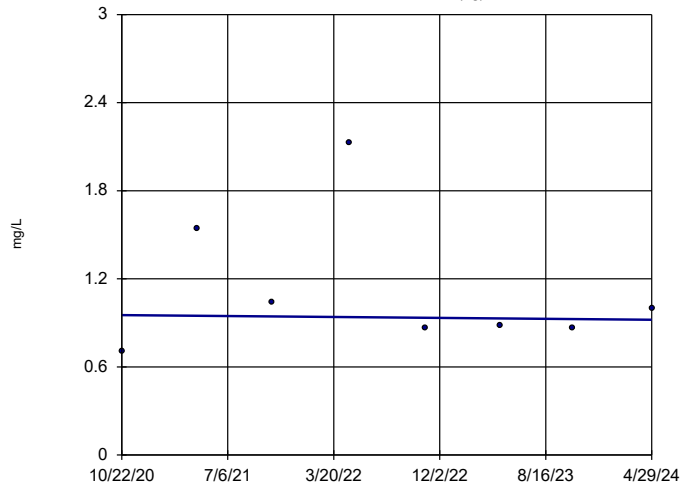


n = 8
 Slope = -0.7624
 units per year.
 Mann-Kendall
 statistic = -14
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

MW-101R-NP (bg)

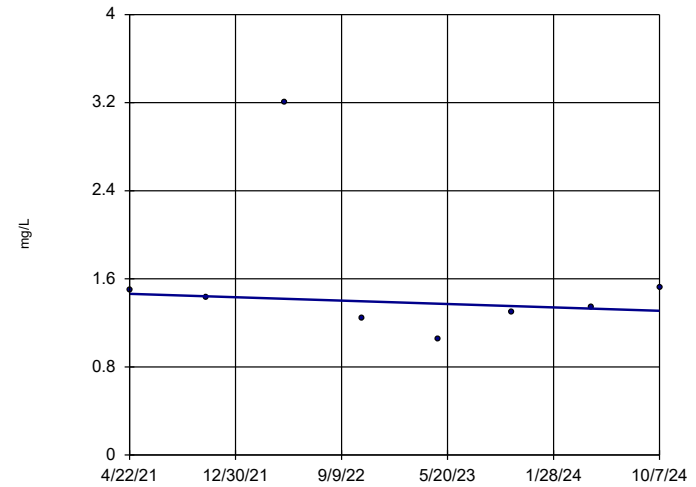


n = 8
 Slope = -0.008719
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

MW-102R-NP

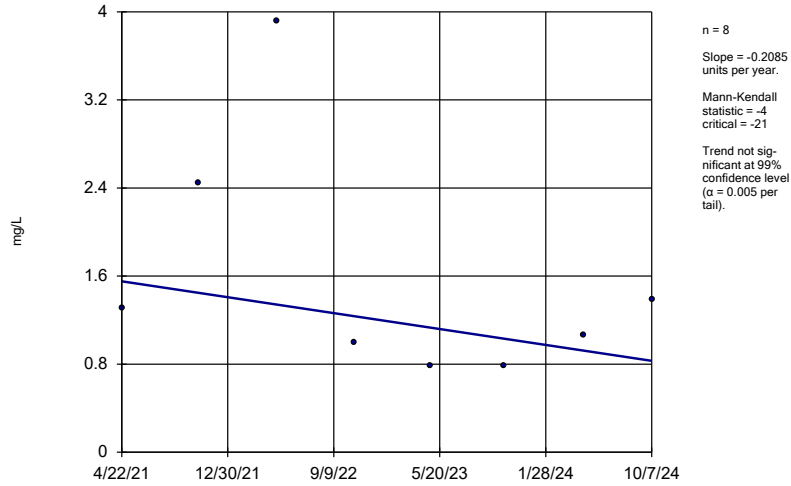


n = 8
 Slope = -0.04431
 units per year.
 Mann-Kendall
 statistic = -2
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
 CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

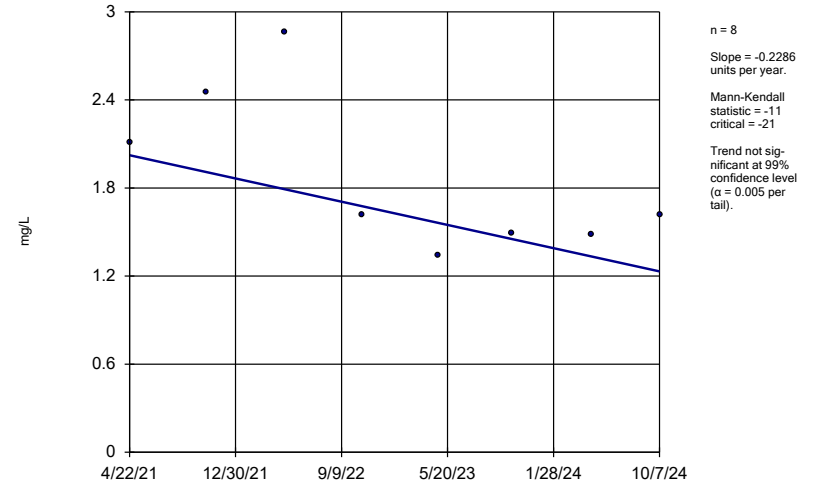
MW-103R-NP



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

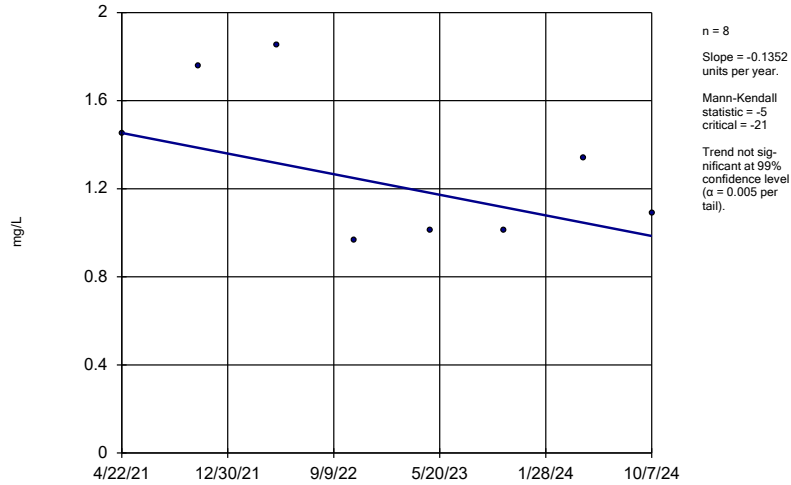
MW-201



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

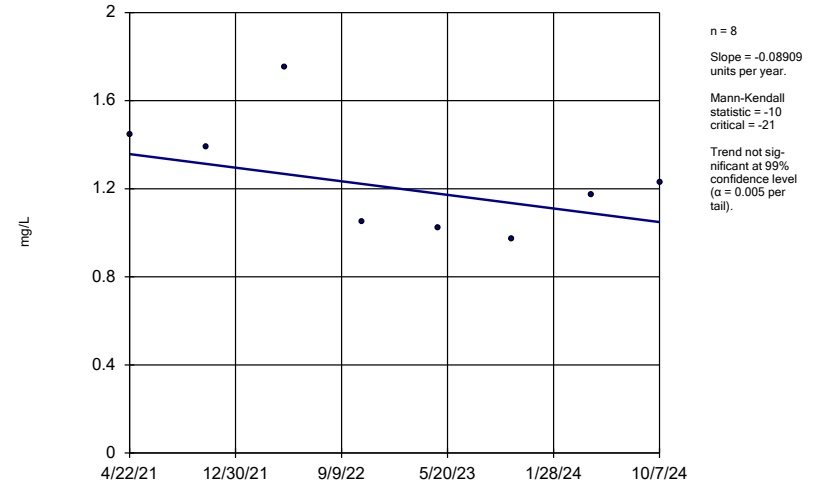
MW-202R



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

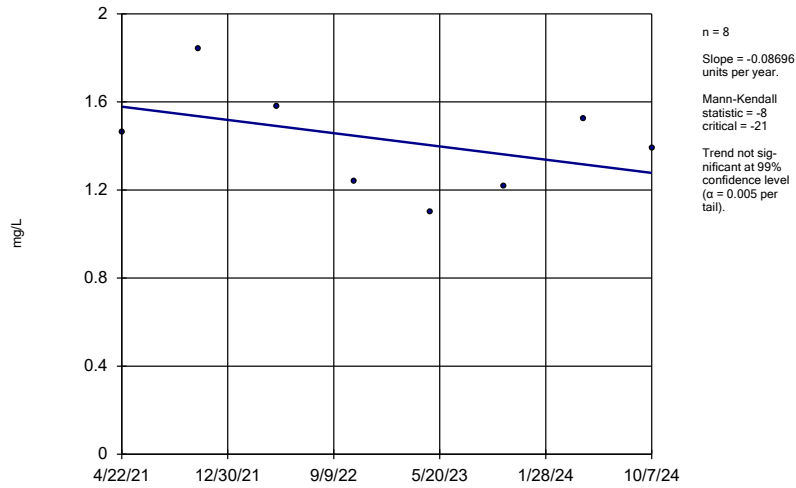
MW-203R (bg)



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

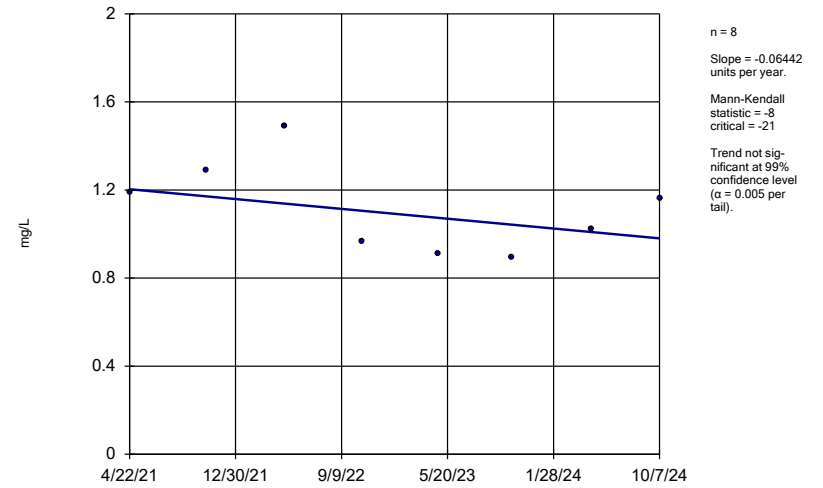
MW-204



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

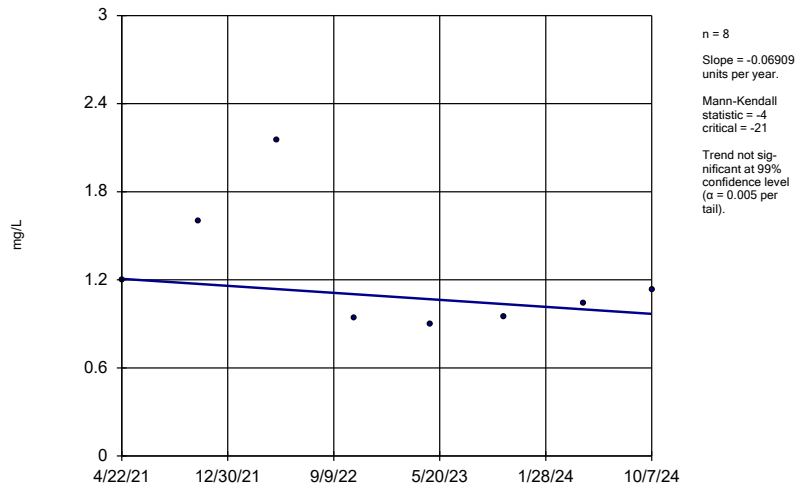
MW-205 (bg)



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

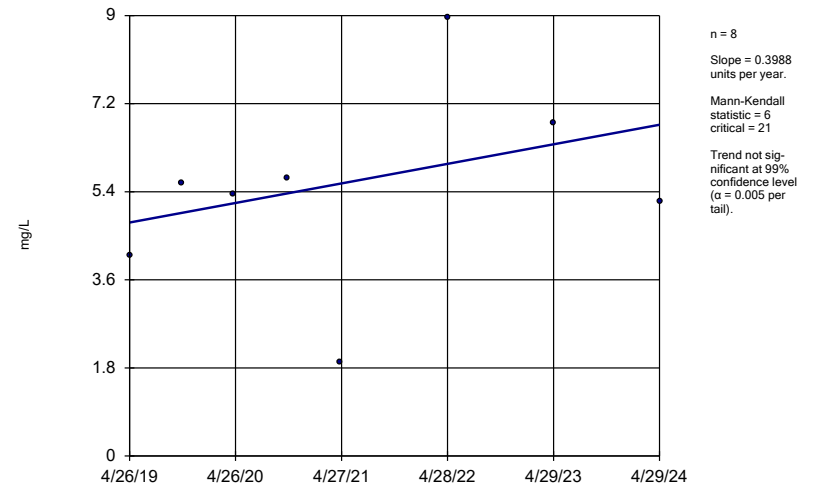
MW-206



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Sen's Slope Estimator

SW-1/OUTFALL4



Constituent: Total Organic Carbon Analysis Run 10/29/2024 12:15 PM View: 2024AWQR - Mann Kendall
CKD Monofill Client: Lehigh Cement Company Data: LCMNT-HMSP-2024AWQR-AM

Attachment B

Control Limits

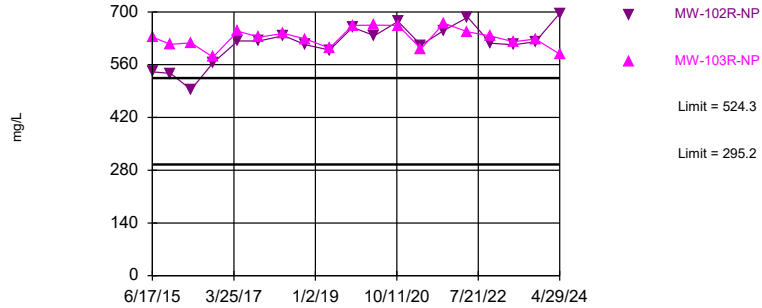
Spring Clay Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 10:05 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Alkalinity, Total [CaCO3] (mg/L)	MW-102R-NP	524.3	295.2	4/29/2024	696	Yes	15	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-103R-NP	524.3	295.2	4/29/2024	588	Yes	15	0	No	0.0001558	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-103R-NP	0.3278	n/a	4/29/2024	0.125J	No	29	62.07	No	0.0003117	Param Inter 1 of 2
Arsenic (mg/L)	MW-102R-NP	0.002845	n/a	4/29/2024	0.000713J	No	14	35.71	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-102R-NP	537.8	n/a	4/29/2024	696	Yes	8	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-103R-NP	537.8	n/a	4/29/2024	588	Yes	8	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-102R-NP	228.6	n/a	4/29/2024	455	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-103R-NP	228.6	n/a	4/29/2024	468	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-102R-NP	14.75	n/a	4/29/2024	5.44	No	33	18.18	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-103R-NP	14.75	n/a	4/29/2024	19.9	Yes	33	18.18	No	0.0003117	Param Inter 1 of 2
Lead (mg/L)	MW-102R-NP	0.003276	n/a	4/29/2024	0.000261J	No	14	50	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-102R-NP	128.7	n/a	4/29/2024	245	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-103R-NP	128.7	n/a	4/29/2024	268	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Nitrate/Nitrite as N (mg/L)	MW-102R-NP	0.1798	n/a	4/29/2024	0.0916J	No	15	53.33	No	0.0003117	Param Inter 1 of 2
Nitrate/Nitrite as N (mg/L)	MW-103R-NP	0.1798	n/a	4/29/2024	0.363	Yes	15	53.33	No	0.0003117	Param Inter 1 of 2
pH (S.U.)	MW-102R-NP	8.527	6.285	4/29/2024	6.73	No	24	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-103R-NP	8.527	6.285	4/29/2024	6.72	No	24	0	No	0.0001558	Param Inter 1 of 2
Potassium (mg/L)	MW-102R-NP	11.01	n/a	4/29/2024	12.3	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-103R-NP	11.01	n/a	4/29/2024	20.6	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Selenium (mg/L)	MW-102R-NP	0.002972	n/a	4/29/2024	0.00201J	No	14	92.86	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-102R-NP	63.56	n/a	4/29/2024	51.2	No	15	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-103R-NP	63.56	n/a	4/29/2024	57.3	No	15	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-102R-NP	2765	n/a	4/29/2024	2826	Yes	25	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-103R-NP	2765	n/a	4/29/2024	2881	Yes	25	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-102R-NP	709.8	n/a	4/29/2024	1480	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-103R-NP	709.8	n/a	4/29/2024	1790	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-102R-NP	2247	n/a	4/29/2024	2610	Yes	31	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-103R-NP	2247	n/a	4/29/2024	3100	Yes	31	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-102R-NP	1006	n/a	4/29/2024	2150	Yes	14	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-103R-NP	1006	n/a	4/29/2024	2270	Yes	14	0	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-102R-NP	2.138	n/a	4/29/2024	1.34	No	14	7.143	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-103R-NP	2.138	n/a	4/29/2024	1.06	No	14	7.143	No	0.0003117	Param Inter 1 of 2

Exceeds Limits: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

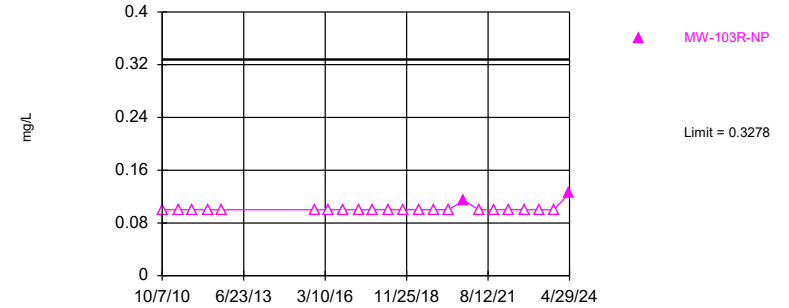


Background Data Summary: Mean=409.7, Std. Dev.=57.29, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

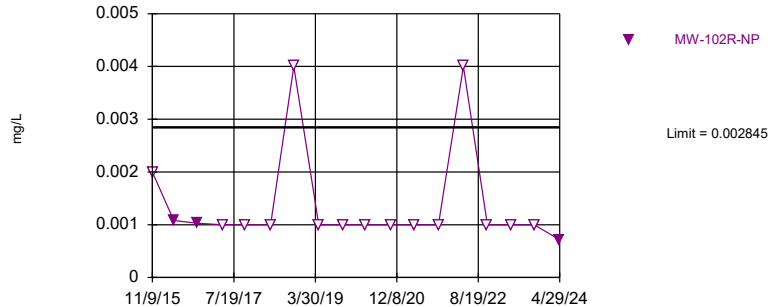


Background Data Summary: Mean=0.1459, Std. Dev.=0.09097, n=29, 62.07% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Ammonia as N Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

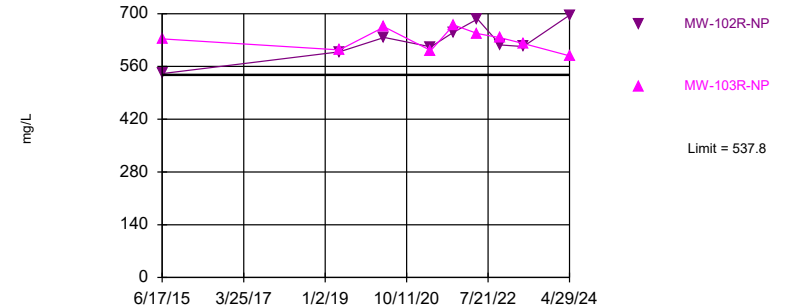


Background Data Summary: Mean=0.001512, Std. Dev.=0.0006665, n=14, 35.71% NDs. Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Arsenic Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

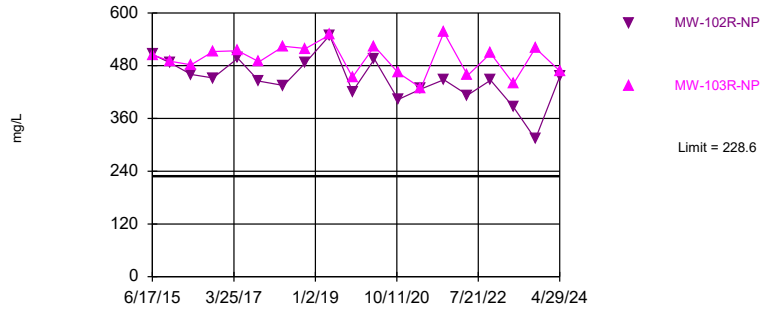


Background Data Summary: Mean=397.3, Std. Dev.=70.27, n=8. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Bicarbonate Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric



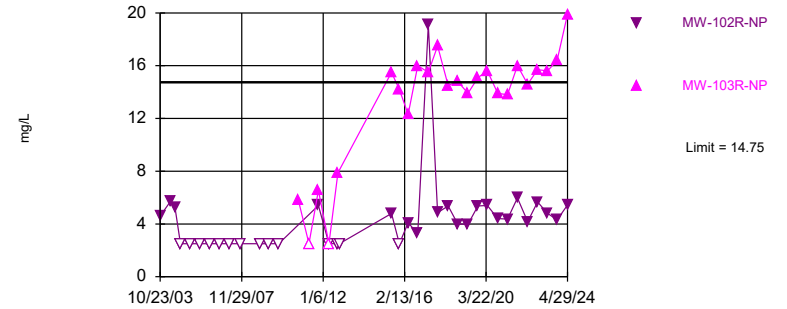
Background Data Summary: Mean=151.1, Std. Dev.=38.75, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Calcium Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Exceeds Limit: MW-103R-NP

Prediction Limit Interwell Parametric



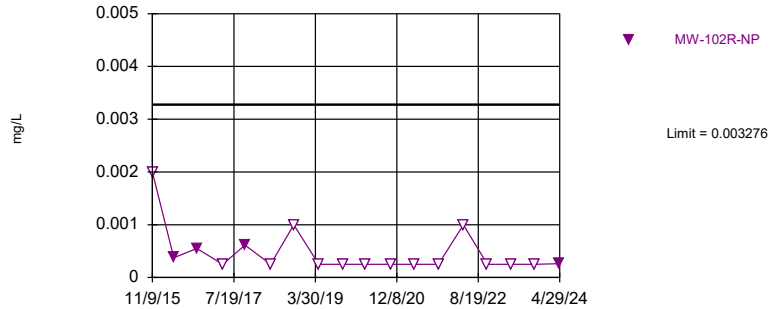
Background Data Summary: Mean=5.706, Std. Dev.=4.52, n=33, 18.18% NDs. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Within Limit

Prediction Limit Interwell Parametric

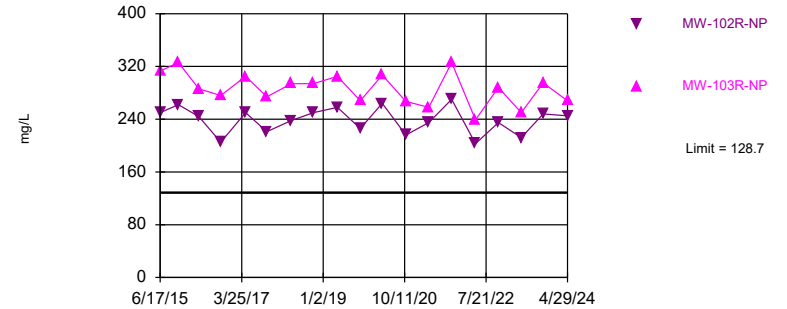


Background Data Summary: Mean=0.0008411, Std. Dev.=0.001217, n=14, 50% NDs. Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Lead Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

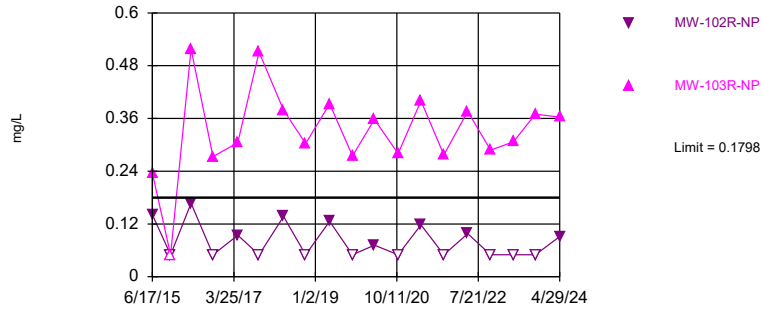


Background Data Summary: Mean=81.83, Std. Dev.=23.41, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-103R-NP

Prediction Limit
Interwell Parametric

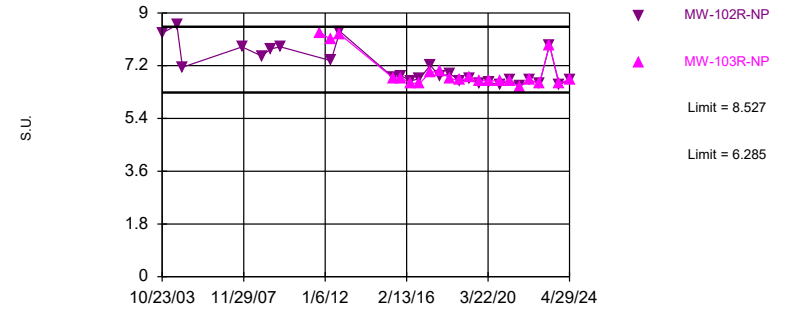


Background Data Summary: Mean=0.08043, Std. Dev.=0.04969, n=15, 53.33% NDs (user selected parametric test despite non-detects). Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limits

Prediction Limit
Interwell Parametric

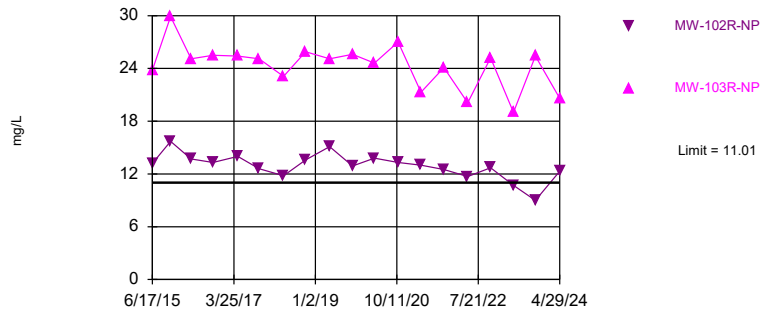


Background Data Summary: Mean=7.406, Std. Dev.=0.5606, n=24. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

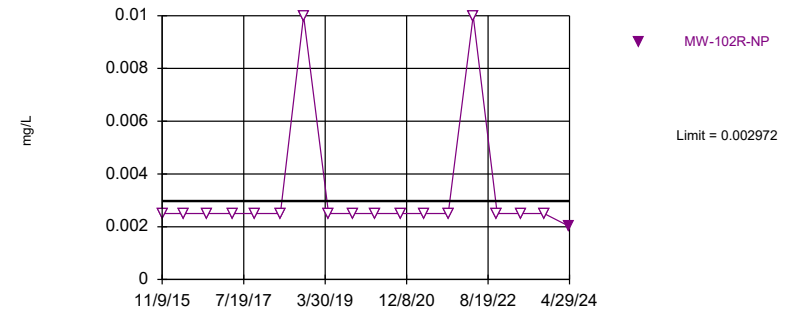


Background Data Summary: Mean=8.577, Std. Dev.=1.217, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Potassium Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limits

Prediction Limit
Interwell Parametric

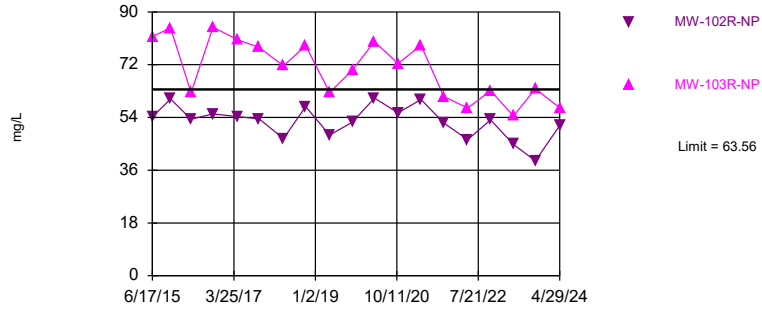


Background Data Summary: Mean=0.002427, Std. Dev.=0.0002726, n=14, 92.86% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Selenium Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit Interwell Parametric

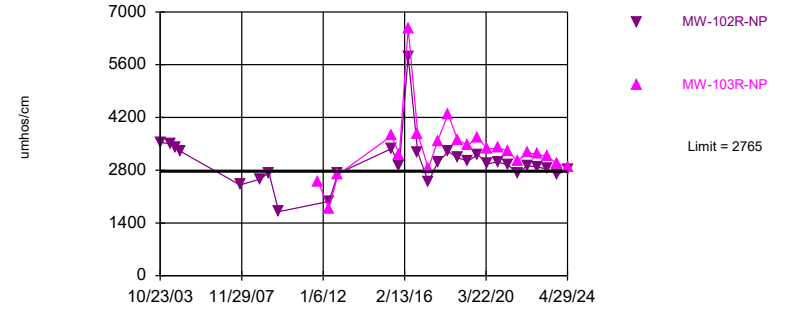


Background Data Summary: Mean=47.71, Std. Dev.=7.926, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Sodium Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

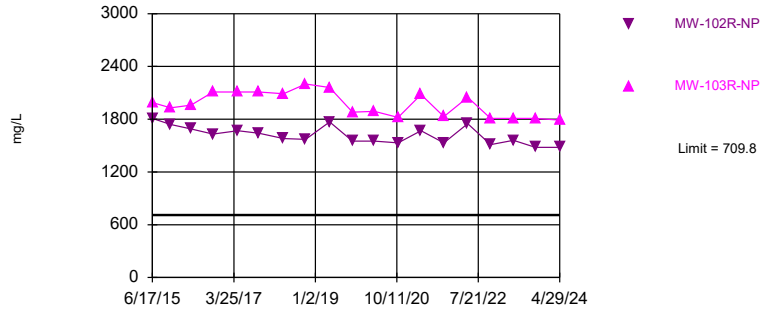


Background Data Summary: Mean=1485, Std. Dev.=639.8, n=25. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

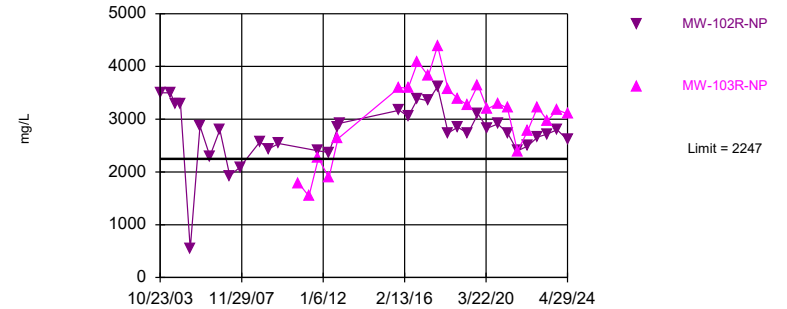


Background Data Summary: Mean=343.3, Std. Dev.=183.2, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

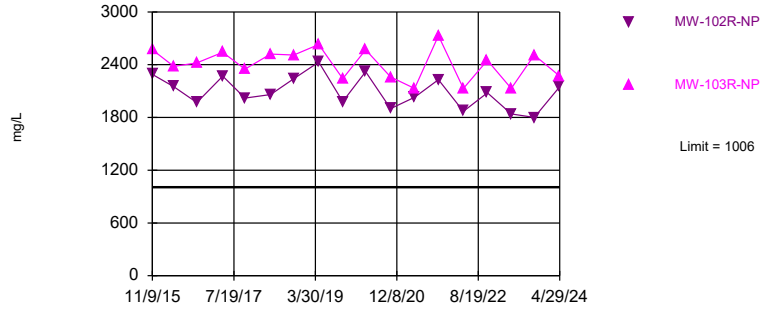


Background Data Summary: Mean=1234, Std. Dev.=506.8, n=31. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Total Dissolved Solids Analysis Run 10/29/2024 10:04 AM View: 2024AWQR Spring Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric



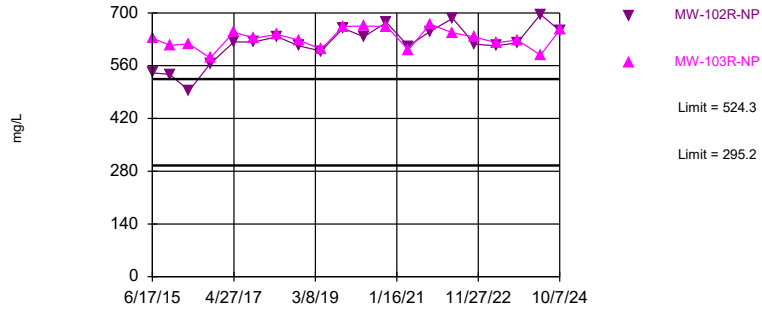
Fall Clay Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 10:55 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Alkalinity, Total [CaCO3] (mg/L)	MW-102R-NP	524.3	295.2	10/7/2024	653	Yes	15	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-103R-NP	524.3	295.2	10/7/2024	655	Yes	15	0	No	0.0001558	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-102R-NP	537.8	n/a	10/7/2024	653	Yes	8	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-103R-NP	537.8	n/a	10/7/2024	655	Yes	8	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-102R-NP	228.6	n/a	10/7/2024	446	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-103R-NP	228.6	n/a	10/7/2024	498	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-102R-NP	14.75	n/a	10/7/2024	4.89J	No	33	18.18	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-103R-NP	14.75	n/a	10/7/2024	22.5	Yes	33	18.18	No	0.0003117	Param Inter 1 of 2
Chromium (mg/L)	MW-102R-NP	0.007105	n/a	10/7/2024	0.00357J	No	14	78.57	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-102R-NP	128.7	n/a	10/7/2024	247	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-103R-NP	128.7	n/a	10/7/2024	305	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Nitrate/Nitrite as N (mg/L)	MW-103R-NP	0.1798	n/a	10/7/2024	0.435	Yes	15	53.33	No	0.0003117	Param Inter 1 of 2
pH (S.U.)	MW-102R-NP	8.527	6.285	10/7/2024	6.46	No	24	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-103R-NP	8.527	6.285	10/7/2024	6.58	No	24	0	No	0.0001558	Param Inter 1 of 2
Potassium (mg/L)	MW-102R-NP	11.01	n/a	10/7/2024	13	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-103R-NP	11.01	n/a	10/7/2024	25.4	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-102R-NP	63.56	n/a	10/7/2024	52.4	No	15	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-103R-NP	63.56	n/a	10/7/2024	61.4	No	15	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-102R-NP	2765	n/a	10/7/2024	3110	Yes	25	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-103R-NP	2765	n/a	10/7/2024	3463	Yes	25	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-102R-NP	709.8	n/a	10/7/2024	1510	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-103R-NP	709.8	n/a	10/7/2024	1770	Yes	15	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-102R-NP	2247	n/a	10/7/2024	2540	Yes	31	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-103R-NP	2247	n/a	10/7/2024	3100	Yes	31	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-102R-NP	1006	n/a	10/7/2024	2130	Yes	14	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-103R-NP	1006	n/a	10/7/2024	2500	Yes	14	0	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-102R-NP	2.138	n/a	10/7/2024	1.52	No	14	7.143	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-103R-NP	2.138	n/a	10/7/2024	1.39	No	14	7.143	No	0.0003117	Param Inter 1 of 2

Exceeds Limits: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

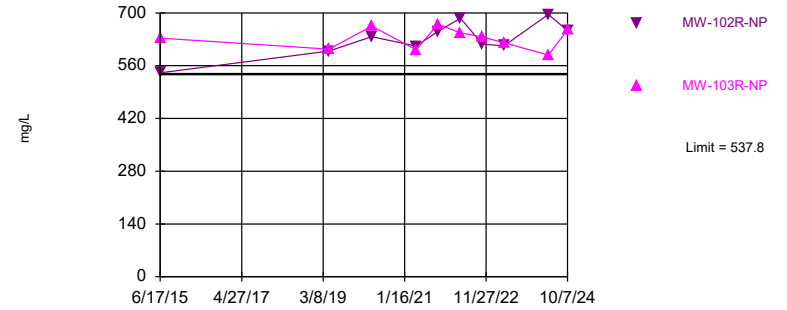


Background Data Summary: Mean=409.7, Std. Dev.=57.29, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

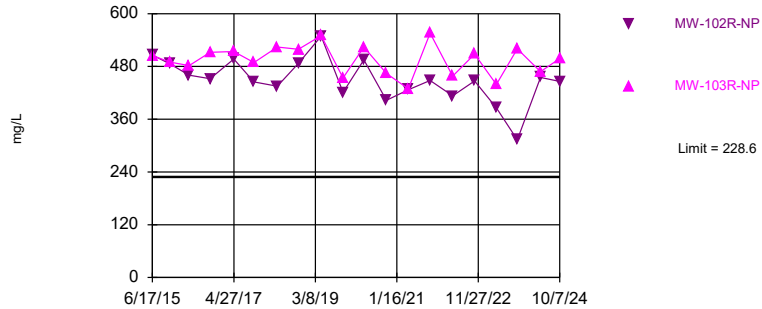


Background Data Summary: Mean=397.3, Std. Dev.=70.27, n=8. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Bicarbonate Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

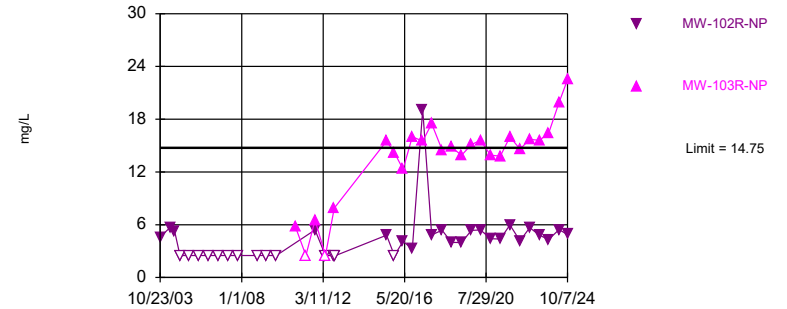


Background Data Summary: Mean=151.1, Std. Dev.=38.75, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Calcium Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-103R-NP

Prediction Limit
Interwell Parametric

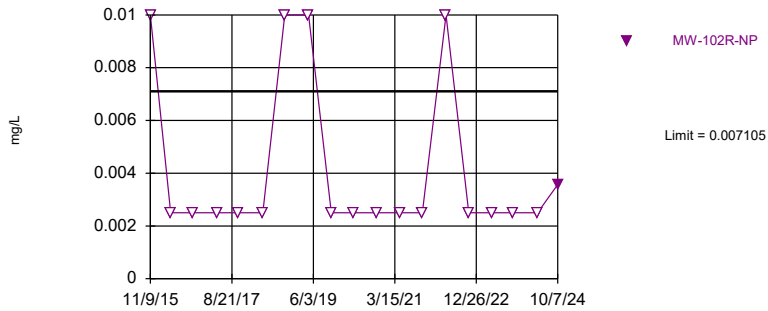


Background Data Summary: Mean=5.706, Std. Dev.=4.52, n=33, 18.18% NDs. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit Interwell Parametric

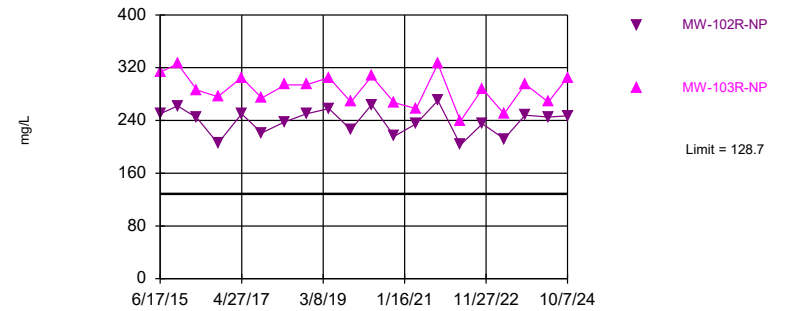


Background Data Summary: Mean=0.002906, Std. Dev.=0.002099, n=14, 78.57% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Chromium Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

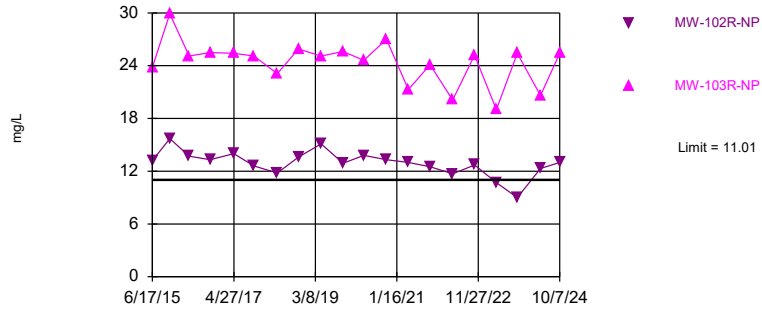
Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric



Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

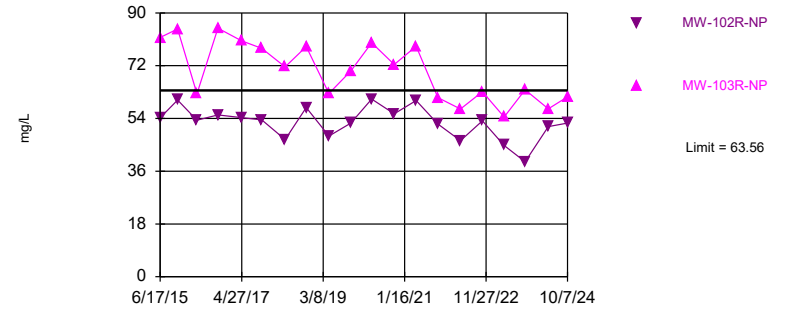


Background Data Summary: Mean=8.577, Std. Dev.=1.217, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Potassium Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit Interwell Parametric

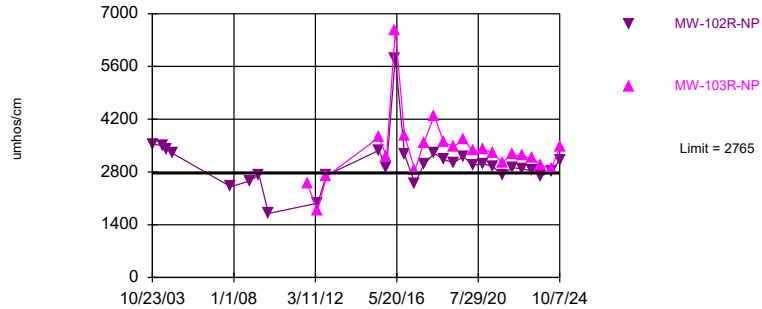


Background Data Summary: Mean=47.71, Std. Dev.=7.926, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Sodium Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

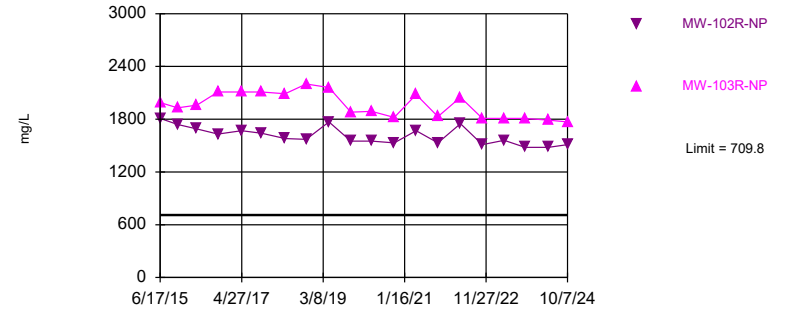


Background Data Summary: Mean=1485, Std. Dev.=639.8, n=25. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit Interwell Parametric

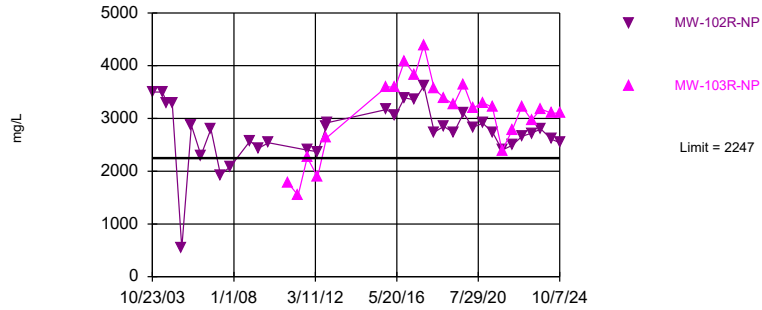


Background Data Summary: Mean=343.3, Std. Dev.=183.2, n=15. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

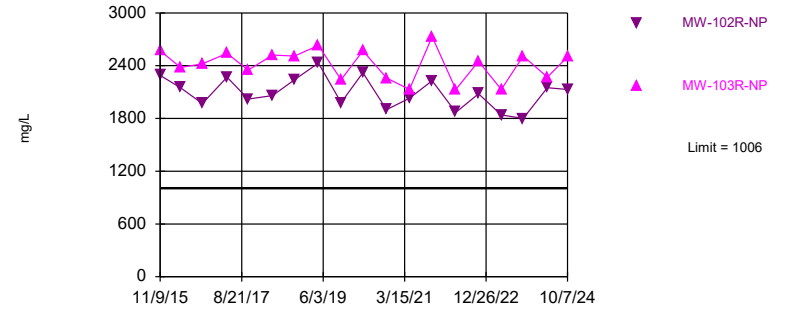


Background Data Summary: Mean=1234, Std. Dev.=506.8, n=31. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Total Dissolved Solids Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-102R-NP, MW-103R-NP

Prediction Limit
Interwell Parametric

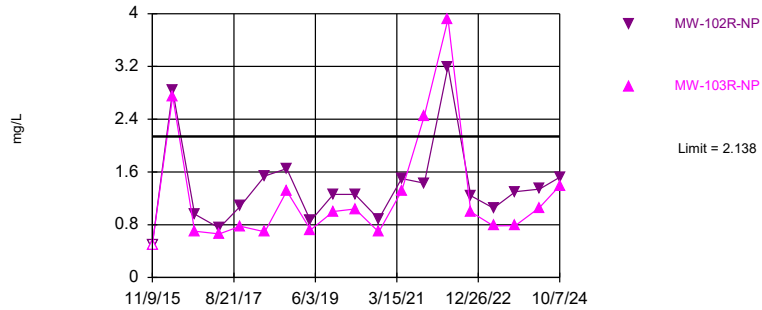


Background Data Summary: Mean=685.4, Std. Dev.=160.2, n=14. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Total Hardness Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=1.115, Std. Dev.=0.5118, n=14, 7.143% NDs. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Total Organic Carbon Analysis Run 10/29/2024 10:51 AM View: 2024AWQR Fall Clay CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Spring Bedrock Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 9:54 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Alkalinity, Total [CaCO3] (mg/L)	MW-201	383.9	303.1	4/29/2024	260	Yes	45	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-202R	383.9	303.1	4/29/2024	283	Yes	45	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-204	383.9	303.1	4/29/2024	306	No	45	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-206	383.9	303.1	4/29/2024	342	No	45	0	No	0.0001558	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-201	0.6253	n/a	4/29/2024	0.147J	No	69	5.797	No	0.0003117	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-202R	0.6253	n/a	4/29/2024	0.329	No	69	5.797	No	0.0003117	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-204	0.6253	n/a	4/29/2024	0.4555	No	69	5.797	No	0.0003117	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-206	0.6253	n/a	4/29/2024	0.335	No	69	5.797	No	0.0003117	Param Inter 1 of 2
Arsenic (mg/L)	MW-204	0.001199	n/a	4/29/2024	0.0007805J	No	38	97.37	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-201	372.2	n/a	4/29/2024	260	No	18	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-202R	372.2	n/a	4/29/2024	283	No	18	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-204	372.2	n/a	4/29/2024	306	No	18	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-206	372.2	n/a	4/29/2024	342	No	18	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-201	137.5	n/a	4/29/2024	61.3	No	38	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-202R	137.5	n/a	4/29/2024	80.9	No	38	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-204	137.5	n/a	4/29/2024	117	No	38	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-206	137.5	n/a	4/29/2024	81.9	No	38	0	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-201	30.3	n/a	4/29/2024	31.3	Yes	69	31.88	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-202R	30.3	n/a	4/29/2024	19.5	No	69	31.88	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-204	30.3	n/a	4/29/2024	26.95	No	69	31.88	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-206	30.3	n/a	4/29/2024	4.01	No	69	31.88	No	0.0003117	Param Inter 1 of 2
Chromium (mg/L)	MW-201	0.01904	n/a	4/29/2024	0.00181J	No	38	86.84	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-201	43.95	n/a	4/29/2024	55.1	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-202R	43.95	n/a	4/29/2024	53.3	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-204	43.95	n/a	4/29/2024	52.4	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-206	43.95	n/a	4/29/2024	37	No	38	0	No	0.0003117	Param Inter 1 of 2
pH (S.U.)	MW-201	10.18	5.515	4/29/2024	8.01	No	59	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-202R	10.18	5.515	4/29/2024	7.42	No	59	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-204	10.18	5.515	4/29/2024	6.98	No	59	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-206	10.18	5.515	4/29/2024	6.98	No	59	0	No	0.0001558	Param Inter 1 of 2
Potassium (mg/L)	MW-201	10.72	n/a	4/29/2024	29.9	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-202R	10.72	n/a	4/29/2024	6.86	No	38	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-204	10.72	n/a	4/29/2024	16.15	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-206	10.72	n/a	4/29/2024	6.29	No	38	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-201	20.63	n/a	4/29/2024	27.8	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-202R	20.63	n/a	4/29/2024	23.5	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-204	20.63	n/a	4/29/2024	20.75	Yes	38	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-206	20.63	n/a	4/29/2024	16.7	No	38	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-201	1763	n/a	4/29/2024	763.1	No	58	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-202R	1763	n/a	4/29/2024	748.1	No	58	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-204	1763	n/a	4/29/2024	862.3	No	58	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-206	1763	n/a	4/29/2024	638.9	No	58	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-201	24.01	n/a	4/29/2024	125	Yes	45	42.22	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-202R	24.01	n/a	4/29/2024	99.3	Yes	45	42.22	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-204	24.01	n/a	4/29/2024	149.5	Yes	45	42.22	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-206	24.01	n/a	4/29/2024	28.2	Yes	45	42.22	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-201	486.9	n/a	4/29/2024	458	No	69	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-202R	486.9	n/a	4/29/2024	432	No	69	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-204	486.9	n/a	4/29/2024	570	Yes	69	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-206	486.9	n/a	4/29/2024	354	No	69	0	No	0.0003117	Param Inter 1 of 2

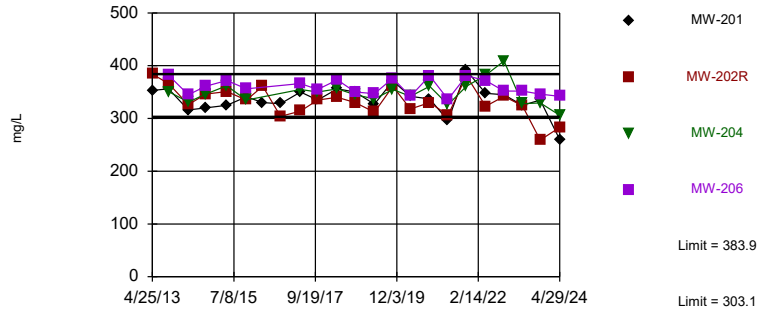
Spring Bedrock Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 9:54 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Total Hardness (mg/L)	MW-201	513.4	n/a	4/29/2024	380	No	45	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-202R	513.4	n/a	4/29/2024	421	No	45	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-204	513.4	n/a	4/29/2024	508	No	45	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-206	513.4	n/a	4/29/2024	357	No	45	0	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-201	2.855	n/a	4/29/2024	1.48	No	45	15.56	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-202R	2.855	n/a	4/29/2024	1.34	No	45	15.56	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-204	2.855	n/a	4/29/2024	1.525	No	45	15.56	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-206	2.855	n/a	4/29/2024	1.04	No	45	15.56	No	0.0003117	Param Inter 1 of 2

Exceeds Limits: MW-201, MW-202R

Prediction Limit
Interwell Parametric

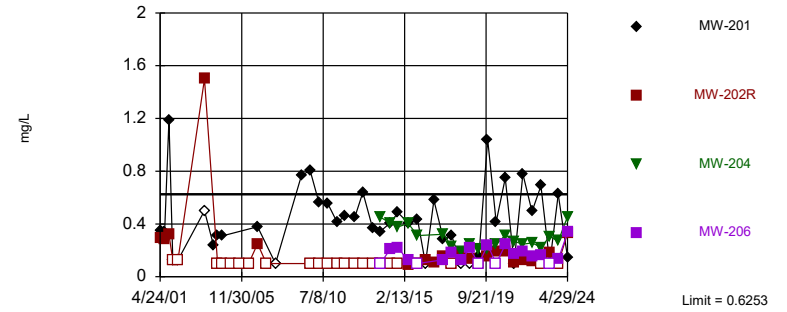


Background Data Summary: Mean=343.5, Std. Dev.=20.19, n=45. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Parametric



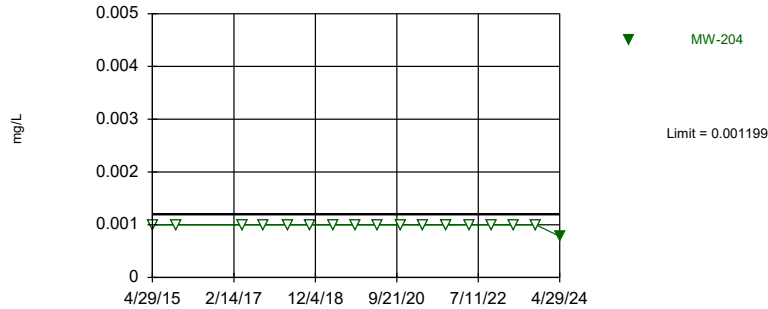
Background Data Summary: Mean=0.3195, Std. Dev.=0.1529, n=69, 5.797% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedro
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Constituent: Ammonia as N Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

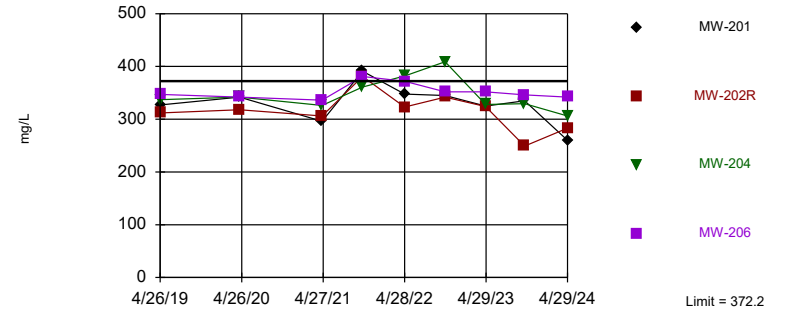
Prediction Limit
Interwell Parametric



Background Data Summary: Mean=0.0009699, Std. Dev.=0.0001146, n=38, 97.37% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Within Limit

Prediction Limit
Interwell Parametric



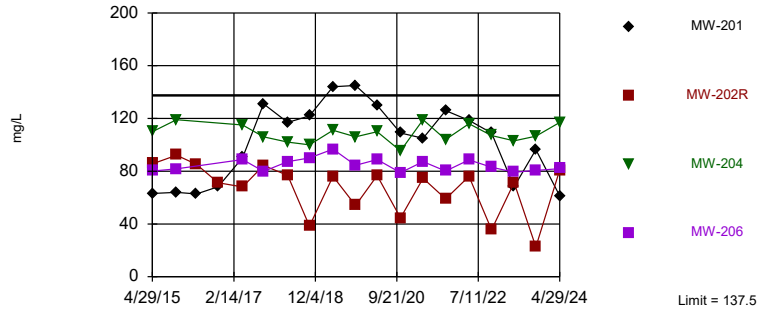
Background Data Summary: Mean=342.6, Std. Dev.=14.76, n=18. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Arsenic Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Constituent: Bicarbonate Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric



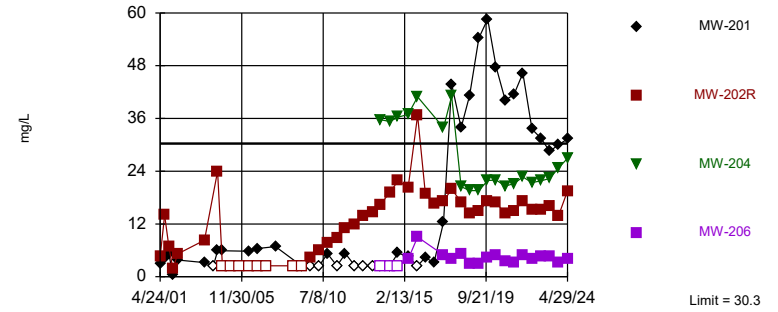
Background Data Summary: Mean=81.48, Std. Dev.=27.99, n=38. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Calcium Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Exceeds Limit: MW-201

Prediction Limit
Interwell Parametric



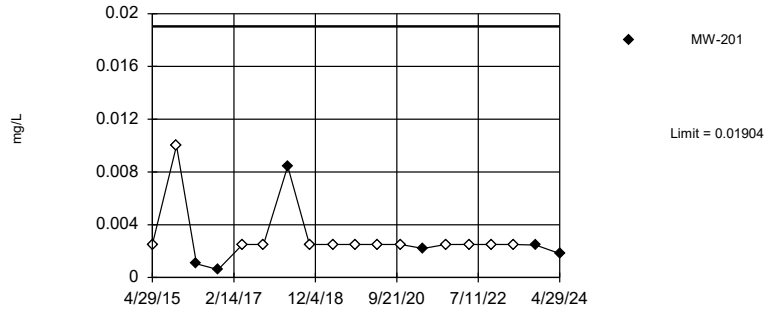
Background Data Summary: Mean=6.591, Std. Dev.=11.86, n=69, 31.88% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Parametric

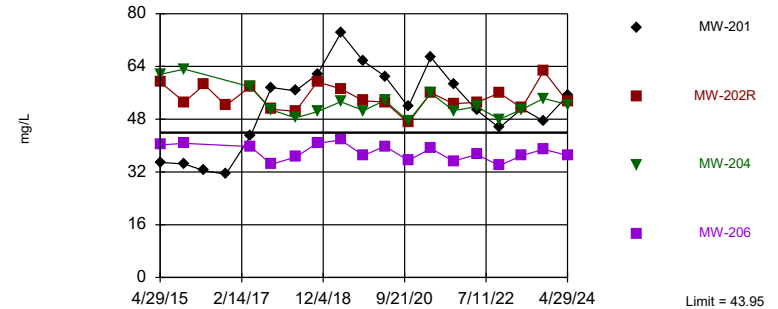


Background Data Summary: Mean=0.004079, Std. Dev.=0.00748, n=38, 86.84% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Chromium Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R, MW-204

Prediction Limit
Interwell Parametric

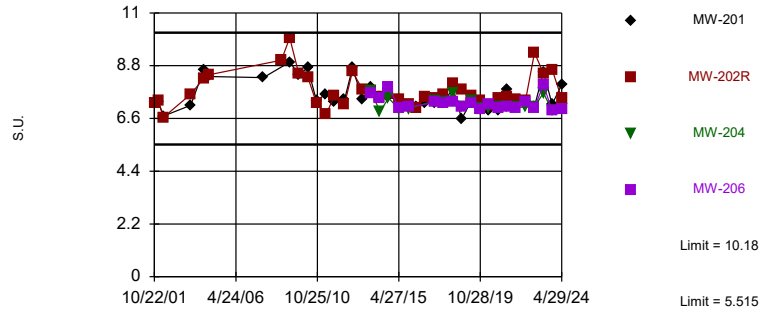


Background Data Summary: Mean=34.43, Std. Dev.=4.76, n=38. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limits

Prediction Limit
Interwell Parametric

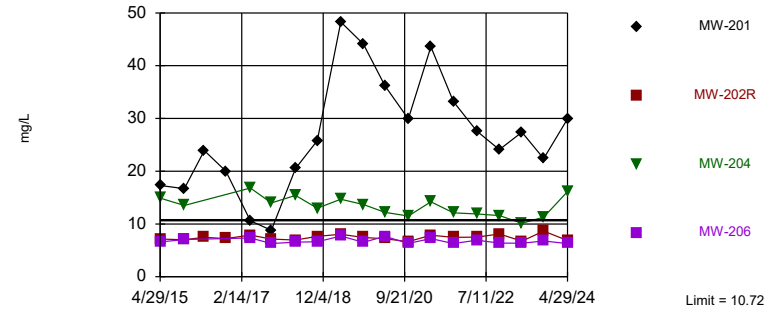


Background Data Summary: Mean=7.845, Std. Dev.=1.165, n=59. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-204

Prediction Limit
Interwell Parametric

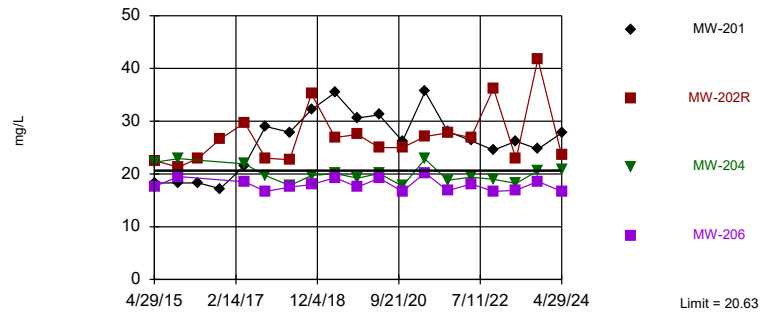


Background Data Summary: Mean=6.458, Std. Dev.=2.132, n=38. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Potassium Analysis Run 10/29/2024 9:14 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R, MW-204

Prediction Limit
Interwell Parametric

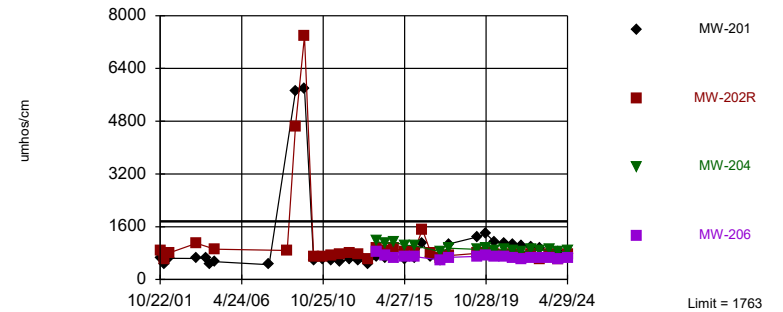


Background Data Summary: Mean=17.87, Std. Dev.=1.381, n=38. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Sodium Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

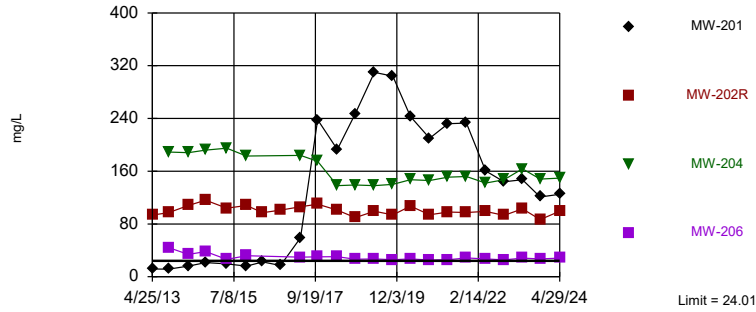


Background Data Summary: Mean=672.3, Std. Dev.=545.3, n=58. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R, MW-204, MW-206

Prediction Limit Interwell Parametric

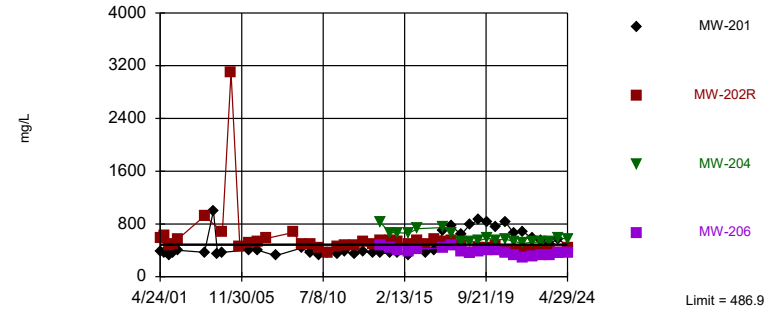


Background Data Summary: Mean=9.444, Std. Dev.=7.285, n=45, 42.22% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-204

Prediction Limit Interwell Parametric

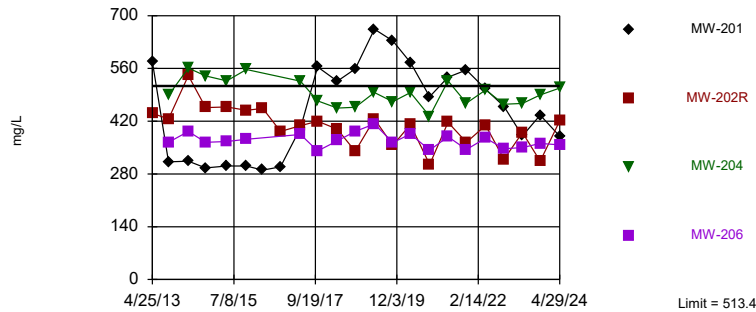


Background Data Summary: Mean=315.8, Std. Dev.=85.54, n=69. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Dissolved Solids Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit Interwell Parametric

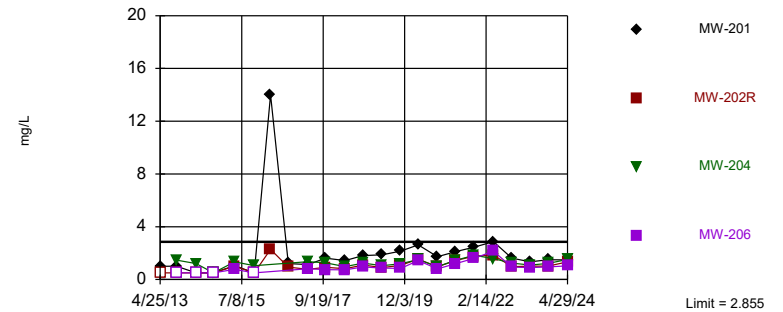


Background Data Summary: Mean=343.9, Std. Dev.=84.72, n=45. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Hardness Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit Interwell Parametric



Background Data Summary: Mean=1.119, Std. Dev.=0.8683, n=45, 15.56% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Organic Carbon Analysis Run 10/29/2024 9:15 AM View: 2024AWQR - Spring Bedrock
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Fall Bedrock Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 10:01 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Alkalinity, Total [CaCO3] (mg/L)	MW-201	383	304	10/7/2024	364	No	47	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-202R	383	304	10/7/2024	318	No	47	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-204	383	304	10/7/2024	346	No	47	0	No	0.0001558	Param Inter 1 of 2
Alkalinity, Total [CaCO3] (mg/L)	MW-206	383	304	10/7/2024	361	No	47	0	No	0.0001558	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-201	0.6199	n/a	10/7/2024	0.602	No	71	5.634	No	0.0003117	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-204	0.6199	n/a	10/7/2024	0.321J	No	71	5.634	No	0.0003117	Param Inter 1 of 2
Ammonia as N (mg/L)	MW-206	0.6199	n/a	10/7/2024	0.719	Yes	71	5.634	No	0.0003117	Param Inter 1 of 2
Arsenic (mg/L)	MW-201	0.001195	n/a	10/7/2024	0.0016J	No	40	97.5	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-201	370.6	n/a	10/7/2024	364	No	20	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-202R	370.6	n/a	10/7/2024	153	No	20	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-204	370.6	n/a	10/7/2024	346	No	20	0	No	0.0003117	Param Inter 1 of 2
Bicarbonate (mg/L)	MW-206	370.6	n/a	10/7/2024	361	No	20	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-201	135.8	n/a	10/7/2024	104	No	40	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-202R	135.8	n/a	10/7/2024	2.34	No	40	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-204	135.8	n/a	10/7/2024	111.5	No	40	0	No	0.0003117	Param Inter 1 of 2
Calcium (mg/L)	MW-206	135.8	n/a	10/7/2024	86.4	No	40	0	No	0.0003117	Param Inter 1 of 2
Carbonate (mg/L)	MW-202R	6.177	n/a	10/7/2024	165	Yes	20	100	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-201	29.9	n/a	10/7/2024	28.9	No	71	30.99	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-202R	29.9	n/a	10/7/2024	12.7	No	71	30.99	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-204	29.9	n/a	10/7/2024	22.1	No	71	30.99	No	0.0003117	Param Inter 1 of 2
Chloride (mg/L)	MW-206	29.9	n/a	10/7/2024	3.6J	No	71	30.99	No	0.0003117	Param Inter 1 of 2
Chromium (mg/L)	MW-202R	0.01859	n/a	10/7/2024	0.00122J	No	40	87.5	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-201	43.77	n/a	10/7/2024	49.5	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-202R	43.77	n/a	10/7/2024	67.7	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-204	43.77	n/a	10/7/2024	55.4	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Magnesium (mg/L)	MW-206	43.77	n/a	10/7/2024	40.6	No	40	0	No	0.0003117	Param Inter 1 of 2
Nitrate/Nitrite as N (mg/L)	MW-202R	0.05	n/a	10/7/2024	0.139	Yes	47	100	No	0.0003117	Param Inter 1 of 2
pH (S.U.)	MW-201	10.13	5.506	10/7/2024	7.25	No	61	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-202R	10.13	5.506	10/7/2024	9.67	No	61	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-204	10.13	5.506	10/7/2024	6.89	No	61	0	No	0.0001558	Param Inter 1 of 2
pH (S.U.)	MW-206	10.13	5.506	10/7/2024	6.96	No	61	0	No	0.0001558	Param Inter 1 of 2
Potassium (mg/L)	MW-201	10.61	n/a	10/7/2024	23.2	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-202R	10.61	n/a	10/7/2024	9.63	No	40	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-204	10.61	n/a	10/7/2024	12.85	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Potassium (mg/L)	MW-206	10.61	n/a	10/7/2024	7.06	No	40	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-201	20.56	n/a	10/7/2024	25.2	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-202R	20.56	n/a	10/7/2024	56.4	Yes	40	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-204	20.56	n/a	10/7/2024	19.9	No	40	0	No	0.0003117	Param Inter 1 of 2
Sodium (mg/L)	MW-206	20.56	n/a	10/7/2024	18.3	No	40	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-201	1743	n/a	10/7/2024	951.8	No	60	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-202R	1743	n/a	10/7/2024	680.3	No	60	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-204	1743	n/a	10/7/2024	954.1	No	60	0	No	0.0003117	Param Inter 1 of 2
Specific Conductance (umhos/cm)	MW-206	1743	n/a	10/7/2024	706.3	No	60	0	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-201	23.99	n/a	10/7/2024	119	Yes	47	42.55	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-202R	23.99	n/a	10/7/2024	68.9	Yes	47	42.55	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-204	23.99	n/a	10/7/2024	146.5	Yes	47	42.55	No	0.0003117	Param Inter 1 of 2
Sulfate (mg/L)	MW-206	23.99	n/a	10/7/2024	30.3	Yes	47	42.55	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-201	484.3	n/a	10/7/2024	522	Yes	71	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-202R	484.3	n/a	10/7/2024	386	No	71	0	No	0.0003117	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-204	484.3	n/a	10/7/2024	557	Yes	71	0	No	0.0003117	Param Inter 1 of 2

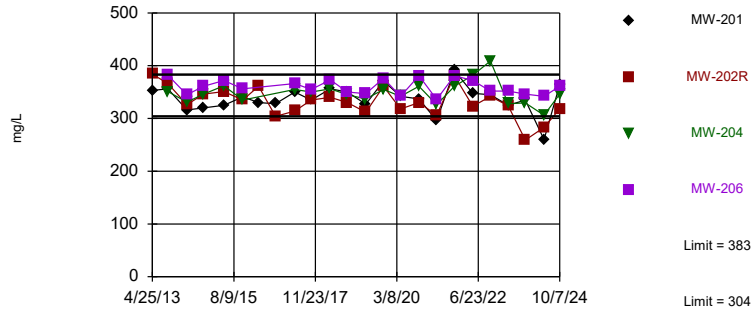
Fall Bedrock Control Limit

CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master Printed 10/29/2024, 10:01 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids (mg/L)	MW-206	484.3	n/a	10/7/2024	342	No	71	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-201	509.4	n/a	10/7/2024	464	No	47	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-202R	509.4	n/a	10/7/2024	285	No	47	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-204	509.4	n/a	10/7/2024	506.5	No	47	0	No	0.0003117	Param Inter 1 of 2
Total Hardness (mg/L)	MW-206	509.4	n/a	10/7/2024	383	No	47	0	No	0.0003117	Param Inter 1 of 2
Total Kjeldahl Nitrogen (mg/L)	MW-201	0.6815	n/a	10/7/2024	0.601J	No	47	70.21	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-201	2.821	n/a	10/7/2024	1.62	No	47	14.89	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-202R	2.821	n/a	10/7/2024	1.09	No	47	14.89	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-204	2.821	n/a	10/7/2024	1.39	No	47	14.89	No	0.0003117	Param Inter 1 of 2
Total Organic Carbon (mg/L)	MW-206	2.821	n/a	10/7/2024	1.13	No	47	14.89	No	0.0003117	Param Inter 1 of 2

Within Limits

Prediction Limit
Interwell Parametric



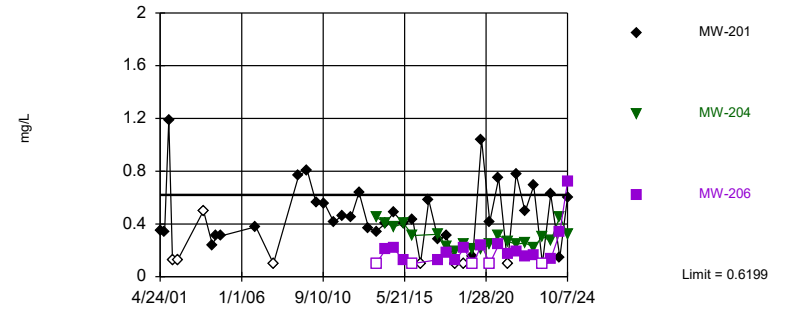
Background Data Summary: Mean=343.5, Std. Dev.=19.75, n=47. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Exceeds Limit: MW-206

Prediction Limit
Interwell Parametric



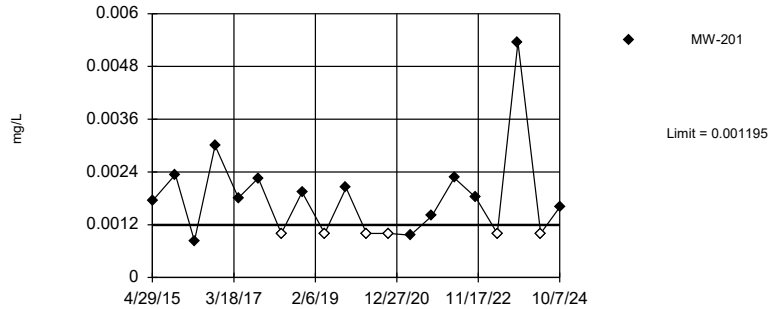
Background Data Summary: Mean=0.3167, Std. Dev.=0.1516, n=71, 5.634% NDs. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Ammonia as N Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Parametric

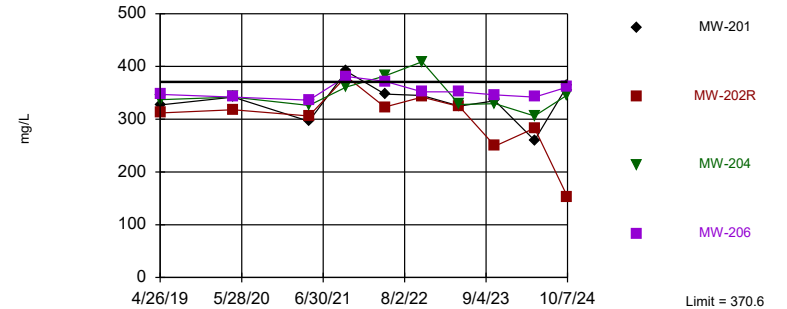


Background Data Summary: Mean=0.0009714, Std. Dev.=0.0001118, n=40, 97.5% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Arsenic Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

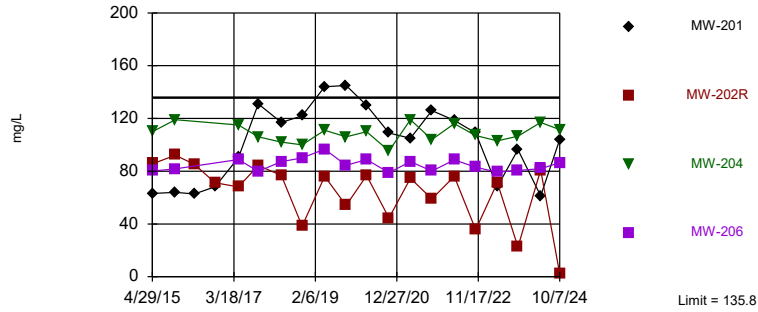


Background Data Summary: Mean=342.7, Std. Dev.=13.96, n=20. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Bicarbonate Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric



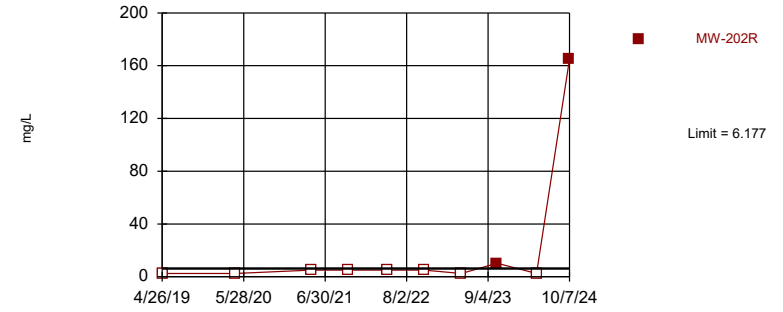
Background Data Summary: Mean=81.25, Std. Dev.=27.29, n=40. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Calcium Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Exceeds Limit: MW-202R

Prediction Limit
Interwell Parametric



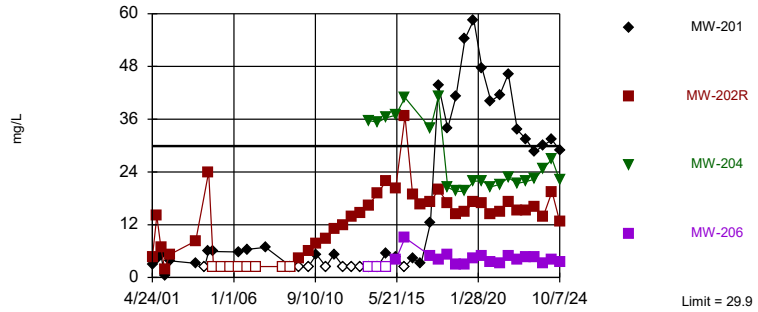
Background Data Summary: Mean=3.625, Std. Dev.=1.276, n=20, 100% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Carbonate Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Parametric



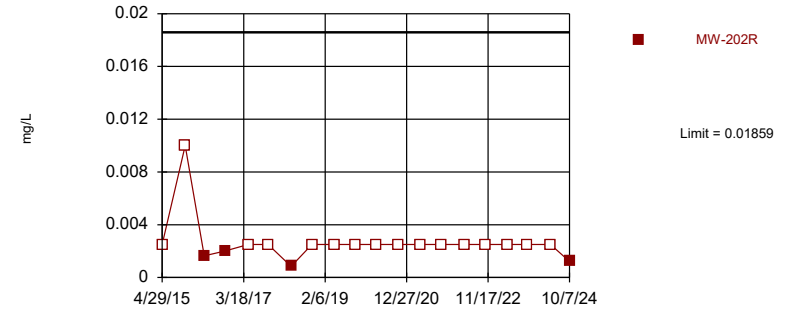
Background Data Summary: Mean=6.518, Std. Dev.=11.69, n=71, 30.99% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Parametric

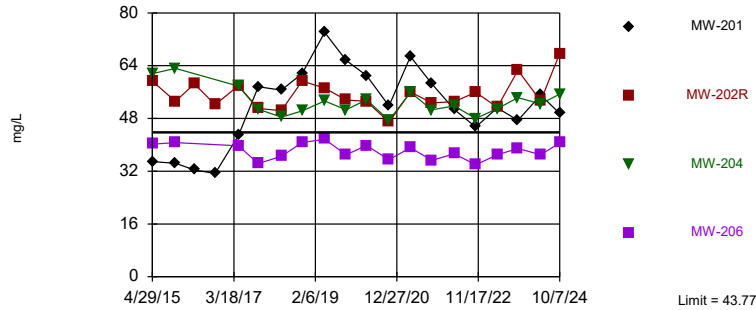


Background Data Summary: Mean=0.004, Std. Dev.=0.007294, n=40, 87.5% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Chromium Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R, MW-204

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=34.46, Std. Dev.=4.657, n=40. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.

Exceeds Limit: MW-202R

Prediction Limit
Interwell Parametric

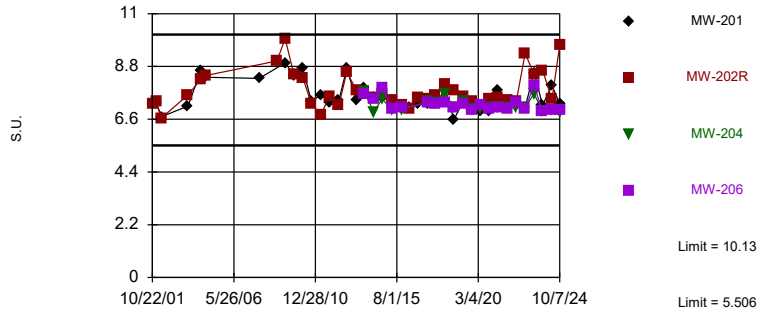


Background Data Summary: Mean=0.05, Std. Dev.=0, n=47, 100% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Nitrate/Nitrite as N Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limits

Prediction Limit
Interwell Parametric

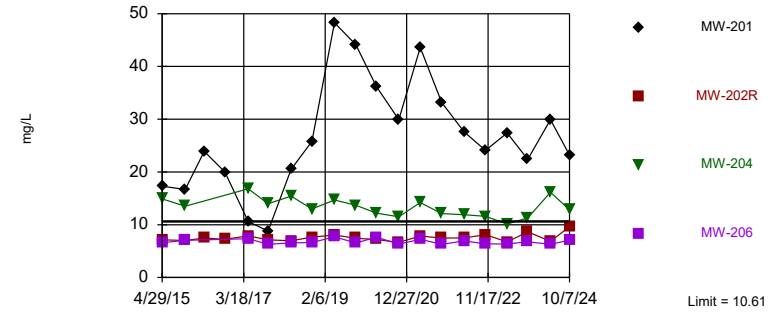


Background Data Summary: Mean=7.817, Std. Dev.=1.156, n=61. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-204

Prediction Limit
Interwell Parametric

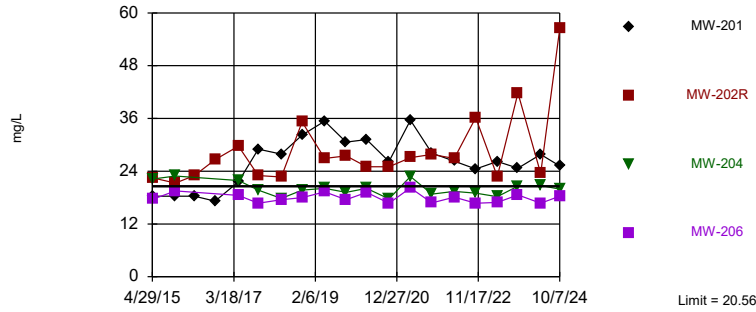


Background Data Summary: Mean=6.442, Std. Dev.=2.083, n=40. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Potassium Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R

Prediction Limit
Interwell Parametric

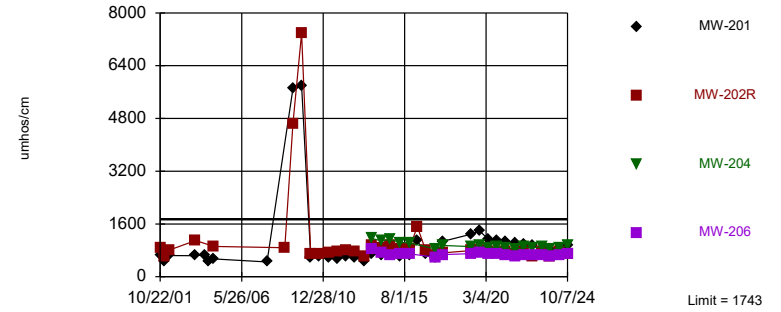


Background Data Summary: Mean=17.87, Std. Dev.=1.348, n=40. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Sodium Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

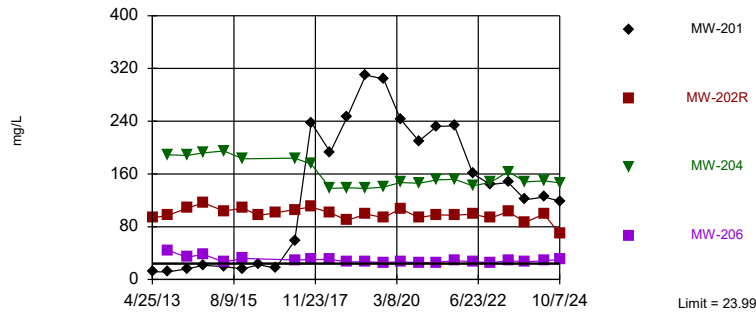


Background Data Summary: Mean=671.3, Std. Dev.=536, n=60. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-202R, MW-204, MW-206

Prediction Limit
Interwell Parametric

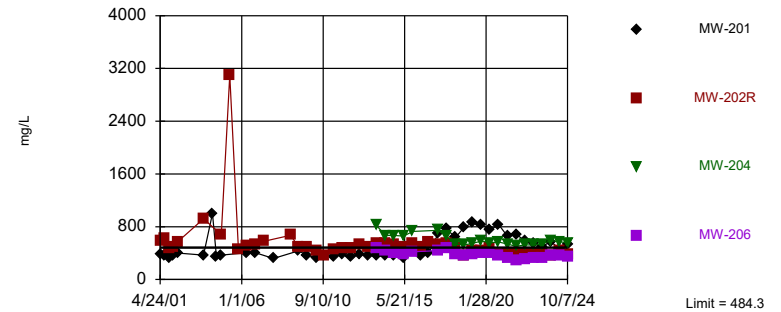


Background Data Summary: Mean=9.447, Std. Dev.=7.273, n=47, 42.55% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Exceeds Limit: MW-201, MW-204

Prediction Limit
Interwell Parametric

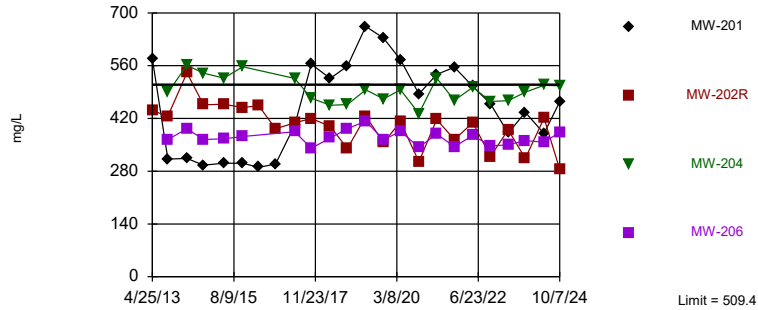


Background Data Summary: Mean=315.6, Std. Dev.=84.34, n=71. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Dissolved Solids Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric

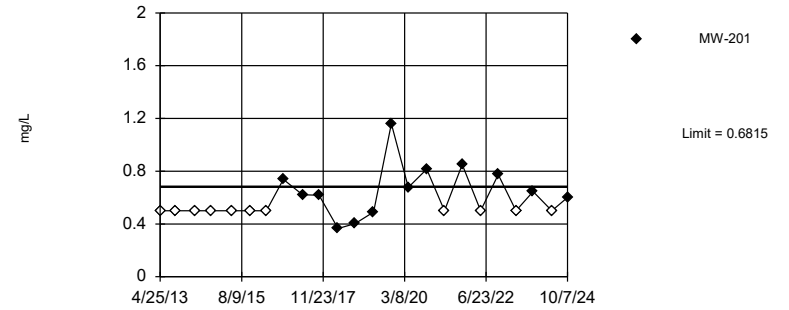


Background Data Summary: Mean=343.6, Std. Dev.=82.9, n=47. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Hardness Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Within Limit

Prediction Limit
Interwell Parametric



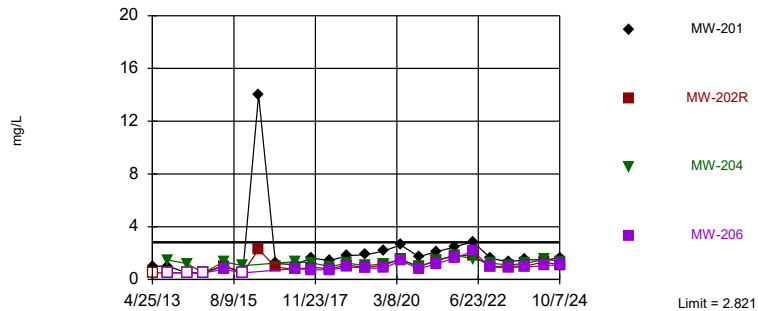
Background Data Summary: Mean=0.5119, Std. Dev.=0.08484, n=47, 70.21% NDs (user selected parametric test despite non-detects). Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Total Kjeldahl Nitrogen Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Hollow symbols indicate censored values.


Within Limit

Prediction Limit
Interwell Parametric



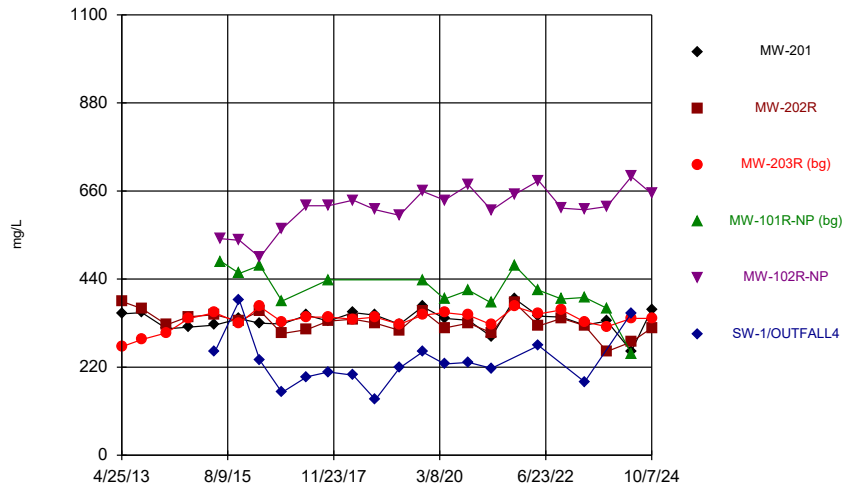
Background Data Summary: Mean=1.122, Std. Dev.=0.8494, n=47, 14.89% NDs. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Total Organic Carbon Analysis Run 10/29/2024 9:57 AM View: 2024AWQR Fall Bedrock CL
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master



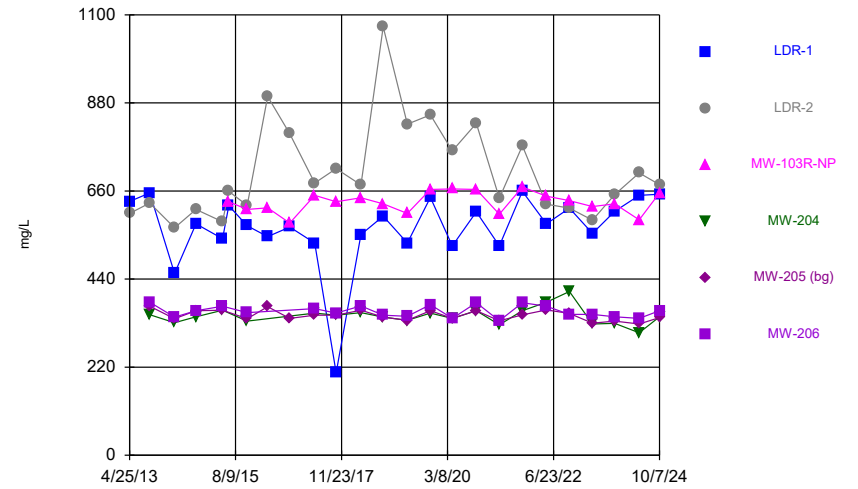
Attachment C
Time Series Graphs

Time Series



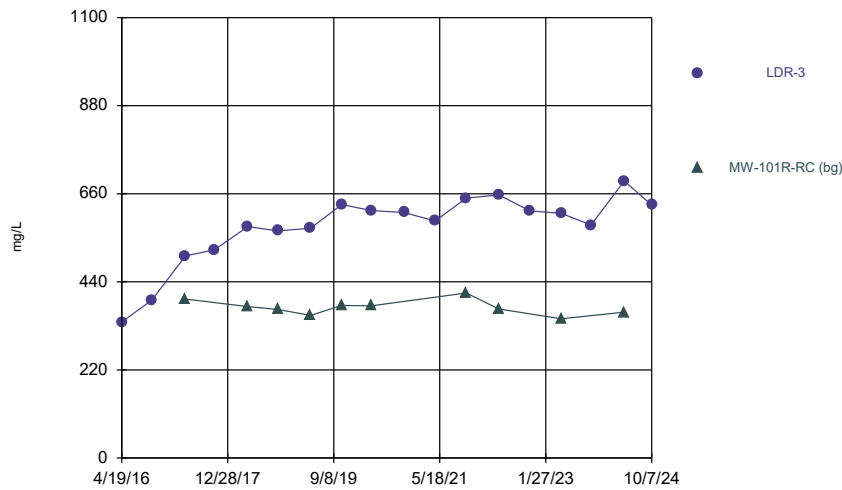
Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/28/2024 5:31 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



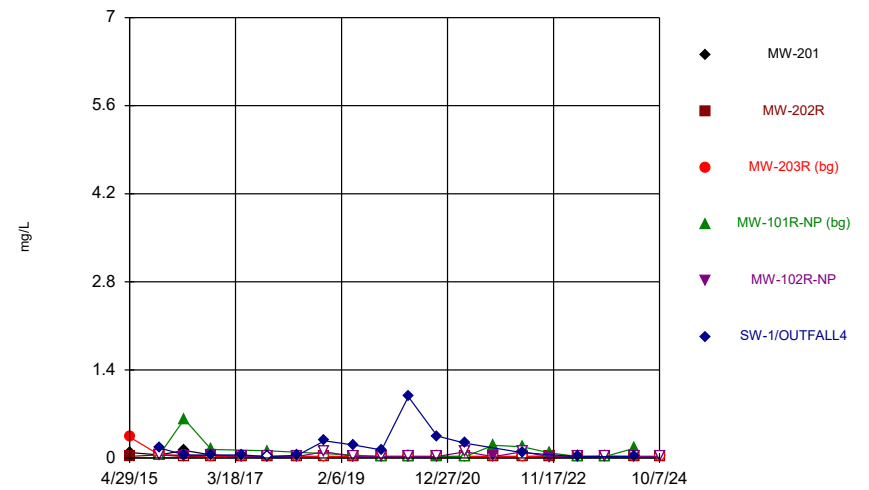
Constituent: Alkalinity, Total [CaCO3] Analysis Run 10/28/2024 5:31 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



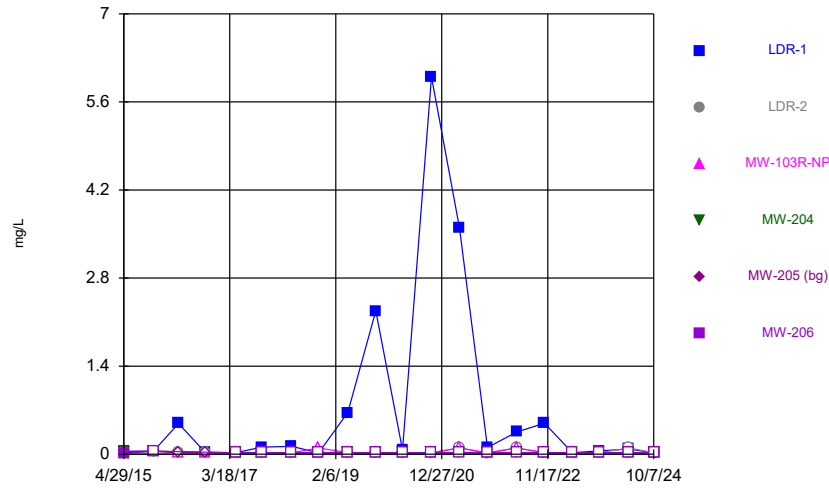
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



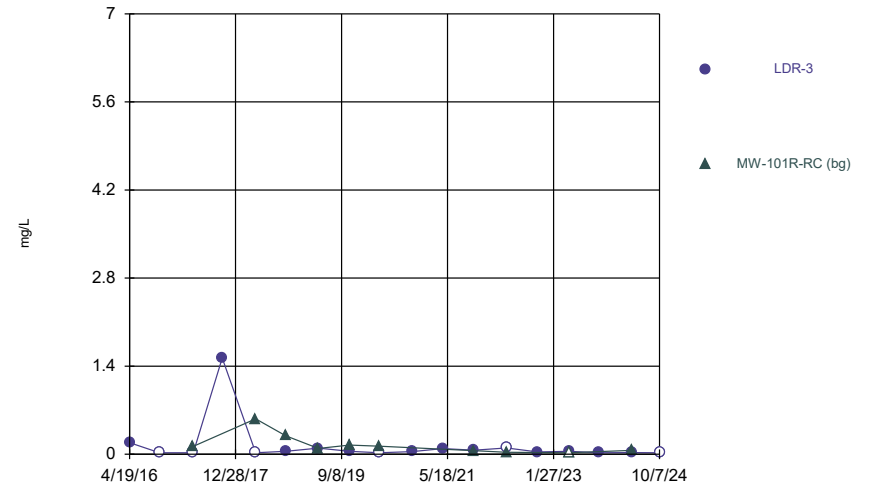
Constituent: Aluminum Analysis Run 10/28/2024 5:31 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



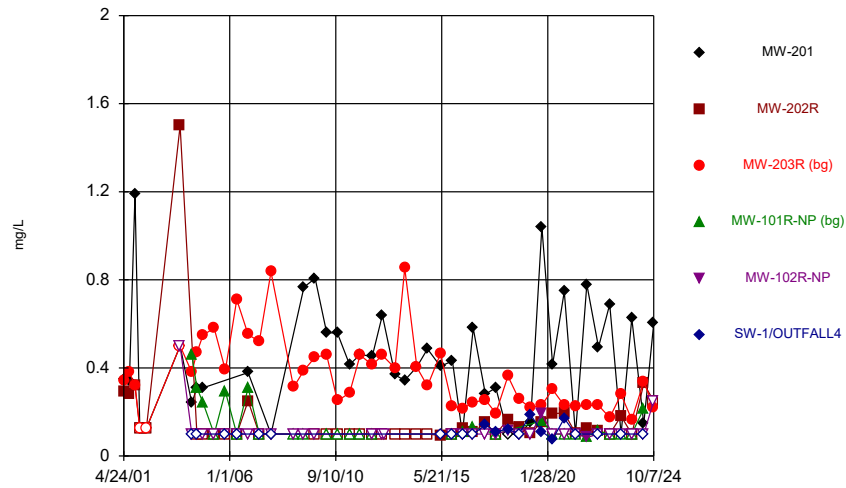
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



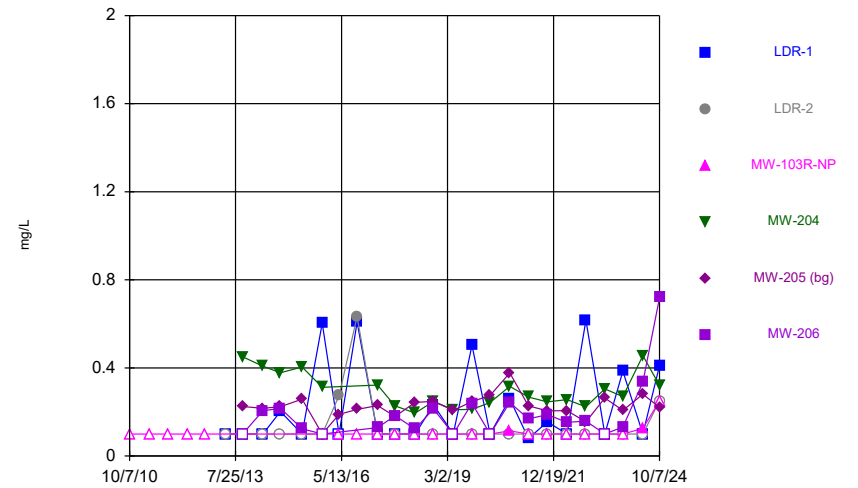
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



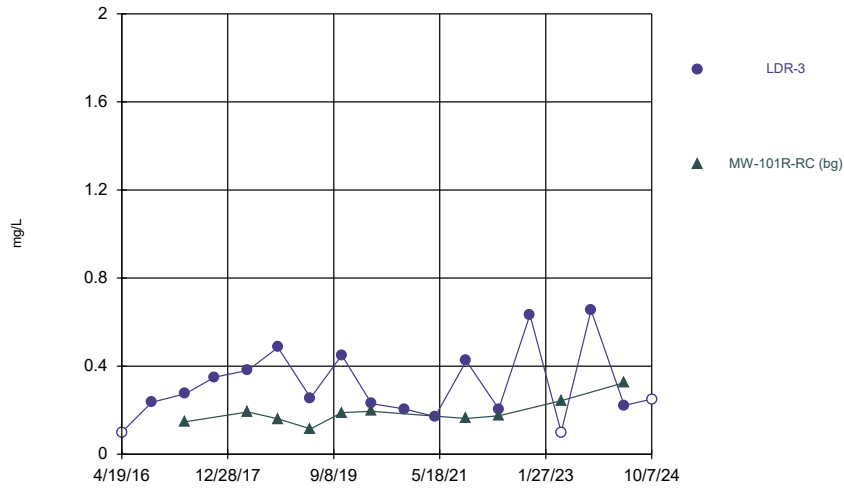
Constituent: Ammonia as N Analysis Run 10/28/2024 5:31 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



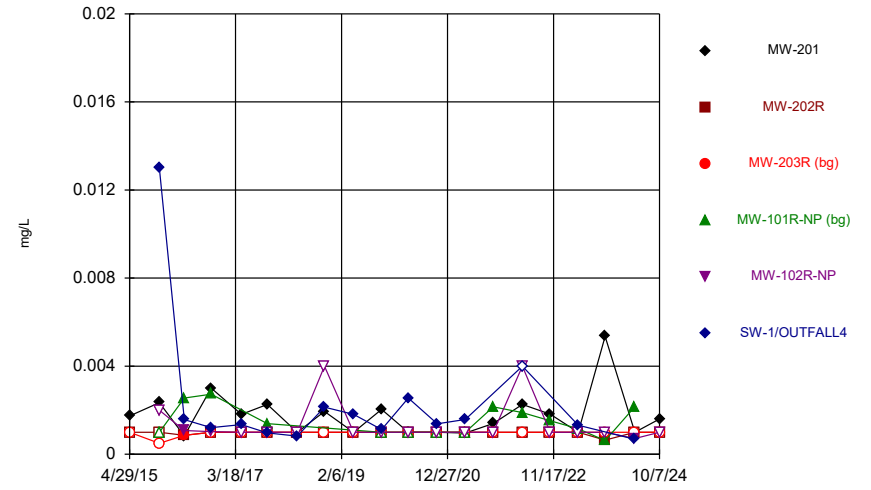
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



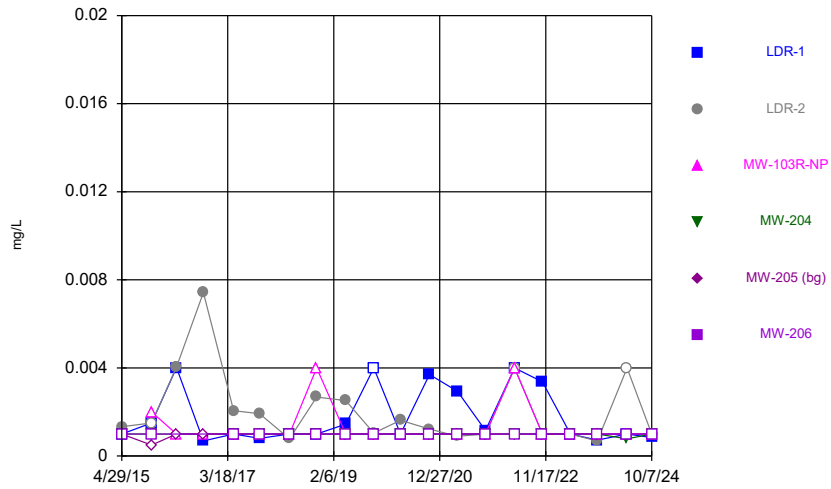
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



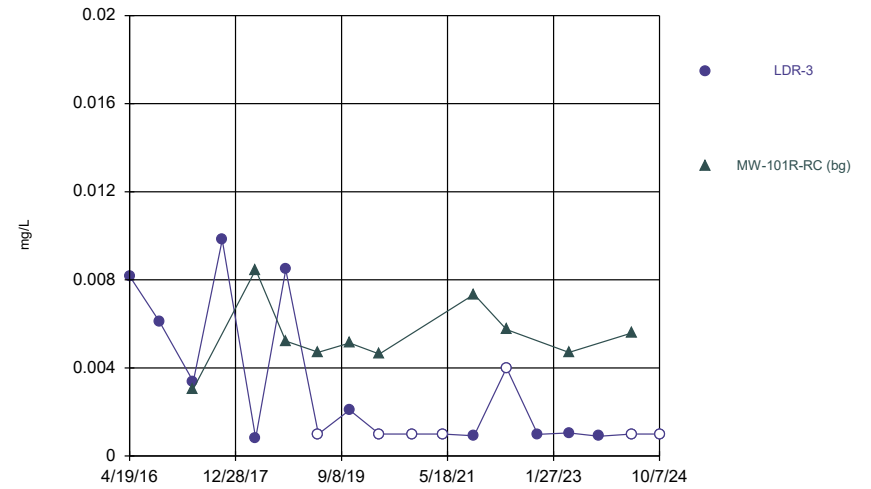
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



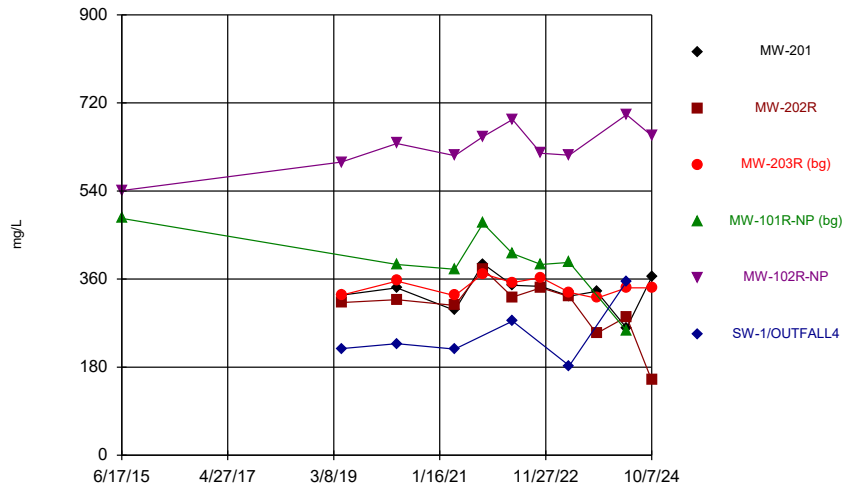
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



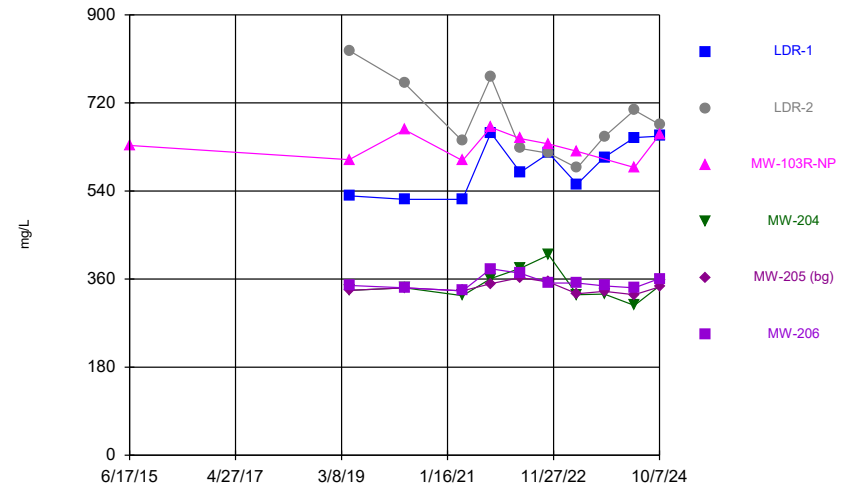
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



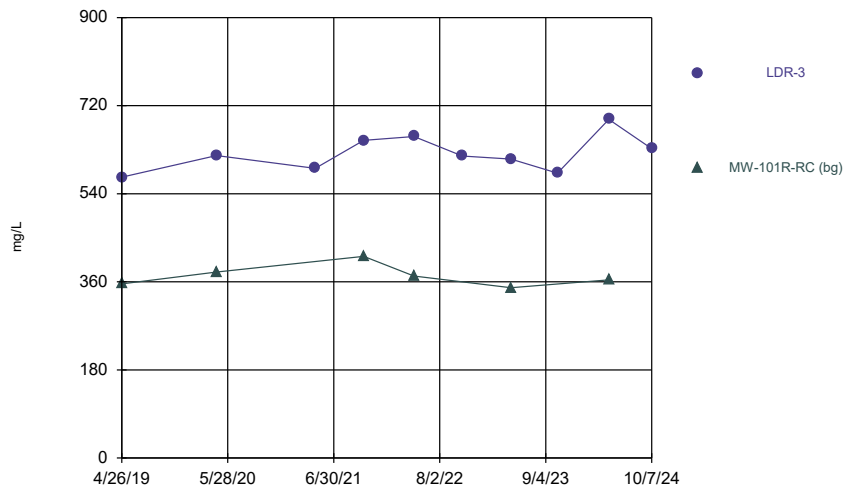
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



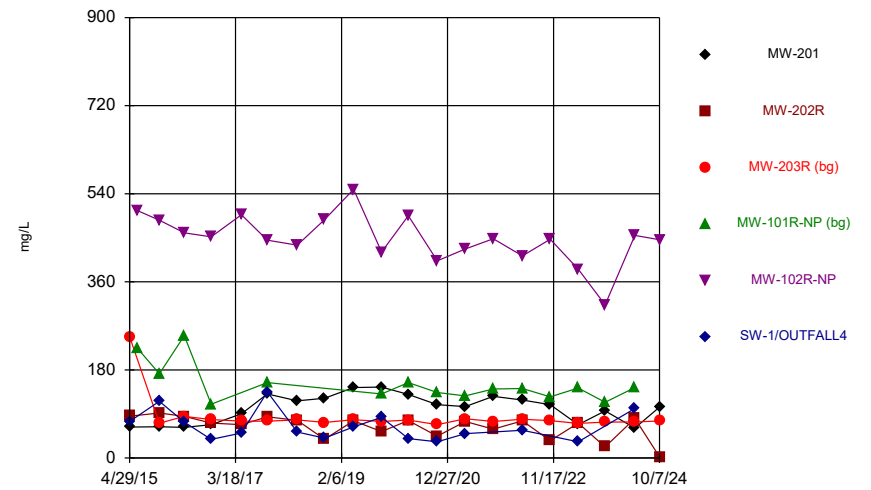
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



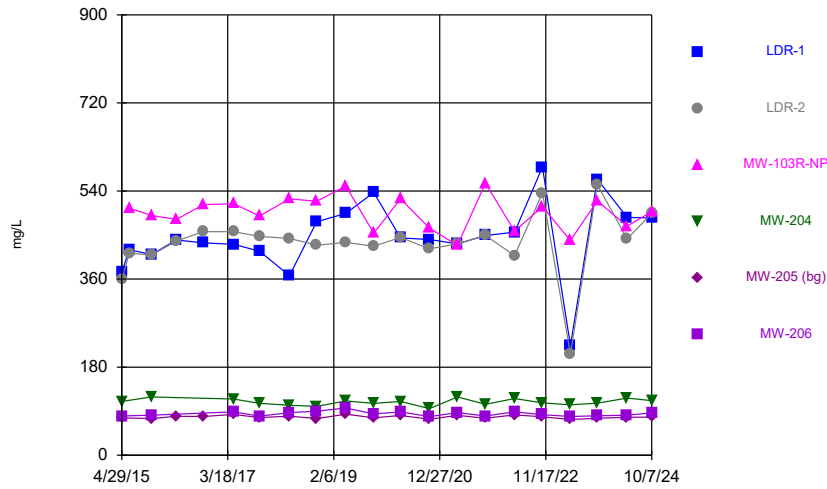
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



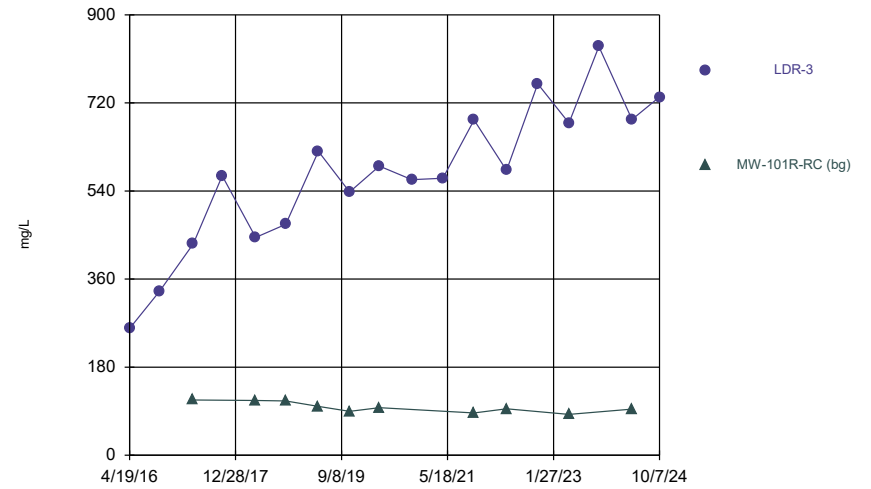
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



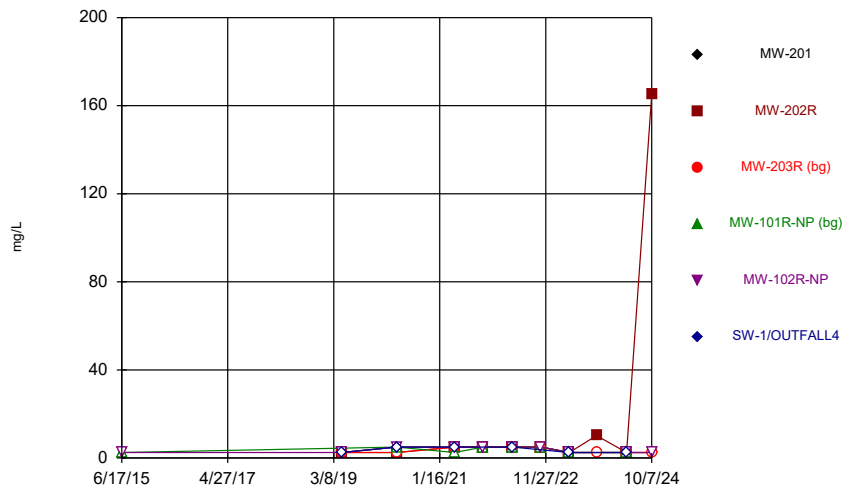
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



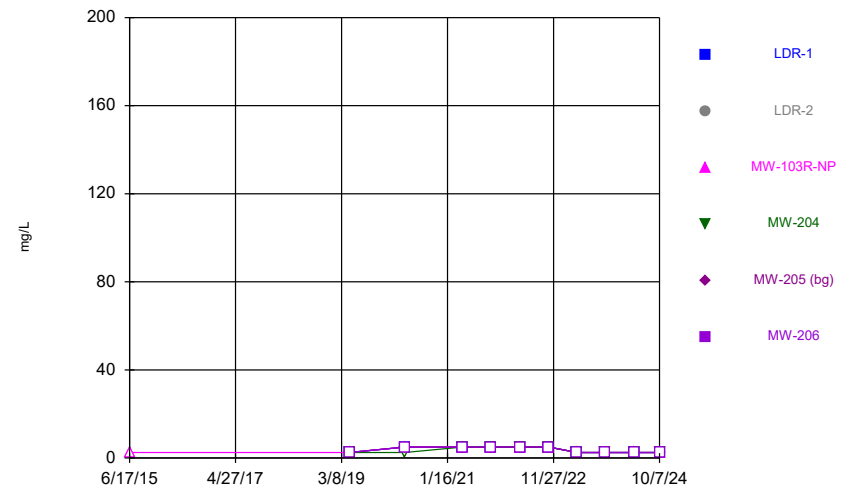
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



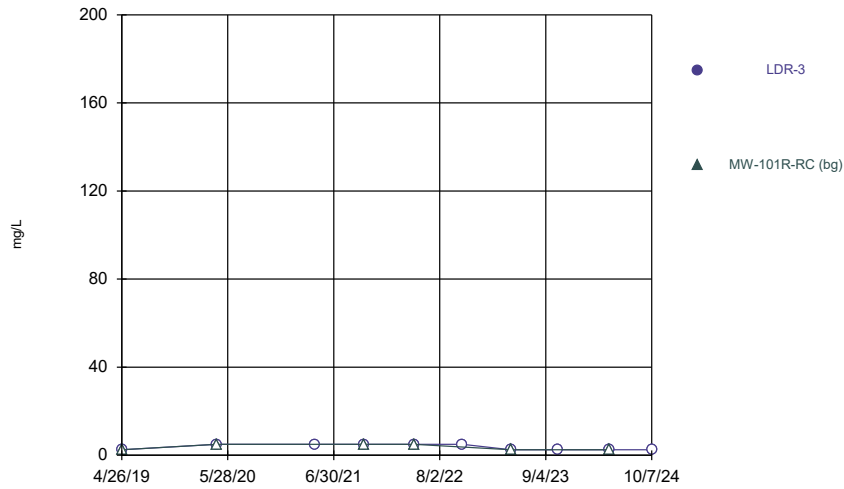
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Time Series



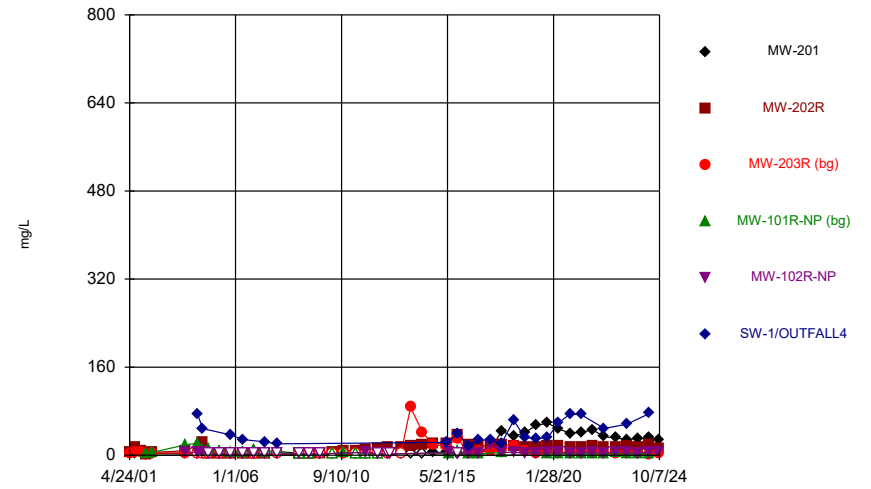
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Time Series



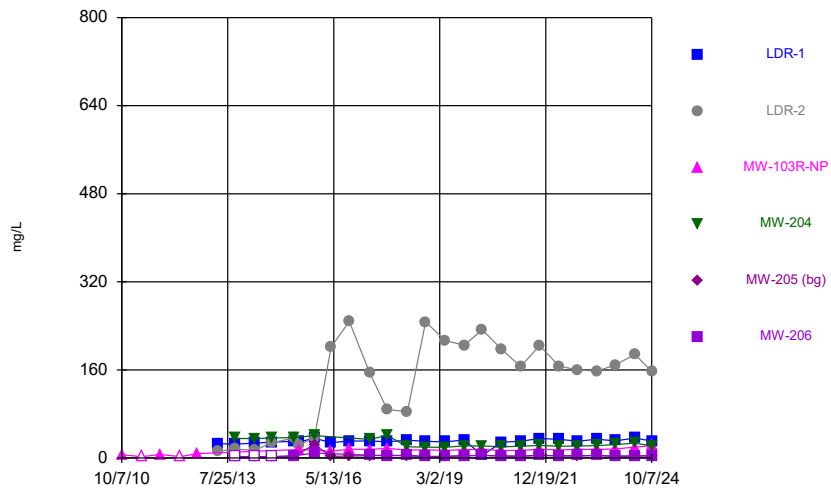
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



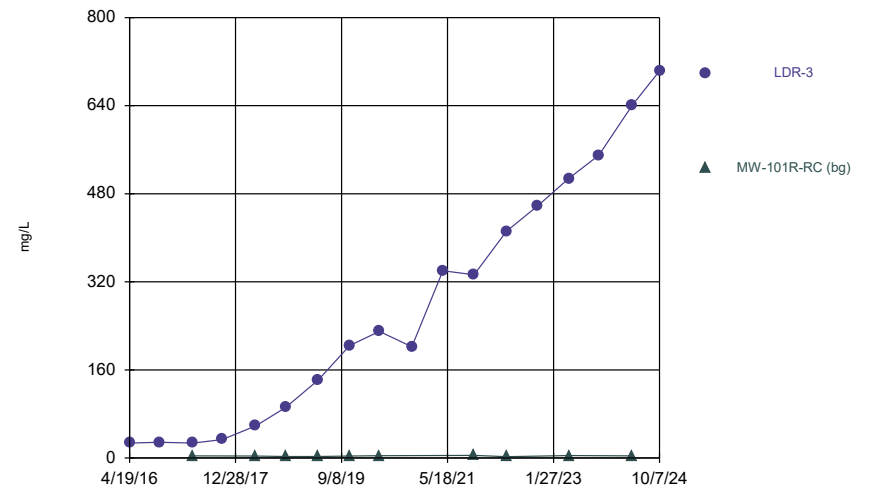
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



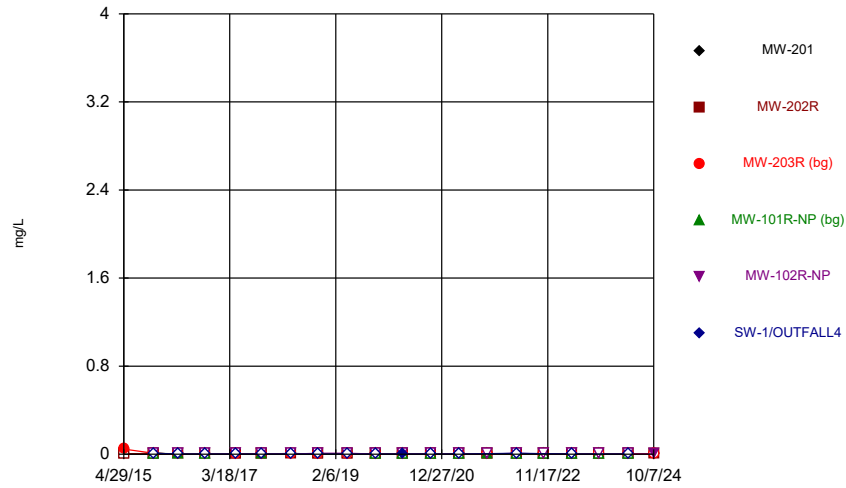
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



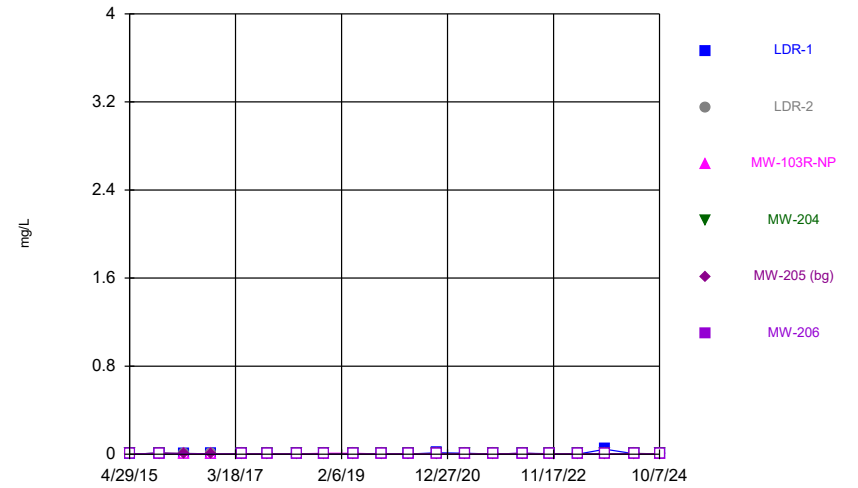
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



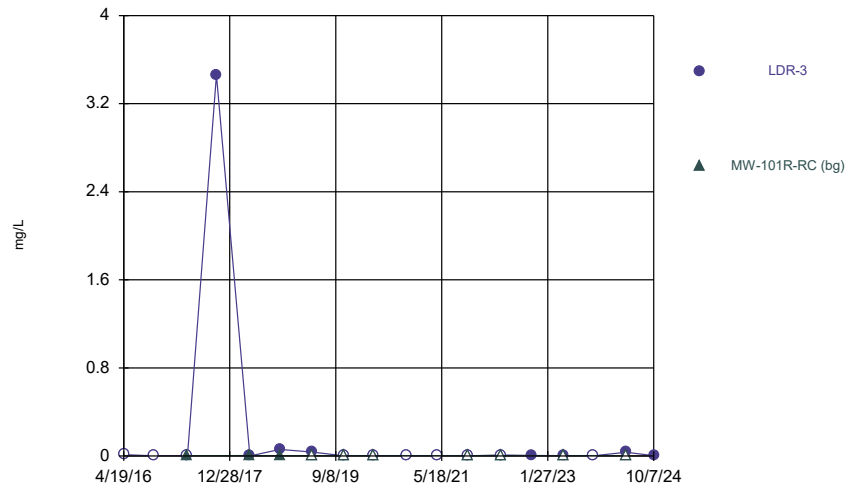
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



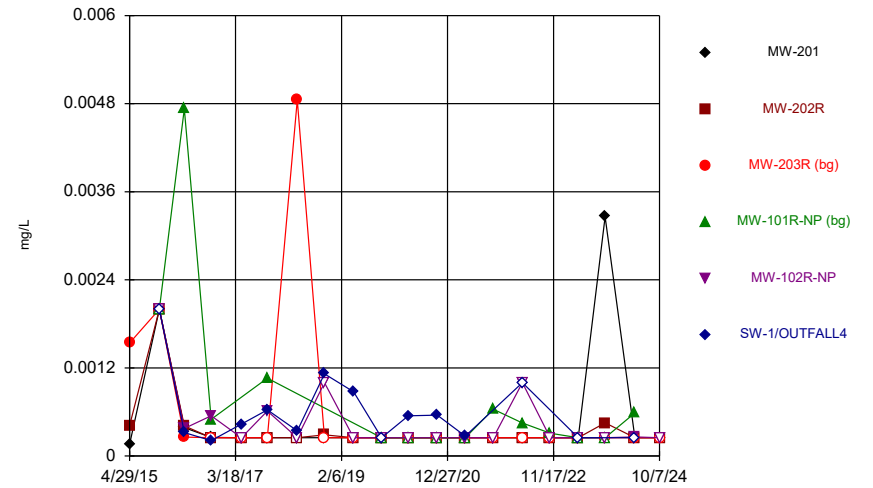
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



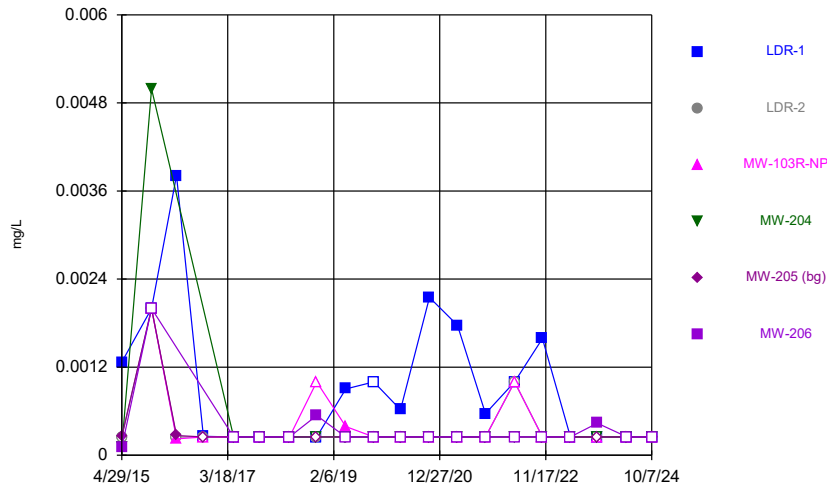
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



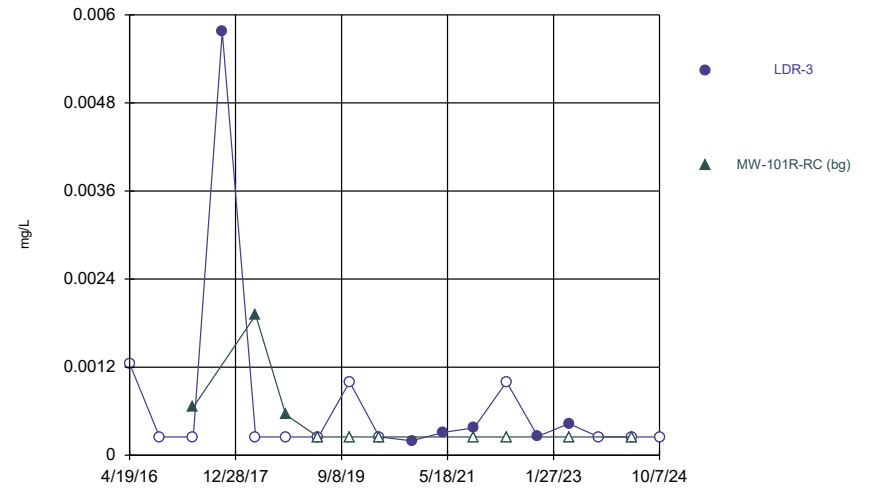
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



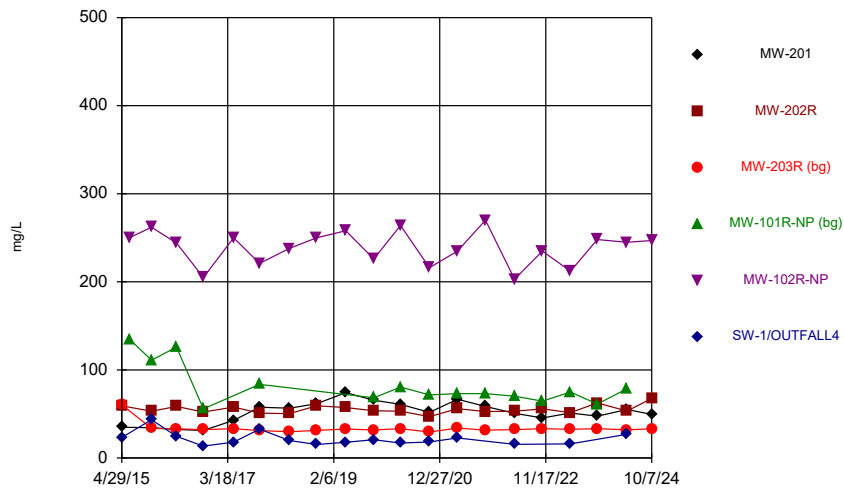
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



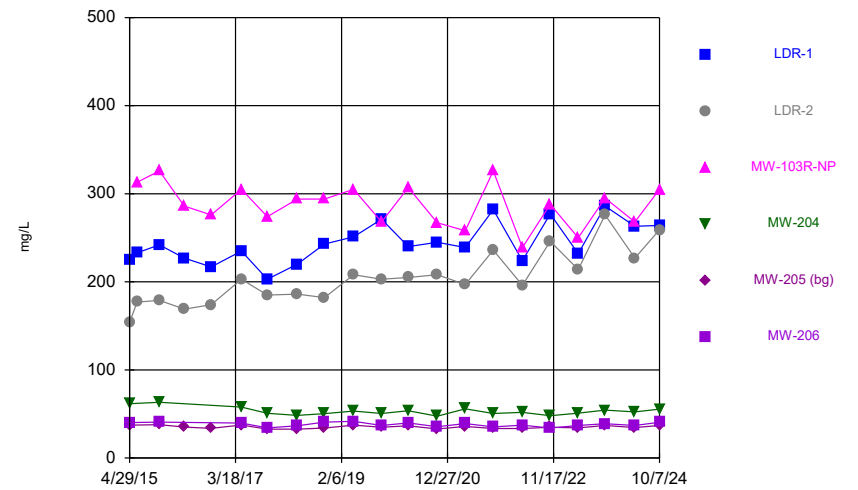
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



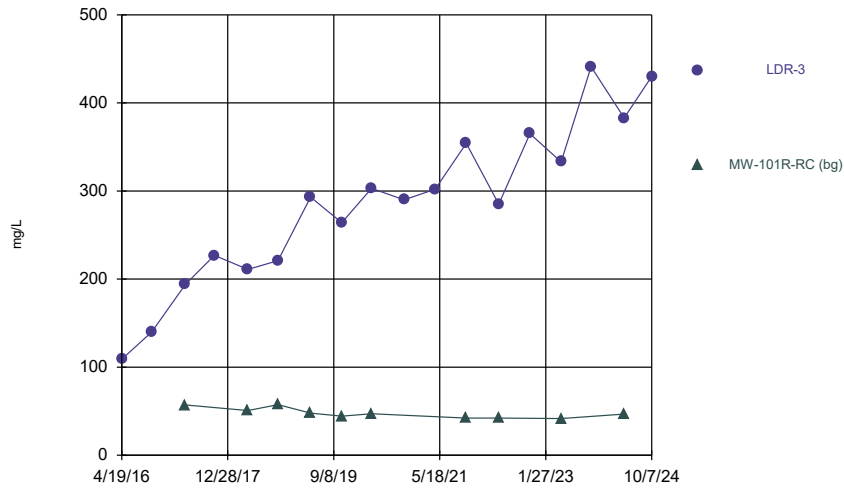
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



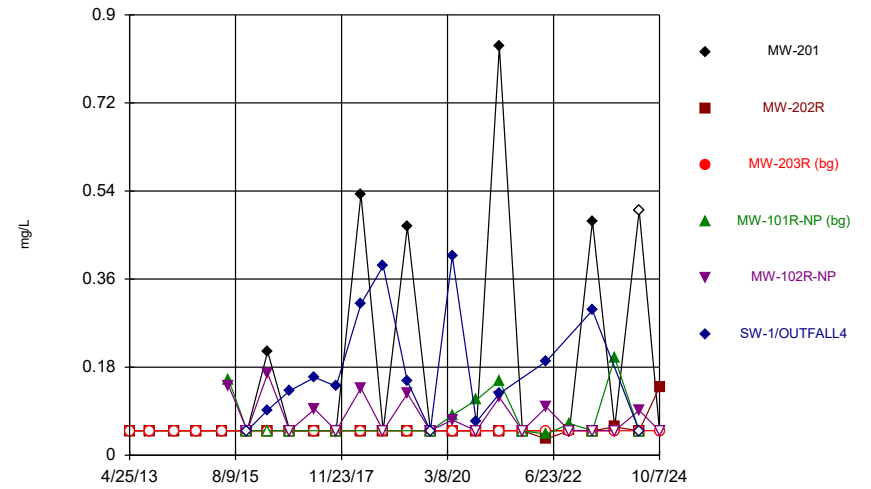
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CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



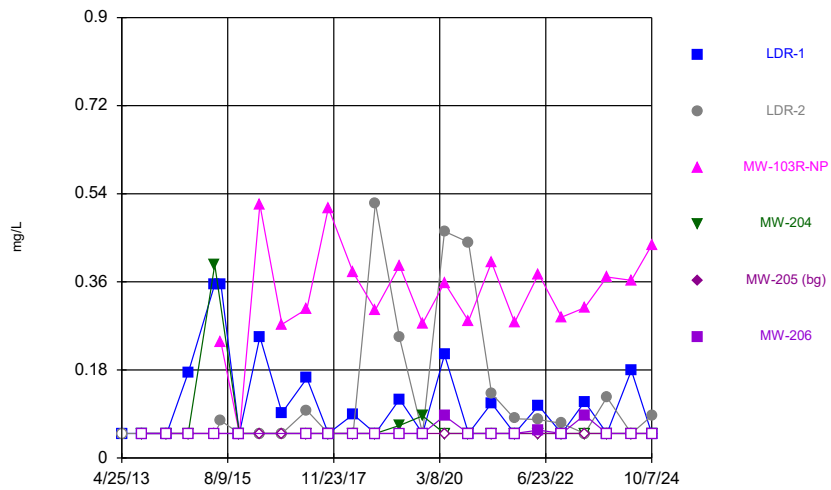
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



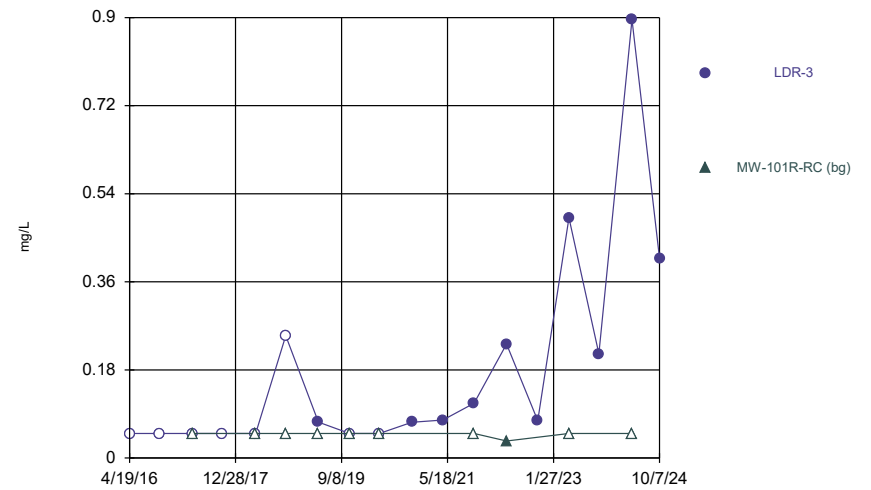
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



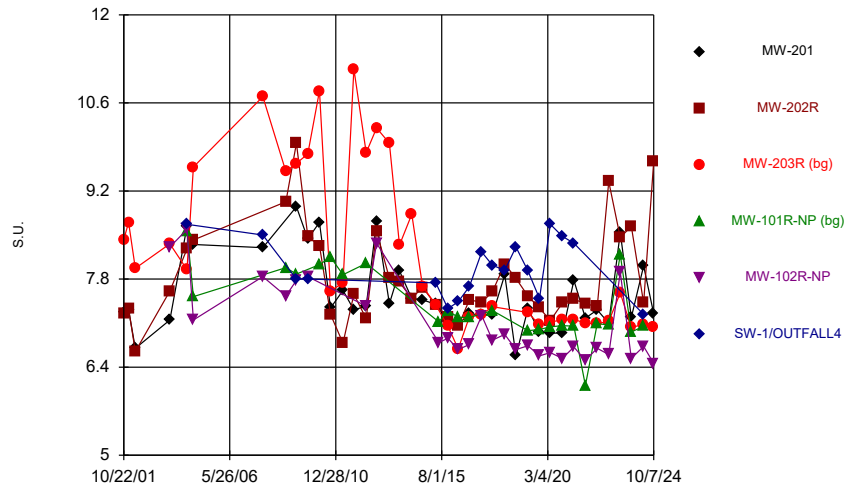
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



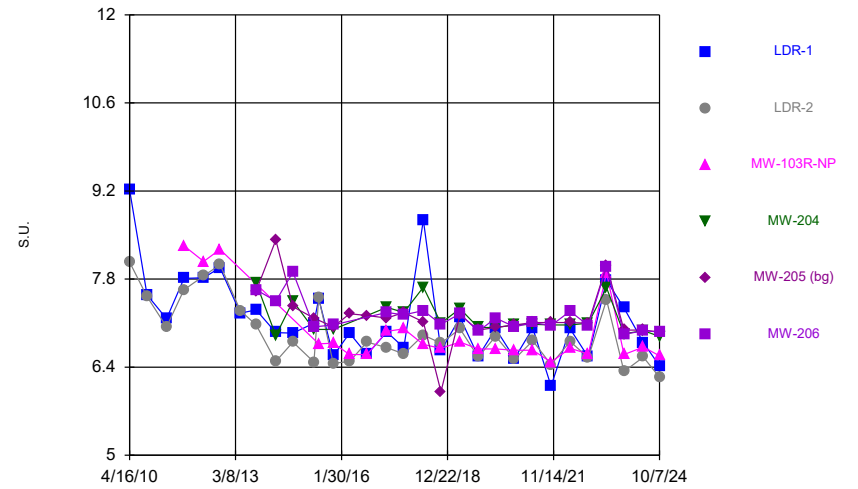
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 CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



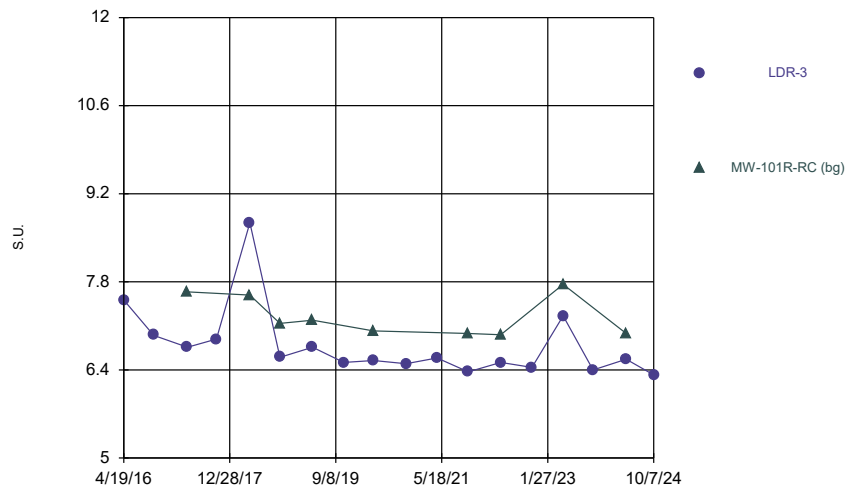
Constituent: pH Analysis Run 10/28/2024 5:32 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



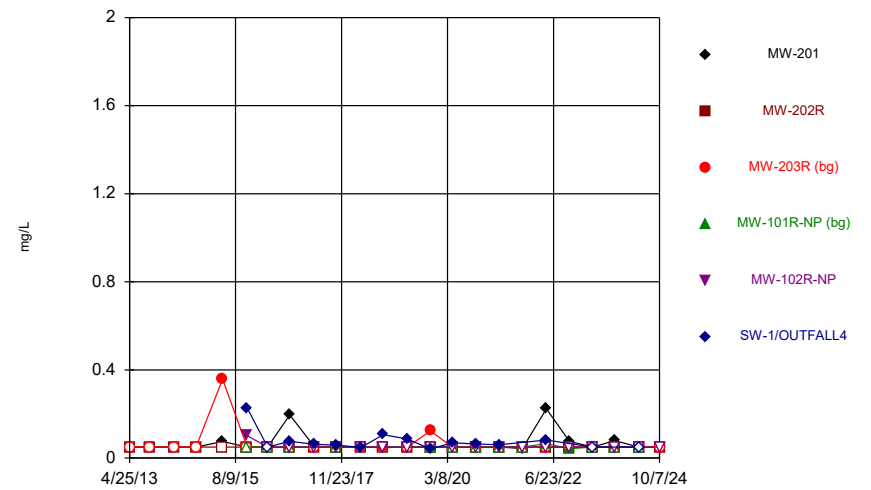
Constituent: pH Analysis Run 10/28/2024 5:32 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Time Series



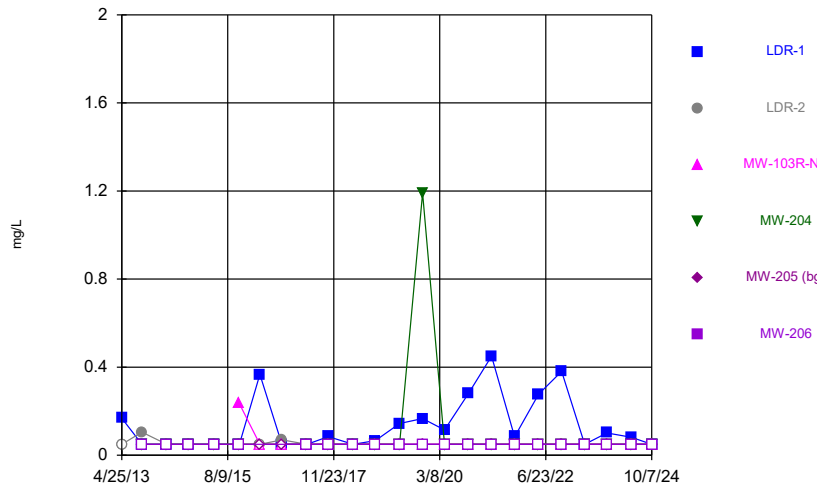
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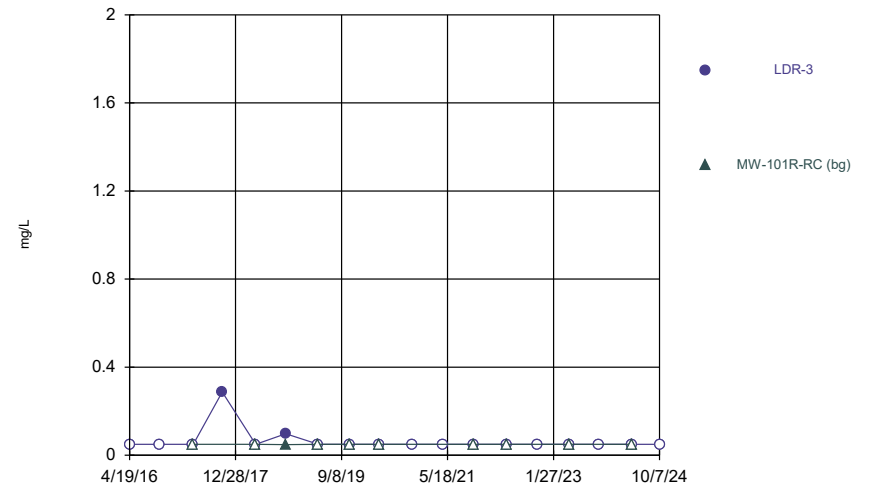
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Time Series



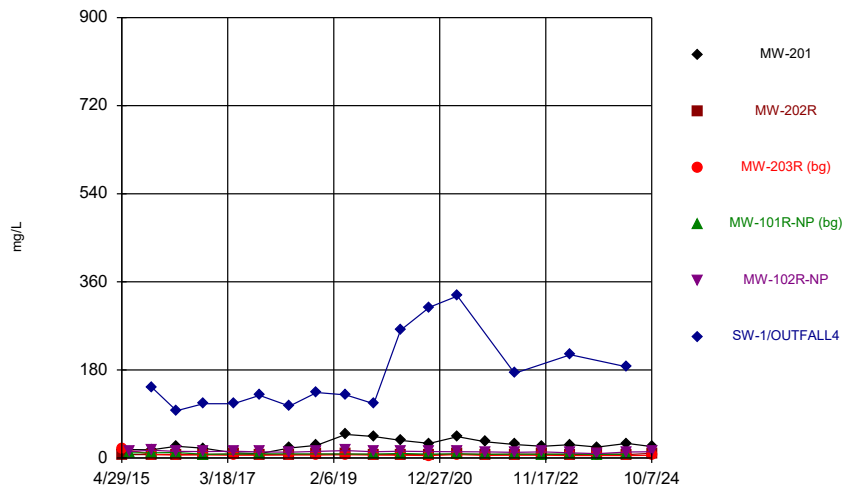
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Time Series



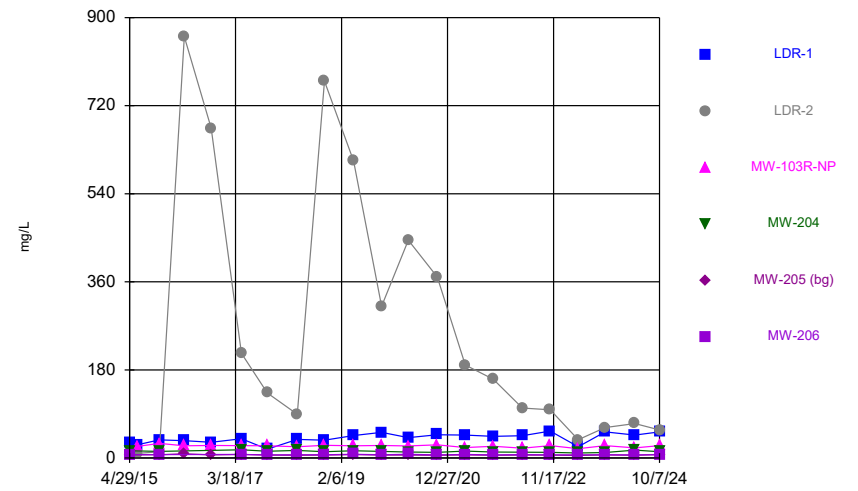
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Time Series



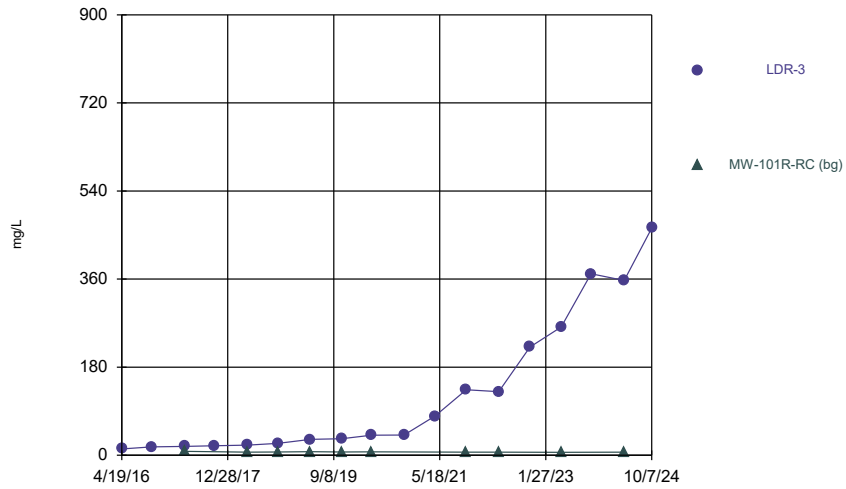
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Time Series



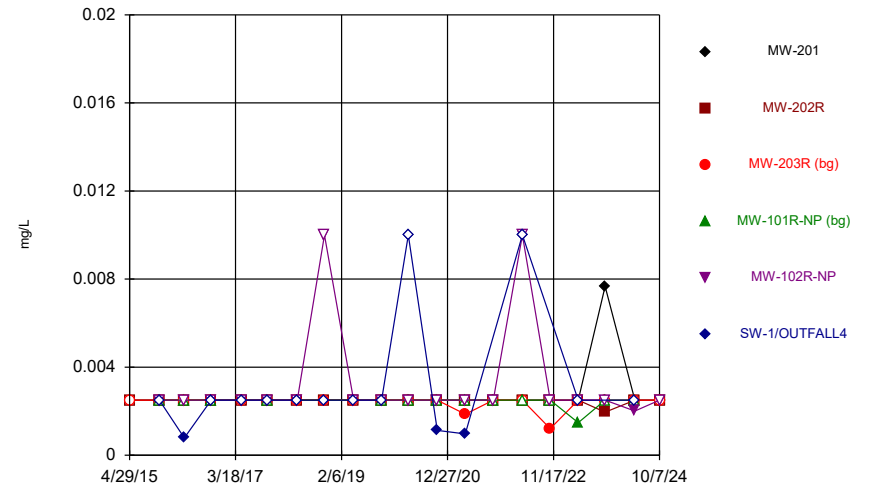
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Time Series



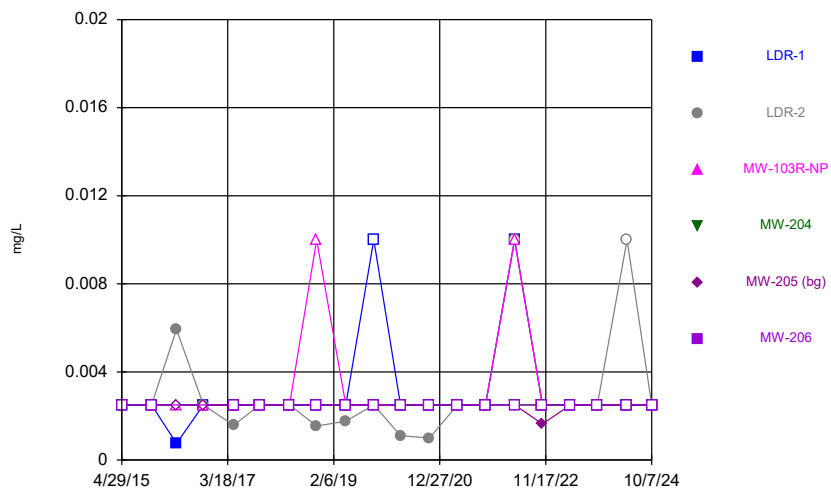
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Time Series



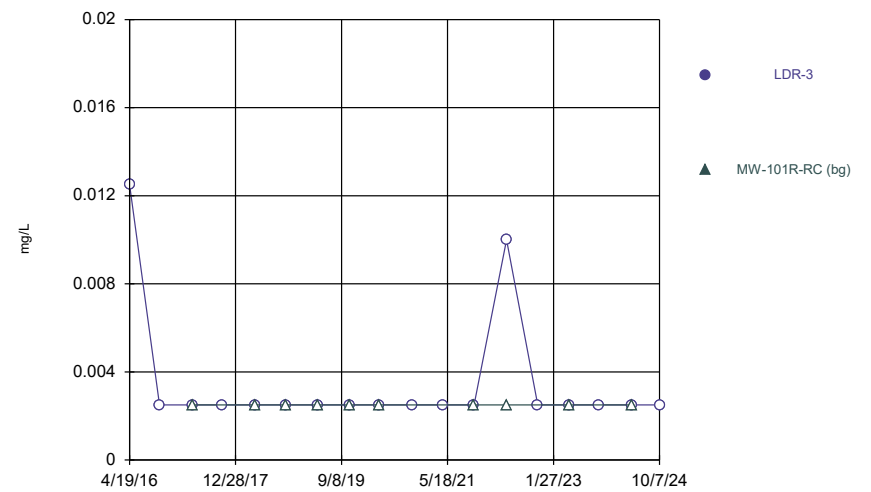
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Time Series



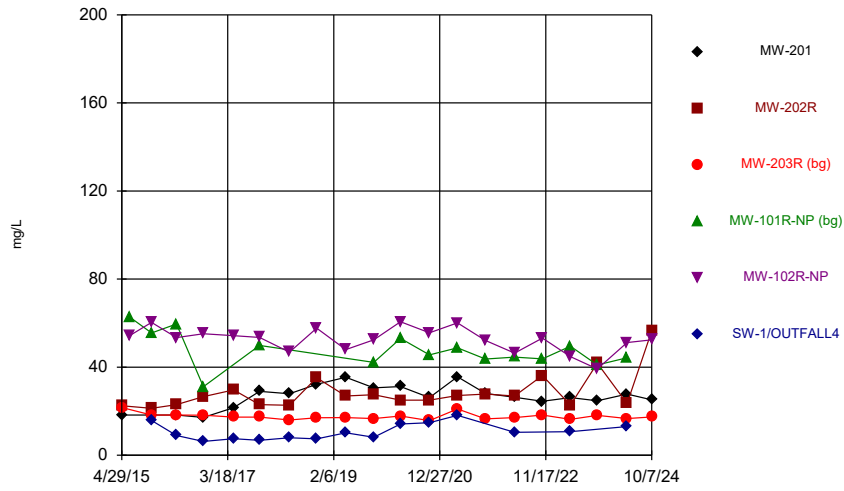
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Time Series



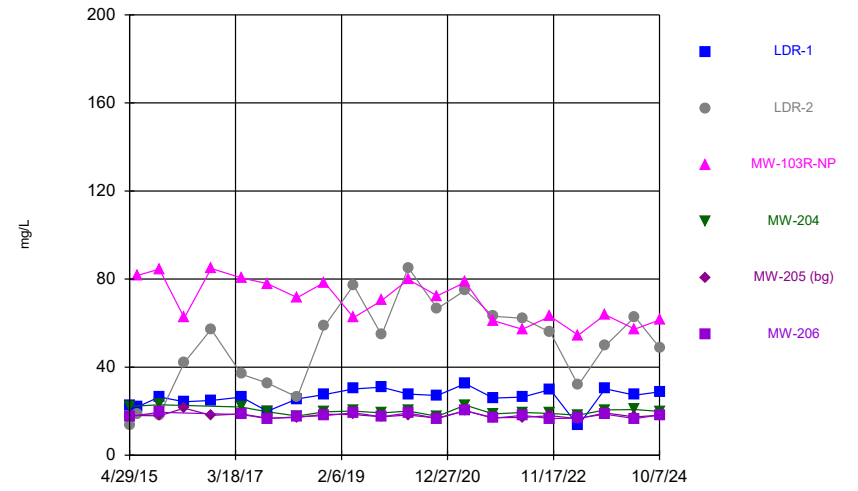
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Time Series



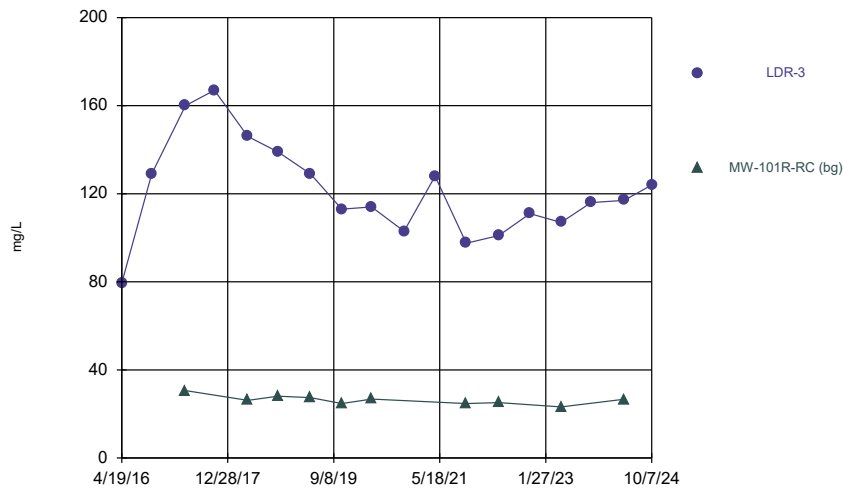
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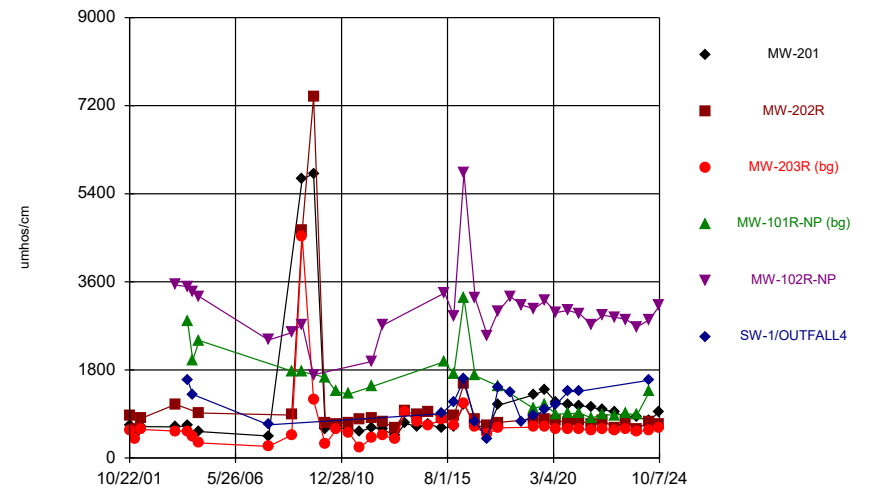
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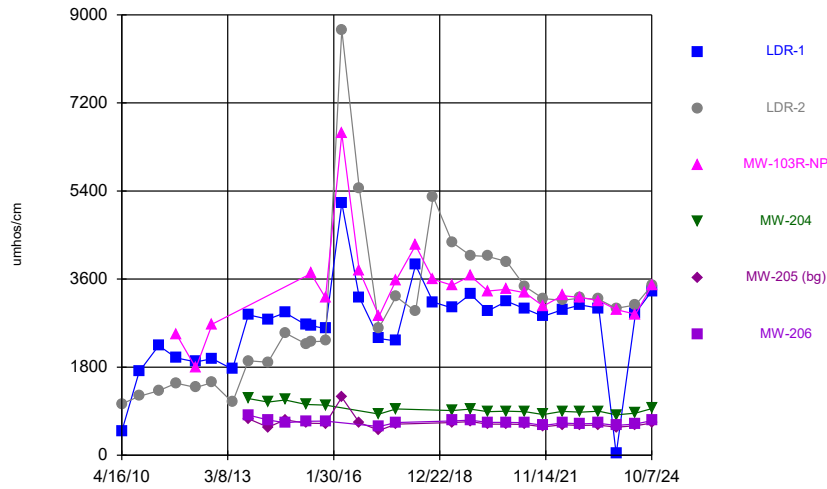
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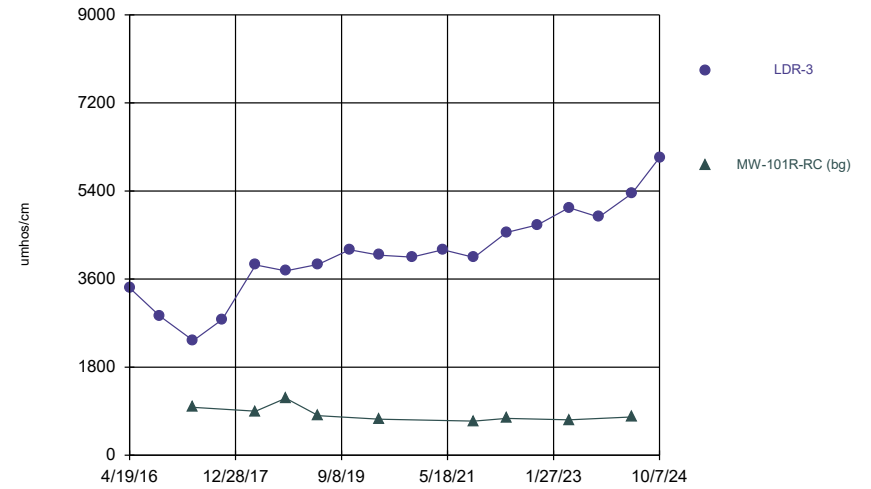
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Time Series



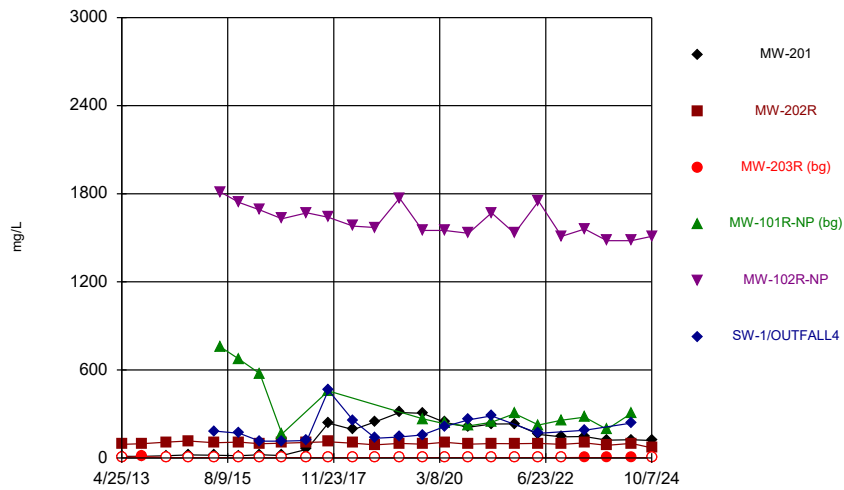
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Time Series



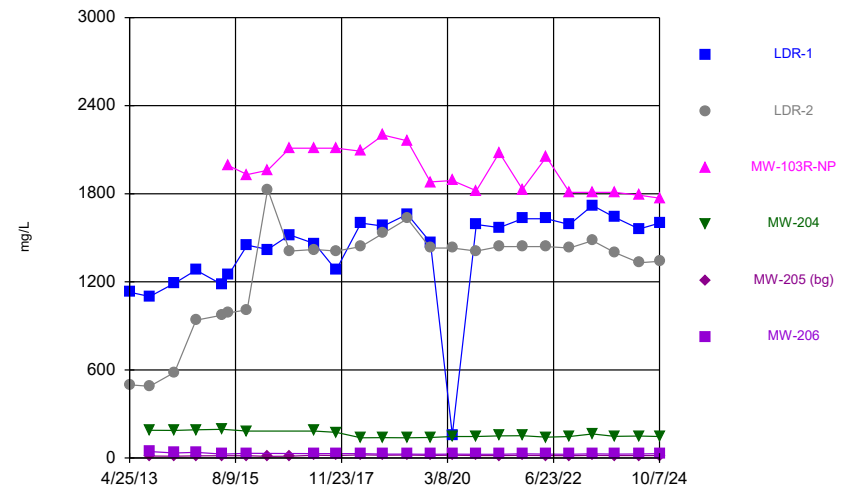
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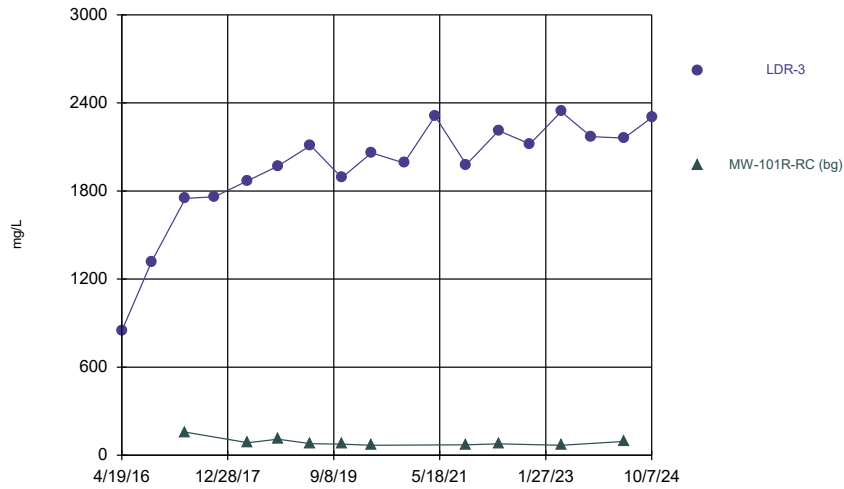
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Time Series



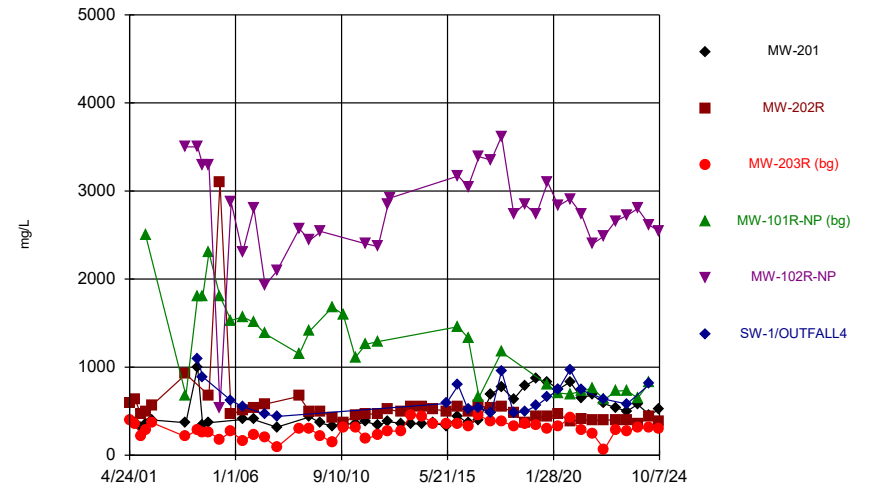
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Time Series



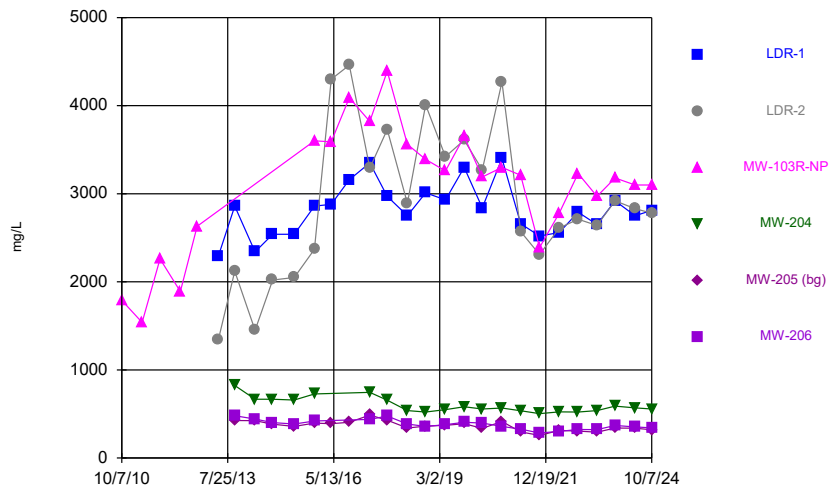
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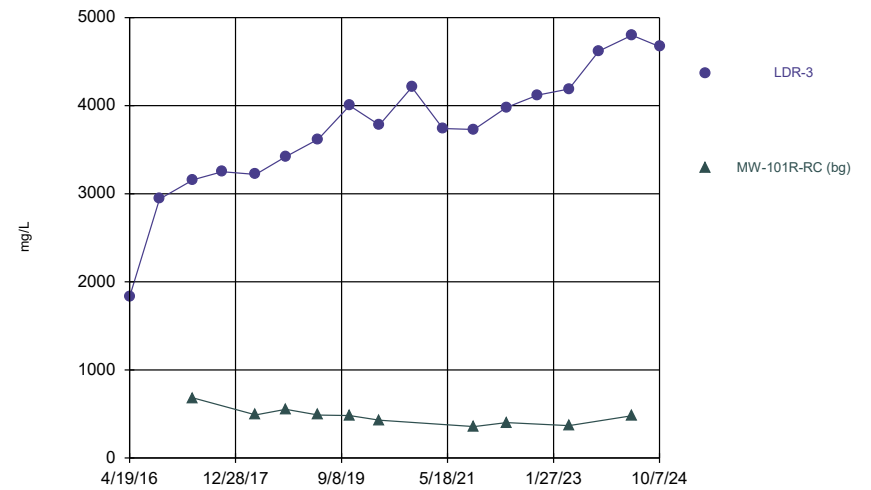
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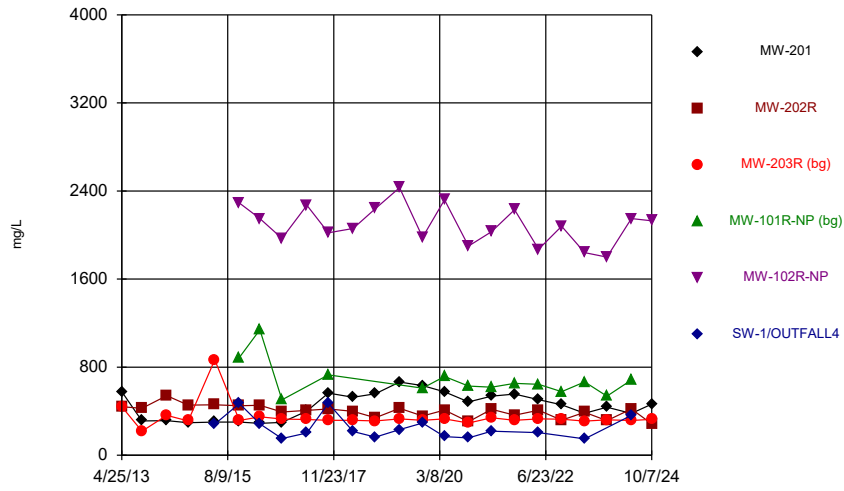
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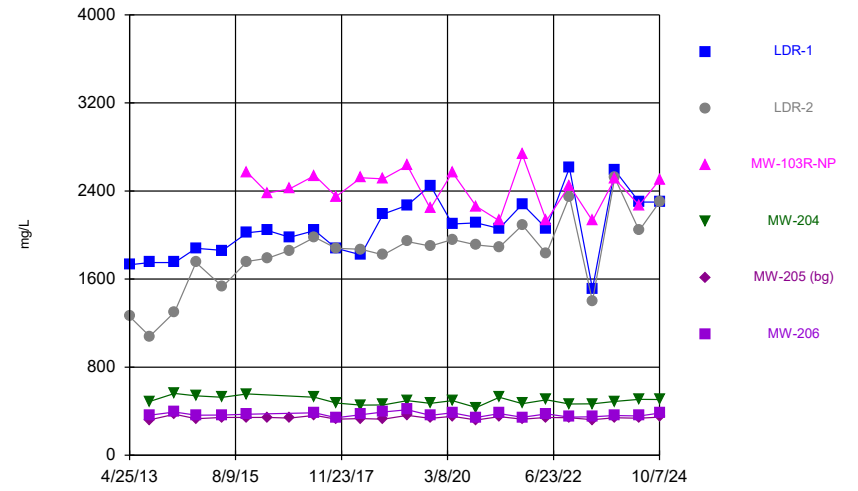
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Time Series



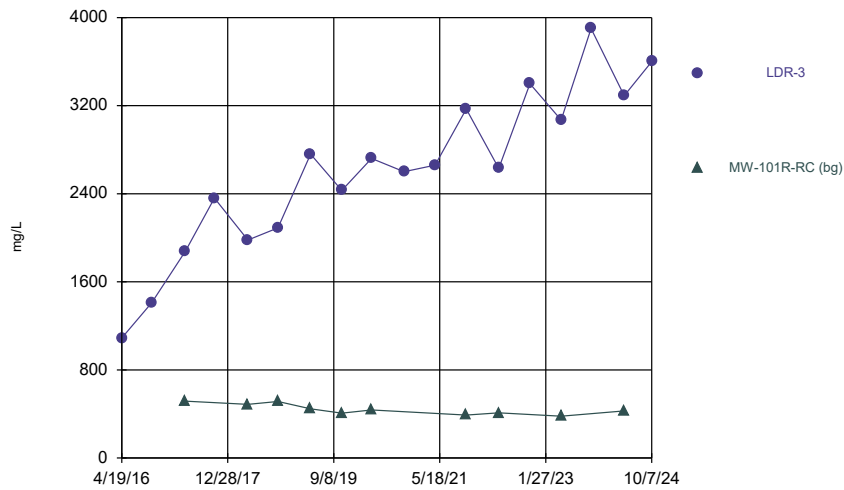
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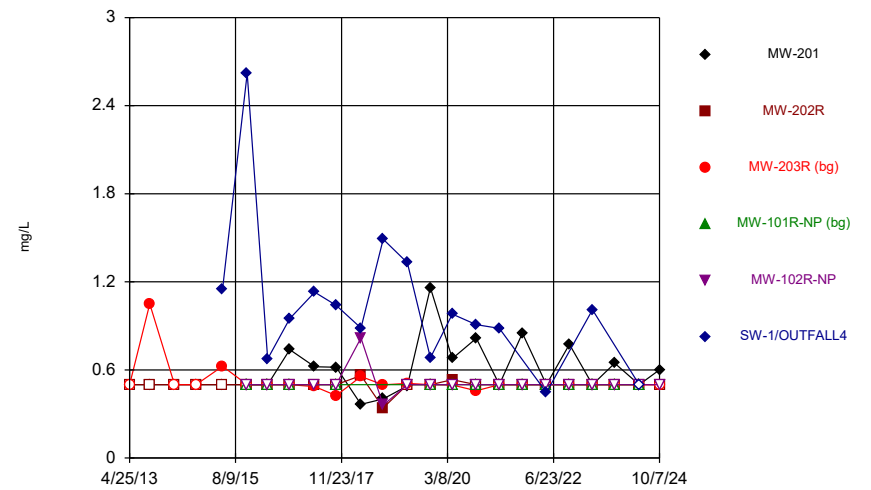
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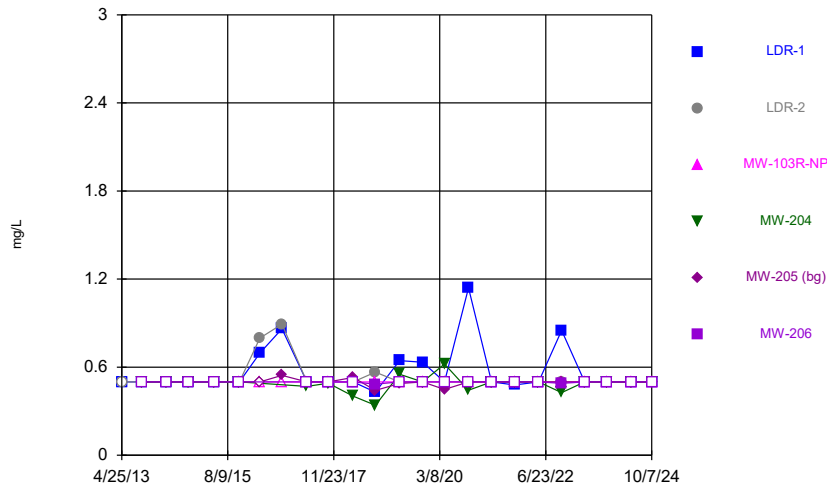
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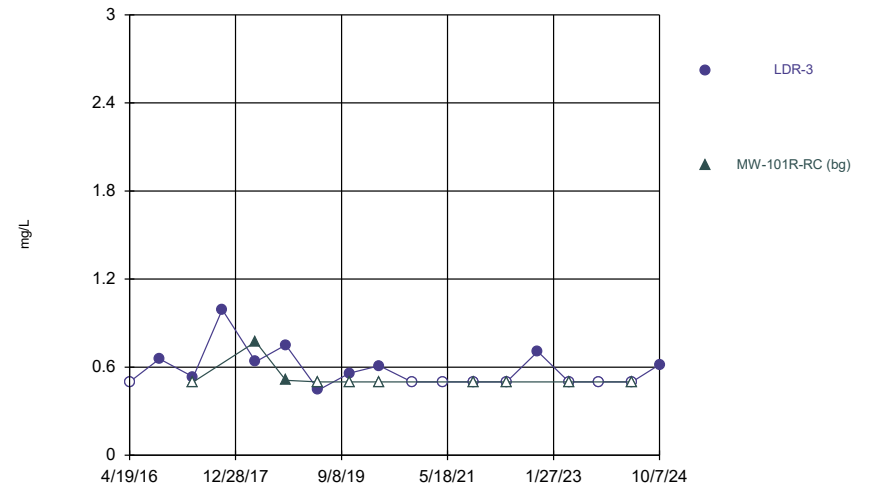
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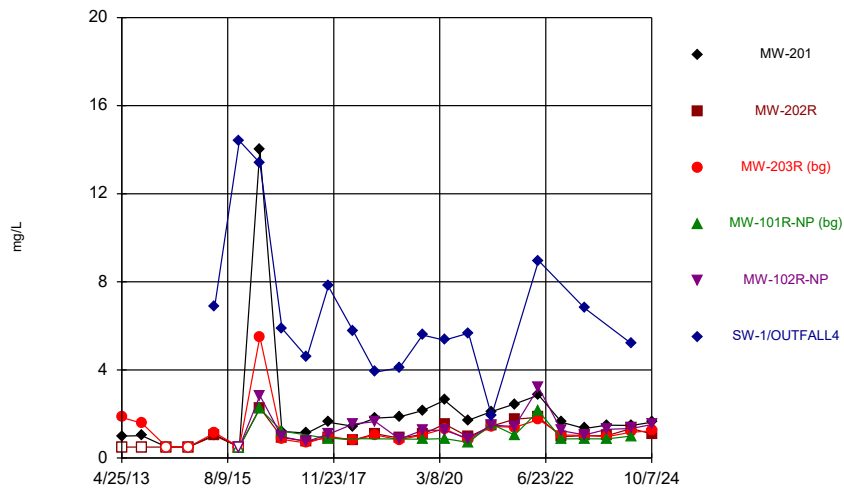
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Time Series



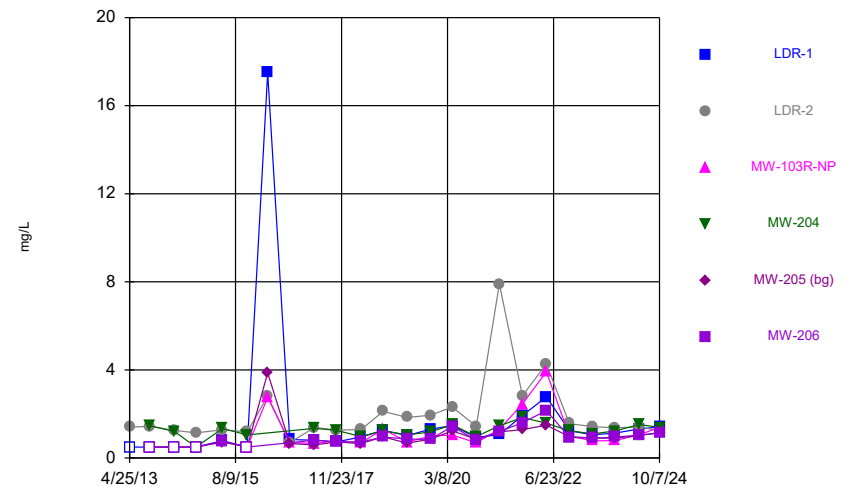
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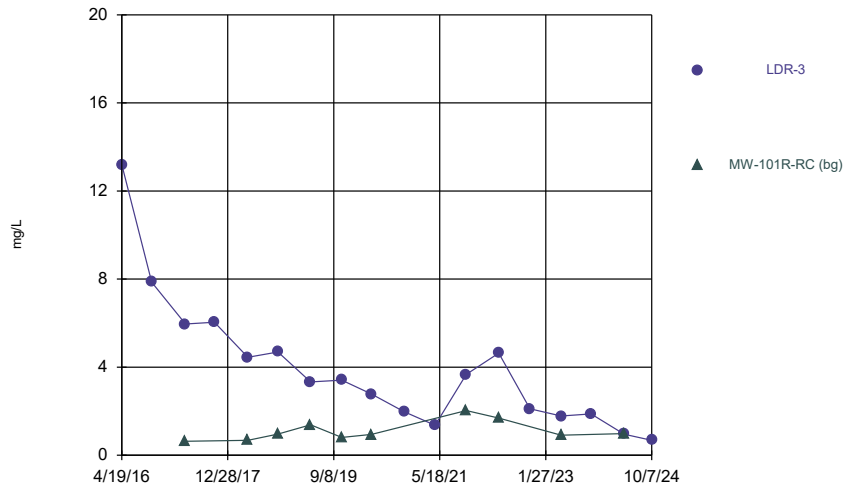
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Time Series



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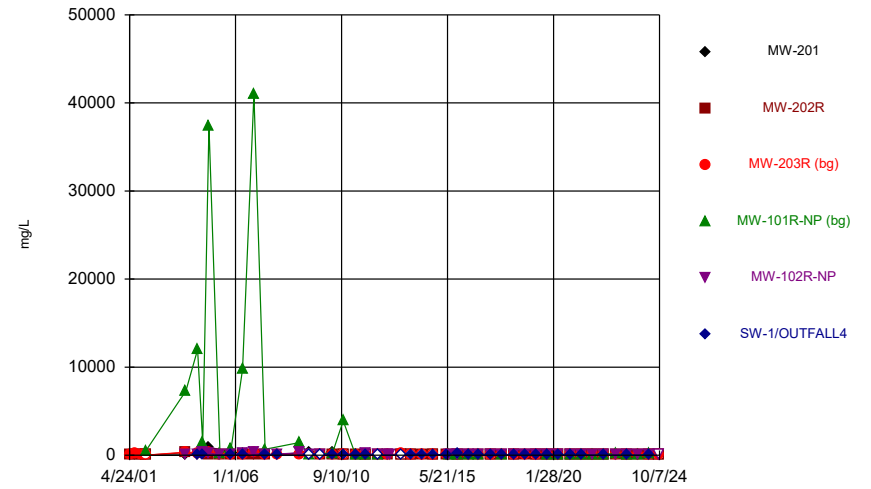
Time Series



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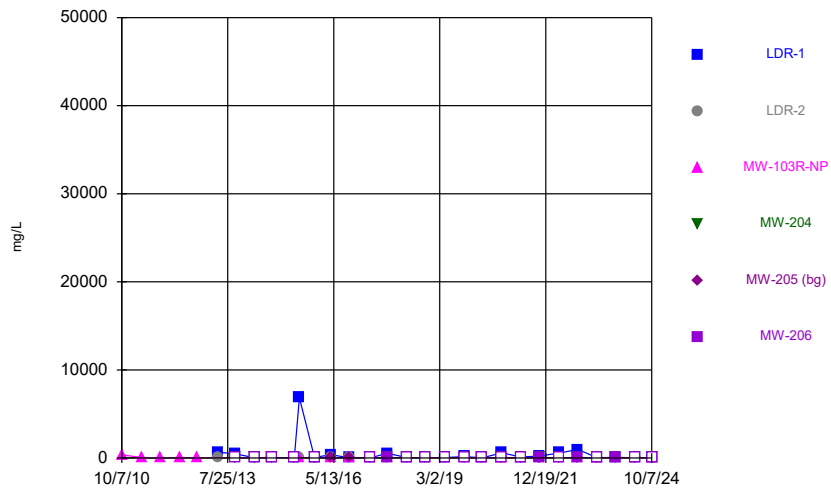
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Constituent: Total Suspended Solids Analysis Run 10/28/2024 5:33 PM View: 2024AWQR - Time Series
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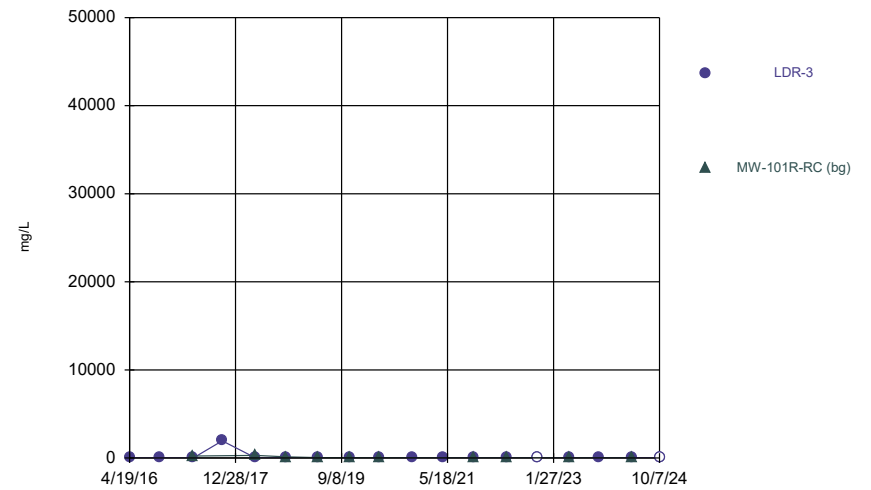
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Time Series



Constituent: Total Suspended Solids Analysis Run 10/28/2024 5:33 PM View: 2024AWQR - Time Series
CKD Monofill Client: Lehigh Cement Company Data: LCMNT Master

Appendix E

Mann-Kendall Trend Table

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
LDR-1	Alkalinity, Total [CaCO3]		10	
	Aluminum	-14		
	Ammonia as N		9	
	Arsenic	-15		
	Bicarbonate		10	
	Calcium		8	
	Chloride		4	
	Chromium		-3	
	Lead	-16		
	Magnesium		4	
	Nitrate/Nitrite as N		0	
	pH		-2	
	Phosphorus, Total [as P]	-15		
	Potassium		8	
	Sodium		0	
	Specific Conductance		4	
	Sulfate		1	
	Total Dissolved Solids			14
	Total Hardness		6	
Total Organic Carbon		3		
LDR-2	Alkalinity, Total [CaCO3]		2	
	Bicarbonate		2	
	Calcium		6	
	Chloride		-6	
	Magnesium		12	
	Nitrate/Nitrite as N		-9	
	pH		-10	
	Potassium	-20		
	Sodium	-16		
	Specific Conductance		-6	
	Sulfate	-15		
	Total Dissolved Solids			18
	Total Hardness		6	
	Total Organic Carbon	-24		
LDR-3	Alkalinity, Total [CaCO3]		2	
	Aluminum	-18		
	Ammonia as N		6	
	Bicarbonate		2	
	Calcium			14
	Chloride			26
	Chromium		5	
	Magnesium			16
	Nitrate/Nitrite as N			14
	pH		-6	
	Potassium			24
	Sodium		12	
	Specific Conductance			24
	Sulfate		2	
	Total Dissolved Solids			24
	Total Hardness			14
Total Organic Carbon	-14			

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-101R-NP	Alkalinity, Total [CaCO3]	-15		
	Aluminum		3	
	Ammonia as N		8	
	Arsenic		3	
	Bicarbonate		-11	
	Calcium		6	
	Chloride		0	
	Lead		2	
	Magnesium		1	
	Nitrate/Nitrite as N		-3	
	pH		1	
	Potassium		-9	
	Sodium		-6	
	Specific Conductance		4	
	Sulfate		8	
	Total Dissolved Solids		7	
	Total Hardness		4	
Total Organic Carbon		-1		
MW-102R-NP	Alkalinity, Total [CaCO3]		10	
	Bicarbonate		8	
	Calcium		-2	
	Chloride		0	
	Magnesium		5	
	Nitrate/Nitrite as N		-8	
	pH		-4	
	Potassium		-5	
	Sodium		-8	
	Specific Conductance		-4	
	Sulfate	-14		
	Total Dissolved Solids		2	
	Total Hardness		-2	
	Total Organic Carbon		-2	
MW-103R-NP	Alkalinity, Total [CaCO3]		-4	
	Bicarbonate		-8	
	Calcium		4	
	Chloride			20
	Magnesium		6	
	Nitrate/Nitrite as N		6	
	pH		0	
	Potassium		7	
	Sodium		-4	
	Specific Conductance		-8	
	Sulfate	-23		
	Total Dissolved Solids		3	
	Total Hardness		5	
	Total Organic Carbon		-4	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-201	Alkalinity, Total [CaCO3]		-4	
	Ammonia as N		-1	
	Arsenic		5	
	Bicarbonate		-4	
	Calcium	-14		
	Chloride	-18		
	Lead		3	
	Magnesium		-10	
	Nitrate/Nitrite as N		0	
	pH		2	
	Phosphorus, Total [as P]		0	
	Potassium	-16		
	Selenium		3	
	Sodium		-12	
	Specific Conductance	-18		
	Sulfate	-22		
	Total Dissolved Solids	-18		
Total Hardness	-16			
Total Organic Carbon		-11		
MW-202R	Alkalinity, Total [CaCO3]		-8	
	Ammonia as N		9	
	Bicarbonate	-14		
	Calcium		-8	
	Carbonate		3	
	Chloride		-3	
	Magnesium		8	
	Nitrate/Nitrite as N		12	
	pH		10	
	Potassium		6	
	Sodium		6	
	Specific Conductance		-8	
	Sulfate		-6	
	Total Dissolved Solids		-6	
	Total Hardness		-10	
Total Organic Carbon		-5		
MW-203R	Alkalinity, Total [CaCO3]		-5	
	Ammonia as N		2	
	Bicarbonate		-5	
	Calcium		-10	
	Chloride		-6	
	Magnesium		-1	
	pH	-13		
	Potassium	-14		
	Sodium		-4	
	Specific Conductance		-2	
	Total Dissolved Solids		12	
	Total Hardness		-10	
	Total Organic Carbon		-10	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-204	Alkalinity, Total [CaCO3]		-2	
	Ammonia as N			14
	Bicarbonate		-2	
	Calcium		-2	
	Chloride			14
	Magnesium		6	
	pH		-11	
	Potassium		-4	
	Sodium		2	
	Specific Conductance		4	
	Sulfate		-4	
	Total Dissolved Solids			14
	Total Hardness		2	
	Total Organic Carbon		-8	
MW-205	Alkalinity, Total [CaCO3]		-8	
	Ammonia as N		8	
	Bicarbonate		-8	
	Calcium		-6	
	Chloride		0	
	Magnesium		11	
	pH	-16		
	Potassium		2	
	Sodium		2	
	Specific Conductance		-2	
	Sulfate		-4	
	Total Dissolved Solids		12	
	Total Hardness		-4	
	Total Organic Carbon		-8	
MW-206	Alkalinity, Total [CaCO3]		-5	
	Ammonia as N		4	
	Bicarbonate		-5	
	Calcium		-2	
	Chloride		-3	
	Magnesium		5	
	pH		-11	
	Potassium		-4	
	Sodium		-3	
	Specific Conductance		-2	
	Sulfate		10	
	Total Dissolved Solids		12	
	Total Hardness		6	
	Total Organic Carbon		-4	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
SW-1/OUTFALL4	Alkalinity, Total [CaCO3]		4	
	Aluminum	-14		
	Ammonia as N		-10	
	Arsenic		-6	
	Bicarbonate		3	
	Calcium		0	
	Chloride			14
	Chromium		5	
	Lead		-7	
	Magnesium		2	
	Nitrate/Nitrite as N		1	
	pH		-2	
	Phosphorus, Total [as P]		-9	
	Potassium		6	
	Sodium		8	
	Specific Conductance			20
	Sulfate		12	
	Total Dissolved Solids		4	
	Total Hardness		-4	
	Total Kjeldahl Nitrogen		-10	
Total Organic Carbon		6		

Appendix F

Leachate Control System Performance Evaluation Report

Table F1
Leachate Management Summary
2024 Annual Water Quality Report
Heidelberg Materials US Cement CKD Monofill
Permit No. 17-SDP-08-99P

Date of Measurement	Column in Piezometer (ft)			Volume Recirculated (gal)	Discharge to North Pond (gal)	Precipitation (in)
	LHP-1	LHP-2	LHP-3			
11/4/2023	NA	NA	NA	0	16,665,000	0.19
12/15/2023	NA	NA	NA			1.45
1/1/2024	NA	NA	NA			1.01
2/1/2024	NA	NA	NA			0.17
3/1/2024	NA	NA	NA			2.41
4/27/2024	NA	NA	NA			4.45
5/2/2024	NA	NA	NA			9.72
6/2/2024	NA	NA	NA			6.67
7/7/2024	NA	NA	NA			6.36
8/8/2024	NA	NA	NA			2.55
9/22/2024	NA	NA	NA			0.45
10/2/2024	NA	NA	NA			1.47
11/14/2024	2.25	Dry	Dry			2.06
Reporting Period Total					16,665,000	38.96

Notes:

- 1) Leachate column thicknesses were not available for the period of November 2023 through October 2024. SCS Engineers began collecting leachate measurements in November 2024.
- 2) Historical leachate levels and graphs are provided in Attachment A.
- 3) Precipitation data for November 2023 - November 2024 obtained from [ncdc.noaa.gov](https://www.ncdc.noaa.gov).
- 4) NA - Not Available.

Comments:

Reporting Period: November 2023 - November 2024.

Approved Changes to Leachate Collection System: None.

Proposed Changes to Leachate Collection System: None.

Maintenance Performed on Leachate Collection System: None.

Last Date of Cleaning and Inspection: October 2021.

Date of Next Cleaning and Inspection: Anticipated by early 2025.

Volume of Leachate Recirculated: 0 gallons

Volume of Leachate Treated Off-Site: Not Applicable - Discharge under NPDES permit # 1700100.

Leachate Quality Testing Results: See SW-1 in Appendix C.

North Pond Levels: 4/29/2024 = 1,111.94 feet amsl; 10/7/2024 = 1,109.85 feet amsl

Date Saved: 11/08/2024 12:32 PM
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 Path: C:\Users\bmadison\OneDrive - SCS Engineers\Desktop\GIS\MapDocs\Leachate Control System\MapDocs\Leachate Control System.aprx



Leachate Control System

Legend		
Leachate Monitoring Point Leachate Piping - Perforated Leachate Piping - Solid Monitoring Well	Leachate Piezometer Leak Detection Lysimeter Waste Boundary Existing Cell Boundary	FML Liner Boundary Future Waste Boundary Property Boundary

Lehigh Cement Company
 Mason City, Iowa
 Project No: 27224104.00
 Drawing Date: November
 2024

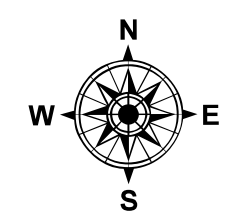



Figure 1



Attachment A

Historical Leachate Level Graphs

**Historical Leachate Head Level Measurements
Lehigh-Mason City Cement Manufacturing Waste Landfill**

Date	LHP-1		LHP-2		LHP-3	
	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)
1/28/2004	dry	--	Not Installed			
2/27/2004	dry	--				
3/31/2004	dry	--				
4/27/2004	dry	--				
5/27/2004	0.39	1115.23				
6/30/2004	dry	--				
7/20/2004	0.38	1115.22				
8/31/2004	dry	--				
9/29/2004	0.42	1115.26				
10/29/2004	0.90	1115.74				
11/29/2004	dry	--				
12/28/2004	dry	--				
4/26/2005	0.37	1115.21				
10/24/2005	dry	--				
4/24/2006	dry	--				
10/25/2006	dry	--				
4/24/2007	1.45	1116.29				
12/6/2007	not measured	not measured	not measured	not measured	Not Installed	
4/30/2008	0.30	1115.14	not measured	not measured		
10/30/2008	not measured	not measured	1.48	1117.08		
4/16/2009	not measured	not measured	not measured	not measured		
10/12/2009	not measured	not measured	not measured	not measured		
4/16/2010	dry	--	0.27	1115.87		
10/7/2010	dry	--	1.18	1116.78		
4/21/2011	0.99	1115.83	0.44	1116.04		
10/11/2011	1.03	1115.87	0.85	1116.45		
4/24/2012	dry	--	dry	--		
10/4/2012	dry	--	0.31	1115.91		
4/25/2013	0.70	1115.54	4.56	1120.16		
10/1/2013	1.31	1116.15	2.21	1117.81		
4/15/2014	0.44	1115.28	3.71	1119.31		
10/2/2014	0.09	1114.93	1.81	1117.41		
4/27/2015	not measured	not measured	4.88	1120.48		
4/29/2015	dry	--	3.78	1119.38		
5/22/2015	dry	--	3.46	1119.06		
6/24/2015	dry	--	3.64	1119.24		
7/23/2015	dry	--	3.57	1119.17		
8/20/2015	dry	--	3.74	1119.34		
9/24/2015	dry	--	3.61	1119.21		
10/25/2015	dry	--	3.55	1119.15		
11/9/2015	dry	--	3.59	1119.19		
12/23/2015	dry	--	Piezometer Pulled	not measured	dry	--
1/27/2016	dry	--	Piezometer Pulled	not measured	dry	--
2/24/2016	dry	--	Piezometer Pulled	not measured	dry	--
3/22/2016	dry	--	dry	--	dry	--
4/21/2016	dry	--	dry	--	dry	--
5/27/2016	dry	--	dry	--	dry	--
6/24/2016	dry	--	dry	--	dry	--
7/22/2016	dry	--	dry	--	dry	--
8/23/2016	dry	--	dry	--	dry	--
9/22/2016	dry	--	dry	--	dry	--

**Historical Leachate Head Level Measurements
Lehigh-Mason City Cement Manufacturing Waste Landfill**

Date	LHP-1		LHP-2		LHP-3	
	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)
10/26/2016	dry	--	dry	--	Sensor is bad	not measured
11/23/2016	dry	--	dry	--	Sensor is bad	not measured
12/2/2016	dry	--	dry	--	Sensor is bad	not measured
1/26/2017	dry	--	Sensor is bad	not measured	dry	--
2/22/2017	dry	--	Sensor is bad	not measured	dry	--
3/20/2017	dry	--	dry	--	dry	--
4/26/2017	dry	--	dry	--	dry	--
5/30/2017	dry	--	dry	--	dry	--
6/28/2017	dry	--	dry	--	dry	--
7/26/2017	dry	--	dry	--	dry	--
8/30/2017	dry	--	dry	--	dry	--
9/27/2017	dry	--	dry	--	dry	--
10/12/2017	dry	--	dry	--	dry	--
11/28/2017	0.2	1115.04	dry	--	dry	--
12/22/2017	0.2	1115.04	dry	--	dry	--
1/30/2018	0.1	1114.94	dry	--	dry	--
2/21/2018	0.2	1115.04	0.1	1115.70	dry	--
3/28/2018	0.2	1115.04	dry	--	dry	--
4/27/2018	0.1	1114.94	dry	--	dry	--
5/30/2018	0.2	1115.04	dry	--	dry	--
6/29/2018	0.2	1115.04	dry	--	dry	--
7/27/2018	0.2	1115.04	dry	--	dry	--
8/31/2018	0.1	1114.94	dry	--	dry	--
9/28/2018	0.2	1115.04	dry	--	dry	--
10/17/2018	0.2	--	dry	--	dry	--
11/23/2018	0.1	--	dry	--	dry	--
12/12/2018	0.1	--	dry	--	dry	--
1/24/2019	0.2	--	dry	--	dry	--
2/19/2019	0.2	--	dry	--	dry	--
3/14/2019	0.2	--	dry	--	dry	--
4/25/2019	0.1	--	dry	--	dry	--
5/28/2019	0.2	--	dry	--	dry	--
6/27/2019	0.2	--	dry	--	dry	--
7/25/2019	0.1	--	dry	--	dry	--
8/29/2019	0.1	--	dry	--	dry	--
9/27/2019	dry	--	dry	--	dry	--
10/24/2019	dry	--	dry	--	dry	--
11/1/2019	Data Not Found	--	Data Not Found	--	Data Not Found	--
12/1/2019	Data Not Found	--	Data Not Found	--	Data Not Found	--
1/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
2/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
3/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
4/16/2020	0.1	1114.94	dry	--	dry	--
5/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
6/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
7/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
8/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
9/1/2020	Data Not Found	--	Data Not Found	--	Data Not Found	--
10/13/2020	dry	--	dry	--	0.2	1115.04

**Historical Leachate Head Level Measurements
Lehigh-Mason City Cement Manufacturing Waste Landfill**

Date	LHP-1		LHP-2		LHP-3	
	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)	Head Level (ft)	Elevation (ft asl)
11/24/2020	dry	--	dry	--	dry	--
12/31/2020	dry	--	dry	--	dry	--
1/27/2021	dry	--	dry	--	dry	--
2/25/2021	dry	--	dry	--	dry	--
3/25/2021	0.04	1114.88	0.06	1115.66	0.04	1114.88
4/28/2021	dry	--	0.02	1115.62	dry	--
5/31/2021	dry	--	0.04	1115.64	dry	--
6/30/2021	dry	--	dry	--	dry	--
7/30/2021	dry	--	0.04	1115.64	dry	--
8/31/2021	dry	--	dry	--	dry	--
9/30/2021	dry	--	0.04	1115.64	dry	--
10/29/2021	0.06	1114.90	0.06	1115.66	0.02	1114.86
11/30/2021	dry	--	dry	--	0.06	1114.90
12/15/2021	dry	--	0.02	1115.62	0.04	1114.88
1/18/2022	dry	--	dry	--	dry	--
2/15/2022	dry	--	dry	--	dry	--
3/10/2022	dry	--	dry	--	dry	--
4/12/2022	dry	--	dry	--	dry	--
5/12/2022	dry	--	dry	--	dry	--
6/13/2022	0.17	1115.01	0.08	1115.68	0.08	1114.92
7/14/2022	dry	--	dry	--	dry	--
8/16/2022	dry	--	dry	--	dry	--
9/12/2022	dry	--	dry	--	dry	--
10/5/2022	dry	--	0.33	1115.93	dry	--
11/4/2022	0.02	1114.86	dry	--	0.02	1114.86
12/15/2021	Data Not Found	--	Data Not Found	--	Data Not Found	--
1/1/2023	Data Not Found	--	Data Not Found	--	Data Not Found	--
2/1/2023	Data Not Found	--	Data Not Found	--	Data Not Found	--
3/1/2023	Data Not Found	--	Data Not Found	--	Data Not Found	--
4/27/2023	dry	--	dry	--	dry	--
5/2/2023	dry	--	dry	--	dry	--
6/2/2023	dry	--	dry	--	dry	--
7/7/2023	dry	--	dry	--	dry	--
8/8/2023	dry	--	dry	--	dry	--
9/22/2023	dry	--	dry	--	dry	--
10/2/2023	dry	--	dry	--	dry	--
11/4/2023	Data Not Found	--	Data Not Found	--	Data Not Found	--
12/15/2023	Data Not Found	--	Data Not Found	--	Data Not Found	--
1/1/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
2/1/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
3/1/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
4/27/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
5/2/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
6/2/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
7/7/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
8/8/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
9/22/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
10/2/2024	Data Not Found	--	Data Not Found	--	Data Not Found	--
11/14/2024	2.25	1112.59	dry	--	dry	--

LHP-3

