

December 15, 2023

Mr. Matthew Graesch
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319

RE: City of Keokuk Sanitary Landfill (Closed)
Permit No. 56-SDP-04-77C
Annual Landfill Monitoring Report

Dear Mr. Graesch,

This letter is provided to the Iowa DNR to summarize the 2023 groundwater monitoring, landfill gas monitoring, leachate collection, and engineering inspection results for the Closed Keokuk Sanitary Landfill. In summary, the following was completed at the landfill during 2023:

- Landfill Gas Measurements were recorded on March 2, 2023 at GP1, GP2, and GP3
- An Engineering Inspection was completed on March 2, 2023.
- Groundwater sampling was completed by Klingner and Associates at MW7, MW9, MW12RR, and MW15 for Appendix I parameters in 567 IAC 11 and TSS. A Hydrasleeve™ was set in each well on March 2, 2023, and samples were collected on March 28, 2023.
- 675,100 gallons of leachate was hauled from the landfill between December 2022 and November 2023.

Permit Conditions:

The site permit was issued on September 10, 1992 and permit amendments have been issued including supplemental sampling requirements as stated in PA 4, 5, 6, & 8 (Replaced PA 7). Permit Amendment #8 was issued in a letter dated January 4, 2017 which required one round of groundwater sampling for Appendix I parameters and TSS at eight (8) wells in the spring and semi-annual gas monitoring at three (3) gas probes and two (2) monitoring wells. PA #9 incorporated the Gas Mitigation Trench Installation Report with As-Built into the permit and PA #10 incorporated the abandonment records for MW8 and MW12R. PA #11 was issued on March 6, 2018 and required annual sampling for Appendix 1 parameters and TSS using low flow techniques at all monitoring wells and monthly explosive gas monitoring at all gas probes and MW7, MW8R, MW12RR, MW15, and MW16. No permit amendments were issued in response to the 2018 AWQR. However, the DNR recommended that groundwater sampling be continued with the same frequency and parameters as the previous year, that explosive gas readings be reduced to quarterly for 2019, that progress continued on a permanent solution for leachate management, and that an additional gas probe be installed. PA #12 was issued on October 29, 2019 and incorporated GP4 into the gas monitoring program. Additionally, PA #12 inadvertently included requirements for monthly landfill gas readings, however Mr. Graesch was contacted and approved the continuance of quarterly gas readings.

This letter report comes in response to PA #13 dated March 16, 2022, and subsequent Revised PA #13 dated August 26, 2022 which reduced landfill monitoring and reporting requirements.

The following requirements were set by Permit Amendment #13:

- The permit is extended by two (2) years, until September 10, 2024
- The hydraulic monitoring system plan was reduced to include only wells MW7, MW9, MW12RR, and MW15. Sampling is required for each well on a biennial basis, though at least one well must be sampled in any given year such that the site as a whole is monitored annually.
- Landfill gas will be monitored annually at GP1, GP2, and GP3.
- An annual engineering inspection will be conducted by a professional engineer. The reporting for the inspection is contemporaneous with this report.
- This annual report will detail groundwater results, landfill gas results, leachate collection data, and engineering inspection results. Tables summarizing groundwater, landfill gas, and leachate data are provided with this report.

Groundwater:

Sampling was conducted at MW7, MW9, MW12RR, and MW15. On March 2, 2023, each well was agitated, purged, and allowed to recharge prior to setting the Hydrasleeve™. On March 28, 2023, the Hydrasleeves™ were retrieved. Field measurements including temperature, pH, and specific conductance were recorded, and samples were placed into lab supplied containers. A table summarizing 2023 groundwater monitoring results as well as a complete lab report are included.

Groundwater levels were measured by Klingner during the annual engineering inspection. A summary of groundwater levels is included.

Inorganics / Metals

Background levels of inorganics are determined using samples collected from MW9 which is the only well considered to be upstream at the site. The following inorganics were found to have either no detects, or detects below the MCL / statewide standards for all wells sampled in 2023:

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Copper
- Lead
- Nickel
- Selenium
- Silver
- Thallium
- Vanadium
- Zinc

Cobalt

There were no detects of cobalt at MW7 or MW9. Cobalt was observed to be above the MCL/ statewide standards at MW12RR and slightly above the MCL/ statewide standards at MW15. Cobalt appears to increase with TSS at MW12RR and cobalt levels above MCL / statewide standards are likely due to naturally occurring cobalt in the surrounding soils. Historically, background levels of cobalt have been observed at MW9 above statewide standards.

Organics

Background levels of inorganics are determined using samples collected from MW9 which is the only well considered to be upstream at the site. The following organics were found to have either no detects, or detects below the MCL / statewide standards for all wells sampled in 2023:

- 1,1,1,2-Tetrachloroethane
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- 1,2-Dibromoethane
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,4-Dichlorobenzene
- 2-Butanone
- 2-Hexanone
- 4-Methyl-2-pentanone
- Xylenes- Total
- Acetone
- Acrylonitrile
- Benzene
- Bromodichloromethane
- Bromoform
- Bromomethane
- Carbon disulfide
- Carbon tetrachloride
- cis-1,2-Dichloroethylene
- cis-1,3-Dichloropropene
- Chlorobenzene
- Chloroethane
- Chloroform
- Chloromethane
- DBCP
- Dibromochloromethane
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene
- Ethylbenzene
- Methylene chloride
- Styrene
- Tetrachloroethene
- Toluene
- Trichloroethene
- Trichlorofluoromethane
- Vinyl acetate
- Vinyl chloride
- trans-1,4-Dichloro-2-butene
- Iodomethane
- Dibromomethane
- Bromochloromethane
- 1,2,3-Trichloropropane

Landfill Gas Monitoring:

Explosive gas levels were measured by Klingner & Associates on March 2, 2023 at GP1, GP2, and GP3. Explosive gas measurements are collected using a GEM 2000 with tubing attached to a barbed hose fitting on the gas probe caps. A summary of the gas measurements taken in 2023 as well as a historical summary graph is included with this report.

Leachate Collection:

Leachate is collected in a series of holding tanks (total capacity of 10,000 gallons), pumped by the City of Keokuk, and trucked to the City wastewater treatment plant. Leachate volumes hauled are provided in the following table:

Month	Discharged to Keokuk WWTP (gal)	Precipitation (in)
Dec-22	37,000	-
Jan-23	49,900	-
Feb-23	86,700	-
Mar-23	138,000	-
Apr-23	56,100	0.9
May-23	54,800	1.5
Jun-23	37,600	0.8
Jul-23	52,900	6.1
Aug-23	64,100	6.7
Sep-23	33,400	1.3
Oct-23	33,000	2.7
Nov-23	31,600	-
2023 Annual Total	675,100	20

Pumping of the leachate collection tank is generally completed 2-3 days per week and multiple loads of leachate are pumped in a single day to allow for sufficient storage space. Pumping operations vary based on City staff availabilities.

The City installed a second 1,500-gallon leachate storage tank at the site in June of 2020 to address the need for immediate leachate storage. Two (2) additional 3,500-gallon tanks (7,000 gallons of additional storage capacity) were installed in November of 2020. The current leachate storage capacity has been increased to 10,000 gallons of total storage from 1,500 gallons prior to June of 2020.

Engineering Inspection:

March 2, 2023 Inspection

An annual engineering inspection was conducted at the landfill on March 2, 2023. During the spring inspection, conditions were overcast with temperatures around 40 degrees Fahrenheit. The landfill entrance gate was locked. Access roads were well maintained with rock. Signage at the entrance gate provided the site contact information.

The landfill had generally good grass cover. The slope north of the leachate collection area was observed to have a small leachate seep. Leachate was confined to the property boundary. Some areas of ponding were observed throughout the landfill, snow melt and precipitation had

occurred recently prior to the inspection so much of the landfill was saturated with moisture. Gas bubbling was observed in a ponded area near the east gas mitigation trench. The leachate and methane seeps may be due to persistent ponding on the top of the slope where additional fill/grading is required. Erosion was observed around the stormwater inlet along the south property boundary. Additional rock or rip rap was recommended to be added around the inlet.

2023 Landfill Repairs & Maintenance:

Following the Engineer's Inspection conducted in March of 2023, the City of Keokuk installed an additional leachate drain in the area of the leachate seep north of the leachate collection area. Additionally, the City repaired eroded areas around the stormwater inlets. Photos of the repairs made are included in an attached photo log.

On August 3, 2023 the City of Keokuk and Klingner were made aware of a leachate seep observed by Iowa DNR during a May 31, 2023 site visit. A site visit was made by Mr. Brian Carroll, Keokuk Public Works Director, and Mrs. Jessica Coca, Klingner, the following week. Keokuk had received a record amount of rainfall the weekend prior to the site visit and a large tree had recently fallen in the area of the leachate seep described by Iowa DNR. A slight leachate odor was noted in the area but the leachate seep could not be observed due to the downed tree.

The City of Keokuk entered into a contract on October 10, 2023 with Klingner for surveying and civil/site design services to place fill on the landfill cap to both improve drainage throughout the landfill and reduce the quantity of leachate produced due to infiltration. Work on a topographic survey is anticipated to begin prior to the end of 2023 with civil/site design to begin in 2024 with the intent to bid the project for a Spring 2024 construction start date. Proposed grading plans will be provided to Iowa DNR prior to bidding to ensure the state is in concurrence with the proposed grading work. Additionally, exploratory digging and leachate drain repair is proposed to be included in the scope of the construction contract to address the seep identified by Iowa DNR in May of 2023.

Conclusion / Recommendations:

At this time, no alterations to the current monitoring plan is recommended.

The timeline for future landfill activities is as follows:

- Annual Engineering Inspection in early March, 2024. At this time, gas monitoring, well purging, and setting Hydrasleeves™ will be performed.
- In late March, 2024 or early April, 2024, each well will be sampled by pulling the Hydrasleeve™ device and transferring sample water into laboratory supplied sampling containers.
- Spring 2024, landfill grading work to begin.

- Summer 2024, provide Iowa DNR construction documentation from grading work and results from Spring 2024 groundwater sampling for determination of future permit requirements (Fall 2024 permit expiration)

Please address any correspondence with the City of Keokuk to Mr. Brian Carroll, Public Works Director.

As always, if you have any questions, please do not hesitate to contact us.

Sincerely,

KLINGNER & ASSOCIATES, P.C.

Jessica Coca, P.E.

P:\Burlington\06141_Keokuk Public Works\005_212010 Landfill Monitoring\19.Enviro\Landfill\2023 Annual Water Quality\0 2023 Keokuk Landfill AWQR.docx

C: Brian Carroll, City of Keokuk

Enclosure: 2023 Groundwater Data Summary
Historic Groundwater Data Summary
Water Level Data
Laboratory Report
Groundwater Sampling Forms
2023 Landfill Gas Data Summary
Historic Landfill Gas Data Summary
2023 Annual Engineering Inspection Documentation
2023 Landfill Repairs Photo Log



**2023 GROUNDWATER DATA
SUMMARY**

2023 Groundwater Monitoring Summary
City of Keokuk Sanitary Landfill (Closed)
Permit No. 56-SDP-04-77C

March 28, 2023 Groundwater Sampling Results

Constituent	MCL	SS	MW-7	MW-9 (Upgradient)	MW-12RR	MW-15
Total Suspended Solids (mg/L)	-	-	<4.0	4	460	29
Metals (ug/L)						
Antimony	6	-	<3.0	<3.0	<3.0	<3.0
Arsenic	10	-	1.2	<1.0	9	5.8
Barium	2000	-	360	420	73	120
Beryllium	4	-	<1.0	<1.0	<1.0	<1.0
Cadmium	5	-	<1.0	<1.0	<1.0	<1.0
Chromium	100	-	<4.0	<4.0	21	7.5
Cobalt	-	2.8	<2.0	<2.0	7	3.3
Copper	1300	-	<3.0	<3.0	16	<3.0
Lead	15	-	<1.0	3.1	9.8	1.7
Nickel	-	100	<5.0	<5.0	22	7.6
Selenium	50	-	<1.0	16	1.4	<1.0
Silver	-	100	<5.0	<5.0	<5.0	<5.0
Thallium	2	-	<1.0	<1.0	<1.0	<1.0
Vanadium	-	35	<5.0	<5.0	35	5.8
Zinc	-	2000	<6.0	16	50	<6.0
Volatile Organics (ug/L)						
1,1,1,2-Tetrachloroethane	-	70	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	280	-	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	-	0.3	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	5	-	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	-	140	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	-	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	-	0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	600	-	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	5	-	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	5	-	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	75	-	<1.0	<1.0	<1.0	<1.0
2-Butanone	-	4000	<5.0	<5.0	<5.0	<5.0
2-Hexanone	-	-	<5.0	<5.0	<5.0	<5.0
4-Methyl-2-pentanone	-	560	<5.0	<5.0	<5.0	<5.0
Xylenes- Total	10	-	<3.0	<3.0	<3.0	<3.0
Acetone	-	6300	<5.0	<5.0	<5.0	<5.0
Acrylonitrile	-	0.32	<10	<10	<10	<10
Benzene	5	-	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	-	80	<1.0	<1.0	<1.0	<1.0
Bromoform	-	80	<2.5	<2.5	<2.5	<2.5
Bromomethane	-	10	<2.5	<2.5	<2.5	<2.5
Carbon disulfide	-	700	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	5	-	<1.0	<1.0	<1.0	<1.0

March 28, 2023 Groundwater Sampling Results

Constituent	MCL	SS	MW-7	MW-9 (Upgradient)	MW-12RR	MW-15
cis-1,2-Dichloroethylene	70	-	4.6	<1.0	<1.0	4.3
cis-1,3-Dichloropropene	-	-	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	-	<1.0	<1.0	<1.0	<1.0
Chloroethane	-	2800	<1.0	<1.0	<1.0	<1.0
Chloroform	-	80	<1.0	<1.0	<1.0	<1.0
Chloromethane	-	-	<1.0	<1.0	<1.0	<1.0
DBCP	0.2	-	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	-	80	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100	-	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene	-	-	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	700	-	<1.0	<1.0	<1.0	<1.0
Methylene chloride	-	5	<1.0	<1.0	<1.0	<1.0
Styrene	100	-	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5	-	<1.0	<1.0	<1.0	<1.0
Toluene	1000	-	<1.0	<1.0	<1.0	<1.0
Trichloroethene	5	-	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	-	2000	<1.0	<1.0	<1.0	<1.0
Vinyl acetate	-	-	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2	-	<1.0	<1.0	<1.0	<1.0
trans-1,4-Dichloro-2-butene	-	1.8	<2.5	<2.5	<2.5	<2.5
Iodomethane	-	-	<2.5	<2.5	<2.5	<2.5
Dibromomethane	-	70	<1.0	<1.0	<1.0	<1.0
Bromochloromethane	-	90	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	-	0.0058	<1.0	<1.0	<1.0	<1.0

Bold = Detection

Green = Exceedance of USEPA Maximum Contaminant Level (MCL)

Yellow = Exceedance of Iowa Statewide Standards (SS)

HISTORIC GROUNDWATER DATA SUMMARY

Analytical Data Summary
 2023 Annual Water Quality Report
 Keokuk (Closed) Sanitary Landfill
 Permit No. 56-SDP-04-77

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Antimony (Total) (7440-36-0) MCL = 6	9/22/2008	µg/l	NM	NM	<6	NM	NM	<6	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<3	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	3.6	<3	<3	NM	<3	NM	NM	3.3	<3	<3
	10/4/2016	µg/l	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
	3/23/2017	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	9/15/2017	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	3/13/2018	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	8/28/2018	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	3/13/2019	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	9/17/2019	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	3/5/2020	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	9/28/2020	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	3/16/2021	µg/l	<3	<3	NM	<3	<3	NM	<3	<3	<3	<3
	9/28/2021	µg/l	NM	<3	NM	<3	<3	NM	<3	<3	<3	<3
	3/22/2022	µg/l	NM	<3	NM	NM	<3	NM	<5.4	NM	<3	NM
	3/28/2023	µg/l	NM	<3	NM	NM	<3	NM	<3	NM	<3	NM
Arsenic (Total) (7440-38-2) MCL = 10	9/22/2008	µg/l	NM	NM	10.7	NM	NM	14.4	NM	NM	NM	NM
	9/16/2009	µg/l	NM	NM	4.4	NM	NM	55.0	NM	NM	NM	NM
	3/17/2010	µg/l	NM	NM	3.0	NM	NM	32.0	NM	NM	NM	NM
	9/22/2010	µg/l	NM	NM	4.2	NM	NM	24.0	NM	NM	NM	NM
	3/16/2011	µg/l	NM	NM	3.4	NM	NM	18.0	NM	NM	NM	NM
	9/16/2011	µg/l	NM	NM	3.8	NM	NM	20.0	NM	NM	NM	NM
	3/28/2012	µg/l	NM	NM	4.1	NM	NM	NM	NM	NM	NM	NM
	9/11/2012	µg/l	NM	NM	4.8	NM	NM	11.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1	NM	NM	NM	NM	NM	NM	NM
	9/5/2013	µg/l	NM	NM	<1	NM	NM	17.0	NM	NM	NM	NM
	3/25/2014	µg/l	NM	NM	NM	NM	NM	5.4	NM	NM	NM	NM
	9/25/2014	µg/l	NM	NM	4.1	NM	NM	11.0	NM	NM	NM	NM
	9/9/2015	µg/l	97.0	1.2	2.0	NM	17.0	NM	NM	12.0	6.0	2.3
	10/4/2016	µg/l	1.0	2.6	10.0	2.5	2.6	5.9	31.0	6.1	3.4	4
	3/23/2017	µg/l	<1	13.0	NM	2.4	1.6	NM	2.3	<1	4.8	2.5
	9/15/2017	µg/l	2.7	1.2	NM	4.7	14.0	NM	70.0	6.0	6.7	3
	3/13/2018	µg/l	1.7	2.3	NM	1.3	2.8	NM	<1	1.4	5.3	2.7
	8/28/2018	µg/l	1.4	2.3	NM	2.1	<1	NM	5.8	<1	5.6	3.2
	3/13/2019	µg/l	<1	2.2	NM	1.2	2.7	NM	1.0	1.0	9.1	4.9
	9/17/2019	µg/l	19	1.1	NM	7.5	2.0	NM	29.0	2.3	<1	4.9
	3/5/2020	µg/l	1.8	1.9	NM	3.5	<1	NM	2.8	1.6	4.7	1.7
	9/28/2020	µg/l	1.9	3.9	NM	3.2	<1	NM	23.0	2.5	4.3	1.6
	3/16/2021	µg/l	2.4	2.5	NM	7.5	<1	NM	2.7	1.6	5.4	1.9
9/28/2021	µg/l	NM	3.0	NM	7.5	10.0	NM	43.0	2.6	3.6	1.9	
3/22/2022	µg/l	NM	2.8	NM	NM	1.7	NM	36.0	NM	6.8	NM	
3/28/2023	µg/l	NM	1.2	NM	NM	<1	NM	9.0	NM	5.8	NM	
Barium (Total) (7440-39-3) MCL = 2000	9/22/2008	µg/l	NM	NM	121	NM	NM	21	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	38	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	790	380	75	NM	980	NM	NM	95	790	130
	10/4/2016	µg/l	130	460	230	38	500	29	210	190	610	150
	3/23/2017	µg/l	140	540	NM	64	640	NM	27	100	360	160
	9/15/2017	µg/l	180	330	NM	160	730	NM	520	130	500	130
	3/13/2018	µg/l	150	380	NM	76	540	NM	18	120	220	140
	8/28/2018	µg/l	150	350	NM	89	450	NM	50	71	200	160
	3/13/2019	µg/l	140	330	NM	110	490	NM	19	46	210	140
	9/17/2019	µg/l	360	380	NM	110	540	NM	290	99	86	800
	3/5/2020	µg/l	180	380	NM	91	450	NM	49	71	180	150
	9/28/2020	µg/l	180	400	NM	89	420	NM	160.0	92.0	570.0	130.0
	3/16/2021	µg/l	190	420	NM	92	460	NM	67.0	77.0	310.0	140.0
	9/28/2021	µg/l	NM	410	NM	95	680	NM	2.8	97.0	630.0	170.0
	3/22/2022	µg/l	NM	420	NM	NM	510	NM	490.0	NM	490.0	NM
	3/28/2023	µg/l	NM	360.0	NM	NM	420.0	NM	73.0	NM	120.0	NM

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Beryllium (Total) (7440-41-7) MCL = 4	9/22/2008	µg/l	NM	NM	1.2	NM	NM	<1	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1	<1	<1	NM	1.5	NM	NM	<1	<1	<1
	10/4/2016	µg/l	<1	<1	<1	<1	<1	<1	1.6	<1	<1	<1
	3/23/2017	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/15/2017	µg/l	<1	<1	NM	<1	1.4	NM	4.8	<1	<1	<1
	3/13/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	8/28/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	3/13/2019	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/17/2019	µg/l	<1	<1	NM	<1	<1	NM	2.6	<1	<1	<1
	3/5/2020	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/28/2020	µg/l	<1	<1	NM	<1	<1	NM	1.3	<1	<1	<1
	3/16/2021	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/28/2021	µg/l	NM	<1	NM	<1	<1	NM	2.8	<1	<1	<1
	3/22/2022	µg/l	NM	<1	NM	NM	<1	NM	3.9	NM	<1	NM
	3/28/2023	µg/l	NM	<1	NM	NM	<1	NM	<1	NM	<1	NM
Cadmium (Total) (7440-43-9) MCL = 5	9/22/2008	µg/l	NM	NM	6.2	NM	NM	7	NM	NM	NM	NM
	9/16/2009	µg/l	NM	NM	1	NM	NM	NM	NM	NM	NM	NM
	3/17/2010	µg/l	NM	NM	<5	NM	NM	NM	NM	NM	NM	NM
	9/22/2010	µg/l	NM	NM	<5	NM	NM	NM	NM	NM	NM	NM
	3/16/2011	µg/l	NM	NM	<1	NM	NM	NM	NM	NM	NM	NM
	9/16/2011	µg/l	NM	NM	1.2	NM	NM	NM	NM	NM	NM	NM
	3/28/2012	µg/l	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<5	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	26	<1	1.9	NM	1.6	NM	NM	<1	<1	<1
	10/4/2016	µg/l	<1	1.2	11	<1	<1	<1	1.3	1.6	1.3	<1
	3/23/2017	µg/l	<1	4.3	NM	<1	<1	NM	<1	<1	<1	<1
	9/15/2017	µg/l	<1	<1	NM	<1	1	NM	3.4	<1	<1	<1
	3/13/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	8/28/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	3/13/2019	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/17/2019	µg/l	2.6	1.5	NM	<1	<1	NM	2	<1	<1	<1
3/5/2020	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1	
9/28/2020	µg/l	<1	<1	NM	<1	<1	NM	1.4	<1	<1	<1	
3/16/2021	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1	
9/28/2021	µg/l	NM	<1	NM	<1	1.6	NM	3.3	<1	<1	<1	
3/22/2022	µg/l	NM	<1	NM	NM	<1	NM	2.6	NM	<1	NM	
3/28/2023	µg/l	NM	<1	NM	NM	<1	NM	<1	NM	<1	NM	
Chromium (Total) (7440-47-3) MCL = 100	9/22/2008	µg/l	NM	NM	<20	NM	NM	<20	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<4	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	870	<4	6.3	NM	55	NM	NM	4	<4	<4
	10/4/2016	µg/l	<4	6.6	43	<4	5.4	<4	50	22	5.4	4.7
	3/23/2017	µg/l	<4	27	NM	<4	<4	NM	<4	<4	<4	<4
	9/15/2017	µg/l	<4	<4	NM	<4	41	NM	150	5.7	<4	<4
	3/13/2018	µg/l	<4	<4	NM	<4	<4	NM	<4	<4	<4	<4
	8/28/2018	µg/l	<4	<4	NM	<4	<4	NM	11	<4	<4	<4
	3/13/2019	µg/l	<4	<4	NM	<4	5.7	NM	<4	<4	<4	<4
	9/17/2019	µg/l	9	<4	NM	7.5	5.8	NM	81	5.3	<4	<4
	3/5/2020	µg/l	<4	<4	NM	7.8	<4	NM	10	5	<4	<4
	9/28/2020	µg/l	<4	<4	NM	4.2	<4	NM	37.0	<4	<4	<4
	3/16/2021	µg/l	<4	<4	NM	<4	<4	NM	15.0	<4	<4	<4
	9/28/2021	µg/l	NM	<4	NM	4.5	33	NM	80.0	8.1	18	7.2
	3/22/2022	µg/l	NM	<4	NM	NM	7.7	NM	150.0	NM	<4	NM
	3/28/2023	µg/l	NM	<4	NM	NM	<4	NM	21.0	NM	7.5	NM
Cobalt (Total) (7440-48-4) SS = 2.8	9/22/2008	µg/l	NM	NM	<2	NM	NM	21.5	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	2.2	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	200	<5	4.3	NM	44	NM	NM	6	14	9.6
	10/4/2016	µg/l	<2	8.1	16	5	2.9	2.4	30	9	4.3	13
	3/23/2017	µg/l	<2	28	NM	24	4.3	NM	<2	<2	<2	5.8
	9/15/2017	µg/l	3.2	3.3	NM	31	34	NM	61	2.5	6.2	8.2
	3/13/2018	µg/l	<2	3.8	NM	18	4.2	NM	<2	<2	<2	6.5
	8/28/2018	µg/l	<2	2.6	NM	23	<2	NM	4.3	<2	<2	6.1
	3/13/2019	µg/l	<2	<2	NM	19.0	3.5	NM	<2	<2	3	<2
	9/17/2019	µg/l	11	2.9	NM	21	9	NM	38	3	9	3.4
	3/5/2020	µg/l	11	2.1	NM	19	<2	NM	<2	<2	4.2	5.2
	9/28/2020	µg/l	6.4	2.8	NM	26	<2	NM	22.0	<2	7.4	5.1
	3/16/2021	µg/l	6.3	<2	NM	25	<2	NM	2.5	<2	5.4	5.5
	9/28/2021	µg/l	NM	3.1	NM	30	38	NM	40.0	<2	7.6	6.1
	3/22/2022	µg/l	NM	5.1	NM	NM	6.8	NM	47.0	NM	9.5	NM
	3/28/2023	µg/l	NM	<2	NM	NM	<2	NM	7.0	NM	3.3	NM

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Copper (Total) (7440-50-8) MCL = 1300	9/22/2008	µg/l	NM	NM	37.4	NM	NM	<20	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	9.5	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	330	<3	54	NM	53	NM	NM	5.7	6.4	<3
	10/4/2016	µg/l	<3	17	410	4.9	4.7	<3	55	26	8.8	9.3
	3/23/2017	µg/l	<3	46	NM	3.6	<3	NM	<3	<3	4.6	<3
	9/15/2017	µg/l	5.7	<3	NM	6.8	36	NM	140	11	4.8	7.7
	3/13/2018	µg/l	<3	<3	NM	5	<3	NM	<3	<3	<3	<3
	8/28/2018	µg/l	<3	<3	NM	4.6	<3	NM	11	<3	<3	<3
	3/13/2019	µg/l	<3	<3	NM	4.5	7.8	NM	<3	<3	<3	<3
	9/17/2019	µg/l	53	<3	NM	4.7	4.6	NM	78	4.9	<3	<3
	3/5/2020	µg/l	<3	<3	NM	6.3	<3	NM	4.5	3.5	<3	<3
	9/28/2020	µg/l	<3	<3	NM	<3	<3	NM	48.0	<3	<3	<3
	3/16/2021	µg/l	3.1	<3	NM	4.2	3.8	NM	7.8	4.9	<3	3.9
	9/28/2021	µg/l	NM	<3	NM	<3	40	NM	78.0	23.0	<3	<3
	3/22/2022	µg/l	NM	<3	NM	NM	4.8	NM	99.0	NM	<3	NM
3/28/2023	µg/l	NM	<3	NM	NM	<3	NM	16.0	NM	<3	NM	
Lead (Total) (7439-92-1) MCL = 15	9/22/2008	µg/l	NM	NM	11.5	NM	NM	<40	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	55	<1	2.5	NM	24	NM	NM	2.7	2.3	<1
	10/4/2016	µg/l	<1	3.8	2.1	<1	1.9	<1	28	15	4.1	5.4
	3/23/2017	µg/l	<1	15	NM	<1	<1	NM	<1	<1	<1	<1
	9/15/2017	µg/l	1.1	<1	NM	2.5	23	NM	75	4.7	3.7	4
	3/13/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	8/28/2018	µg/l	<1	<1	NM	<1	<1	NM	4.8	<1	<1	<1
	3/13/2019	µg/l	<1	<1	NM	1.9	3.2	NM	<1	<1	1	<1
	9/17/2019	µg/l	11	<1	NM	2.1	3.1	NM	42	2	<1	<1
	3/5/2020	µg/l	<1	<1	NM	1.4	<1	NM	2.2	1.3	1.3	<1
	9/28/2020	µg/l	<1	<1	NM	<1	<1	NM	25.0	<1	<1	<1
	3/16/2021	µg/l	<1	<1	NM	<1	<1	NM	2.3	1.0	<1	<1
	9/28/2021	µg/l	NM	<1	NM	<1	18	NM	45.0	4.1	<1	<1
	3/22/2022	µg/l	NM	<1	NM	NM	2.4	NM	56.0	NM	<1	NM
3/28/2023	µg/l	NM	<1	NM	NM	3.1	NM	9.8	NM	1.7	NM	
Nickel (Total) (7440-02-0) SS = 100	9/22/2008	µg/l	NM	NM	57.9	NM	NM	<50	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	18	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	800	8.1	23.0	NM	96	NM	NM	34	18	17
	10/4/2016	µg/l	<5	28	68	17	14	<5	84	27	12	33
	3/23/2017	µg/l	<5	64.0	NM	54	14	NM	<5	<5	9.6	14
	9/15/2017	µg/l	7.0	5.4	NM	46	68	NM	170	5.8	11.0	16
	3/13/2018	µg/l	<5	<5	NM	48	8.2	NM	<5	<5	7.1	8.8
	8/28/2018	µg/l	<5	<5	NM	51	<5	NM	12	<5	<5	9
	3/13/2019	µg/l	<5	<5	NM	36.0	8.6	NM	<5	<5	12	21
	9/17/2019	µg/l	30	5.7	NM	50	21	NM	110	6	13	7.4
	3/5/2020	µg/l	31	<5	NM	51	6.3	NM	8.1	<5	8.5	8.9
	9/28/2020	µg/l	14	<5	NM	53.0	<5	NM	59.0	<5	<5	7.5
	3/16/2021	µg/l	11	<5	NM	50.0	<5	NM	13.0	<5	7.6	8.7
	9/28/2021	µg/l	NM	5.5	NM	49.0	57.0	NM	100.0	6.8	17.0	11.0
	3/22/2022	µg/l	NM	10.0	NM	NM	13	NM	140.0	NM	14.0	NM
3/28/2023	µg/l	NM	<5	NM	NM	<5	NM	22.0	NM	7.6	NM	
Selenium (Total) (7782-49-2) MCL = 50	9/22/2008	µg/l	NM	NM	<50	NM	NM	<25	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	1.4	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	9.1	<1	1.5	NM	9.2	NM	NM	<1	<1	35
	10/4/2016	µg/l	<1	2.1	4.6	<1	13	<1	5.1	2.2	<1	16
	3/23/2017	µg/l	<1	14	NM	1.2	7.1	NM	<1	<1	<1	5.6
	9/15/2017	µg/l	<1	<1	NM	<1	4.9	NM	11	<1	<1	27
	3/13/2018	µg/l	<1	<1	NM	<1	6.8	NM	<1	<1	<1	1.7
	8/28/2018	µg/l	<1	<1	NM	<1	16	NM	1.3	<1	<1	2.6
	3/13/2019	µg/l	<1	<1	NM	<1	17.0	NM	<1	<1	<1	16
	9/17/2019	µg/l	1.4	<1	NM	1	18	NM	11	<1	<1	31
	3/5/2020	µg/l	<1	<1	NM	<1	23	NM	<1	<1	<1	1.2
	9/28/2020	µg/l	<1	<1	NM	<1	19.0	NM	3.7	<1	<1	4.0
	3/16/2021	µg/l	<1	<1	NM	<1	24.0	NM	<1	<1	<1	1.6
	9/28/2021	µg/l	NM	<1	NM	<1	18.0	NM	6.9	<1	<1	<1
	3/22/2022	µg/l	NM	<1	NM	NM	22	NM	5.4	NM	<1	NM
3/28/2023	µg/l	NM	<1	NM	NM	16.0	NM	1.4	NM	<1	NM	

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Silver (Total) (7440-22-4) SS = 100	9/22/2008	µg/l	NM	NM	<20	NM	NM	<20	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	26	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<5	<5	<5	NM	<5	NM	NM	<5	<5	<5
	10/4/2016	µg/l	<5	<5	<5	<5	7.2	13	<5	<5	<5	<5
	3/23/2017	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	9/15/2017	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	3/13/2018	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	8/28/2018	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	3/13/2019	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	9/17/2019	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	3/5/2020	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	9/28/2020	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	3/16/2021	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	9/28/2021	µg/l	NM	<5	NM	<5	<5	NM	<5	<5	<5	<5
	3/22/2022	µg/l	NM	<5	NM	NM	<5	NM	<5	NM	<5	NM
	3/28/2023	µg/l	NM	<5	NM	NM	<5	NM	<5	NM	<5	NM
Thallium (Total) (7440-28-0) MCL = 2	9/22/2008	µg/l	NM	NM	<2	NM	NM	<2	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	1.9	<1	<1	NM	<1	NM	NM	<1	<1	<1
	10/4/2016	µg/l	<1	<1	2.2	<1	<1	<1	2.3	<1	<1	<1
	3/23/2017	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/15/2017	µg/l	<1	<1	NM	<1	<1	NM	2.5	<1	<1	<1
	3/13/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	8/28/2018	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	3/13/2019	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/17/2019	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	3/5/2020	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	9/28/2020	µg/l	<1	<1	NM	<1	<1	NM	<1	<1	<1	<1
	3/16/2021	µg/l	<1	<1	NM	<1	<1	NM	1.3	1.2	1.6	<1
	9/28/2021	µg/l	NM	<1	NM	<1	<1	NM	1.6	<1	<1	<1
	3/22/2022	µg/l	NM	<1	NM	NM	<1	NM	<1	NM	<1	NM
	3/28/2023	µg/l	NM	<1	NM	NM	<1	NM	<1	NM	<1	NM
Vanadium (Total) (7440-62-2) SS = 35	9/22/2008	µg/l	NM	NM	<50	NM	NM	<50	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<5	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	71	<5	11	NM	86	NM	NM	<5	<5	<5
	10/4/2016	µg/l	<5	10	68	<5	10	<5	83	30	8.5	8.9
	3/23/2017	µg/l	<5	38	NM	<5	<5	NM	<5	<5	<5	<5
	9/15/2017	µg/l	<5	<5	NM	<5	68	NM	230	5.4	6.2	6.8
	3/13/2018	µg/l	<5	<5	NM	<5	<5	NM	<5	<5	<5	<5
	8/28/2018	µg/l	<5	<5	NM	<5	<5	NM	19	<5	<5	<5
	3/13/2019	µg/l	<5	<5	NM	<5	12.0	NM	5.7	5.7	<5	<5
	9/17/2019	µg/l	12	<5	NM	12	8.4	NM	120	6.1	<5	<5
	3/5/2020	µg/l	<5	<5	NM	<5	<5	NM	6.7	<5	<5	<5
	9/28/2020	µg/l	<5	<5	NM	<5	<5	NM	58	<5	<5	<5
	3/16/2021	µg/l	<5	<5	NM	<5	<5	NM	12	<5	<5	<5
	9/28/2021	µg/l	NM	<5	NM	<5	44.0	NM	120	13.0	<5	<5
	3/22/2022	µg/l	NM	<5	NM	NM	12	NM	240.0	NM	<5	NM
	3/28/2023	µg/l	NM	<5	NM	NM	<5	NM	35.0	NM	5.8	NM
Zinc (Total) (7440-66-6) SS = 2000	9/22/2008	µg/l	NM	NM	116	NM	NM	73.8	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	7.5	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	810	180	20	NM	120.0	NM	NM	11.0	<6	<6
	10/4/2016	µg/l	<6	29	150	31	12	11	170	46	14	14
	3/23/2017	µg/l	<6	110	NM	30	<6	NM	<6	<6	7.6	<6
	9/15/2017	µg/l	8.7	6	NM	16	95	NM	440	11	16	14
	3/13/2018	µg/l	<6	<6	NM	12	<6	NM	<6	<6	<6	<6
	8/28/2018	µg/l	<6	<6	NM	9.9	<6	NM	33	<6	<6	<6
	3/13/2019	µg/l	7.4	<6	NM	11.0	23.0	NM	<6	<6	<6	6.3
	9/17/2019	µg/l	50.0	6.0	NM	15.0	13.0	NM	230	11.0	<6	6.4
	3/5/2020	µg/l	56.0	19.0	NM	21.0	76.0	NM	16	9.5	16.0	<6
	9/28/2020	µg/l	27.0	9.6	NM	13.0	50.0	NM	170	<6	9.4	<6
	3/16/2021	µg/l	18.0	6.1	NM	13.0	27.0	NM	20	8.4	7.2	9.1
	9/28/2021	µg/l	NM	<6	NM	21.0	120.0	NM	340	32.0	13.0	<6
	3/22/2022	µg/l	NM	<6	NM	NM	29	NM	340.0	NM	11.0	NM
	3/28/2023	µg/l	NM	<6	NM	NM	16.0	NM	50.0	NM	<6	NM

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Total Suspended Solids (TSS)	10/14/2016	mg/l	7.2	6.4	4.8	<4	37	<4	<4	<4	11	<4
	3/23/2017	mg/l	<4	<4	NM	<4	<4	NM	<4	<4	<4	<4
	9/15/2017	mg/l	<4	<4	NM	<4	15.0	NM	8.4	<4	4.0	21.0
	3/13/2018	mg/l	<4	<4	NM	<4	8.8	NM	<4	<4	<4	<4
	8/28/2018	mg/l	<4	4.0	NM	<4	<4	NM	<4	<4	<4	4.4
	3/13/2019	mg/l	<4	9.2	NM	97.0	60.0	NM	28.0	<4	8.8	17.0
	9/17/2019	mg/l	290.0	7.6	NM	190.0	130.0	NM	2900.0	32.0	14.0	20.0
	3/5/2020	µg/l	4.8	4.0	NM	62.0	12.0	NM	120.0	82.0	32.0	5.6
	9/28/2020	µg/l	6.4	4.8	NM	30.0	8.8	NM	1400.0	18.0	24.0	6.4
	3/16/2021	µg/l	<4	<4	NM	22.0	6.4	NM	47.0	20.0	5.6	<4
	9/28/2021	µg/l	NM	4.8	NM	34.0	600.0	NM	800.0	70.0	8.0	<4
	3/22/2022	µg/l	NM	<4	NM	NM	42	NM	1600.0	NM	22.0	NM
	3/28/2023	µg/l	NM	<4	NM	NM	4.0	NM	460.0	NM	29.0	NM
	Acetone (67-64-1) SS = 6300	9/22/2008	µg/l	NM	NM	<10.0	NM	NM	<10.0	NM	NM	NM
3/22/2013		µg/l	NM	NM	<5.0	NM	NM	NM	NM	NM	NM	NM
9/9/2015		µg/l	15	<5.0	<5.0	NM	<5.0	NM	11	6.2	<5.0	<5.0
10/4/2016		µg/l	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
3/23/2017		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
9/15/2017		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
3/13/2018		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
8/28/2018		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
3/13/2019		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
9/17/2019		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
3/5/2020		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
9/28/2020		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
3/16/2021		µg/l	<5.0	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
9/28/2021		µg/l	NM	<5.0	NM	<5.0	<5.0	NM	<5.0	<5.0	<5.0	<5.0
3/22/2022	µg/l	NM	<5.0	NM	NM	<5.0	NM	<5.0	NM	<5.0	NM	
3/28/2023	µg/l	NM	<5.0	NM	NM	<5.0	NM	<5.0	NM	<5.0	NM	
Acrylonitrile (107-13-1) SS = 0.32	9/22/2008	µg/l	NM	NM	<10.0	NM	NM	<10.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<10	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<10	<10	<10	NM	<10	NM	NM	<10	<10	<10
	10/4/2016	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	3/23/2017	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	9/15/2017	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	3/13/2018	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	8/28/2018	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	3/13/2019	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	9/17/2019	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	3/5/2020	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	9/28/2020	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	3/16/2021	µg/l	<10	<10	NM	<10	<10	NM	<10	<10	<10	<10
	9/28/2021	µg/l	NM	<10	NM	<10	<10	NM	<10	<10	<10	<10
3/22/2022	µg/l	NM	<10	NM	NM	<10	NM	<10	NM	<10	NM	
3/28/2023	µg/l	NM	<10	NM	NM	<10	NM	<10	NM	<10	NM	
Benzene (71-43-2) MCL = 5	9/22/2008	µg/l	NM	NM	1.3	NM	NM	2	NM	NM	NM	NM
	9/16/2009	µg/l	NM	NM	<5.0	NM	NM	<5.0	NM	NM	NM	NM
	3/17/2010	µg/l	NM	NM	<5	NM	NM	<5	NM	NM	NM	NM
	9/22/2010	µg/l	NM	NM	<5	NM	NM	<5	NM	NM	NM	NM
	3/16/2011	µg/l	NM	NM	<5	NM	NM	<5.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	1.4	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	1.1	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/15/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	1	<1.0	NM	<1.0	<1.0	1.5	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/16/2021	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2021	µg/l	NM	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/22/2022	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM
	3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
p-Dichlorobenzene (106-46-7) 1,4-Dichlorobenzene MCL = 75	9/22/2008	µg/l	NM	NM	<1.0	NM	NM	<1.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1.0	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	<1.0	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/15/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	2.6	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/16/2021	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2021	µg/l	NM	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/22/2022	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM
3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM	
trans-1,4-Dichloro-2-butene (110-57-6) SS = 1.8	9/22/2008	µg/l	NM	NM	<10.0	NM	NM	<10.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1.0	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	<1.0	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/15/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/16/2021	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2021	µg/l	NM	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/22/2022	µg/l	NM	<2.5	NM	NM	<2.5	NM	<2.5	NM	<2.5	NM
3/28/2023	µg/l	NM	<2.5	NM	NM	<2.5	NM	<2.5	NM	<2.5	NM	
1,1-Dichloroethane (75-34-3) SS = 140	9/22/2008	µg/l	NM	NM	6.9	NM	NM	36.4	NM	NM	NM	NM
	9/16/2009	µg/l	NM	NM	6.7	NM	NM	15	NM	NM	NM	NM
	3/17/2010	µg/l	NM	NM	7.9	NM	NM	6.8	NM	NM	NM	NM
	9/22/2010	µg/l	NM	NM	12	NM	NM	28	NM	NM	NM	NM
	3/16/2011	µg/l	NM	NM	9.5	NM	NM	15	NM	NM	NM	NM
	12/6/2011	µg/l	NM	NM	10	NM	NM	26	NM	NM	NM	NM
	3/28/2012	µg/l	NM	NM	8.4	NM	NM	NM	NM	NM	NM	NM
	9/11/2012	µg/l	NM	NM	8	NM	NM	<5.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	7.7	NM	NM	NM	NM	NM	NM	NM
	9/5/2013	µg/l	NM	NM	5.4	NM	NM	<5.0	NM	NM	NM	NM
	3/25/2014	µg/l	NM	NM	NM	NM	NM	<5.0	NM	NM	NM	NM
	9/24/2014	µg/l	NM	NM	<5.0	NM	NM	<5.0	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	8.6	8.5	NM	<1.0	NM	NM	3	4.4	<1.0
	10/4/2016	µg/l	<1.0	4.2	5.3	<1.0	<1.0	<1.0	<1.0	2.1	2.8	<1.0
	3/23/2017	µg/l	<1.0	5.3	NM	1.4	<1.0	NM	<1.0	<1.0	2	<1.0
	9/15/2017	µg/l	<1.0	7.4	NM	1.3	<1.0	NM	<1.0	1.1	6.2	<1.0
	3/13/2018	µg/l	<1.0	5	NM	1.3	<1.0	NM	<1.0	1.6	<1.0	<1.0
	8/28/2018	µg/l	<1.0	4.2	NM	<1.0	<1.0	NM	<1.0	<1.0	1.3	<1.0
	3/13/2019	µg/l	<1.0	2.9	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	5.4	NM	2.1	<1.0	NM	<1.0	<1.0	8	<1.0
	3/5/2020	µg/l	<1.0	2	NM	1.8	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	2.4	NM	2.1	<1.0	NM	<1.0	<1.0	6.8	<1.0
	3/16/2021	µg/l	<1.0	1.4	NM	<1	<1.0	NM	<1.0	1.9	2.2	<1.0
	9/28/2021	µg/l	NM	4.8	NM	2.1	<1.0	NM	<1.0	<1.0	6.0	<1.0
	3/22/2022	µg/l	NM	4.3	NM	NM	<1.0	NM	<1.0	NM	2.8	NM
3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM	

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
1,2-Dichloroethane (107-06-2) MCL = 5	9/22/2008	µg/l	NM	NM	<1.0	NM	NM	<1.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1.0	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	<1.0	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/15/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	1.6	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/16/2021	µg/l	<1.0	NM	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2021	µg/l	NM	NM	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/22/2022	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM
3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM	
1,1-Dichloroethylene (75-35-4) 1,1-Dichloroethene MCL = 7	9/22/2008	µg/l	NM	NM	<2.0	NM	NM	<2.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1.0	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	<1.0	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/15/2017	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/16/2021	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2021	µg/l	NM	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/22/2022	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM
3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM	
cis-1,2-Dichloroethylene (156-59-2) MCL - 70	9/22/2008	µg/l	NM	NM	9.6	NM	NM	2.8	NM	NM	NM	NM
	9/16/2009	µg/l	NM	NM	8.4	NM	NM	5.0	NM	NM	NM	NM
	3/17/2010	µg/l	NM	NM	<5	NM	NM	9.7	NM	NM	NM	NM
	9/22/2010	µg/l	NM	NM	15.0	NM	NM	<5	NM	NM	NM	NM
	3/16/2011	µg/l	NM	NM	14.0	NM	NM	<5.0	NM	NM	NM	NM
	12/6/2011	µg/l	NM	NM	16.0	NM	NM	<5.0	NM	NM	NM	NM
	3/28/2012	µg/l	NM	NM	12.0	NM	NM	NM	NM	NM	NM	NM
	9/11/2012	µg/l	NM	NM	12.0	NM	NM	NM	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	13.0	NM	NM	NM	NM	NM	NM	NM
	9/5/2013	µg/l	NM	NM	8.6	NM	NM	NM	NM	NM	NM	NM
	9/24/2014	µg/l	NM	NM	8.1	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	29.0	14.0	NM	<1.0	NM	NM	4.2	32.0	7.9
	10/4/2016	µg/l	<1.0	20.0	8.9	1.2	<1.0	<1.0	<1.0	2.9	<1.0	4.0
	3/23/2017	µg/l	<1.0	23.0	NM	3.2	<1.0	NM	<1.0	<1.0	12.0	2.7
	9/15/2017	µg/l	<1.0	23.0	NM	3.6	<1.0	NM	<1.0	3.3	50.0	6.0
	3/13/2018	µg/l	<1.0	24.0	NM	3.0	<1.0	NM	<1.0	3.5	14.0	7.5
	8/28/2018	µg/l	<1.0	19.0	NM	4.4	<1.0	NM	<1.0	<1.0	6.2	5.6
	3/13/2019	µg/l	<1.0	16.0	NM	1.5	<1.0	NM	<1.0	<1.0	6.3	2.2
	9/17/2019	µg/l	<1.0	19.0	NM	4.7	<1.0	NM	<1.0	<1.0	110.0	8.7
	3/5/2020	µg/l	<1.0	36.0	NM	2.9	<1.0	NM	<1.0	<1.0	11.0	11.0
9/28/2020	µg/l	<1.0	32.0	NM	4.0	<1.0	NM	<1.0	<1.0	66.0	9.5	
3/16/2021	µg/l	<1.0	28.0	NM	<1	<1.0	NM	<1.0	3.5	33.0	6.0	
9/28/2021	µg/l	NM	35.0	NM	4.1	<1.0	NM	<1.0	<1.0	52.0	9.0	
3/22/2022	µg/l	NM	29.0	NM	NM	3.9	NM	1.1	NM	37.0	NM	
3/28/2023	µg/l	NM	4.6	NM	NM	<1.0	NM	<1.0	NM	4.3	NM	

Constituent (CAS #)	Sample Date	Units	MW6	MW7	MW8	MW8R	MW9	MW12/R	MW12RR	MW14	MW15	MW16
			DwnGrad	DwnGrad	DwnGrad	DwnGrad	Bkgrnd	DwnGrad	DwnGrad	DwnGrad	DwnGrad	DwnGrad
Vinyl chloride (75-01-4) MCL = 2	9/22/2008	µg/l	NM	NM	<1.0	NM	NM	<1.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<1.0	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<1.0	<1.0	<1.0	NM	<1.0	NM	NM	<1.0	<1.0	<1.0
	10/4/2016	µg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/23/2017	µg/l	<1.0	2.4	NM	<1.0	<1.0	NM	<1.0	<1.0	1.8	<1.0
	9/15/2017	µg/l	<1.0	1	NM	<1.0	<1.0	NM	<1.0	<1.0	4.3	<1.0
	3/13/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	8/28/2018	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/13/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/17/2019	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	3/5/2020	µg/l	<1.0	<1.0	NM	<1.0	<1.0	NM	<1.0	<1.0	<1.0	<1.0
	9/28/2020	µg/l	<1.0	3.6	NM	<1.0	<1.0	NM	<1.0	<1.0	9.1	<1.0
	3/16/2021	µg/l	<1.0	3.8	NM	<1.0	<1.0	NM	<1.0	<1.0	2.1	<1.0
	9/28/2021	µg/l	NM	2.9	NM	<1.0	<1.0	NM	<1.0	<1.0	9.8	<1.0
	3/22/2022	µg/l	NM	2.5	NM	NM	<1.0	NM	<1.0	NM	3.8	NM
3/28/2023	µg/l	NM	<1.0	NM	NM	<1.0	NM	<1.0	NM	<1.0	NM	
Xylene (total) (1330-20-7) MCL = 10	9/22/2008	µg/l	NM	NM	<3.0	NM	NM	<3.0	NM	NM	NM	NM
	3/22/2013	µg/l	NM	NM	<2.9	NM	NM	NM	NM	NM	NM	NM
	9/9/2015	µg/l	<3.0	<3.0	<3.0	NM	<3.0	NM	NM	<3.0	<3.0	<3.0
	10/4/2016	µg/l	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	3/23/2017	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	9/15/2017	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	3/13/2018	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	8/28/2018	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	3/13/2019	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	9/17/2019	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	3/5/2020	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	9/28/2020	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	3/16/2021	µg/l	<3.0	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	9/28/2021	µg/l	NM	<3.0	NM	<3.0	<3.0	NM	<3.0	<3.0	<3.0	<3.0
	3/22/2022	µg/l	NM	<3.0	NM	NM	<3.0	NM	<3.0	NM	<3.0	NM
3/28/2023	µg/l	NM	<3.0	NM	NM	<3.0	NM	<3.0	NM	<3.0	NM	

Key:
Detections are in bold
MCL = USEPA Maximum Contaminant Level
SS = Iowa Statewide Standards

Comments:
This is landfill data since December 2007.

This worksheet;
1) Determines if 5 samples for a new well and/or new contaminant have been collected within 1 year.
2) Determines if resamples are being collected within 90 days.
3) Looks for gaps in data record and if an explanation for those gaps was prepared.
4) Ensures that DQR is being correctly applied.
5) Examines if RLs are reasonable and if they have changed over the course of the project.

WATER LEVEL DATA

**HISTORIC WATER LEVEL MEASUREMENTS
CITY OF KEOKUK LANDFILL (CLOSED)**

DATE	MW6	MW7	MW8	MW8R	MW9	MW12	MW12R	MW12RR	MW14	MW15	MW16
TOP OF CASING	655.57	675.66	611.17	612.49	679.57	645.19			674.07	675.97	654.69
6/21/1989	579.56	648.78	606.07		648.84	NM			NM	NM	NM
1/30/1991	Dry	646.66	606.17		643.57	NM			NM	NM	NM
4/20/1991	Dry	646.98	607.69		646.72	567.67			623.06	647.12	625.89
12/19/1991	Dry	646.16	605.67		646.07	565.31			624.28	NM	NM
9/28/1992	Dry	646.87	603.22		648.76	567.12			Dry	649.13	625.62
12/29/1992	Dry	649.29	607.32		650.20	567.57			Dry	649.53	626.15
3/25/1993	Dry	650.55	608.32		651.62	567.48			Dry	650.90	627.98
6/30/1993	Dry	651.86	607.75		653.09	567.81			Dry	652.18	629.27
4/4/1994	Dry	654.48	NM		655.02	568.06			618.73	654.74	630.34
9/28/1994	Dry	654.18	604.30		654.34	568.05			616.83	654.43	628.19
5/30/1995	Dry	654.56	NM		655.90	568.04			621.69	654.57	630.81
6/28/1995	Dry	654.76	606.37		656.27	568.39			617.70	654.82	631.04
7/25/1995	Dry	654.86	605.57		656.11	568.39			618.30	655.17	630.34
8/24/1995	Dry	654.84	605.92		655.72	568.23			619.00	655.15	629.53
9/27/1995	Dry	654.92	605.71		655.52	568.25			619.00	655.18	628.97
10/25/1995	Dry	654.86	605.22		655.27	568.39			618.85	654.95	628.69
11/29/1995	Dry	654.66	606.12		655.47	568.29			621.20	654.77	628.49
4/8/1996	Dry	654.34	606.87		654.47	568.41			638.12	654.48	629.12
4/17/1996	Dry	654.54	607.66		654.87	568.52			639.43	654.83	629.41
5/16/1996	Dry	654.46	607.30		655.23	568.61			626.57	654.57	630.59
6/4/1996	Dry	654.86	606.77		655.47	568.79			628.52	655.14	630.94
7/24/1996	Dry	655.06	NM		656.07	568.59			635.27	655.37	629.99
8/30/1996	Dry	654.86	NM		656.17	568.34			635.77	655.07	NM
9/19/1996	580.62	654.78	604.36		655.57	568.45			636.08	655.00	629.01
10/25/1996	Dry	654.56	NM		NM	568.84			626.29	654.87	628.57
3/11/1997	583.80	652.98	607.37		653.91	568.40			639.07	653.22	628.15
3/26/1998	598.57	655.04	607.55		657.39	569.08			640.51	655.36	632.37
5/4/1998	NM	655.66	NM		658.35	569.09			627.27	655.97	630.09
6/23/1998	NM	NM	NM		NM	568.79			637.77	NM	NM
7/24/1998	NM	656.08	NM		658.76	568.77			640.29	656.39	NM
8/26/1998	NM	656.14	NM		658.09	568.89			640.86	656.45	NM
9/22/1998	NM	655.91	NM		657.45	568.84			642.67	656.22	NM
10/11/1998	616.26	656.03	606.83		657.18	568.89			644.59	655.25	631.80
3/2/2000	617.83	654.39	607.25		654.89	569.14			643.75	654.59	629.44
5/31/2000	655.57	653.46	NM		654.14	569.49			641.89	653.77	NM
6/28/2000	NM	653.21	NM		654.16	569.29			642.87	653.52	NM
7/26/2000	NM	653.51	NM		655.02	569.39			642.07	652.82	NM
8/31/2000	NM	653.66	NM		654.97	569.59			641.57	653.97	NM
9/19/2000	619.63	653.71	604.76		654.97	569.89			641.69	653.90	628.48
10/24/2000	NM	653.16	NM		654.17	569.19			641.17	653.47	626.89
3/28/2001	619.68	652.97	605.95		654.97	569.63			641.20	653.23	629.87
9/5/2001	621.09	654.80	607.25		656.47	569.49			643.76	655.00	630.05
3/29/2002	621.12	656.36	604.07		658.57	569.99			643.97	656.72	630.99
10/1/2002	624.21	656.80	604.72		658.26	569.97			645.96	656.86	629.75
3/26/2003	623.42	653.90	605.12		654.89	570.02			645.17	654.04	628.84
9/30/2003	624.66	653.56	605.12		654.85	568.54			644.05	653.69	630.34
3/18/2004	626.92	656.16	607.07		658.27	570.04			647.35	656.07	631.59
9/9/2004	627.67	657.26	605.47		658.57	569.97			647.15	656.97	630.79
3/30/2005	629.67	658.36	607.57		660.19	570.84			648.47	658.57	633.49
9/16/2005	628.67	657.16	604.55		654.42	570.06			647.57	657.34	631.27
3/29/2006	629.97	654.86	608.52		655.99	569.99			648.97	656.17	633.49
9/13/2006	629.00	654.31	604.51		655.48	570.37			645.57	654.54	634.33
3/8/2007	629.02	652.66	607.22		653.77	570.19			644.47	652.87	632.04
9/13/2007	624.87	653.21	605.22		654.84	570.49			644.54	652.12	633.08
3/11/2008	621.34	652.19	NM		646.05	569.98			638.86	651.49	630.31
9/22/2008	621.41	652.33	604.78		646.18	570.13			638.97	651.65	630.52
3/17/2009	631.62	656.76	607.82		655.62	573.04			646.97	656.97	635.79
9/16/2009	631.85	658.96	605.67		660.62	573.09			647.57	659.20	636.02
3/17/2010	633.12	660.81	607.82		662.97	571.98			659.87	661.05	638.25
9/22/2010	633.92	662.09	607.99		663.05	585.93			651.19	661.94	638.16
3/16/2011	633.42	659.44	607.52		660.62	594.62			656.60	659.69	637.84
9/14/2011	632.39	660.22	604.09		660.87	592.04			648.99	660.44	636.95
3/28/2012	633.91	658.52	607.25		659.50	(4)			650.55	658.52	637.35
9/12/2012	631.51	657.77	604.10		656.92	(5)	571.86		647.77	657.97	636.14
3/22/2013	632.91	655.11	607.27		655.32	(5)	571.78		652.64	655.12	637.34
9/5/2013	631.60	653.02	603.97		653.84	(5)	571.50		646.13	655.45	636.10
3/25/2014	633.41	625.85	(6)		653.32	(5)	584.58		650.57	652.37	634.49
9/24/2014	632.45	668.52	606.42		647.54	(5)	571.36		641.17	648.23	637.59
4/16/2015	633.79	634.21	651.67		629.95	(5)	582.41		629.19	634.15	638.41
9/9/2015	629.47	655.46	605.17		653.27	(5)	571.68		643.67	655.47	636.29

**HISTORIC WATER LEVEL MEASUREMENTS
CITY OF KEOKUK LANDFILL (CLOSED)**

DATE	MW6	MW7	MW8	MW8R	MW9	MW12	MW12R	MW12RR	MW14	MW15	MW16
TOP OF CASING	655.57	675.66	611.17	612.49	679.57	645.19	644.78	644.09	674.07	675.97	654.69
10/4/2016	632.67	655.96	603.87	602.94	655.84	(5)	576.66	571.54	645.82	656.17	638.57
3/23/2017	633.61	653.76	(7)	603.72	647.75	(5)	(7)	571.95	642.07	655.01	636.99
9/15/2017	631.71	654.68	(7)	602.56	654.79	(5)	(7)	571.65	645.07	654.57	636.61
3/13/2018	633.59	655.96	(7)	604.16	653.17	(5)	(7)	571.44	646.59	653.79	636.69
8/28/2018	632.42	655.01	(7)	602.58	652.42	(5)	(7)	569.91	646.00	653.97	635.08
3/13/2019	636.64	658.07	(7)	607.48	655.39	(5)	(7)	579.91	669.87	655.99	638.29
9/17/2019	634.06	656.70	(7)	603.44	656.55	(5)	(7)	571.62	646.80	656.82	638.47
3/5/2020	636.47	658.36	(7)	604.56	658.68	(5)	(7)	571.79	657.57	658.44	640.39
9/28/2020	634.40	657.97	(7)	603.57	658.26	(5)	(7)	571.90	648.25	658.08	638.70
3/16/2021	636.28	657.98	(7)	605.08	657.87	(5)	(7)	571.96	670.87	658.01	640.30
9/28/2021	(8)	658.72	(7)	603.54	659.12	(5)	(7)	571.97	648.41	658.83	638.80
3/22/2022	634.91	656.91	(7)	605.44	657.17	(5)	(7)	572.38	671.43	656.98	639.49
9/1/2022	633.24	657.56	(7)	602.83	658.04	(5)	(7)	571.82	648.22	657.68	637.78
3/2/2023	634.51	635.66	(7)	636.25	673.80	(5)	(7)	569.18	688.97	654.29	639.65

NOTES:

- 1.) Data for 1994 through 2001 as reported in the 2001 AWQR prepared by MWH.
- 2.) Data for 2002 through March 18, 2009 as reported in 2008 AWQR and 2009 Semi-Annual Water Quality Report, Barker Lemar.
- 3.) Data for September 2009 through present collected by PDC Laboratories sampling crew.
- 4.) MW12 did not pass 2011 slug test and is scheduled for replacement in 2012
- 5.) MW12 abandoned and replace by MW12R
- 6.) MW8 lock frozen under water; could not open well to sample

LABORATORY RESULTS



Pace Analytical Services, LLC

2231 W. Altorfer Drive

Peoria, IL 61615

(800)752-6651

April 12, 2023

Jessica Cary
Klingner & Associates - Burlington
610 N 4th St, Suite 100
Burlington, IA 52601

RE: KLINGNER APP I

Dear Jessica Cary:

Please find enclosed the analytical results for the **4** sample(s) the laboratory received on **3/30/23 1:19 pm** and logged in under work order **GC04970**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise . We are always trying to improve our customer service and we welcome you to contact the General Manager, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

A handwritten signature in cursive script, appearing to read "Taylor Cordle".

Taylor Cordle
Project Manager
(309)683-1793
taylor.cordle@pacelabs.com



SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order GC04970

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided



ANALYTICAL RESULTS

Sample: GC04970-01
Name: MW-7
Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:05
Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
General Chemistry - PIA									
Solids - total suspended solids (TSS)	< 4.0	mg/L		03/31/23 09:31	1	4.0	03/31/23 12:03	HRF	SM 2540 D 1997
Total Metals - PIA									
Antimony	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 08:34	JMW	EPA 6020A
Arsenic	1.2	ug/L		04/04/23 09:27	5	1.0	04/06/23 09:45	JMW	EPA 6020A
Barium	360	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Chromium	< 4.0	ug/L		04/04/23 09:27	5	4.0	04/05/23 08:34	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		04/04/23 09:27	5	2.0	04/05/23 08:34	JMW	EPA 6020A
Copper	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 08:34	JMW	EPA 6020A
Lead	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Nickel	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 08:34	JMW	EPA 6020A
Selenium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Silver	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 08:34	JMW	EPA 6020A
Thallium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 08:34	JMW	EPA 6020A
Vanadium	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/06/23 09:45	JMW	EPA 6020A
Zinc	< 6.0	ug/L		04/04/23 09:27	5	6.0	04/05/23 08:34	JMW	EPA 6020A
Volatile Organics - PIA									
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/05/23 09:12	1	0.05	04/05/23 15:17	GCC	EPA 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,4-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
2-Butanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 16:36	GCC	EPA 8260B
2-Hexanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 16:36	GCC	EPA 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 16:36	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-01

Name: MW-7

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:05

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Xylenes- Total	< 3.0	ug/L		04/04/23 10:44	1	3.0	04/04/23 16:36	GCC	EPA 8260B
Acetone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 16:36	GCC	EPA 8260B
Acrylonitrile	< 10	ug/L		04/04/23 10:44	1	10	04/04/23 16:36	GCC	EPA 8260B
Benzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Bromodichloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Bromoform	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 16:36	GCC	EPA 8260B
Bromomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 16:36	GCC	EPA 8260B
Carbon disulfide	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Carbon tetrachloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
cis-1,2-Dichloroethene	4.6	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Chlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Chloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Chloroform	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Chloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
DBCP	< 0.05	ug/L		04/04/23 10:44	1	0.05	04/04/23 16:36	GCC	EPA 8260B
Dibromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Ethylbenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Methylene chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Styrene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Tetrachloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Toluene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Trichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Vinyl acetate	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Vinyl chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
trans-1,4-Dichloro-2-butene	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 16:36	GCC	EPA 8260B
Iodomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 16:36	GCC	EPA 8260B
Dibromomethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
Bromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 16:36	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-02

Name: MW-9

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:33

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
General Chemistry - PIA									
Solids - total suspended solids (TSS)	4.0	mg/L		03/31/23 09:31	1	4.0	03/31/23 12:03	HRF	SM 2540 D 1997
Total Metals - PIA									
Antimony	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:33	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/06/23 09:56	JMW	EPA 6020A
Barium	420	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Chromium	< 4.0	ug/L		04/04/23 09:27	5	4.0	04/05/23 09:33	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		04/04/23 09:27	5	2.0	04/05/23 09:33	JMW	EPA 6020A
Copper	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:33	JMW	EPA 6020A
Lead	3.1	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Nickel	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:33	JMW	EPA 6020A
Selenium	16	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Silver	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:33	JMW	EPA 6020A
Thallium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:33	JMW	EPA 6020A
Vanadium	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/06/23 09:56	JMW	EPA 6020A
Zinc	16	ug/L		04/04/23 09:27	5	6.0	04/05/23 09:33	JMW	EPA 6020A
Volatile Organics - PIA									
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/05/23 09:12	1	0.05	04/05/23 15:44	GCC	EPA 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,4-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
2-Butanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:02	GCC	EPA 8260B
2-Hexanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:02	GCC	EPA 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:02	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-02

Name: MW-9

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:33

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Xylenes- Total	< 3.0	ug/L		04/04/23 10:44	1	3.0	04/04/23 17:02	GCC	EPA 8260B
Acetone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:02	GCC	EPA 8260B
Acrylonitrile	< 10	ug/L		04/04/23 10:44	1	10	04/04/23 17:02	GCC	EPA 8260B
Benzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Bromodichloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Bromoform	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:02	GCC	EPA 8260B
Bromomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:02	GCC	EPA 8260B
Carbon disulfide	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Carbon tetrachloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Chlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Chloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Chloroform	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Chloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
DBCP	< 0.05	ug/L		04/04/23 10:44	1	0.05	04/04/23 17:02	GCC	EPA 8260B
Dibromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Ethylbenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Methylene chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Styrene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Tetrachloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Toluene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Trichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Vinyl acetate	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Vinyl chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
trans-1,4-Dichloro-2-butene	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:02	GCC	EPA 8260B
Iodomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:02	GCC	EPA 8260B
Dibromomethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
Bromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:02	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-03

Name: MW-12RR

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:50

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
General Chemistry - PIA									
Solids - total suspended solids (TSS)	460	mg/L		03/31/23 09:31	1	12	03/31/23 12:03	HRF	SM 2540 D 1997
Total Metals - PIA									
Antimony	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:37	JMW	EPA 6020A
Arsenic	9.0	ug/L		04/04/23 09:27	5	1.0	04/06/23 10:00	JMW	EPA 6020A
Barium	73	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Chromium	21	ug/L		04/04/23 09:27	5	4.0	04/05/23 09:37	JMW	EPA 6020A
Cobalt	7.8	ug/L		04/04/23 09:27	5	2.0	04/05/23 09:37	JMW	EPA 6020A
Copper	16	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:37	JMW	EPA 6020A
Lead	9.8	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Nickel	22	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:37	JMW	EPA 6020A
Selenium	1.4	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Silver	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:37	JMW	EPA 6020A
Thallium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:37	JMW	EPA 6020A
Vanadium	35	ug/L		04/04/23 09:27	5	5.0	04/06/23 10:00	JMW	EPA 6020A
Zinc	50	ug/L		04/04/23 09:27	5	6.0	04/05/23 09:37	JMW	EPA 6020A
Volatile Organics - PIA									
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/05/23 09:12	1	0.05	04/05/23 16:10	GCC	EPA 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,4-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
2-Butanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:29	GCC	EPA 8260B
2-Hexanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:29	GCC	EPA 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:29	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-03

Name: MW-12RR

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:50

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Xylenes- Total	< 3.0	ug/L		04/04/23 10:44	1	3.0	04/04/23 17:29	GCC	EPA 8260B
Acetone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:29	GCC	EPA 8260B
Acrylonitrile	< 10	ug/L		04/04/23 10:44	1	10	04/04/23 17:29	GCC	EPA 8260B
Benzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Bromodichloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Bromoform	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:29	GCC	EPA 8260B
Bromomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:29	GCC	EPA 8260B
Carbon disulfide	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Carbon tetrachloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Chlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Chloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Chloroform	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Chloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
DBCP	< 0.05	ug/L		04/04/23 10:44	1	0.05	04/04/23 17:29	GCC	EPA 8260B
Dibromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Ethylbenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Methylene chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Styrene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Tetrachloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Toluene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Trichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Vinyl acetate	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Vinyl chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
trans-1,4-Dichloro-2-butene	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:29	GCC	EPA 8260B
Iodomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:29	GCC	EPA 8260B
Dibromomethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
Bromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:29	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-04

Name: MW-15

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:15

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
General Chemistry - PIA									
Solids - total suspended solids (TSS)	29	mg/L		03/31/23 09:31	1	4.0	03/31/23 12:03	HRF	SM 2540 D 1997
Total Metals - PIA									
Antimony	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:41	JMW	EPA 6020A
Arsenic	5.8	ug/L		04/04/23 09:27	5	1.0	04/06/23 10:03	JMW	EPA 6020A
Barium	120	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Chromium	7.5	ug/L		04/04/23 09:27	5	4.0	04/05/23 09:41	JMW	EPA 6020A
Cobalt	3.3	ug/L		04/04/23 09:27	5	2.0	04/05/23 09:41	JMW	EPA 6020A
Copper	< 3.0	ug/L		04/04/23 09:27	5	3.0	04/05/23 09:41	JMW	EPA 6020A
Lead	1.7	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Nickel	7.6	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:41	JMW	EPA 6020A
Selenium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Silver	< 5.0	ug/L		04/04/23 09:27	5	5.0	04/05/23 09:41	JMW	EPA 6020A
Thallium	< 1.0	ug/L		04/04/23 09:27	5	1.0	04/05/23 09:41	JMW	EPA 6020A
Vanadium	5.8	ug/L		04/04/23 09:27	5	5.0	04/06/23 10:03	JMW	EPA 6020A
Zinc	< 6.0	ug/L		04/04/23 09:27	5	6.0	04/05/23 09:41	JMW	EPA 6020A
Volatile Organics - PIA									
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/05/23 09:12	1	0.05	04/05/23 14:51	GCC	EPA 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,4-Dichlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
2-Butanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:56	GCC	EPA 8260B
2-Hexanone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:56	GCC	EPA 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:56	GCC	EPA 8260B



ANALYTICAL RESULTS

Sample: GC04970-04

Name: MW-15

Matrix: Ground Water - Regular Sample

Sampled: 03/28/23 10:15

Received: 03/30/23 13:19

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Xylenes- Total	< 3.0	ug/L		04/04/23 10:44	1	3.0	04/04/23 17:56	GCC	EPA 8260B
Acetone	< 5.0	ug/L		04/04/23 10:44	1	5.0	04/04/23 17:56	GCC	EPA 8260B
Acrylonitrile	< 10	ug/L		04/04/23 10:44	1	10	04/04/23 17:56	GCC	EPA 8260B
Benzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Bromodichloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Bromoform	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:56	GCC	EPA 8260B
Bromomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:56	GCC	EPA 8260B
Carbon disulfide	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Carbon tetrachloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
cis-1,2-Dichloroethene	4.3	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Chlorobenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Chloroethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Chloroform	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Chloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
DBCP	< 0.05	ug/L		04/04/23 10:44	1	0.05	04/04/23 17:56	GCC	EPA 8260B
Dibromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Ethylbenzene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Methylene chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Styrene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Tetrachloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Toluene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Trichloroethene	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Vinyl acetate	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Vinyl chloride	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
trans-1,4-Dichloro-2-butene	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:56	GCC	EPA 8260B
Iodomethane	< 2.5	ug/L		04/04/23 10:44	1	2.5	04/04/23 17:56	GCC	EPA 8260B
Dibromomethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
Bromochloromethane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/04/23 10:44	1	1.0	04/04/23 17:56	GCC	EPA 8260B



NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050



Certified by: Taylor Cordle, Project Manager



REGULATORY PROGRAM (CIRCLE):	NPDES
MORBCA	RCRA
CCDD	TACO: RES OR IND/COMM

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT KLINGER AND ASSOCIATES ADDRESS: 610 N. 4TH STREET, SUITE 100 CITY: BURLINGTON, IA 52601 CONTACT PERSON: MS JESSICA COCA		PROJECT NUMBER: KEOKUK LF PHONE NUMBER: 319-752-3603		PROJECT LOCATION: IA E-MAIL: S Troutman @Klinger		PURCHASE ORDER # DATE SHIPPED: 3-28-23		3 ANALYSIS REQUESTED SB, AS, BA, BE, CD, CR CO, CU, PB, NI, SE, AG, TL, V, ZN, VOA, TSS			4 (FOR LAB USE ONLY) LOGIN #: 6C04970 LOGGED BY: JPO CLIENT: KLINGER & ASSOC-BURLINGTON PROJECT: KLINGER APP I PROJ. MGR.: GJ SCHINDLER	
2 SAMPLE DESCRIPTION (UNIQUE DESCRIPTION AS IT WILL APPEAR ON THE ANALYTICAL REPORT)		DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB COMP	MATRIX TYPE	BOTTLE COUNT	PRES CODE CLIENT PROVIDED				REMARKS	
MW-6				X	GW	5		X	X	X		
MW-7		3-28-23	1005	X	GW	5		X	X	X		
MW-8R				X	GW	5		X	X	X		
MW-9		3-28-23	1033	X	GW	5		X	X	X		
MW-12RR		3-28-23	1050	X	GW	5		X	X	X		
MW-14				X	GW	5		X	X	X		
MW-15		3-28-23	1015	X	GW	5		X	X	X		
MW-16				X	GW	5		X	X	X		
CHEMICAL PRESERVATION CODES: 1-HCL 2-H2SO4 3-HNO3 4-NAOH 5-NA2S2O3 6-UNPRESERVED 7-OTHER												
5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) <input checked="" type="radio"/> NORMAL <input type="radio"/> RUSH (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE) RUSH RESULTS VIA (PLEASE CIRCLE) <input checked="" type="radio"/> EMAIL <input type="radio"/> PHONE EMAIL IF DIFFERENT FROM ABOVE: PHONE # IF DIFFERENT FROM ABOVE:				DATE RESULTS NEEDED Standard TAT		6 I understand that by initialing this box I give the lab permission to proceed with analysis, even though it may not meet all sample conformance requirements as defined in the receiving facility's Sample Acceptance Policy and the data will be qualified. Qualified data may <u>NOT</u> be acceptable to report to all regulatory authorities. PROCEED WITH ANALYSIS AND QUALIFY RESULTS: (INITIALS) _____						
7 RELINQUISHED BY: (SIGNATURE) 		DATE: 3-28-23 TIME: 1200	RECEIVED BY: (SIGNATURE) 				DATE: TIME:	8 COMMENTS: (FOR LAB USE ONLY) SAMPLE TEMPERATURE UPON RECEIPT: 4.5 °C CHILL PROCESS STARTED PRIOR TO RECEIPT SAMPLE(S) RECEIVED ON ICE SAMPLE ACCEPTANCE NONCONFORMANT REPORT IS NEEDED YOR N DATE AND TIME TAKEN FROM SAMPLE BOTTLE: 3/22/23 1015				
RELINQUISHED BY: (SIGNATURE)		DATE: TIME:	RECEIVED BY: (SIGNATURE)				DATE: TIME:					
RELINQUISHED BY: (SIGNATURE)		DATE: TIME:	RECEIVED BY: (SIGNATURE) 				DATE: 3/22/23 TIME: 1015					

GROUNDWATER SAMPLING FORMS

GROUNDWATER SAMPLING AND/OR GROUNDWATER ELEVATION MEASUREMENT FORM

Site Name City of Keokuk Sanitary Landfill (Closed) Permit No. 56-SDP-04-77C
 Monitoring Well/Piezometer No. MW-7
 Upgradient no Downgradient yes
 Name of person sampling Skyler Troutman

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? (please check) YES NO

If no, explain _____

Standing Water or Litter? (please check) YES NO

If yes, explain _____

B. GROUNDWATER ELEVATION MEASUREMENT (± 0.01 foot, MSL)

Elevation:

Top of inner well casing 675.66 Ground Elevation 673.36

Depth of Well 609.94 Inside Casing Diameter (in inches) 2"

Equipment Used Geotech WL Indicator

Groundwater Level (± 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	3-2-23 / 1035	19.60	653.66
*After Purging	3-2-23 / 1100	-	
*Before Purging	3-2-23 / 1005	19.51'	653.85

TWD - 65.72

*C. WELL PURGING

Quantity of Water Removed from Well (gallons) ~22

No. of Well Volumes (based on current water level) ~3

Was well pumped/bailed dry? no

Equipment used:

Bailer type - Dedicated Bailer? -

Pump type Grundfos Redi-Flow 2 Dedicated Pump? no

If not dedicated, method of cleaning Decon, replace tubing

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

***D. FIELD MEASUREMENT**

Weather Conditions Clear, 40°F

Field Measurements (after stabilization):

Temperature 51.4 Units °F

Equipment Used Oakton PCTS Testr 50

pH 7.08

Equipment Used same

Specific Conductance 1007 Units µS/cm

Equipment Used same

Comments

3.2.23 - agitated and purged well until water ran clear
- set hydrasleeve at 1505

3.28.23 pulled Steere @ 1005

CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate and complete.

Signature 

Date 3.28.23

Telephone 319-752-3603 Fax

Email Stroutman@Klingner.com

NOTE: Attach Laboratory Report and 8 ½" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

GROUNDWATER SAMPLING AND/OR GROUNDWATER ELEVATION MEASUREMENT FORM

Site Name City of Keokuk Sanitary Landfill (Closed) Permit No. 56-SDP-04-77C
 Monitoring Well/Piezometer No. MW-15
 Upgradient no Downgradient yes
 Name of person sampling Skyler Troutman

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? (please check) YES NO

If no, explain _____

Standing Water or Litter? (please check) YES NO

If yes, explain _____

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

Elevation:

Top of inner well casing 675.97 Ground Elevation 674.00
 Depth of Well 635.25 Inside Casing Diameter (in inches) 2"
 Equipment Used Geotech WL Indicator

Groundwater Level (+ 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	3-2-23	19.71'	654.29
*After Purging	3-2-23 / 1030	-	
*Before Purging	3-28-23 / 1015	19.50'	654.5

720-40.72

*C. WELL PURGING

Quantity of Water Removed from Well (gallons) ~20

No. of Well Volumes (based on current water level) ~6

Was well pumped/bailed dry? no

Equipment used:

Bailer type - Dedicated Bailer? -

Pump type Grundfos Redi-Flow 2 Dedicated Pump? no

If not dedicated, method of cleaning Decon, replace tubing

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

***D. FIELD MEASUREMENT**


Weather Conditions Clear, 40° F
Field Measurements (after stabilization):
Temperature 52.6 Units °F
Equipment Used Oakton PCTS Testr50
pH 6.99
Equipment Used same
Specific Conductance 830. Units µS/cm
Equipment Used same

Comments

3.2.23: - agitated and purged well until water ran clear
- hydrastere set at 1500

3.28.23 pulled sleeve @ 101.5

CERTIFICATION
I certify under penalty of law I believe the information reported above is true, accurate and complete.

Signature  Date 3.28.23
Telephone 319-752-3603 Fax — Email Stroutman@Klingner.com

NOTE: Attach Laboratory Report and 8 ½" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations.

GROUNDWATER SAMPLING AND/OR GROUNDWATER ELEVATION MEASUREMENT FORM

Site Name City of Keokuk Sanitary Landfill (Closed) Permit No. 56-SDP-04-77C
 Monitoring Well/Piezometer No. MW-12 RR
 Upgradient no Downgradient yes
 Name of person sampling Skyler Troutman

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? (please check) YES NO
 If no, explain _____
 Standing Water or Litter? (please check) YES NO
 If yes, explain _____

B. GROUNDWATER ELEVATION MEASUREMENT (± 0.01 foot, MSL)

Elevation:
 Top of inner well casing 644.09 Ground Elevation 641.27
 Depth of Well 561.39 Inside Casing Diameter (in inches) 2
 Equipment Used Geotech WL Indicator

Groundwater Level (± 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	3.2.23	72.09'	569.18
*After Purging	3.2.23 / 1200	-	
*Before Purging	3.2.23 / 1430		
	3.28.23 / 1050	71.98'	569.29

TWO - 82.70

*C. WELL PURGING

Quantity of Water Removed from Well (gallons) ~15 gal
 No. of Well Volumes (based on current water level) ~9
 Was well pumped/bailed dry? yes
 Equipment used:
 Bailer type - Dedicated Bailer? -
 Pump type Grundfos Redi-Flow 2 Dedicated Pump? no
 If not dedicated, method of cleaning Decon, replace tubing

***D. FIELD MEASUREMENT**

Weather Conditions Clear, 40°F

Field Measurements (after stabilization):

Temperature 50.200 Units °F

Equipment Used Oakton PCTS Testr50

pH 7.18

Equipment Used Same

Specific Conductance 1390 Units µS/cm

Equipment Used Same

Comments

3.2.23 - agitated and purged well until dry, allowed recharge time, and repeat
- heavily silty water, purged until water cleared up
- set hydrasteve at 1540

3.28.23 pulled sleeve @ 1050

CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate and complete.

Signature 

Date 3.28.23

Telephone 319-752-3603 Fax Email Stroutman@Klingner.com

NOTE: Attach Laboratory Report and 8 1/2" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

GROUNDWATER SAMPLING AND/OR GROUNDWATER ELEVATION MEASUREMENT FORM

Site Name City of Keokuk Sanitary Landfill (Closed) Permit No. 56-SDP-04-77C
 Monitoring Well/Piezometer No. mw-9
 Upgradient yes Downgradient no
 Name of person sampling Skyler Troutman

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? (please check) YES NO

If no, explain _____

Standing Water or Litter? (please check) YES NO

If yes, explain _____

B. GROUNDWATER ELEVATION MEASUREMENT (± 0.01 foot, MSL)

Elevation:

Top of inner well casing 697.57 Ground Elevation 696.92

Depth of Well 640.85 Inside Casing Diameter (in inches) 2

Equipment Used Geotech WL Indicator

Groundwater Level (± 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	3-2-23		
	3-2-23 / 1120	23.12	673.8
*After Purging	3-2-23 / 1140	-	
*Before Purging	3-28-23 / 1033	22.56	674.36

TWO - 56.72

*C. WELL PURGING

Quantity of Water Removed from Well (gallons) ~10 gal

No. of Well Volumes (based on current water level) ~2

Was well pumped/bailed dry? no yes

Equipment used:

Bailer type - Dedicated Bailer? -

Pump type Grundfos Redi-Flow 2 Dedicated Pump? no

If not dedicated, method of cleaning Decon, replace tubing

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

***D. FIELD MEASUREMENT**

Weather Conditions clear, 40° F

Field Measurements (after stabilization):

Temperature 52.9 Units °F

Equipment Used Oakton PCTS Testr 50

pH 7.03

Equipment Used same

Specific Conductance 934 Units µS/cm

Equipment Used same

Comments

3-2-23 -agitated and purged well until dry (water running clear)
-set hydrasteve at 1450

3-28-23 pulled sleeve @ 1033

CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate and complete.

Signature  Date 3-28-23

Telephone 319-752-3603 Fax - Email stroutman@Klingner.com

NOTE: Attach Laboratory Report and 8 ½" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, nina.booker@dnr.iowa.gov

2023 METHANE SUMMARY



Date 03/02/23
Eng Proj # 21-2010

Inspected by STT
Checked by JAC

METHANE GAS MEASUREMENTS

FACILITY INFORMATION

CITY OF KEOKUK SANITARY
LANDFILL
PERMIT NUMBER 56-SDP-04-77C PERMIT ISSUED 9/10/1992, EXPIRES 9/10/2024

INSPECTION INFORMATION

TAKEN BY: STT DATE: March 2, 2023
EQUIPMENT: LANDTEC GEM 2000, TUBING ATTACHED TO PVC CAP WITH BARBED HOSE FITTING / TUBING ATTACHED TO SAMPLE PORTS ON GAS VENTS

WEATHER CONDITIONS Overcast

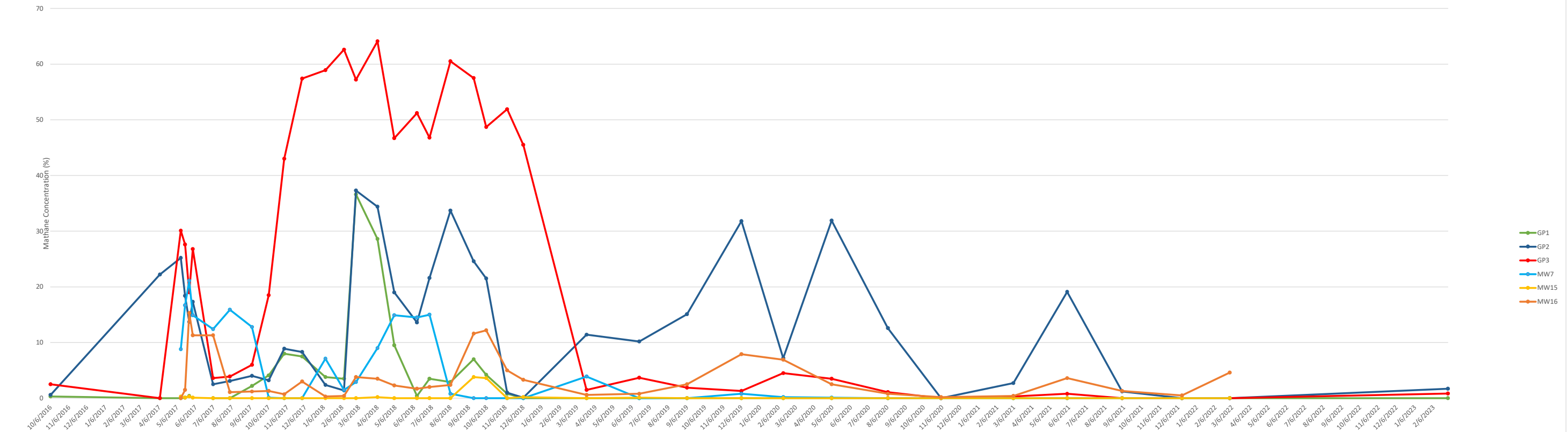
WIND: 4 MPH ENE TEMPERATURE: 40 DEGREES FAHRENHEIT

LOCATION	% LOWER EXPLOSIVE LIMIT	TIME OF MEASUREMENT	CO2 CONTENT	O2 CONTENT	COMMENTS
GP #1	0%	9:37 AM	2.0%	20.3%	
GP #2	35%	2:45 PM	12.7%	8.9%	1.7% CH4
GP #3	17%	10:13 AM	7.4%	15.3%	0.8% CH4

** METHANE LOWER EXPLOSIVE LIMIT = 5%
** METHANE UPPER EXPLOSIVE LIMIT = 15%

HISTORIC METHANE SUMMARY

Methane (CH4) Concentration



	10/6/2016	4/7/2017	5/12/2017	5/19/2017	5/26/2017	6/1/2017	7/5/2017	8/2/2017	9/8/2017	10/6/2017	11/1/2017	12/1/2017	1/9/2018	2/9/2018	3/1/2018	4/6/2018	5/4/2018	6/11/2018	7/2/2018	8/6/2018	9/14/2018	10/5/2018	11/9/2018	12/6/2018	3/22/2019	6/18/2019	9/6/2019	12/6/2019	2/14/2020	5/5/2020	8/7/2020	11/4/2020	3/5/2021	6/3/2021	9/3/2021	12/12/2021	3/2/2022	3/2/2023		
GP1	0.3	0	0	0.1	0.4		0	0	2.2	4.1	8	7.5	3.8	3.5	36.6	28.6	9.5	0.4	3.5	2.9	7	4.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GP2	0.6	22.2	25.2	18.4	13.7	17.3	2.5	3.1	4	3.2	8.9	8.3	2.4	1.4	37.3	34.4	19	13.6	21.6	33.7	24.6	21.5	1	0.1	11.4	10.2	15.1	31.8	7.2	21.9	12.6	0	2.7	19.1	1.2	0	0	0	1.7	
GP3	2.5	0	30.1	27.6	19	26.8	3.6	3.9	6	18.5	43	57.4	58.9	62.6	57.2	64.1	46.7	51.2	46.8	60.5	57.5	48.7	51.9	45.5	1.5	3.7	1.9	1.3	5.5	4.5	3.5	1.1	0	0.3	0.8	0	0	0	0	0.85
MW7			8.8	16.7	21.1	14.9	12.4	15.9	12.8	0.1	0	0	7.1	1.5	2.9	9	14.9	14.5	15	0.8	0	0	0	0	3.9	0	0	0	0.8	0.2	0.1	0	0	0	0	0	0	0	0	0
MW15			0.3	0.1	0.3	0.1	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
MW16			0	1.5	15.3	11.3	11.3	1.1	1.2	1.3	0.7	3	0.3	0.4	3.8	3.5	2.3	1.7	2	2.4	11.6	12.2	5	3.3	0.6	0.8	2.5	7.9	6.9	2.5	0.8	0.2	0.4	3.6	1.3	0.5	4.6			

2023 ANNUAL INSPECTION DOCUMENTS



Date 03/02/23 Inspected by JAC
 Eng Proj # 21-2010

CLOSED LANDFILL INSPECTION CHECKLIST

CITY OF KEOKUK LANDFILL (NORTH) **LANDFILL CONTACTS:** **Brian Carroll, Public Works Director**
PERMIT NUMBER 56-SDP-04-77C **PERMIT ISSUED 9/10/1992, EXPIRES 9/10/2024**

Weather Conditions: 40F, Cloudy

GENERAL

1.) Landfill ID and contact info posted?	Yes.
2.) Is entrance gate locked?	Yes
3.) Entrance Road Conditions	Good

COVER

4.) Condition of Final Cover: Vegetation	Generally good, some seeding is required when leachate collection lines were replaced just northeast of the leachate collection area.
5.) Has topsoil been placed on the landfill?	Only in areas that received fill.
6.) Has the landfill been properly graded and seeded?	Generally yes. Some areas of ponded water were noted, see attached photo log.

EROSION

7.) Is drainage and erosion being controlled on the landfill?	Generally yes.
---	----------------

LEACHATE

8.) Is there evidence of leachate on the surface of the landfill?	Yes, small seep present north of leachate collection area.
9.) Is there any leachate flows leaving the site?	No.
10.) Has the landfill submitted plans for a leachate collection/treatment system?	Yes.
11.) Has the approved leachate collection and treatment system been constructed?	Yes.
12.) Does the landfill have a permit to discharge leachate?	No.

LANDFILL GAS

13.) Is there evidence of landfill gas problems?	No odors present. Took landfill gas measurements, see attached.
--	---

MONITORING WELLS

14.) Are monitoring wells in good condition?	Yes.
15.) Are monitoring wells marked and identified?	Yes.

MISCELLANEOUS

16.) Is there evidence of open burning?	No.
17.) Is there evidence of open dumping, litter?	No.
18.) Is there evidence of rodents or insects as a result of improper landfilling operations?	No.

Additional Comments:
 Some erosion was noted at the furthest east stormwater inlet along the southern property boundary.



Description	Facing south from GP1	1
Date	3/2/2023	



Description	GP1 facing east	2
Date	3/2/2023	



Description	MW9 facing north	3
Date	3/2/2023	



Description	Facing south from MW9	4
Date	3/2/2023	



Description	Facing SW from MW9	5
Date	3/2/2023	



Description	MW14	6
Date	3/2/2023	



Description	MW6	7
Date	3/2/2023	



Description	Leachate seep on slope north of leachate collection area	8
Date	3/2/2023	



Description	Leachate collection area facing west	9
Date	3/2/2023	



Description	Slope east of leachate collection area, facing west	10
Date	3/2/2023	



Description	Erosion at stormwater inlet on south side of landfill, facing east	11
Date	3/2/2023	



Description	Erosion at stormwater inlet	12
Date	3/2/2023	



Description	South gas mitigation trench and MW16, facing east	13
Date	3/2/2023	



Description	Facing west from south gas mitigation trench area	14
Date	3/2/2023	



Description	MW16	15
Date	3/2/2023	



Description	Facing NW from south gas mitigation trench area	16
Date	3/2/2023	



Description	Facing NE from south gas mitigation trench area	17
Date	3/2/2023	



Description	Facing east from south gas mitigation trench area	18
Date	3/2/2023	



Description	Stormwater inlet east of south gas mitigation trench	19
Date	3/2/2023	



Description	GP2	20
Date	3/2/2023	



Description	GP4	21
Date	3/2/2023	



Description	GP3	22
Date	3/2/2023	



Description	Bubbling from ponded area near east gas mitigation trench	23
Date	3/2/2023	



Description	Ponding near east gas mitigation trench, facing east	24
Date	3/2/2023	

2023 LANDFILL REPAIRS PHOTO LOG



Description	Repairs around stormwater inlet	1
Date	7/21/2023	



Description	Repairs around stormwater inlet	2
Date	7/21/2023	



Description	Fill dirt placed near leachate collection area	3
Date	7/21/2023	