

11228 Aurora Avenue
Des Moines, Iowa 50322-7905
United States
ghd.com



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January 30, 2026

Mr. Brian Rath
Environmental Engineer Senior
Solid Waste and Contaminated Sites Section
Iowa Department of Natural Resources
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321

2025 IDNR Template Tables
Neal North Energy Center Coal Combustion Residual (CCR) Monofill
Sergeant Bluff, Iowa
Permit 97-SDP-12-95P

Dear Mr. Rath:

GHD Services Inc. (GHD) has prepared Table 7 and Table 9 using the general format provided in the Iowa Department of Natural Resources' (IDNR's) *Annual Water Quality Report Template for Non-Municipal Landfills*. Table 7 and Table 9, provided in Attachment 1, are modified as approved in our January 23, 2025, telephone conversation with Geoffrey Spain (IDNR) and Josh Love of MidAmerican Energy Company. A comparison of the IDNR Action Levels from 567 Iowa Administrative Code (IAC) Chapter 103 to the criteria specified in the federal CCR rule (40 Code of Federal Regulations [CFR] §257) is provided in Attachment 2.

In Attachment 3, the 2025 groundwater monitoring results are compared to the Maximum Contaminant Level (MCL) or Health Advisory Lifetime (HAL) as described in 567 IAC Chapter 103, Paragraph 103.1(4)d.

Attachment 4 provides a crosswalk table to reference the items provided in the Annual Groundwater Monitoring and Corrective Action Report prepared under the Federal CCR rule with the IDNR's *Annual Water Quality Report Template for Non-Municipal Landfills*.

Should you have any questions or require additional information regarding these tables, please do not hesitate to contact Kevin Armstrong of GHD.

Regards,

Kevin G. Armstrong
Hydrogeologist
+1 515 414-3935
kevin.armstrong@ghd.com

Michael J. Alowitz, P.E.
Senior Engineer
+1 515 414-3934
michael.alowitz@ghd.com

PR/jlf/7/S4

Encl.: Attachment 1 - IDNR Template Table 7 and Table 9
Attachment 2 - Iowa CCR Rule and Federal CCR Rule Criteria Summary
Attachment 3 - MCL/HAL Comparison Table
Attachment 4 - IDNR Template to AGWMCAR Cross Reference Table

Copy to: Kenna Anderson, MidAmerican Energy Company
Josh Love, MidAmerican Energy Company

Attachments

Attachment 1

IDNR Template Table 7 and Table 9

Table 7
Summary of Ongoing and Newly Identified Control Limit Exceedances
2025 Annual Water Quality Report
Neal North Energy Center - Active CCR Monofill
Permit No. 97-SDP-12-95P

Well	Constituent	Units	Most recent result	Background Standard	Groundwater Protection Standard 40 CFR §257.95(h)
MW-5R	None	--	--	--	--
MW-11	None	--	--	--	--
MW-13/MW-13R (Background)	None	--	--	--	--
MW-19	Boron	mg/L	0.554	0.328	None
	Calcium	mg/L	364	242	None
	Sulfate	mg/L	854	318	None
	Total Dissolved Solids (TDS)	mg/L	2130	1128	None
	Cobalt	mg/L	0.00858	0.00694	0.00694
	Lithium	mg/L	0.257	0.196	0.196
MW-21	Boron	mg/L	0.348	0.328	None
	Calcium	mg/L	437	242	None
	Sulfate	mg/L	1180	318	None
	Total Dissolved Solids (TDS)	mg/L	2350	1128	None
	Lithium	mg/L	0.308	0.196	0.196
MW-23	None	--	--	--	--
MW-25	Boron	mg/L	0.512	0.328	None
	Sulfate	mg/L	394	318	None
	Total Dissolved Solids (TDS)	mg/L	1130	1128	None
MW-27 (Background)	Arsenic	mg/L	0.0759	0.0695	0.0695
MW-29/MW-29R (Background)	None	--	--	--	--
MW-57/MW-57R	Sulfate	mg/L	323	318	None
	Total Dissolved Solids (TDS)	mg/L	1180	1128	None
MW-59S	None	--	--	--	--
MW-60S	None	--	--	--	--
MW-223S (Background)	None	--	--	--	--
MW-231S/MW-231SR (Background)	None	--	--	--	--

Comments:

Statistics are based on the background concentration (95/95 Upper Tolerance Limit [UTL] Inter-well) developed in accordance with the Federal CCR rule. Table 4.7 of the Annual Groundwater Monitoring and Corrective Action Report compares the MCL, GWPS, and background concentrations for the Appendix IV Parameters. The background concentration is used as the site-specific GWPS when higher than the MCL or GWPS.

Table 4.3 of the Annual Groundwater Monitoring and Corrective Action Report provides the 95/95 UTL background concentrations established for the Appendix III and IV analytes.

The following Appendix III/IV analyte(s) are compared to the 95/95 UTL background concentrations, no IDNR Action Level has been established: calcium, cobalt, and lithium.

The following Appendix III analyte(s) are compared to the 95/95 UTL background concentrations, which are higher than the IDNR Action Level: fluoride, sulfate, and TDS.

The following Appendix IV analyte(s) are compared to the 95/95 UTL background concentration, which is higher than the IDNR action level: arsenic, molybdenum, and selenium.

Table 9
Historical Control Limit & GWPS Exceedances
2025 Annual Water Quality Report
Neal North Energy Center - Active CCR Monofill
Permit No. 97-SDP-12-95P

Key: gray =CL; black =GWPS		March	May	September	February	May	July	October	March	June	September	March/April	September	March	June	September	March	May	September
Well	Constituent	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2023	2023	2024	2024	2024	2025	2025	2025
MW-5R	Boron																	na	
	pH, lab																		
	Sulfate														na			na	
	Barium	na	na								na	na			na			na	
MW-11	None														ns			ns	
MW-13/MW-13R (Background)	Chloride		ns		ns	ns									ns			ns	
	Barium		ns		ns	ns									ns			ns	
	Thallium		ns		ns	ns									ns			ns	
MW-19	Boron														na			na	
	Calcium														na			na	
	pH, lab		na																
	Sulfate														na			na	
	Total Dissolved Solids (TDS)														na			na	
	Cobalt	na	na									na	na		na			na	
	Lead	na	na									na	na		na			na	
	Lithium	na	na									na	na		na			na	
MW-21	Boron																	na	
	Calcium		na												na				
	pH, lab																		
	Fluoride														na			na	
	Sulfate		na												na				
	Total Dissolved Solids (TDS)		na												na				
	Lead	na	na									na	na		na			na	
	Lithium	na	na									na	na		na			na	
	Selenium		na									na	na		na			na	
MW-23	Calcium				ns	ns		ns		na					ns			ns	
	pH, lab		na		ns	ns		ns							ns			ns	
	Sulfate				ns	ns		ns		na					ns			ns	
	Total Dissolved Solids (TDS)				ns	ns		ns		na					ns			ns	
MW-25	Boron					ns		ns		ns					ns			ns	ns
	Sulfate					ns		ns		ns					ns			ns	ns
	Total Dissolved Solids (TDS)					ns		ns		ns					ns			ns	ns
MW-27 (Background)	Arsenic		ns												ns			ns	
	Lithium		ns												ns			ns	
MW-29/MW-29R (Background)	Barium		ns		ns	ns									ns			ns	
	Cobalt		ns		ns	ns									ns			ns	
MW-57/MW-57R	Boron				ns	ns		ns		ns					na			na	
	Calcium				ns	ns		ns		ns					na			na	
	pH, lab		na		ns	ns		ns		ns					na				
	Sulfate				ns	ns		ns		ns					na			na	
	Total Dissolved Solids (TDS)				ns	ns		ns		ns								na	
MW-59S	None																		
MW-60S	None																		
MW-223S (Background)	Chloride		ns												ns			ns	
	Barium		ns												ns			ns	
MW-231S/MW-231SR (Background)	Chloride		ns												ns			na	
	Calcium		ns												ns			na	
	Sulfate		ns												ns			na	
	Total Dissolved Solids (TDS)		ns												ns			na	
	Cobalt		ns												ns			na	
	Thallium		ns												ns			na	
	Radium-226 & 228		ns												ns			na	

Comments:

ns - No sample collected during this sampling event.

na - Constituent not analyzed.

Statistics are based on the background concentration (95/95 Upper Tolerance Limit [UTL] Inter-well) developed in accordance with the Federal CCR rule.

Table 4.7 of the Annual Groundwater Monitoring and Corrective Action Report compares the MCL, GWPS, and background concentrations for the Appendix IV Parameters. The background concentration is used as the site-specific GWPS when higher than the MCL or GWPS.

Table 4.3 of the Annual Groundwater Monitoring and Corrective Action Report provides the 95/95 UTL background concentrations established for the Appendix III and IV analytes.

The following Appendix III/IV analyte(s) are compared to the 95/95 UTL background concentrations, no IDNR Action Level has been established: calcium, cobalt, and lithium.

The following Appendix III analyte(s) are compared to the 95/95 UTL background concentrations, which are higher than the IDNR Action Level: fluoride, sulfate, and TDS.

The following Appendix IV analyte(s) are compared to the 95/95 UTL background concentration, which is higher than the IDNR action level: arsenic, molybdenum, and selenium.

Grey shading indicates exceedance of the 95/95 UTL background concentration.

Black shading indicates exceedance of the site-specific GWPS.

Attachment 2

Iowa CCR Rule and Federal CCR Rule Criteria Summary

Iowa CCR Rule and Federal CCR Rule Criteria Summary for Neal North Monofill Groundwater
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

		IDNR CCR Rule			Federal CCR Rule				Basis for Comparison on IDNR Template Tables
		567 IAC Chapter 103, paragraph 103.1(4)d			40 CFR 257.95(h)(1) - 40 CFR 257.95(h)(3)				
Analytes	Units	MCL ^a	HAL ^b	SDWR ^c	MCL ^a	CCR Rule GWPS ^d	Site-Specific Background ^e	Site-Specific GWPS	
Appendix III									
Boron	mg/L	--	6	--	--	--	0.678	none	Use HAL.
Calcium	mg/L	--	--	--	--	--	248	none	No MCL or HAL, so use background for comparison.
Chloride	mg/L	--	--	250	--	--	28.8	none	Use secondary MCL.
pH, lab	s.u.	--	--	6.5-8.5	--	--	6.87 J - 7.9 J	none	Use secondary MCL.
Sulfate	mg/L	--	--	250	--	--	322	none	Use background for comparison (higher than secondary MCL)
TDS	mg/L	--	--	500	--	--	1160	none	Use background for comparison (higher than secondary MCL)
Appendix IV									
Antimony	mg/L	0.006	0.006	--	0.006	--	0.00200 U	0.006 ^a	Federal site-specific GWPS equal to the MCL and HAL.
Arsenic	mg/L	0.01	--	--	0.01	--	0.0679	0.0679 ^e	Federal site-specific GWPS based on background (higher than the MCL).
Barium	mg/L	2.0	--	--	2.0	--	0.271	2.0 ^a	Federal site-specific GWPS equal to the MCL.
Beryllium	mg/L	0.004	--	--	0.004	--	0.00100 U	0.004 ^a	Federal site-specific GWPS equal to the MCL.
Cadmium	mg/L	0.005	0.005	--	0.005	--	0.000500 U	0.005 ^a	Federal site-specific GWPS equal to the MCL and HAL.
Chromium	mg/L	0.1	--	--	0.1	--	0.0681	0.1 ^a	Federal site-specific GWPS equal to the MCL.
Cobalt	mg/L	--	--	--	--	0.006	0.0067	0.0067 ^e	Federal site-specific GWPS based on background (no MCL or HAL).
Fluoride	mg/L	4.0	--	--	4.0	--	6.49	6.49 ^e	Federal site-specific GWPS based on background (higher than the MCL).
Lead	mg/L	0.015 ^f	--	2.0	--	0.015	0.00064	0.015 ^d	Federal site-specific GWPS equal to the MCL.
Lithium	mg/L	--	--	--	--	0.040	0.171	0.171 ^e	Federal site-specific GWPS based on background (no MCL or HAL).
Mercury	mg/L	0.002	0.002	--	0.002	--	0.000200 U	0.002 ^a	Federal site-specific GWPS equal to the MCL and HAL.
Molybdenum	mg/L	--	0.04	--	--	0.100	0.0357	0.100 ^d	Federal GWPS (higher than the HAL).
Radium-226 & 228	pCi/L	5	--	--	5	--	-0.0527 U - 1.79	5 ^a	Federal site-specific GWPS equal to the MCL.
Selenium	mg/L	0.05	0.05	--	0.05	--	0.144	0.144 ^e	Federal site-specific GWPS based on background (higher than the MCL).
Thallium	mg/L	0.002	--	--	0.002	--	0.00122	0.002 ^a	Federal site-specific GWPS equal to the MCL.

Notes:

-- - Not applicable.

U - Not detected at the associated reporting limit.

^a Maximum contaminant level (MCL) - used in both IDNR and Federal CCR rules.

^b Drink Water Health Advisory - Lifetime (HAL).

^c Secondary Drinking Water Regulation (SDWR).

^d Groundwater protection standard (GWPS) established under 40 CFR 257.95(h)(2).

^e Background concentration (95/95UTL) developed in accordance with the Federal CCR rule, determined from baseline data set for MW-13, MW-27, MW-29, MW-223S, and MW-231S (40 CFR 257.95(h)(3)).

^f Action level for lead (treatment technique).

248 Federal site-specific GWPS varies from state action levels (MCL, HAL, SDWR).

Attachment 3

MCL/HAL Comparison Table

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:					MW-5R	MW-5R	MW-5R	MW-11	MW-11
Sample ID:					MW05R-GW-0325	MW05R-GW-0525	MW05R-GW-0925	MW11R-GW-0325	DP04-GW-0325
Sample Date:					3/17/2025	5/20/2025	9/19/2025	3/17/2025	3/17/2025
Parameters		Units	MCL ^a	HAL ^b	SDWR ^c				(Duplicate)
Appendix III									
Boron	mg/L	--	6	--	0.37	--	0.208	0.172	0.168
Calcium	mg/L	--	--	--	160	--	109	123	134
Chloride	mg/L	--	--	250	10	--	9.06	5.00 U	5.07
Fluoride	mg/L	4.0	--	2.0	1.0 U	--	1.00 U	1.00 U	1.00 U
pH, lab	s.u.	--	--	6.5 - 8.5	7.7 J	7.3 J	7.7 J	7.9 J	7.8 J
Sulfate	mg/L	--	--	250	320	--	121	86.9	85.5
Total dissolved solids (TDS)	mg/L	--	--	500	930	--	556	530	558
Appendix IV									
Antimony	mg/L	0.006	0.006	--	0.0020 U	--	0.00200 U	--	--
Arsenic	mg/L	0.01	--	--	0.031	--	0.0286	--	--
Barium	mg/L	2.0	--	--	0.14	--	0.0972	--	--
Beryllium	mg/L	0.004	--	--	0.0010 U	--	0.00100 U	--	--
Cadmium	mg/L	0.005	0.005	--	0.00020 U	--	0.000200 U	--	--
Chromium	mg/L	0.1	--	--	0.0050 U	--	0.00500 U	--	--
Cobalt	mg/L	--	--	--	0.00055	--	0.000500 U	--	--
Lead	mg/L	0.015 ^d	--	--	0.00050 U	--	0.000500 U	--	--
Lithium	mg/L	--	--	--	0.074	--	0.0686	--	--
Mercury	mg/L	0.002	0.002	--	0.00020 U	--	0.000200 U	--	--
Molybdenum	mg/L	--	0.04	--	0.0036	--	0.00445	--	--
Radium-226 & 228	pCi/L	5	--	--	0.646	--	0.609	--	--
Selenium	mg/L	0.05	0.05	--	0.0050 U	--	0.00500 U	--	--
Thallium	mg/L	0.002	--	--	0.0010 U	--	0.00100 U	--	--

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-11	MW-11	MW-13	MW-13	MW-19	MW-19	MW-19
Sample ID:		MW11R-GW-0925	DP04-GW-0925	MW13R-GW-0325	MW13R-GW-0925	MW19-GW-0325	MW19-GW-0525	MW19-GW-0925
Sample Date:		9/19/2025	9/19/2025	3/11/2025	9/17/2025	3/17/2025	5/19/2025	9/19/2025
Parameters			(Duplicate)					
Appendix III								
Boron	mg/L	0.159	0.133	0.136	0.131	0.64	--	0.554
Calcium	mg/L	110	110	147	141	420	--	364
Chloride	mg/L	5.00 U	5.00 U	17.3	11.0	20	--	19.3
Fluoride	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	--	1.00 U
pH, lab	s.u.	7.8 J	7.8 J	7.8 J	7.1 J	7.4 J	6.6 J	7.3 J
Sulfate	mg/L	74.0	71.7	38.7	47.4	1000	--	854
Total dissolved solids (TDS)	mg/L	474	502	580	540	2300	--	2130
Appendix IV								
Antimony	mg/L	--	--	0.00200 U	0.00200 U	0.0020 U	--	0.00200 U
Arsenic	mg/L	--	--	0.0592	0.0503	0.0054	--	0.00443
Barium	mg/L	--	--	0.226	0.217	0.023	--	0.0189
Beryllium	mg/L	--	--	0.00100 U	0.00100 U	0.0010 U	--	0.00100 U
Cadmium	mg/L	--	--	0.000200 U	0.000200 U	0.00020 U	--	0.000200 U
Chromium	mg/L	--	--	0.00500 U	0.00500 U	0.0050 U	--	0.00500 U
Cobalt	mg/L	--	--	0.00102	0.000946	0.015	--	0.00858
Lead	mg/L	--	--	0.000500 U	0.000500 U	0.00050 U	--	0.000500 U
Lithium	mg/L	--	--	0.0846	0.0743	0.28	--	0.257
Mercury	mg/L	--	--	0.000200 U	0.000200 U	0.00020 U	--	0.000200 U
Molybdenum	mg/L	--	--	0.00377	0.00445	0.0020 U	--	0.00200 U
Radium-226 & 228	pCi/L	--	--	0.828	1.09	0.801	--	0.899
Selenium	mg/L	--	--	0.00500 U	0.00500 U	0.0050 U	--	0.00500 U
Thallium	mg/L	--	--	0.00100 U	0.00100 U	0.0010 U	--	0.00100 U

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-21	MW-21	MW-21	MW-23	MW-23	MW-25	MW-27
Sample ID:		MW21-GW-0325	MW21-GW-0525	MW21-GW-0925	MW23R-GW-0325	MW23R-GW-0925	MW25-GW-0325	MW27-GW-0325
Sample Date:		3/17/2025	5/19/2025	9/19/2025	3/17/2025	9/19/2025	3/17/2025	3/12/2025
Parameters								
Appendix III								
Boron	mg/L	0.46	--	0.348	0.208	0.216	0.512	0.228
Calcium	mg/L	560	441	437	191	194	197	157
Chloride	mg/L	6.7	--	6.51	12.9	13.2	5.00 U	24.5
Fluoride	mg/L	1.0 U	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
pH, lab	s.u.	7.4 J	6.8 J	7.4 J	7.7 J	7.6 J	7.8 J	7.8 J
Sulfate	mg/L	1600	1690	1180	241	298	394	81.1
Total dissolved solids (TDS)	mg/L	3000	2730	2350	958	960	1130	692

Appendix IV

Antimony	mg/L	0.0011 J	--	0.00200 U	--	--	--	0.00200 U
Arsenic	mg/L	0.00068 J	--	0.00200 U	--	--	--	0.0613
Barium	mg/L	0.019	--	0.0174	--	--	--	0.158
Beryllium	mg/L	0.0010 U	--	0.00100 U	--	--	--	0.00100 U
Cadmium	mg/L	0.00029	--	0.000245	--	--	--	0.000200 U
Chromium	mg/L	0.0050 U	--	0.00500 U	--	--	--	0.00500 U
Cobalt	mg/L	0.00082	--	0.000500 U	--	--	--	0.000635
Lead	mg/L	0.00050 U	--	0.000500 U	--	--	--	0.000500 U
Lithium	mg/L	0.35	--	0.308	--	--	--	0.110
Mercury	mg/L	0.00020 U	--	0.000200 U	--	--	--	0.000200 U
Molybdenum	mg/L	0.0020 U	--	0.00200 U	--	--	--	0.00200 U
Radium-226 & 228	pCi/L	0.622	--	0.810	--	--	--	0.257
Selenium	mg/L	0.0038 J	--	0.0153	--	--	--	0.00500 U
Thallium	mg/L	0.0010 U	--	0.00100 U	--	--	--	0.00100 U

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-27	MW-29	MW-29	MW-29	MW-57	MW-57	MW-57
Sample ID:		MW27-GW-0925	MW29R-GW-0325	DP01-GW-0325	MW29R-GW-0925	MW57R-GW-0325	MW57R-GW-0525	DP01-GW-0525
Sample Date:		9/16/2025	3/12/2025	3/12/2025	9/16/2025	3/17/2025	5/20/2025	5/20/2025
Parameters				(Duplicate)				(Duplicate)
Appendix III								
Boron	mg/L	0.274	0.158	0.156	0.173	0.362	--	--
Calcium	mg/L	160	187	190	203	205	--	--
Chloride	mg/L	15.5	12.0	9.49	8.73	17.5	--	--
Fluoride	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	--	--
pH, lab	s.u.	7.1 J	7.7 J	7.7 J	7.0 J	7.8 J	7.1 J	7.1 J
Sulfate	mg/L	53.7	140	136	133	274	--	--
Total dissolved solids (TDS)	mg/L	658	774	768	850	1080	--	--

Appendix IV

Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--
Arsenic	mg/L	0.0759	0.0240	0.0241	0.0281	--	--	--
Barium	mg/L	0.183	0.213	0.222	0.240	--	--	--
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--
Cadmium	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--
Cobalt	mg/L	0.000796	0.00280	0.00285	0.00250	--	--	--
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--
Lithium	mg/L	0.106	0.0957	0.0968	0.0941	--	--	--
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--
Radium-226 & 228	pCi/L	1.25	0.696	0.568	1.29	--	--	--
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-57	MW-59S	MW-59S	MW-59S	MW-60S	MW-60S	MW-60S
Sample ID:		MW57R-GW-0925	MW59S-GW-0325	MW59S-GW-0525	MW59S-GW-0925	MW60S-GW-0325	MW60S-GW-0525	MW60S-GW-0925
Sample Date:		9/19/2025	3/17/2025	5/19/2025	9/19/2025	3/17/2025	5/19/2025	9/18/2025
Units								
Parameters								
Appendix III								
Boron	mg/L	0.309	0.235	--	0.195	0.194	--	0.155
Calcium	mg/L	224	157	143	147	135	--	122
Chloride	mg/L	19.2	5.96	--	5.43	6.56	--	8.66
Fluoride	mg/L	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U
pH, lab	s.u.	7.6 J	7.7 J	7.2 J	7.6 J	7.8 J	7.2 J	7.7 J
Sulfate	mg/L	323	124	--	117	137	--	142
Total dissolved solids (TDS)	mg/L	1180	748	--	718	648	--	640
Appendix IV								
Antimony	mg/L	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	--	--
Lithium	mg/L	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	--	--
Molybdenum	mg/L	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	--	--

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-223S	MW-223S	MW-231S	MW-231S	MW-231S	MW-231S
Sample ID:		MW223S-GW-0325	MW223S-GW-0925	MW231SR-GW-0325	MW231SR-GW-0525	MW231SR-GW-0925	DP01-GW-0925
Sample Date:		3/13/2025	9/17/2025	3/13/2025	5/20/2025	9/17/2025	9/17/2025
Parameters		Units					(Duplicate)
Appendix III							
Boron	mg/L	0.142	0.180	0.200	--	0.221	0.231
Calcium	mg/L	130	200	190	--	171	177
Chloride	mg/L	15.2	22.8	9.30	--	16.3	14.2
Fluoride	mg/L	0.200 U	0.200 U	0.200 U	--	0.200 U	1.00 U
pH, lab	s.u.	7.6 J	7.0 J	7.8 J	7.2 J	7.0 J	7.1 J
Sulfate	mg/L	88.5	222	177	--	110	103
Total dissolved solids (TDS)	mg/L	510	778	788	--	740	648

Appendix IV

Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U
Arsenic	mg/L	0.0116	0.0503	0.00229	--	0.00200 U	0.00200 U
Barium	mg/L	0.166	0.240	0.147	--	0.0865	0.0890
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U
Cadmium	mg/L	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U
Cobalt	mg/L	0.000767	0.00131	0.00253	--	0.00305	0.00311
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U
Lithium	mg/L	0.0540	0.0692	0.0856	--	0.0846	0.0869
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00205	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U
Radium-226 & 228	pCi/L	0.577	1.12	0.612	--	1.26	0.936
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	--	0.00580	0.00597
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U

Notes:

^a Maximum contaminant level (MCL) established in the 2018 Edition of the Drinking Water Standards and Health Advisories (EPA 822-F-18-001).

^b Drink Water Health Advisory - Life-time established in the 2018 Edition of the Drinking Water Standards and Health Advisories (EPA 822-F-18-001).

^c Secondary Drinking Water Regulation (SDWR) established in the 2018 Edition of the Drinking Water Standards and Health Advisories (EPA 822-F-18-001).

^d Action level for lead (treatment technique).

1.00 Value exceeds the MCL, or HAL/SDWR where MCL not established.

J - Estimated concentration.

U - Not detected at the associated reporting limit.

Attachment 4

**IDNR Template to AGWMCAR Cross
Reference Table**

IDNR Template to AGWMCAR Cross Reference Table

Neal North Energy Center - Active CCR Monofill
Permit No. 97-SDP-12-95P

Annual Water Quality Report Template for Non-Municipal Landfills	Annual Groundwater Monitoring and Corrective Action Report	Notes
Table 1 Monitoring Program Summary	Table 2.1 Groundwater Monitoring Well Network	Lists all wells in monitoring network.
	Table 2.6 Summary of Groundwater Monitoring Events	Lists total number of samples from monitoring programs since December 2015.
	Table 4.5 Inter-Well Comparisons for Monitoring Data vs. Upgradient Background UTLs	Compares current reporting period's groundwater data to the pooled background data (control limit).
	Section 1.1 Purpose of this Report	States the current monitoring program.
	Section 2.1 Groundwater Monitoring Network	Describes the aquifer characteristics.
	Section 6.3 Recommendations	Provides recommended changes, if any, to the monitoring network.
Table 2 Monitoring Program Implementation Schedule	Table 2.6 Summary of Groundwater Monitoring Events	Provides summary of sampling events since December 2015.
Table 3 Monitoring Well Maintenance and Performance Revaluation Schedule	Section 2.2 Monitoring Well Inspection	States the frequency of total depth measurements (annually).
Table 4 Monitoring Well Maintenance and Performance Summary	Table 2.2 Well Construction Details	Provides well coordinates and elevations for TOC, original total depth, ground surface, top of screen, and bottom of screen.
	Table 2.3 Monitoring Well Screen Occlusion Evaluation	Provides TOC elevation, original total depth below TOC, screen length, annual total depth measurements, and percent of screen occluded.
	Table 3.1 Groundwater Elevation Data	Provides groundwater elevation data, past elevations through elevations during the current reporting period.
Table 5 Background Summary	Table 4.3 Inter-Well Comparison Values	Summary of inter-well evaluation from pooled background well data. Provides the baseline 95/95 UTL (background level).
Table 6 Summary of Well/Detected Constituent Pairs With No Immediately Preceding Control Limit Exceedances	Table 4.5 Inter-Well Comparisons for Monitoring Data vs. Upgradient Background UTLs	Compares current reporting period's groundwater data to the pooled background data (control limit).
Table 7 Summary of Ongoing and Newly Identified Control Limit Exceedances	--	Table 7 is provided to IDNR.
Table 8 Analytical Data Summary	Table 4.1 Baseline Period Groundwater Monitoring Data	Provides groundwater analytical data from the baseline period at the CCR Monofill.
	Table 4.2 Monitoring Analytical Results Summary	Provides groundwater analytical data for the current reporting period at the CCR Monofill.
Table 9 Historic Control Limit & GWPS Exceedances	--	Table 9 is provided to IDNR.
Table 10 Groundwater Quality Assessment Plan Trend Analysis	Section 4 Groundwater Monitoring	Section 4 discusses trends in groundwater data, during baseline monitoring and current reporting period.
Table 11 Leachate Management Summary	Annual Leachate Report	The Annual Leachate Report documents the leachate management activities for the current reporting period. Provides analytical data, leachate head, and leachate volume measurements.
Table 12 Gas Monitoring Summary	NA	Not applicable since the CCR Monofill holds CCR and does not generate gas.



Annual Groundwater Monitoring and Corrective Action Report for the Neal North CCR Monofill

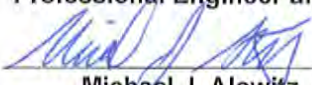
**Permit 97-SDP-12-95P
Neal North Energy Center
Sergeant Bluff, Iowa**

MidAmerican Energy Company
January 30, 2026

Certification

Annual Groundwater Monitoring and Corrective Action Report for the Neal North CCR Monofill
Permit 97-SDP-12-95P
Neal North Energy Center
Sergeant Bluff, Iowa
MidAmerican Energy Company

I certify this Annual Groundwater Monitoring and Corrective Action Report meets the requirements of 40 CFR §257.90(e).

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
	 Michael J. Alowitz, P.E.	 Date
	License Number:	18160
	My license renewal date is:	December 31, 2026
	Pages or sheets covered by this seal:	Entire Document

Executive summary

In compliance with 40 CFR §257.90(e)(6), this executive summary provides an overview of the current status of groundwater monitoring and corrective action programs for Neal North Energy Center coal combustion residual (CCR) Monofill located near Sergeant Bluff, Iowa.

Item	Current Status
(e)(6)(i) At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;	At the start of the current annual reporting period, this CCR unit was operating under the detection monitoring program (40 CFR §257.94).
(e)(6)(ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;	At the end of the current annual reporting period, this CCR unit was operating under the detection monitoring program (40 CFR §257.94).
(e)(6)(iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to §257.94(e):	
(A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and	Verified statistically significant increases were detected for the following Appendix III constituents during the calendar year 2025 reporting period: – Boron at MW-19 and MW-21 – Calcium at MW-19 and MW-21 – Chloride at MW-23R and MW-57R – pH at MW-23R – Sulfate at MW-19, MW-21, and MW-223S (upgradient) – TDS at MW-19 and MW-21
(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.	An alternate source demonstration was completed and this CCR unit was determined to not be the source of the SSIs and, therefore, an assessment monitoring program has not been initiated for this CCR unit.
(e)(6)(iv) If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to §257.95(g) include all of the following:	
(A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;	Monitoring for Appendix IV constituents was not completed for this CCR unit during the 2025 annual reporting period because the CCR unit is in detection monitoring.
(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;	A corrective measures assessment is not required for this CCR unit.
(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and	A public meeting for assessment of corrective measures is not required for this CCR unit.
(D) Provide the date when the assessment of corrective measures was completed for the CCR unit.	A corrective measures assessment is not required for this CCR unit.
(e)(6)(v) Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection; and	A remedy selection is not required for this CCR unit.
(e)(6)(vi) Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.	No remedial activities pursuant to §257.98 occurred during the current annual reporting period for this CCR unit.

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Appendix A	Groundwater Sample Collection Records
Appendix B	Laboratory Analytical Reports
Appendix C	Time Series Graphs
Appendix D	Groundwater Analytical Data (December 2015 through 2025)

1. Introduction

1.1 Purpose of this Report

This Annual Groundwater Monitoring and Corrective Action Report has been prepared by GHD on behalf of MidAmerican Energy Company (MidAmerican) in compliance with the Federal Coal Combustion Residual (CCR) rule (40 CFR Part 257) for the Neal North Energy Center (Neal North) CCR Monofill (Neal North Monofill) located near Sergeant Bluff, Iowa. The Neal North Monofill is located in the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 30, Township 87N, Range 47W (Cells 1 and 2) and the E $\frac{1}{2}$ of the SW $\frac{1}{4}$ of Section 30, Township 87N, Range 47W (Permitted Area for Future Cells) in Woodbury County, Iowa. The Site Location Map (Figure 1.1) also shows the location of MidAmerican's Neal South Energy Center facility. The Neal North Monofill extent and monitoring well locations are shown on Figure 1.2.

MidAmerican initiated baseline groundwater monitoring in accordance with the Federal CCR rule in December 2015. The initial eight rounds of baseline sampling and analysis were completed prior to the October 17, 2017 deadline established in the Federal CCR rule (40 CFR §257.94). Data for the eight required baseline monitoring events and the first detection monitoring event were presented in the annual report dated January 31, 2018 (GHD, 2018a). Two semiannual detection monitoring events (March 10-17, 2025 and September 15-19, 2025) and one verification monitoring event (May 19-20, 2025) were conducted during 2025.

On May 1, 2018, MidAmerican completed an initial alternative source determination (GHD, 2018b), with an updated report completed January 2026 (GHD, 2026), for the Neal North Monofill which determined the Neal North Monofill is not the source of statistically significant increases (SSIs) in concentrations detected in groundwater; therefore, the Neal North Monofill remains in detection monitoring.

The uppermost aquifer at the Neal North Monofill is the water table aquifer. Perched groundwater was encountered at multiple locations and has been included in the groundwater monitoring program. In general, the subsurface geology at the Neal North Monofill includes a layer of fine-grained materials (silts and clays) overlying predominantly fine sand with some sand and gravel at depth. A clay layer up to 55 feet thick has been found at the location of monitoring wells MW-17/MW-18, MW-19/MW-20, MW-21/MW-22, and MW-31/MW-32.

2. Groundwater Monitoring Activities

2.1 Groundwater Monitoring Network

The groundwater monitoring network consists of 33 monitoring wells (Table 2.1). Groundwater elevation data were collected from the 33 wells, and groundwater samples were collected from 14 of the 33 monitoring wells. The 14 sampled monitoring wells and 5 other shallow monitoring wells are screened at the water table (approximately 26 to 43 feet below ground surface [bgs]) and 14 deep monitoring wells are screened in a deeper portion (approximately 43 to 68 feet bgs) of the alluvial aquifer. Horizontal spacing between the downgradient shallow alluvial aquifer monitoring wells ranges from approximately 300 to 400 feet. The groundwater monitoring network includes monitoring wells used for collection of groundwater samples and for gauging groundwater elevations. Groundwater samples are used to assess potential impacts of the Neal North Monofill on surrounding groundwater. Groundwater elevation data are used to identify upgradient and downgradient monitoring points and to determine the potential influence of the Missouri River on groundwater conditions.

Well construction details are provided in Table 2.2. Monitoring wells associated with the Neal North CCR Monofill may also be associated with other nearby groundwater monitoring networks and additional monitoring activities may be completed on these monitoring wells beyond those required for the Neal North CCR Monofill. Some well identifications

include an “R” indicating a replacement well. These wells were installed in close proximity to the original well due to damage to the original well or a well that was replaced by a deeper well due to prolonged dry conditions resulting in water levels below the original well screen.

All monitoring wells in the groundwater monitoring system consist of 2-inch nominal inner-diameter polyvinyl chloride (PVC) casing and screen. Monitoring well construction included placement of clean silica sand in the screened interval and an annular seal of bentonite to the near surface. Monitoring well surface completions consist of either a lockable stick-up surface casing set in a concrete pad and placement of protective bollards in locations where traffic may be of concern, or a flushmount cover with a watertight well plug in high traffic areas where a stick-up well is not suitable. Review of monitoring records and well inspections indicate the monitoring wells have been operated and maintained adequately to meet the design specifications of the monitoring program.

2.2 Monitoring Well Inspection

During each sampling event, the monitoring wells were visually inspected and any deficient conditions of the monitoring wells were noted. Wells are maintained with a well cap and a lockable protective casing. Observations include the condition of the protective casing/vault and surrounding ground surface. All wells were found to be in generally good condition, with no issues affecting well or sample integrity. Due to the surrounding topography, sediment has accumulated on top of some of the monitoring well pads.

On an annual basis, the total well depth of each well in the monitoring network is measured to evaluate the well condition and potential sediment accumulation in the well. Total well depth measurements and screen occlusion calculations from the 2025 total depth measurements are presented in Table 2.3. If screen occlusion greater than 10 percent is verified to be present, the well will be redeveloped prior to the next sampling event.

Based on the total depth measurements made in September 2025, none of the sampled well screens were occluded at or above the 10 percent criterion. Some of the monitoring wells were measured at total depths greater than the total well depth on the original monitoring well logs, which results in a negative percent screen occlusion. It is assumed the recent total depth measurements are correct due to the consistency between the measurements.

2.3 Sample Collection

Sampling was conducted using dedicated bladder pumps to purge water and collect samples using low-flow sampling techniques.

Prior to sample collection, the temperature, conductivity, pH, oxidation-reduction potential (ORP), dissolved oxygen, and turbidity of the purge water were measured using a calibrated multiparameter water quality instrument and flow cell. The readings were recorded on well sampling records or in a field notebook. Upon stabilization, unfiltered samples were collected in laboratory-supplied containers. Copies of the groundwater sampling records for the 2025 monitoring events are included in Appendix A. A field duplicate sample was collected during the semiannual sampling events from monitoring wells MW-11R (March and September 2025), MW-29R (March 2025), and MW-231SR (September 2025) for quality assurance/quality control (QA/QC) purposes. A duplicate was collected from monitoring well MW-57R for the May 2025 event.

2.4 Analytical Parameters

Groundwater samples were analyzed for the parameters specified in 40 CFR Part 257 Appendix III (Table 2.4) for the two detection monitoring events and a subset of this list for the verification event. The laboratory analyses were conducted by Eurofins Environment Testing North Central, LLC (Eurofins) in Cedar Falls, Iowa. Analyses were conducted by the laboratory in accordance with the procedures and methods described in the United States Environmental Protection Agency (USEPA) Manual SW-846, “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (September 1986),” as updated and/or in accordance with other approved testing procedures. Eurofins provided prepared sample containers for each monitoring event. Analytical reports from each sampling event report total (i.e., unfiltered) sample results in accordance with the Federal CCR rule.

The Appendix IV analytes (applicable to baseline and assessment monitoring events) are listed in Table 2.5. The analytes in Table 2.5 were not included in 2025 sampling events because the site is under the detection monitoring program. Table 2.6 summarizes the number of groundwater samples collected for analysis from each monitoring well, the dates the samples were collected, and whether the sample was required by the baseline, detection monitoring, or assessment monitoring programs.

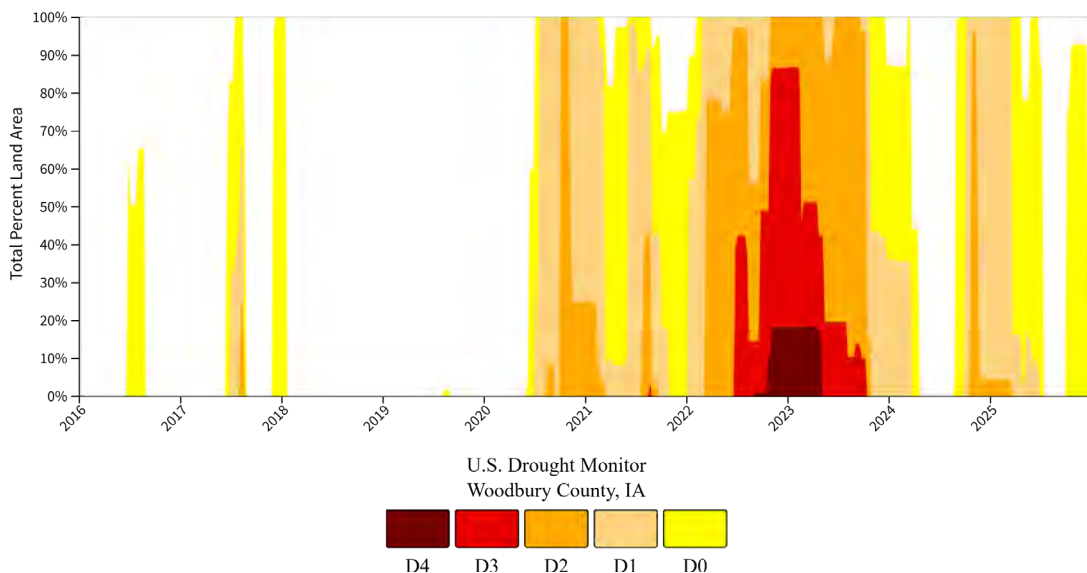
Following receipt of the final laboratory analytical reports from each round of sampling, GHD completed an analytical data quality assessment and validation for the groundwater and field quality assurance samples collected during the baseline and initial detection monitoring events. Based on these assessments, the data are acceptable for use as reported by the laboratories.

3. Groundwater Flow Conditions

3.1 Drought and Flood Conditions

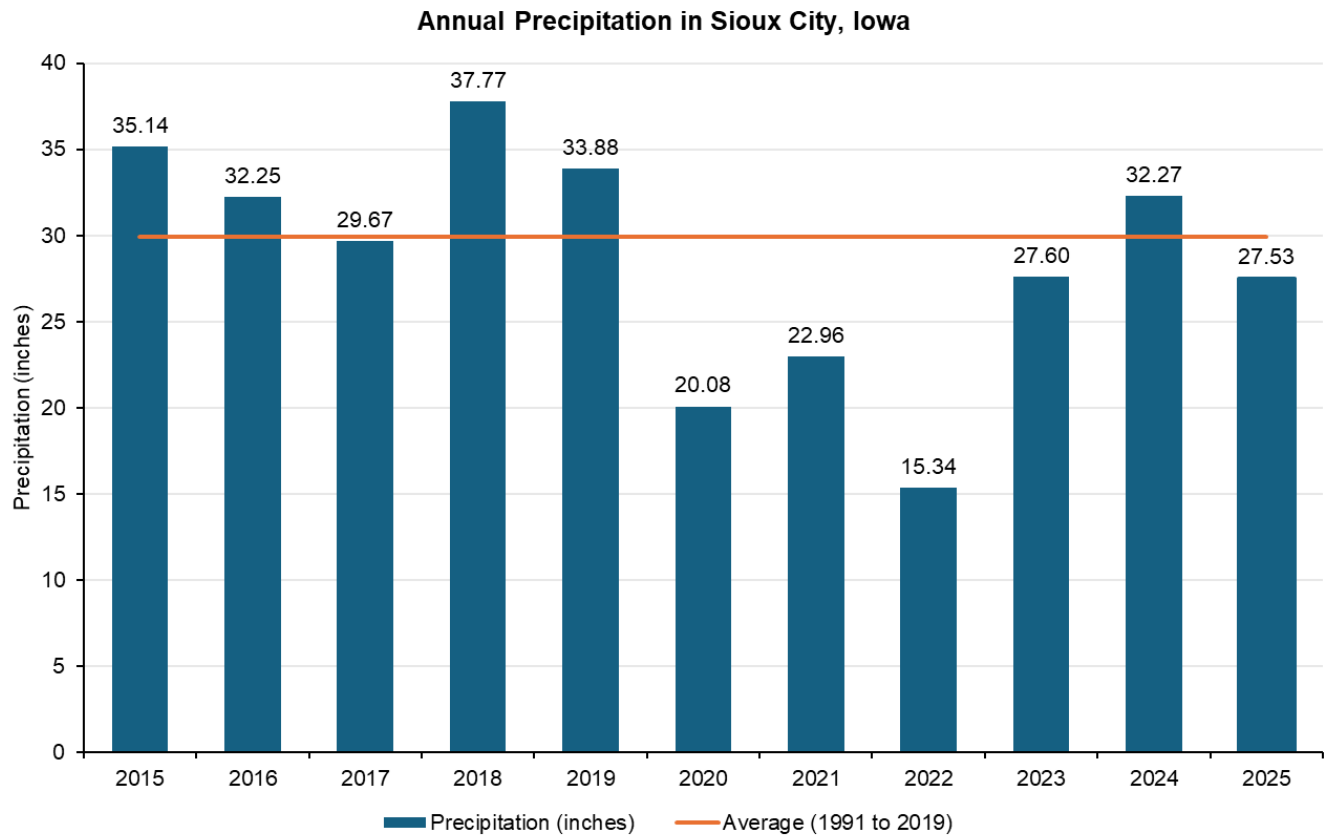
Groundwater levels at Neal North declined over the last few years due to regional drought conditions. Drought conditions for Woodbury County from 2016 through December 31, 2025 reported by the U.S. Drought Monitor are shown on Inset 1. In mid-2020, 100 percent of the area of Woodbury County was recorded as D0 Abnormally Dry, which intensified into D1 Moderate Drought and then D2 Severe Drought for a period of time. In early 2021, approximately 80 percent of Woodbury County was in drought. During early 2022 through late 2023, the entire county was reported as at least D1 Moderate Drought, with significant periods of time where all or most of the county was in D2 Severe Drought or D3 Extreme Drought. During late 2022 and early 2023, almost 20 percent of the county, including Neal North, was reported as D4 Exceptional Drought. Beginning mid-April 2024, all of Woodbury County was out of drought conditions until September 2024. Since October 2024, nearly all of Woodbury County has been reported as at least D0 Abnormally Dry, with a short period of time from mid-July through September where all of Woodbury County was no longer in drought conditions.

On June 21, 2024, Woodbury County underwent a county-wide flood event. Prior to this, pressure transducers were installed at six locations at the Site: MW-217S, MW-218S, MW-219S, MW-227S, MW-230S, and MW-235S. As a response to the anticipated flooding, GHD deployed additional pressure transducers on June 20, 2024 at monitoring wells MW-233S and MW-234S. These transducers assisted in monitoring groundwater elevation changes as a result of the June 21 flooding event, as well as groundwater elevation changes between sampling events.



Inset 1. Drought conditions for Woodbury County. <https://www.drought.gov/states/iowa/county/Woodbury>

The annual precipitation for the Sioux City, Iowa area is shown on Inset 2. The average annual rainfall (1991 through 2019) at Sioux City, Iowa, is 29.90 inches. Rainfall was near normal from 2016 through 2019. From 2020 through 2023, rainfall had been below the annual average. 2024 was above average for the first time since 2019 but decreased in 2025..



Inset 2. Annual precipitation in Sioux City, Iowa, 2015 through 2025. <https://hprcc.unl.edu/stationtool/explore.php?sid=USW00014943%27>

During 2018 and 2019, releases from the Missouri River reservoir system upstream to the Site were higher-than average. During 2020 through 2023, releases into the Missouri River from the reservoir system decreased river stage near the Site (Inset 3) and reduced precipitation occurred (Inset 2). In mid-2024, the river stage began to increase. The flood event that occurred mid-June 2024 is recorded on Inset 3. The river stage increased to levels higher than was recorded in 2019. After June 2024, the river stage returned to similar levels as those observed since 2023.



Inset 3. Missouri River elevations at Sioux City, Iowa.

<https://waterdata.usgs.gov/monitoring-location/06486000/#parameterCode=00065&period=P2742D>

Groundwater elevations since monitoring began in late 2015 are shown on Inset 4 for select monitoring wells at Neal North. The highest observed groundwater elevations occurred in 2019 and were on a generally decreasing trend though 2023, corresponding with below average precipitation in the area and reduced flows in the Missouri River. Corresponding with an increase in precipitation in the area, groundwater elevations show an increasing trend since 2023.



Inset 4. Hydrograph for select wells at Neal North.

3.2 Horizontal Groundwater Flow

Groundwater levels were measured at each of the monitoring wells included in the monitoring network during each monitoring event. Many of the Neal North Monofill groundwater monitoring wells are in a nested pair with one shallow and one deep well, as illustrated on Figure 1.2 and in Table 3.1. Table 3.1 presents groundwater elevations measured in wells from March, May, and September 2025. A groundwater flow map was prepared using water level measurements from the three Neal North CCR Monofill gauging events for both the shallow and deep portions of the alluvial aquifer (Figures 3.1 through 3.6).

The groundwater contour maps show the groundwater flow direction in the shallow portion of the alluvial aquifer and the localized effect that an area of low permeability materials may have on the groundwater flow direction, provided on Figures 3.1, 3.3, and 3.5. Higher groundwater elevations are observed in areas of low permeability sediments that result in local variations in flow directions. However, the predominant site-wide flow direction is west, toward the Missouri River. Groundwater mounding is observed around monitoring wells MW-19 and MW-21 near the Neal North Monofill and in areas of other monitoring networks.

Figures 3.2, 3.4, and 3.6 illustrate groundwater flow direction in the deeper portion of the alluvial aquifer. MW-20 is screened in fine-grained material, whereas other deep alluvial aquifer monitoring wells are screened in sand. For this reason, MW-20 was excluded from development of the deep alluvial groundwater contours (Figures 3.2, 3.4, and 3.6). Groundwater flow in the shallow and deep portions of the alluvial aquifer is generally west-southwest, toward the Missouri River.

3.3 Horizontal Gradient and Groundwater Flow Velocity

Hydraulic conductivity estimates for the shallow alluvial aquifer at the Neal North Monofill range from a low of approximately 0.3 meter per day (m/day) to 12.0 m/day (MWH, 2006). Hydraulic conductivity estimates for the deep alluvial aquifer at the Neal North Monofill range from a low of approximately 2.4 m/day to 28.4 m/day (MWH, 2006). The geometric mean hydraulic conductivity for the shallow and deep portions of the alluvial aquifer is 2.3 m/day and 12.2 m/day, respectively (MWH, 2006).

The average horizontal linear groundwater velocity for both portions of the alluvial aquifer was estimated based on hydraulic conductivity, horizontal gradient, and the estimated porosity of the formation using the following equation:

$$V = Ki/n$$

Where V equals the average horizontal linear velocity; K equals the geometric mean hydraulic conductivity (2.3 m/day and 12.2 m/day for shallow and deep portions of the aquifer, respectively); i equals the average horizontal hydraulic gradient; and n equals the effective porosity (estimated at 0.3).

In order to consistently assess groundwater horizontal gradient and flow velocity, gradient was determined between well pairs that have been observed to consistently lie along flow paths. In the shallow portion of the alluvial aquifer, the horizontal gradient was estimated along the groundwater flow path between monitoring wells MW-13R and MW-11R. Gradient in the deeper portion of the alluvial aquifer was determined between monitoring wells MW-30 and MW-6 for March, May, and September 2025 monitoring events.

During the three 2025 gauging events at the Neal North CCR Monofill, the average linear groundwater velocity was estimated to range between 0.007 m/day (approximately 8 feet per year) during the May 2025 monitoring event and 0.012 m/day (approximately 14 feet per year) during the March 2025 monitoring events in the shallow portion of the alluvial aquifer. The average linear groundwater velocity in the deeper portion of the alluvial aquifer was estimated to range between 0.036 m/day (approximately 43 feet per year) during the May 2025 monitoring event and 0.073 m/day (approximately 87 feet per year) during the March 2025 monitoring event. The estimated horizontal gradients and average linear groundwater flow velocities for each of the monitoring events are summarized in Table 3.2.

3.4 Vertical Hydraulic Gradient

Water levels measured in monitoring well pairs during the 2025 monitoring events were used to calculate vertical hydraulic gradient using the equation listed below.

$$\frac{\text{Water Elevation in Deep Well} - \text{Water Elevation in Shallow Well}}{\text{Elevation of Middle of Saturated Zone of Shallow Well Screen} - \text{Elevation of Middle of Saturated Zone of Deep Well Screen}}$$

The difference in groundwater elevations between nested pairs of wells ranged from 0.0 to 0.49 feet at wells pairs MW-3R/MW-4, MW-5R/MW-6, MW-11/MW-12, MW-13/MW-14, MW-23/ MW-24, MW-27/MW-28, MW-29/MW-30, and MW-56/MW-57, to in excess of several feet at locations where shallow wells were screened in low conductivity sediments such as well pairs MW-19/MW-20, MW-21/MW-22, MW-25/MW-26, and MW-31/MW-32. The maximum difference of 14.81 feet was observed at the MW-21/MW-22 well pair during the May 2025 gauging event.

Vertical hydraulic gradients generally ranged from -0.052 feet/foot (ft/ft) downward to 0.027 ft/ft upward during recent gauging events at most locations with nested well pairs. However, downward gradients greater than -0.1 ft/ft were observed in several locations with significant deposits of shallow, poorly drained low permeability materials; in these locations, shallow groundwater levels were elevated relative to the surrounding higher permeability alluvial aquifer (MW-19/MW-20, MW-21/MW-22, and MW-25/MW-26), with downward gradients as high as -0.494 ft/ft. One well pair with significant deposits of low permeability materials (MW-25/MW-26) had an upward vertical gradient observed in May 2025 (0.001 ft/ft) and September 2025 (0.031 ft/ft).

3.5 Monitoring Well Network Assessment

The Neal North Monofill monitoring network meets the Federal CCR rule requirements of having at least one upgradient monitoring well and three downgradient monitoring wells, and the groundwater monitoring network meets the design and construction requirements of 40 CFR §257.91. Shallow alluvial aquifer monitoring wells MW-13R, MW-27, MW-29R, MW-223S, and MW-231SR have been identified as background sampling locations.

4. Groundwater Monitoring

Groundwater sample collection records for the 2025 monitoring events are provided in Appendix A and the associated laboratory analytical reports are provided in Appendix B. Appendix C includes time series graphs of concentration verses time for each analyte in the current monitoring program. Analytical results for groundwater samples collected during the baseline monitoring events (December 2015 through September 2020 for intra-well and September-December 2016 through March 2025 for inter-well, see discussion below) and the 2025 detection monitoring events are summarized in Tables 4.1 and 4.2, respectively. The cumulative groundwater analytical database for the Monofill monitoring network from December 2015 through 2025 is provided in Appendix D.

As part of assessment and reporting requirements under the Federal CCR rule, the groundwater monitoring data are subjected to statistical evaluation to demonstrate compliance with monitoring goals. Evaluation components include:

- Statistical summaries for the data sets obtained (on a per-well, per-parameter basis)
- Preparation of trend plots (concentration vs. time)
- Inter-well comparisons (downgradient vs. upgradient background)
- Intra-well comparisons (current vs. baseline conditions at a given well)

The statistical methods used in these evaluation steps for the Neal North Monofill are presented in the Groundwater Statistical Methods Certification (Methods Certification) (GHD, 2017). The procedures in the Methods Certification were selected in accordance with the Federal CCR rule, utilizing methodology presented in the USEPA's *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (Unified Guidance) (USEPA, 2009).

The present evaluation utilizes the statistical methods presented therein to evaluate monitoring data from groundwater samples collected during the 2025 monitoring events.

Originally, baseline monitoring under the Federal CCR rule occurred at the Neal North Monofill during eight monitoring events conducted between December 2015 and July 2017. These first eight events represented the selected baseline period required for both inter-well and intra-well comparisons. An original baseline data evaluation was presented in the 2017 annual report (GHD, 2018a).

A change in regional conditions was observed following that time, with parameter concentrations significantly increasing compared to the original baseline period conditions in upgradient wells (i.e., not a site-related effect). Therefore, the baseline data sets were extended to update the inter-well and intra-well comparison values (GHD, 2021; GHD, 2025c). Consequently, the present assessment considers data from September-December 2016 through March 2025 as baseline for inter-well (comparing downgradient vs. upgradient conditions) comparisons and data from December 2015 through September 2020 as the intra-well baseline period.

4.1 Statistical Analysis Approach

The 2025 detection monitoring data for the Neal North Monofill are presented in Table 4.2. Groundwater monitoring at the Neal North Monofill is currently conducted under Detection Monitoring status per the Federal CCR rule. As such, the seven Appendix III constituents were analyzed in the samples collected during the two 2025 monitoring events (March and September) at background and downgradient wells. One verification sampling event was conducted in May 2025 at downgradient monitoring wells MW-5R, MW-19, MW-21, MW-57R, MW-59S, and MW-60S for selected Appendix III constituents that were previously detected above comparison values in accordance with 40 CFR §257.95(d)(1).

No single method of statistical analysis is appropriate for each groundwater constituent dataset; instead, the statistical methods selected for use are dependent upon the data and distributions and should consider the specific constituents and the nature of local hydrogeologic conditions. Depending on characteristics of the site and the groundwater monitoring data, a mix of inter-well (comparison vs. upgradient background conditions) and intra-well (comparison vs. baseline) tests may be warranted. The statistical methods used for the inter-well and intra-well approaches are selected based on these factors as well as consideration of natural temporal or spatial variability of the concentrations of the groundwater constituents. Substantial natural spatial variability may necessitate intra-well methods. This statistical analysis was completed using both inter-well and intra-well approaches for the purpose of determining if an SSI has occurred at the Neal North Monofill.

An initial statistical analysis of baseline data was previously conducted to assess the constituent data and determine the most appropriate statistical approach(es) for the data (GHD, 2018a). The data were examined for outliers, the percentage of non-detect values, and to determine the statistical distribution. Time series plots, box plots of upgradient background data, and maps were used to evaluate the potential presence of temporal or spatial variations in constituent concentrations. The baseline analysis update in 2021 and 2025 utilized the same assessment strategy, just considering additional data for the inter-well and intra-well baseline periods (GHD, 2021; GHD, 2025c).

The Appendix III and IV constituents occur naturally in the environment. For constituents that occur naturally and may vary substantially in concentration across the monitoring network due to natural hydrogeologic or geochemical factors (i.e., exhibiting spatial variability), an inter-well analysis is not appropriate. Constituent concentrations greater than upgradient background conditions might be incorrectly attributed to impact from the Neal North Monofill, when the differences are actually natural and unrelated to the Neal North Monofill due to locally varying distributions of groundwater constituents. In such cases, an intra-well approach is appropriate. Consequently, the evaluation of constituent concentrations in groundwater at the Neal North Monofill are evaluated utilizing inter-well and intra-well comparisons.

4.1.1 Spatial Variability

The concentration of naturally occurring constituents such as the Appendix III and IV constituents can be affected by the presence of differing aquifer material or geochemistry between monitoring well locations. At the Neal North Monofill, the uppermost groundwater occurs in alluvial deposits, which consist primarily of sands and gravels, with zones of finer-grained silts and clays. The natural geochemistry of groundwater can vary between these zones and affect the detected concentrations of natural constituents. In the case of the Neal North Monofill, these differing geological materials are intersected by the screened zones of the monitoring wells and may result in spatial variability for some constituents.

Based on the evaluation of the baseline data (GHD, 2018a), the presence of spatial variability among the Neal North Monofill upgradient background wells (MW-13, MW-27, MW-29, MW-223S, and MW-231S) was found for several detected constituents:

- MW-27 appears to have higher concentrations of chloride and lithium than MW-13, MW-29, MW-223S, and MW-231S
- MW-13 generally has higher pH than MW-27, MW-29, and MW-231, and MW-223S generally has higher pH than the other background wells
- MW-223S has lower TDS than MW-13, MW-27, MW-29, and MW-231S
- MW-27, MW-29, MW-223S, and MW-231S have detectable arsenic and cobalt, while MW-13 generally does not
- MW-13 has higher molybdenum concentrations than MW-29 and MW-223S; MW-27 is non-detect; and MW-231S is generally non-detect
- MW-13 has higher selenium concentrations than MW-29 and MW-231S; and MW-27 and MW-223S are non-detect

For these constituents, there are observed substantial differences in constituent concentrations in groundwater between the upgradient background wells (MW-13, MW-27, MW-29, MW-223S, and MW-231). This spatial variability necessitates intra-well comparisons for downgradient wells, since observed differences between downgradient and upgradient conditions could be due to natural variability or could be due to effects of the Neal North Monofill. An inter-well comparison alone could not distinguish between these two possibilities.

4.1.2 Temporal Variability

The Federal CCR rule considers the occurrence of temporal trends in groundwater monitoring data. Where trends are observed, the statistical method selected must take these into account.

For inter-well baseline Upper Tolerance Limits (UTLs), where data from background wells (MW-13, MW-27, MW-29, MW-223S, and MW-231S) were combined, trends were assessed using the Regional Kendall test. This test is a modified Seasonal Kendall test described in detail in USEPA, 2009, Section 14.3.4, substituting the individual wells in the place of the separate seasons. In the test, individual Mann-Kendall statistics are calculated for each analyte at each well separately, and then summed to perform the overall test. No trends were identified in the pooled upgradient data. No other statistically significant trends during the baseline period were detected.

4.1.3 Summary of Statistical Analysis Approach

The statistical analysis included both inter-well and intra-well approaches for the purpose of determining if SSIs in constituent concentrations in groundwater have occurred at the Neal North Monofill. This approach could change as additional data are collected during future monitoring. If new information warrants such a change, a modification to the statistical approach will be recommended for one or more constituents and/or monitoring wells.

4.2 Assessment of Baseline Data

Assessment of the baseline data for the Neal North Monofill was presented in the initial annual report (GHD, 2018a) and updated in 2021 for intra-well UTLs and 2025 for inter-well UTLs (GHD, 2021; GHD, 2025c). If additional changes (i.e., trends) in regional conditions continue in the future, the baseline assessment may be revised accordingly. For convenience, the following sections repeat the baseline assessment summary originally provided in the 2021 AGWMCAR and 2024 AGWMCAR (GHD, 2021; GHD, 2025c).

4.2.1 Stability Assessment/Baseline Period Trend Analysis

No statistically significant increasing trend over time in groundwater was observed for the updated inter-well baseline period (September-December 2016 – March 2025) for the combined background well data sets (see results in Table 4.3). In addition, significant trends were identified for several of the updated intra-well baseline data sets (December 2015 – September 2020) data sets (see results in Table 4.4).

Increasing trends in the intra-well baseline data set were found for the following wells/constituents:

- pH at MW-11/MW-11R
- Sulfate at MW-21

Decreasing trends were found for the following wells/constituents:

- Boron at MW-21 and MW-23/MW-23R
- Calcium at MW-11/MW-11R and MW-223S
- Chloride at MW-11/MW-11R, MW-19, MW-27, and MW-223S
- Sulfate at MW-11/MW-11R, MW-59S, and MW-223S
- TDS at MW-11/MW-11R and MW-223S

Where trends have been identified in a baseline data set, the methods for intra-well and inter-well comparisons performed below were adjusted to account for non-stationarity during the updated baseline period.

4.2.2 Inter-well Comparisons – Upgradient Background Values

The Federal CCR rule provides a list of alternate statistical procedures applicable to inter-well and intra-well comparisons (see 40 CFR §257.93(f)). In the Methods Certification, the use of UTLs was selected for assessment of groundwater monitoring data for the Neal North Monofill. A UTL is a statistically-based limit above which a given sample measurement is unlikely to occur if conditions are consistent with the reference population. For inter-well comparisons, the reference population is the data set of constituent concentrations in upgradient background well(s). Since there are five upgradient background wells (MW-13, MW-27, MW-29, MW-223S, and MW-231S), data from these five wells were pooled to calculate the upgradient background UTLs for each constituent.

Calculations of UTLs for inter-well comparisons were completed using the logic and methodology presented in USEPA's Technical Guide for its ProUCL software (USEPA, 2022, version 5.2). The results of the inter-well UTL calculations are provided in Table 4.3.

4.2.3 Intra-well Comparisons – Well-specific Baseline Values

As noted in the Methods Certification, the statistical methods (i.e., UTLs) for intra-well comparisons are analogous to those for inter-well comparisons. In this case, the reference population is the data set of constituent concentrations in a given well observed during the baseline period. Calculation of the upgradient background 95/95 UTL and 99/95 UTL values is performed using the same methods used for the inter-well comparisons.

Where temporal trends were identified over the baseline period, tolerance limits are not calculated (due to violation of the statistical assumptions of the UTL calculations) and a baseline range is provided as a reference. For such data

sets, future sample results are to be compared both against the baseline range and what would be expected based on the observed trend over the baseline period.

The calculated updated intra-well baseline values (UTLs) for each constituent at each well are provided in Table 4.4.

4.3 Evaluation of 2025 Detection Monitoring Data

The Appendix III constituent data sets from sampling conducted during 2025 (two detection and one verification monitoring events) are presented in Table 4.2 and summarized below:

- Boron. No MCL has been established for boron. The maximum boron concentration detected in 2025 was 0.64 milligrams per liter (mg/L) at MW-19 (March 2025).
- Calcium. No MCL has been established for calcium. The maximum calcium concentration detected in 2025 was 560 mg/L at well MW-21 (March 2025).
- Chloride. No MCL has been established for chloride. The maximum chloride concentration reported was 24.5 mg/L in background monitoring well MW-27 (March 2025). The highest concentration reported at a downgradient monitoring well was 20.0 mg/L at MW-19 (March 2025).
- Fluoride. The MCL for fluoride is 4.0 mg/L. All wells were below the associated reporting limit (1.00 mg/L and 0.200 mg/L, depending on sample).
- pH. No MCL has been established for pH. The lowest and highest pH measurement recorded in 2025 were 6.6 J at MW-19 (May 2025) and 7.9 J at monitoring well MW-11 (March 2025).
- Sulfate. No MCL has been established for sulfate. The maximum sulfate concentration detected in 2025 was 1,690 mg/L at MW-21 (May 2025).
- Total Dissolved Solids (TDS). No MCL has been established for TDS. The maximum TDS concentration in 2025 was 3,000 mg/L at MW-21 (March 2025).

Appendix IV analytes are not required for the detection monitoring program.

4.3.1 Inter-well Comparisons (vs. Upgradient Background)

Inter-well comparisons of current monitoring data are conducted by comparing monitoring data from the 2025 sampling events to the upgradient background UTLs derived from the updated baseline period data (September-December 2016 to March 2025). These comparisons are presented in Table 4.5.

The results of the inter-well comparisons identify observations at the nine downgradient monitoring wells where one or more of the 2025 monitoring events had a constituent concentration or measurement outside of baseline conditions represented by the upgradient background wells (MW-13/MW-13R, MW-27, MW-29/MW-29R, MW-223S, and MW-231S/MW-231SR). These include:

- Boron at MW-5R, MW-19, MW-21, MW-25, and MW-57/MW-57R
- Calcium at MW-19 and MW-21
- pH at MW-19 and MW-21
- Sulfate at MW-5R, MW-19, MW-21, MW-25, and MW-57/MW-57R
- TDS at MW-19, MW-21, MW-25, and MW-57/MW-57R

The concentrations exceeding inter-well background that were confirmed with two successive samples above the UTL were:

- Boron at MW-19 and MW-21
- Calcium at MW-19 and MW-21
- Sulfate at MW-19 and MW-21
- TDS at MW-19 and MW-21

TDS and pH were among the constituents that were observed to have spatial variability in groundwater between the upgradient background wells. As such, downgradient wells with confirmed inter-well exceedances (pH and TDS at MW-19 and MW-21) require additional intra-well comparisons to be confirmed SSIs.

4.3.2 Intra-well Comparisons (vs. Well-Specific Baseline Values)

Intra-well comparisons of current monitoring data are conducted by comparing monitoring results from the 2025 sampling events to the baseline period (2015-2020) UTLs for each given well. These comparisons are presented in Table 4.6.

The results of the intra-well comparisons indicate the following Appendix III constituent concentrations are above those observed during the baseline period:

- Boron at MW-25 and MW-59S
- Calcium at MW-21, MW-59S, and background well MW-223S
- Chloride at MW-23/MW-23R and MW-57/MW-57R, and background well MW-223S
- pH at MW-5R, MW-19, MW-21, MW-23/MW-23R, MW-25, MW-57/MW-57R, MW-59S, and MW-60S, and background wells MW-13/MW-13R and MW-231S/MW-231SR
- Sulfate at MW-21 and background well MW-223S
- TDS at MW-21

The concentrations exceeding the intra-well values were confirmed with two successive samples above the UTL, except at:

- Boron at MW-25 and MW-59S – the exceeding results observed in March 2025 were not confirmed in September 2025 (MW-25 was not sampled in September 2025).
- Calcium at MW-59S – the exceeding result observed in March 2025 was not confirmed in May 2025 and September 2025.
- Calcium at MW-223S – to be verified during the next detection monitoring event.
- Chloride at MW-223S – to be verified during the next detection monitoring event.
- pH at MW-5R, MW-21, MW-57/MW-57R, MW-59S, and MW-60S – the exceeding results observed in March 2025 were not confirmed in May 2025.
- pH at MW-19, MW-25, MW-13/MW-13R, and MW-231S/MW-231SR – the exceeding results observed in March 2025 were not confirmed in May and September 2025.

4.4 Statistically Significant Increases (SSI) Summary

SSIs identified as two consecutive results at a downgradient well above the background concentration are identified based on inter-well comparisons and/or intra-well comparisons:

- Boron and calcium at MW-19 and MW-21
- Chloride MW-23/MW-23R, MW-57/MW-57R
- pH at MW-23/MW-23R
- Sulfate at MW-19, MW21, and at upgradient well MW-223S
- TDS at MW-19 and MW-21

These data sets contain concentration data that exceed the corresponding Inter-well UTLs (Table 4.3) and/or Intra-well UTLs (Table 4.4) and have been verified by two successive observations.

TDS at MW-19 and MW-21 were confirmed by two successive sampling events in the inter-well comparison; however, due to the spatial variability exhibited by TDS, they required confirmation in the intra-well comparison and they are verified SSIs.

5. Alternate Source Determinations

As described in 40 CFR §257.94(e)(2), statistically significant differences from background levels for a constituent may be evaluated to demonstrate that a source other than the CCR unit has caused the statistically significant difference from background or resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. An alternate source determination (ASD) was initially completed for the Neal North Monofill in 2018 (GHD, 2018b), subsequent ASDs have been completed to address either new SSIs or to re-verify ongoing SSIs within the network (GHD, 2024; GHD, 2025a; GHD, 2025b; GHD, 2026). The most recent ASD was completed in January 2026 (GHD, 2026). And is summarized in Sections 5.1 through 5.2. A list of the Monofill ASDs are provided in the following table.

Report	Well	Analyte
GHD, 2018b	MW-19	Calcium, Sulfate, TDS
	MW-21	Sulfate
	MW-23	Sulfate, TDS
	MW-25	Sulfate, TDS
	MW-57	Calcium, Sulfate, TDS
	MW-60S	TDS
GHD, 2024	MW-57R	TDS
GHD, 2025a	MW-19	Calcium and Sulfate
	MW-23R	Chloride and pH
	MW-25	Boron and Sulfate
	MW-57R	Chloride and Sulfate
GHD, 2025b	MW-21	Calcium, Sulfate, and TDS
	MW-23R	Chloride and pH
	MW-25	Boron
	MW-57R	Chloride and pH
GHD, 2026	MW-19	Boron, Calcium, Sulfate, and TDS
	MW-21	Boron, Calcium, Sulfate, and TDS
	MW-23R	Chloride and pH
	MW-57R	Chloride

The SSIs for calcium, sulfate, and TDS were addressed in the May 2018 ASD (GHD, 2018b). The sulfate data from the affected wells were used in the Giroud equation which models a theoretical leak through the liner system. Based on the concentrations observed in the monitoring wells and the leachate at the time, it was demonstrated that the lined Neal North Monofill was not the source of the observed SSIs as a conservative leachate leakage rate yields a theoretical release volume that is below the volume required to create the observed SSIs.

In October 2024, an ASD evaluated the verified SSI for TDS at MW-57R (GHD, 2024). The analyte concentration ratios at MW-57R and in the leachate were considered. Due to the large differences, it was determined that leachate could not be the source of the observed SSI. Furthermore, natural variability was also considered as MW-57 was replaced by MW-57R. The lithology of the screened interval at the two wells changes to more fine-grained sediment in the replacement well. This also corresponds to a distinct change in TDS between the original and replacement well.

Boron, calcium, chloride, sulfate, and/or pH were evaluated in the January 2025 ASD (GHD, 2025a). Natural variability and changes in lithology due to replacement was attributed to the increases observed for chloride and pH at MW-23R

and MW-57R. For boron, calcium, and sulfate, the Giroud equation was used with updated monitoring data for the relevant wells and leachate. Based on the results, the volume of leachate required to produce the observed concentrations in the monitoring wells was not possible.

The July 2025 ASD covered observed SSIs for calcium, sulfate, and TDS at MW-21 (GHD, 2025b). This ASD uses the Giroud equation for calcium and sulfate and the different TDS footprints between MW-21 and leachate. It also reaffirms the ASDs for boron, chloride, and pH at MW-23R, MW-25, and MW-57R using updated monitoring data for the Giroud equation and natural variability.

5.1 Description of Alternate Source Determination

Although SSIs were identified in groundwater this reporting period, the lined Neal North Monofill is not believed to be the source of the SSIs due to the nature of the Neal North Monofill construction and operation methods as well as natural variability (GHD, 2026).

5.1.1 Theoretical Leachate Release

The Neal North Monofill has two individual cells constructed in 2010 and 2013. The liner system in each cell includes a minimum 2-foot compacted clay liner with a maximum permeability of 1×10^{-7} centimeters per second (cm/s) overlain by a 60-mil high-density polyethylene (HDPE) membrane liner. A leachate management system above the HDPE liner moves leachate along the sloped cell floors to the sump where it is pumped out of the cell.

The compacted clay liner was tested during and after construction by performing density testing and collecting samples of the clay liner to verify permeability requirements were met. The test results met or exceeded the minimum requirements. In addition, oversight of materials and construction techniques was completed. The HDPE liner was also subject to observation during installation and testing including an electrical leak location survey to identify, repair, and subsequently re-test installation or manufacturing defects. These tests help provide a high level of confidence in the integrity of the liner system. Any identified defects or leaks were repaired before the cell received any CCR. Construction documentation and applicable test reports were provided to the Iowa Department of Natural Resources (IDNR) for review prior to IDNR's approval to place CCR in each cell.

The Neal North Monofill is equipped with a leachate collection and transport system. To demonstrate the lined Neal North Monofill is not the source of the SSIs, the necessary leachate leakage rate to result in the observed SSI was calculated to conservatively estimate the potential leakage through the Neal North Monofill floor.

5.1.2 Natural Variability

Drought conditions began at Neal North in 2021 which resulted in a decrease in groundwater elevations, requiring the replacement of monitoring wells MW-13 (upgradient location), MW-23, and MW-57 to deeper depths. The well screen geology changed between original and replacement wells, resulting in variations to groundwater chemistry. In the most recent ASD, a comparison of Appendix III parameters between MW-13R, MW-23R, MW-57R and their corresponding original well's groundwater chemistry was completed.

5.2 Monofill Is Not Source of Groundwater Impacts

The theoretical leakage calculations conservatively estimate that 25.6 to 37.9 million gallons of leachate is required to raise the calcium and sulfate concentrations above background as observed in the Neal North Monofill. The theoretical leakage calculations demonstrate that 190,350 gallons per year is a conservative leakage rate. Over the 15½ years of operation of the Neal North Monofill, the conservative cumulative volume of leachate released through a theoretical 1-foot-diameter hole in the HDPE liner is 2.95 million gallons, which is more than 22.5 million gallons below the conservative estimate of leachate leakage required to generate the observed sulfate concentrations.

Using calcium and sulfate as a proxy for other constituents that exhibited SSIs (boron and TDS), it has been conservatively demonstrated that the lined Neal North Monofill is not the source of the observed SSIs because even a

conservative leachate leakage rate yields a theoretical release volume that is an order of magnitude below the volume required to create the observed variances between background and downgradient wells.

Natural variability in groundwater and a change in geology at the screened interval due to well replacement has been identified as the cause of the observed SSIs for chloride and pH. A variability in mean concentrations between original and replacement wells for both background and downgradient locations indicated that significant spatial variability exists for chloride and pH in groundwater. MW-13/MW-13R, an upgradient well, would not be affected by a theoretical leachate release. It presents similar Appendix III concentration patterns to MW-23/MW-23R and MW-57/MW-57R; therefore, the SSIs identified at MW-23R and MW-57R are not attributed to impacts from CCR, but a natural range of concentrations and variability in groundwater.

5.3 Alternate Source Determination Conclusion

As demonstrated in this alternate source determination evaluation, the lined Neal North Monofill is not the source of the observed SSIs in groundwater. As a result of this demonstration, the Neal North Monofill will continue with a detection monitoring program under 40 CFR §257.94(e)(2).

6. Conclusions and Recommendations

6.1 Groundwater Flow and Evaluation of the Monitoring Network

Groundwater flow in the shallow and deep portions of the alluvial aquifer in the vicinity of the Neal North Monofill is predominantly to the west, toward the Missouri River; however, during extended periods of high water levels in the Missouri River, groundwater flow is observed to be away from the Missouri River over portions of the Neal North Monofill area. The shallow alluvial groundwater contour maps (Figures 3.1, 3.3, and 3.5) show the localized effect an area of low permeability materials may have on the groundwater flow direction.

The groundwater flow evaluation (see Figures 3.1 through 3.6) indicates the monitoring network is sufficient and has appropriately located upgradient and downgradient well locations. The predominant flow direction was observed to be to the west-southwest, toward the Missouri River.

6.2 Groundwater Quality

The statistical evaluation of groundwater monitoring data collected during the updated baseline periods (September-December 2016 to March 2025 for Inter-well comparisons, and December 2015 through September 2020 for Intra-well comparisons) was conducted in accordance with the Federal CCR rule and Unified Guidance for assessing groundwater data (USEPA, 2009). The respective inter-well and intra-well comparison values were generated previously (GHD, 2021; GHD, 2025c), which was successful in characterizing the baseline data sets, assessing the baseline data for trends, and generating inter-well upgradient background reference values and intra-well baseline values against which current and future monitoring data are evaluated.

An assessment of monitoring data from samples collected during the 2025 detection monitoring events has been conducted. Key results of the evaluation include:

- Constituent concentrations appear to continue to vary among the five upgradient background wells, supporting the need for intra-well comparisons.
- Therefore, inter-well and intra-well UTLs were used for comparisons of the 2025 detection monitoring event data. Inter-well baseline values (UTLs) use the baseline data from the five upgradient background wells (MW-13,

MW-27, MW-29, MW-223S, and MW-231S) and the intra-well baseline values (UTLs) are based on the baseline period data for each monitoring well separately.

- Statistical comparisons of the 2025 detection monitoring data indicate that:
 - Inter-well comparisons (Table 4.5) – The results of the inter-well comparisons indicate two of the nine downgradient monitoring wells during one or both 2025 monitoring events had a verified constituent concentration or measurement outside of baseline conditions in the upgradient wells (boron, calcium, sulfate, and TDS at downgradient wells MW-19 and MW-21).
 - Intra-well comparisons (Table 4.6) – Intra-well comparisons indicated verified Appendix III constituent concentrations above those observed during the baseline (calcium, chloride, sulfate, pH, and/or TDS at downgradient wells MW-21, MW-23/MW-23R, and/or MW-57/MW-57R). In addition, sulfate had a verified exceedance of the intra-well comparison at background monitoring well MW-223S.
- The data sets in this reporting period that are confirmed SSIs are: boron, calcium, sulfate, and TDS at MW-19 and MW-21; chloride and pH at MW-23/MW-23R; chloride at MW-57/MW-57R; and sulfate at upgradient well MW-223S.
- As demonstrated in the alternate source determination evaluations, the lined Neal North Monofill is not the source of the observed SSIs in groundwater.

6.3 Recommendations

Based on the evaluation findings, the Neal North Monofill remains in detection monitoring. No changes to the monitoring network or sampling procedures are necessary.

7. References

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Tables

Table 2.1

Groundwater Monitoring Well Network
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Monitoring Wells	Use in Monitoring Network	Role in Monitoring Network
MW-3R	Gauged Only	Gauging Location
MW-4 ^a	Gauged Only	Gauging Location
MW-5R	Gauged and Sampled	Downgradient Location
MW-6 ^a	Gauged Only	Gauging Location
MW-7	Gauged Only	Gauging Location
MW-8 ^a	Gauged Only	Gauging Location
MW-9	Gauged Only	Gauging Location
MW-10 ^a	Gauged Only	Gauging Location
MW-11R ^b	Gauged and Sampled	Downgradient Location
MW-12 ^a	Gauged Only	Gauging Location
MW-13R ^b	Gauged and Sampled	Upgradient Location
MW-14 ^a	Gauged Only	Gauging Location
MW-19	Gauged and Sampled	Downgradient Location
MW-20 ^a	Gauged Only	Gauging Location
MW-21	Gauged and Sampled	Downgradient Location
MW-22 ^a	Gauged Only	Gauging Location
MW-23R ^b	Gauged and Sampled	Downgradient Location
MW-24 ^a	Gauged Only	Gauging Location
MW-25	Gauged and Sampled	Downgradient Location
MW-26 ^a	Gauged Only	Gauging Location
MW-27	Gauged and Sampled	Upgradient Location
MW-28 ^a	Gauged Only	Gauging Location
MW-29R ^b	Gauged and Sampled	Upgradient Location
MW-30 ^a	Gauged Only	Gauging Location
MW-31	Gauged Only	Gauging Location
MW-32 ^a	Gauged Only	Gauging Location
MW-56 ^a	Gauged Only	Gauging Location
MW-57R ^b	Gauged and Sampled	Downgradient Location
MW-58S	Gauged Only	Gauging Location
MW-59S	Gauged and Sampled	Downgradient Location
MW-60S	Gauged and Sampled	Downgradient Location
MW-223S	Gauged and Sampled	Upgradient Location
MW-231SR ^c	Gauged and Sampled	Upgradient Location

Note:

^a Well is screened in deep portion of the alluvial aquifer.

^b MW-11, MW-13, MW-23, MW-29, and MW-57 were abandoned and replaced by MW-11R, MW-13R, MW-23R, MW-29R, and MW-57R in June 2021 due to low water level conditions.

^c MW-231S was abandoned in December 2021 due to damage and replaced by MW-231SR.

Well Construction Details
MidAmerican Energy Company
Neal North CCR - Sergeant Bluff, Iowa

Well	Northing	Easting	Monitoring Well Construction					
			Top of Casing (NAVD88)	Total Depth (feet BTOC)	Ground Surface Elevation (feet NAVD88)	Screen Length (feet)	Top of Screen (NAVD88)	Bottom of Screen (NAVD88)
MW-1R	3592041.9	4144373.4	1,077.64	36.95	1,074.9	25	1,065.7	1,040.7
MW-2 ^a	3592037.0	4144368.6	1,078.07	50.34	1,074.9	5	1,032.7	1,027.7
MW-3R	3591779.8	4144810.0	1,075.94	36.60	1,074.2	25	1,064.3	1,039.3
MW-4 ^a	3591780.1	4144803.7	1,076.18	45.64	1,074.2	5	1,035.5	1,030.5
MW-5R	3591054.9	4145029.9	1,079.54	36.65	1,077.4	25	1,067.9	1,042.9
MW-6 ^a	3591059.1	4145032.6	1,079.12	46.87	1,077.4	5	1,037.3	1,032.3
MW-7	3590594.5	4145293.6	1,075.96	18.45	1,073.6	10	1,067.5	1,057.5
MW-8 ^a	3590598.3	4145292.8	1,075.96	45.30	1,073.6	5	1,035.7	1,030.7
MW-9	3590205.3	4145811.0	1,088.63	28.65	1,086.6	10	1,070.0	1,060.0
MW-10 ^a	3590204.5	4145804.9	1,088.69	55.66	1,086.6	5	1,038.0	1,033.0
MW-11	3591613.4	4146904.7	1,089.96	33.94	1,087.5	10	1,066.0	1,056.0
MW-11R	3591610.7	4146906.0	1,091.23	41.10	1,088.3	15	1,065.1	1,050.1
MW-12 ^a	3591620.2	4146905.6	1,089.79	57.21	1,087.5	5	1,037.6	1,032.6
MW-13	3592321.0	4148047.7	1,088.12	30.58	1,086.7	10	1,067.5	1,057.5
MW-13R	3592321.1	4148047.8	1,089.22	38.16	1,086.0	15	1,066.1	1,051.1
MW-14 ^a	3592315.5	4148048.1	1,087.64	55.70	1,086.7	5	1,036.9	1,031.9
MW-15R	3593339.8	4147046.3	1,089.45	37.20	1,087.0	25	1,077.3	1,052.3
MW-16 ^a	3593341.7	4147033.8	1,089.82	52.65	1,087.0	5	1,042.2	1,037.2
MW-17	3593229.2	4145828.0	1,088.34	25.62	1,086.3	15	1,077.7	1,062.7
MW-18 ^a	3593228.1	4145823.3	1,088.34	57.16	1,086.3	5	1,036.2	1,031.2
MW-19	3591585.6	4146222.3	1,088.76	28.91	1,086.6	10	1,069.9	1,059.9
MW-20 ^a	3591584.6	4146216.9	1,088.56	56.71	1,086.6	5	1,036.9	1,031.9
MW-21	3591325.6	4145402.9	1,087.51	31.61	1,083.9	15	1,070.9	1,055.9
MW-22 ^a	3591321.1	4145403.2	1,087.40	56.50	1,083.9	5	1,035.9	1,030.9
MW-23	3590330.8	4146542.4	1,089.80	33.60	1,086.2	10	1,066.2	1,056.2
MW-23R	3590330.9	4146542.4	1,089.13	41.25	1,086.4	15	1,062.9	1,047.9
MW-24 ^a	3590329.9	4146534.6	1,090.00	58.80	1,086.2	5	1,036.2	1,031.2
MW-25	3591252.7	4146943.2	1,089.62	33.72	1,085.9	10	1,065.9	1,055.9
MW-26 ^a	3591246.1	4146943.2	1,089.59	57.69	1,085.9	5	1,036.9	1,031.9
MW-27	3591345.3	4147865.3	1,087.29	33.39	1,083.9	10	1,063.9	1,053.9
MW-28 ^a	3591349.0	4147869.8	1,087.17	58.27	1,083.9	5	1,033.9	1,028.9
MW-29	3592830.5	4148011.1	1,090.01	29.71	1,086.3	10	1,070.3	1,060.3
MW-29R	3592830.6	4148011.1	1,088.92	35.20	1,086.0	15	1,068.7	1,053.7
MW-30 ^a	3592832.2	4148018.2	1,090.13	54.83	1,086.3	5	1,040.3	1,035.3
MW-31	3592662.8	4146931.5	1,091.78	33.48	1,088.3	10	1,068.3	1,058.3
MW-32 ^a	3592659.1	4146931.2	1,091.78	57.48	1,088.3	5	1,039.3	1,034.3
MW-56 ^a	3591118.6	4145800.0	1,094.60	72.20	1,090.2	5	1,027.4	1,022.4
MW-57	3591113.1	4145802.0	1,094.76	39.60	1,090.2	10	1,065.2	1,055.2
MW-57R	3591113.1	4145802.0	1,094.61	47.75	1,091.5	15	1,061.9	1,046.9
MW-58S	3592525.4	4147597.3	1,089.12	34.13	1,087.0	15	1,070.4	1,055.4

Well Construction Details
MidAmerican Energy Company
Neal North CCR - Sergeant Bluff, Iowa

Well	Northing	Easting	Monitoring Well Construction					
			Top of Casing (NAVD88)	Total Depth (feet BTOC)	Ground Surface Elevation (feet NAVD88)	Screen Length (feet)	Top of Screen (NAVD88)	Bottom of Screen (NAVD88)
MW-59S	3590909.3	4146311.7	1,090.33	40.28	1,087.8	15	1,065.1	1,050.1
MW-60S	3590797.7	4145885.5	1,094.85	45.05	1,092.6	15	1,064.8	1,049.8
MW-102A	3593970.2	4144530.7	1,078.45	17.61	1,076.0	10	1,070.8	1,060.8
MW-102B ^a	3593966.9	4144526.7	1,079.30	38.05	1,076.6	10	1,051.3	1,041.3
MW-103	3592531.6	4144028.4	1,077.85	27.45	1,076.7	10	1,060.4	1,050.4
MW-104 ^b	3594638.3	4145307.7	1,076.93	21.40	1,073.9	10	1,065.5	1,055.5
MW-104R	3594642.3	4145312.2	1,076.98	21.40	1,073.7	10	1,065.6	1,055.6
MW-207	3595402.6	4145907.0	1,079.33	26.10	1,075.7	10	1,063.2	1,053.2
MW-208 ^a	3595401.0	4145899.8	1,079.15	52.90	NA	NA	NA	NA
MW-209	3594784.9	4147297.2	1,077.04	18.40	1,073.9	10	1,068.6	1,058.6
MW-209R	3594785.2	4147297.6	1,076.68	27.25	1,073.4	15	1,064.4	1,049.4
MW-210 ^a	3594783.2	4147301.2	1,077.12	48.80	1,074.1	5	1,033.3	1,028.3
MW-217S	3594857.0	4146047.8	1,092.11	38.24	1,092.4	15	1,068.9	1,053.9
MW-218S	3594241.9	4146388.1	1,089.35	30.12	1,089.7	15	1,074.2	1,059.2
MW-219S	3593580.7	4146749.8	1,087.33	30.17	1,087.6	15	1,072.2	1,057.2
MW-220S	3593740.1	4147481.4	1,085.88	33.39	1,086.2	15	1,067.5	1,052.5
MW-221S ^b	3594291.1	4147414.3	1,085.75	29.36	1,086.1	15	1,071.4	1,056.4
MW-221SR	3594278.0	4147418.0	1,085.10	30.35	1,085.6	15	1,069.8	1,054.8
MW-222S	3595310.3	4146523.7	1,086.57	30.09	1,087.0	15	1,071.5	1,056.5
MW-223S	3595894.8	4147468.5	1,081.33	26.74	1,081.7	15	1,069.6	1,054.6
MW-224S	3592883.6	4144757.5	1,089.19	40.43	1,089.9	15	1,063.8	1,048.8
MW-225S	3592379.6	4144156.5	1,077.96	32.13	1,075.4	15	1,060.8	1,045.8
MW-226S	3592802.9	4143856.4	1,081.44	34.82	1,079.2	15	1,061.6	1,046.6
MW-227S	3593041.4	4143692.4	1,081.56	35.10	1,079.3	15	1,061.5	1,046.5
MW-228S	3592893.5	4144205.2	1,084.07	35.30	1,084.9	15	1,063.8	1,048.8
MW-229S	3593430.7	4143792.5	1,078.44	27.65	1,076.1	15	1,065.8	1,050.8
MW-230S	3593798.9	4144325.5	1,078.83	29.61	1,076.6	10	1,059.2	1,049.2
MW-231S ^b	3595331.0	4144414.9	1,079.55	26.58	1,077.1	15	1,068.0	1,053.0
MW-231SR	3595322.0	4144417.0	1,080.09	29.07	1,077.3	15	1,066.0	1,051.0
MW-232S	3593334.3	4146242.2	1,088.18	35.05	1,088.5	15	1,068.1	1,053.1
MW-233S	3593238.7	4145618.2	1,091.82	33.94	1,089.8	10	1,067.9	1,057.9
MW-234S	3593127.9	4144469.5	1,089.57	39.45	1,089.8	15	1,065.1	1,050.1
MW-235S	3594274.5	4144871.4	1,080.47	29.85	1,078.0	10	1,060.6	1,050.6
MW-236S	3593499.0	4144391.4	1,089.79	41.30	1,086.9	15	1,063.5	1,048.5
MW-237S	3593395.8	4144317.0	1,090.77	42.30	1,087.9	15	1,063.5	1,048.5
MW-238S	3593288.1	4144270.9	1,092.62	42.90	1,090.0	15	1,064.7	1,049.7
MW-239S	3593152.8	4144418.4	1,092.69	44.10	1,089.8	15	1,063.6	1,048.6
MW-240S	3592761.7	4144101.8	1,082.05	33.10	1,079.1	15	1,063.9	1,048.9
MW-240SR	3592758.5	4144097.8	1,081.75	33.42	1,079.4	15	1,063.3	1,048.3
MW-241S	3592966.7	4144359.4	1,081.57	34.30	1,078.5	15	1,062.3	1,047.3

Well Construction Details
MidAmerican Energy Company
Neal North CCR - Sergeant Bluff, Iowa

Monitoring Well Construction								
Well	Northing	Easting	Top of Casing (NAVD88)	Total Depth (feet BTOC)	Ground Surface Elevation (feet NAVD88)	Screen Length (feet)	Top of Screen (NAVD88)	Bottom of Screen (NAVD88)
MW-241SR	3592963.6	4144356.1	1,081.03	33.37	1,078.7	15	1,062.7	1,047.7
MW-242S	3592888.3	4144419.8	1,080.06	32.70	1,077.5	15	1,062.4	1,047.4
MW-242SR	3592888.3	4144419.9	1,075.69	27.72	1,073.1	15	1,063.0	1,048.0
MW-243S	3594894.2	4145065.0	1,079.58	27.98	1,077.0	15	1,066.6	1,051.6
MW-244S	3594709.6	4144822.0	1,079.71	30.78	1,077.2	15	1,063.9	1,048.9
MW-245S	3594888.1	4144563.0	1,080.26	31.20	1,077.8	15	1,064.1	1,049.1
MW-246S	3595035.1	4144778.9	1,080.17	31.38	1,077.5	15	1,063.8	1,048.8
MW-247S	3594728.5	4145435.4	1,076.29	27.80	1,073.4	15	1,063.5	1,048.5
MW-248S	3594546.4	4145197.0	1,077.57	28.10	1,074.1	15	1,064.5	1,049.5
MW-249S	3594674.7	4144992.1	1,076.60	26.99	1,073.2	15	1,064.6	1,049.6
MW-250S	3593247.1	4144629.4	1,074.25	28.54	1,071.4	15	1,060.7	1,045.7
MW-251S	3593309.4	4143532.9	1,079.94	32.75	1,077.1	15	1,062.2	1,047.2
MW-252S	3593433.2	4143465.8	1,078.10	32.89	1,075.2	15	1,060.2	1,045.2
MW-253S	3593603.9	4143610.7	1,081.52	33.63	1,078.8	15	1,062.9	1,047.9
MW-254S	3593223.3	4145731.6	1,090.57	36.70	1,086.6	15	1,068.9	1,053.9
MW-255S	3593306.5	4145558.5	1,090.59	37.95	1,087.9	15	1,067.6	1,052.6
MW-256S	3593433.7	4145614.9	1,077.01	31.97	1,073.6	15	1,060.0	1,045.0
MW-257S	3593551.5	4145330.3	1,075.27	28.15	1,072.3	15	1,062.1	1,047.1

Notes:

BTOC - Below top of casing.

NAVD88 - North American Vertical Datum 1988.

^a Well is screened in deep portion of the alluvial aquifer.

^b Well was damaged and decommissioned.

Well casings at MW-224S, MW-228S, and MW-234S were cut for final surface completion following the Dec. 19, 2017 event.

MW-223S was modified on June 1, 2022 to accommodate recent construction; the TOC was extended from 1077.99 to 1081.33 and ground surface was raised from 1076.3 to 1081.7.

MW-250S had an initial elevation of 1073.47 prior to final well completion. Following completion on Dec. 14, 2021, TOC elevation was 1074.38. On Aug. 25, 2022, TOC elevation was adjusted to 1074.25.

MW-27 and MW-28 were modified on Oct. 26, 2022 to accommodate well pad settlement; the TOC was cut from 1087.56 to 1087.29 (MW-27) and 1087.49 to 1087.17 (MW-28).

NA - Not applicable/not available.

Table 2.3

Monitoring Well Screen Occlusion Evaluation
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Well	Top of Casing Elevation	Total Well Depth Below Top of Casing (feet)	Screen Length (feet)	21-Sep-2020		10-May-2021		12-Jul-2021		12-Sep-2022		11-Sep-2023		9-Sep-2024		15-Sep-2025	
				Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded
MW-3R	1,075.94	36.60	25	36.80	-0.8%	36.80	-0.8%	36.80	-0.8%	36.75	-0.6%	36.79	-0.8%	36.63	-0.1%	36.80	-0.8%
MW-4 ^a	1,076.18	45.64	5	45.85	-4.2%	45.90	-5.2%	45.88	-4.8%	45.64	0.0%	45.87	-4.6%	45.86	-4.4%	45.86	-4.4%
MW-5R	1,079.54	36.65	25	31.29 ^b	21.4%	36.91	-1.0%	36.90	-1.0%	36.70	-0.2%	36.87	-0.9%	36.97	-1.3%	36.88	-0.9%
MW-6 ^a	1,079.12	46.87	5	47.10	-4.6%	47.02	-3.0%	47.07	-4.0%	47.05	-3.6%	47.06	-3.8%	47.06	-3.8%	47.07	-4.0%
MW-7	1,075.96	18.45	10	18.62	-1.7%	18.60	-1.5%	18.40	0.5%	18.65	-2.0%	18.64	-1.9%	18.67	-2.2%	18.64	-1.9%
MW-8 ^a	1,075.96	45.30	5	45.08	4.4%	45.09	4.2%	45.16	2.8%	45.03	5.4%	45.16	2.8%	45.17	2.6%	45.10	4.0%
MW-9	1,088.63	28.65	10	28.90	-2.5%	28.90	-2.5%	28.68	-0.3%	28.88	-2.3%	28.87	-2.2%	28.87	-2.2%	28.83	-1.8%
MW-10 ^a	1,088.69	55.66	5	55.50	3.2%	55.50	3.2%	55.48	3.6%	55.50	3.2%	55.51	3.0%	55.50	3.2%	55.56	2.0%
MW-11	1,089.96	33.94	10	33.90	0.4%	33.86	0.8%	well abandoned		well abandoned		well abandoned		well abandoned		well abandoned	
MW-11R	1,091.23	41.10	15	not installed		not installed		41.09	0.07%	41.10	0.0%	41.08	0.1%	41.17	-0.5%	41.11	-0.1%
MW-12 ^a	1,089.79	57.21	5	57.11	2.0%	57.05	3.2%	57.10	2.2%	57.09	2.4%	57.08	2.6%	57.10	2.2%	57.11	2.0%
MW-13	1,088.12	30.58	10	30.40	1.8%	30.47	1.1%	well abandoned		well abandoned		well abandoned		well abandoned		well abandoned	
MW-13R	1,089.22	38.16	15	not installed		not installed		38.16	0.00%	38.25	-0.6%	38.13	0.2%	38.14	0.1%	38.16	0.0%
MW-14 ^a	1,087.64	55.70	5	55.60	2.0%	55.55	3.0%	55.50	4.0%	55.50	4.0%	55.49	4.2%	55.60	2.0%	55.57	2.6%
MW-19	1,088.76	28.91	10	28.78	1.3%	29.14	-2.3%	29.01	-1.0%	29.20	-2.9%	29.12	-2.1%	29.09	-1.8%	29.03	-1.2%
MW-20 ^a	1,088.56	56.71	5	56.80	-1.8%	56.90	-3.8%	56.98	-5.4%	56.86	-3.0%	56.86	-3.0%	56.84	-2.6%	56.89	-3.6%
MW-21	1,087.51	31.61	15	32.12	-3.4%	32.15	-3.6%	32.14	-3.5%	32.11	-3.3%	32.12	-3.4%	31.64	-0.2%	32.15	-3.6%
MW-22 ^a	1,087.40	56.50	5	57.40	-18.0%	57.40	-18.0%	57.38	-17.6%	57.33	-16.6%	57.36	-17.2%	57.40	-18.0%	57.41	-18.2%
MW-23	1,089.80	33.60	10	34.18	-5.8%	34.20	-6.0%	well abandoned		well abandoned		well abandoned		well abandoned		well abandoned	
MW-23R	1,089.13	41.25	15	not installed		not installed		41.30	-0.33%	41.35	-0.7%	41.34	-0.6%	41.70	-3.0%	41.24	0.1%
MW-24 ^a	1,090.00	58.80	5	nm	nm	59.45	-13.0%	59.44	-12.8%	59.42	-12.4%	59.42	-12.4%	59.42	-12.4%	59.43	-12.6%
MW-25	1,089.62	33.72	10	33.90	-1.8%	33.91	-1.9%	33.88	-1.6%	33.82	-1.0%	33.81	-0.9%	33.91	-1.9%	33.00	7.2%
MW-26 ^a	1,089.59	57.69	5	57.86	-3.4%	57.89	-4.0%	57.84	-3.0%	57.79	-2.0%	57.80	-2.2%	57.83	-2.8%	57.81	-2.4%
MW-27 ^d	1,087.29	33.39	10	33.84	-1.8%	33.65	0.1%	33.79	-1.3%	34.75 ^b	-10.9%	33.47	-0.8%	33.55	-1.6%	33.50	-1.1%
MW-28 ^{a, d}	1,087.17	58.27	5	59.01	-8.4%	58.96	-7.4%	58.99	-8.0%	59.97 ^b	-27.6%	58.67	-8.0%	58.65	-7.6%	58.70	-8.6%
MW-29	1,090.01	29.71	10	30.35	-6.4%	30.36	-6.5%	well abandoned		well abandoned		well abandoned		well abandoned		well abandoned	
MW-29R	1,088.92	35.20	15	not installed		not installed		35.18	0.13%	35.16	0.3%	35.15	0.3%	35.26	-0.4%	35.16	0.3%
MW-30 ^a	1,090.13	54.83	5	55.35	-10.4%	55.36	-10.6%	55.33	-10.0%	55.30	-9.4%	55.30	-9.4%	55.32	-9.8%	55.34	-10.2%
MW-31	1,091.78	33.48	10	33.80	-3.2%	33.75	-2.7%	33.77	-2.9%	33.75	-2.7%	33.74	-2.6%	33.75	-2.7%	33.78	-3.0%
MW-32 ^a	1,091.78	57.48	5	57.29	3.8%	57.30	3.6%	57.29	3.8%	57.25	4.6%	57.25	4.6%	57.29	3.8%	57.29	3.8%
MW-56 ^a	1,094.60	72.20	5	71.90	6.0%	72.40	-4.0%	71.95	5.0%	71.90	6.0%	71.88	6.4%	71.92	5.6%	71.95	5.0%
MW-57	1,094.76	39.60	10	39.45	1.5%	39.43	1.7%	well abandoned		well abandoned		well abandoned		well abandoned		well abandoned	
MW-57R	1,094.61	47.75	15	not installed		not installed		47.76	-0.07%	47.70	0.3%	47.71	0.3%	47.78	-0.2%	47.70	0.3%
MW-58S	1,089.12	34.13	15	34.05	0.5%	34.02	0.7%	34.04	0.6%	34.02	0.7%	34.03	0.7%	34.02	0.7%	34.00	0.9%

Table 2.3

Monitoring Well Screen Occlusion Evaluation
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Well	Top of Casing Elevation	Total Well Depth Below Top of Casing (feet)	Screen Length (feet)	21-Sep-2020		10-May-2021		12-Jul-2021		12-Sep-2022		11-Sep-2023		9-Sep-2024		15-Sep-2025	
				Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded	Measured Well Depth (feet)	Percent Screen Occluded
MW-59S	1,090.33	40.28	15	40.29	-0.1%	40.32	-0.3%	40.28	0.0%	40.26	0.1%	40.09	1.3%	40.35	-0.5%	40.28	0.0%
MW-60S	1,094.85	45.05	15	45.07	-0.1%	45.05	0.0%	45.01	0.3%	45.00	0.3%	45.03	0.1%	45.09	-0.3%	45.03	0.1%
MW-223S ^c	1,077.99	23.11	15	23.10	0.1%	23.15	-0.3%	23.14	-0.2%	-	-	-	-	-	-	-	-
MW-223S ^c	1,081.33	26.74	15	-	-	-	-	-	-	26.72	0.1%	26.69	0.3%	26.77	-0.2%	26.70	0.3%
MW-231S	1,079.55	26.6	15	26.53	0.3%	26.58	0.0%	26.55	0.2%	well abandoned		well abandoned		well abandoned		well abandoned	
MW-231SR	1,080.09	29.1	15	not installed		not installed		not installed		29.05	0.1%	29.02	0.3%	29.08	-0.1%	29.08	-0.1%

Notes:

Elevations in feet NAVD88 (North American Vertical Datum 1988).

NM - Not measured. % - Percent.

^a Well is screened in deep portion of the alluvial aquifer.

^b Confirmed measurement error, not total well depth.

MW-223S was modified in June 2022 to accommodate nearby construction; the TOC elevation changed from 1077.99 (23.11 feet total well depth) to 1081.33.

MW-27 and MW-28 were modified on Oct. 26, 2022 to accommodate well pad settlement; the TOC was cut from 1087.56 to 1087.29 (MW-27) and 1087.49 to 1087.17 (MW-28).

Table 2.4

Appendix III Parameters (Detection Monitoring)
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Analyte	Analytical Method
Boron	EPA 6020A
Calcium	EPA 6020A
Chloride	EPA 9056A
Fluoride	EPA 9056A
pH	SM 4500 H+B
Sulfate	EPA 9056A
Total Dissolved Solids (TDS)	SM 2540C

Table 2.5

Appendix IV Parameters (Assessment Monitoring)
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Analyte	Analytical Method
Antimony	EPA 6020A
Arsenic	EPA 6020A
Barium	EPA 6020A
Beryllium	EPA 6020A
Cadmium	EPA 6020A
Chromium	EPA 6020A
Cobalt	EPA 6020A
Fluoride	EPA 9056A
Lead	EPA 6020A
Lithium	EPA 6020A
Mercury	EPA 7470A
Molybdenum	EPA 6020A
Selenium	EPA 6020A
Thallium	EPA 6020A
Radium 226 and 228 combined	EPA 9315/9320

Table 2.6

Summary of Groundwater Monitoring Events
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sampling Dates	MW-13/MW-13R (Background)	MW-27 (Background)	MW-29/MW-29R (Background)	MW-223S (Background)	MW-231S/MW-231SR (Background)	MW-5R	MW-11/ MW-11R	MW-19	MW-21	MW-23/ MW-23R	MW-25	MW-57/ MW-57R	MW-59S	MW-60S
December 10-11, 2015	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
March 2-3, 2016	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
June 7-8, 2016	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
September 20-22, 2016	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
December 20-22, 2016	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
February 21-23, 2017	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
April 24-26, 2017	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
July 6-7, 2017	Baseline	Baseline	Baseline	Baseline	-	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
September 12-13, 2017	Detection	Detection	Detection	Detection	-	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
October 18, 2017	-	-	-	-	Baseline	-	-	-	-	-	-	-	-	-
November 20, 2017	-	-	-	-	Baseline	-	-	-	-	-	-	-	-	-
December 21, 2017	-	-	-	-	Baseline	-	-	-	-	-	-	-	-	-
January 30, 2018	-	-	-	-	-	-	-	Verification	Verification	Verification	Verification	Verification	-	Verification
April 18, 2018	Detection	Detection	Detection	Detection	Baseline	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
June 6, 2018	-	-	-	-	Baseline	-	-	-	-	-	-	-	-	-
August 28, 2018	Detection	Detection	Detection	Detection	Baseline	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
December 6, 2018	-	-	-	-	Baseline	-	-	-	-	-	-	-	-	-
March 7-12, 2019	Detection	Detection	Detection	Detection	Baseline	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
May 14-16, 2019	Verification	Verification	Verification	Verification	Verification	-	-	Verification	Verification	Verification	Verification	Verification	-	-
September 17-18, 2019	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
January 7-9, 2020	Supplemental	Supplemental	Supplemental	Supplemental	Supplemental	-	-	-	-	-	-	-	-	-
March 9-11, 2020	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
May 27-28, 2020	-	-	-	-	-	Verification	-	Verification	Verification	Verification	Verification	Verification	-	-
September 22-24, 2020	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
February 2-4, 2021	- ^a	Detection	- ^a	Detection	Detection	Detection	- ^a	Detection	Detection	- ^a	Detection	- ^a	Detection	Detection
July 13-15, 2021	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
March 7-11, 2022	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
June 6-9, 2022	Verification	Verification	Verification	Verification	Verification	Verification	-	Verification	Verification	Verification	-	-	Verification	-
September 12-15, 2022	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
March 27-29, 2023	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
September 11-13, 2023	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
December 5, 2023	-	-	-	-	-	-	-	-	Verification	-	-	-	-	-
January 22-23, 2024	-	-	-	-	Supplemental	-	-	-	-	-	-	-	-	-
February 19-21, 2024	-	-	-	-	Supplemental	-	-	-	-	-	-	-	-	-
March 18-21, 2024	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
June 4-5, 2024	-	-	-	-	-	Verification	-	Verification	Verification	-	-	Verification	Verification	-
September 9-17, 2024	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection

Table 2.6

Summary of Groundwater Monitoring Events
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sampling Dates	MW-13/MW-13R (Background)	MW-27 (Background)	MW-29/MW-29R (Background)	MW-223S (Background)	MW-231S/MW-231SR (Background)	MW-5R	MW-11/ MW-11R	MW-19	MW-21	MW-23/ MW-23R	MW-25	MW-57/ MW-57R	MW-59S	MW-60S
March 10-17, 2025	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection
May 19-20, 2025	-	-	-	-	Verification	Verification	-	Verification	Verification	-	- ^a	Verification	Verification	Verification
September 15-19, 2025	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	Detection	- ^a	Detection	Detection	Detection
Number of Samples														
Appendix III Analytes	24	25	24	25	21	25	24	25	25	24	24	24	25	25
Appendix IV Analytes	8	8	8	8	8	8	8	8	8	8	8	8	8	8

Notes:

1. Baseline monitoring events included analysis of both Appendix III (Detection Monitoring) and Appendix IV (Assessment Monitoring) analytes.

2. Detection monitoring events include the analysis of Appendix III (Detection Monitoring) analytes only.

^a Low water level (drought) conditions prevented sampling of well as scheduled.

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	8-Dec-2015	1-Mar-2016	7-Jun-2016	20-Sep-2016	19-Dec-2016	21-Feb-2017	24-Apr-2017	6-Jul-2017	12-Sep-2017	19-Dec-2017	29-Jan-2018	16-Apr-2018	27-Aug-2018
MW-1R	1,077.64	36.95	1,074.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.99	NA	NA	NA
MW-2 ^a	1,078.07	50.34	1,074.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.92	NA	NA	NA
MW-3R	1,075.94	36.60	1,074.2	1,057.79	1,058.36	1,060.29	1,059.20	1,056.74	1,057.33	1,059.84	1,060.74	1,059.84	1,058.06	1,056.71	1,060.86	1,065.33
MW-4 ^a	1,076.18	45.64	1,074.2	1,057.78	1,058.39	1,060.30	1,059.27	1,056.75	1,057.35	1,059.86	1,060.75	1,059.86	1,058.08	1,056.71	1,060.90	1,065.38
MW-5R	1,079.54	36.65	1,077.4	1,057.19	1,058.00	1,059.83	1,058.87	1,056.18	1,057.00	1,059.63	1,060.38	1,059.45	1,057.52	1,057.11	1,060.77	1,065.10
MW-6 ^a	1,079.12	46.87	1,077.4	1,057.18	1,058.02	1,059.83	1,058.90	1,056.16	1,057.01	1,059.63	1,060.39	1,059.47	1,057.52	1,056.13	1,060.77	1,065.13
MW-7	1,075.96	18.45	1,073.6	1,057.33	Dry	1,058.91	1,057.97	Dry	Dry	1,058.94	1,059.68	1,058.61	Dry	Dry	1,060.21	1,064.63
MW-8 ^a	1,075.96	45.30	1,073.6	1,056.04	1,057.01	1,058.85	1,057.94	1,055.06	1,056.09	1,058.91	1,059.61	1,058.53	1,056.53	1,055.06	1,060.18	1,064.61
MW-9	1,088.63	28.65	1,086.6	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	1,064.32
MW-10 ^a	1,088.69	55.66	1,086.6	1,056.49	1,057.08	1,059.00	1,057.99	1,055.42	1,056.05	1,058.58	1,059.60	1,058.67	1,056.87	1,055.54	1,059.72	1,064.31
MW-11	1,089.96	33.94	1,087.5	1,061.76	1,061.50	1,063.37	1,062.02	1,060.32	1,060.08	1,061.50	1,062.67	1,062.33	1,061.31	1,060.04	1,061.94	1,066.28
MW-11R	1,091.23	41.10	1,088.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12 ^a	1,089.79	57.21	1,087.5	1,061.79	1,061.55	1,063.38	1,062.03	1,060.32	1,060.10	1,061.54	1,062.69	1,062.35	1,061.31	1,060.05	1,061.96	1,066.32
MW-13	1,088.12	30.58	1,086.7	1,064.13	1,063.60	1,065.38	1,063.76	1,062.50	1,062.04	1,062.97	1,064.10	1,064.04	1,063.27	1,062.05	1,063.12	1,067.25
MW-13R	1,089.22	38.16	1,086.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14 ^a	1,087.64	55.70	1,086.7	1,064.10	1,063.54	1,065.33	1,063.89	1,062.41	1,061.96	1,062.92	1,064.04	1,063.96	1,063.20	1,061.96	1,063.06	1,067.19
MW-15R	1,089.45	37.20	1,087.0	1,063.26	1,062.83	1,064.63	1,063.27	1,061.71	1,061.33	1,062.53	1,063.61	1,063.42	1,062.54	1,061.33	1,062.78	1,066.90
MW-16 ^a	1,089.82	52.65	1,087.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-17	1,088.34	25.62	1,086.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,069.86	NA	1,069.70	1,070.72
MW-18 ^a	1,088.34	57.16	1,086.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,060.75	NA	1,061.88	1,066.22
MW-19	1,088.76	28.91	1,086.6	1,077.77	1,080.03	1,078.30	1,075.00	1,074.21	1,073.93	1,075.83	1,074.83	1,075.10	1,074.64	1,073.92	1,076.07	1,076.48
MW-20 ^a	1,088.56	56.71	1,086.6	1,066.57	1,066.33	1,067.48	1,066.43	1,065.15	1,064.76	1,065.50	1,066.54	1,066.34	1,065.87	1,065.19	1,065.58	1,068.96
MW-21	1,087.51	31.61	1,083.9	1,081.01	1,079.57	1,078.62	1,077.05	1,073.86	1,074.79	1,078.64	1,074.21	1,075.25	1,076.53	1,075.95	1,077.57	1,077.04
MW-22 ^a	1,087.40	56.50	1,083.9	1,058.89	1,059.29	1,061.17	1,060.04	1,057.73	1,058.16	1,060.35	1,061.25	1,060.57	1,058.97	1,057.61	1,061.23	1,065.57
MW-23	1,089.80	33.60	1,086.2	1,058.84	1,058.68	1,060.70	1,059.39	1,057.48	1,057.41	1,059.20	1,060.65	1,060.05	1,058.79	1,057.52	1,059.95	1,064.77
MW-23R	1,089.13	41.25	1,086.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-24 ^a	1,090.00	58.80	1,086.2	1,058.75	1,058.64	1,060.62	1,059.36	1,057.40	1,057.18	1,059.21	1,060.58	1,059.98	1,058.69	1,057.44	1,059.98	1,064.75
MW-25	1,089.62	33.72	1,085.9	1,068.71	1,070.79	1,073.37	1,068.95	1,068.19	1,067.95	1,067.77	1,067.41	1,067.10	1,067.81	1,067.41	1,068.92	1,066.18
MW-26 ^a	1,089.59	57.69	1,085.9	1,061.84	1,061.57	1,063.43	1,062.10	1,060.38	1,060.16	1,061.57	1,062.74	1,062.38	1,061.37	1,060.11	1,062.01	1,066.35
MW-27	1,087.29	33.39	1,083.9	1,063.35	1,062.82	1,064.61	1,063.20	1,061.77	1,061.25	1,062.32	1,063.54	1,063.39	1,062.56	1,061.32	1,062.58	1,066.84
MW-28 ^a	1,087.17	58.27	1,083.9	1,063.32	1,062.87	1,064.65	1,063.26	1,061.71	1,061.29	1,062.38	1,063.58	1,063.42	1,062.58	1,061.34	1,062.61	1,066.87
MW-29	1,090.01	29.71	1,086.3	1,064.28	1,063.71	1,065.49	1,064.08	1,062.61	1,062.15	1,063.08	1,064.20	1,064.12	1,063.36	1,062.33	1,063.21	1,067.28
MW-29R	1,088.92	35.20	1,086.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-30 ^a	1,090.13	54.83	1,086.3	1,064.27	1,063.73	1,065.51	1,064.09	1,062.63	1,062.13	1,063.09	1,064.20	1,064.11	1,063.36	1,062.15	1,063.22	1,067.31
MW-31	1,091.78	33.48	1,088.3	1,070.80	1,069.81	1,068.65	1,064.25	1,062.59	1,062.30	1,069.92	1,065.25	1,064.63	1,063.77	1,062.27	1,069.45	1,069.85
MW-32 ^a	1,091.78	57.48	1,088.3	1,062.75	1,062.42	1,064.25	1,062.89	1,061.23	1,060.94	1,062.20	1,063.31	1,063.07	1,062.13	1,060.89	1,062.55	1,066.74
MW-56 ^a	1,094.60	72.20	1,090.2	1,059.72	1,059.89	1,061.79	1,060.59	1,058.47	1,058.66	1,060.63	1,061.65	1,061.04	1,059.63	1,058.32	1,061.37	1,065.78
MW-57	1,094.76	39.60	1,090.2	1,059.80	1,060.02	1,061.93	1,060.74	1,059.07	1,058.81	1,060.78	1,061.76	1,061.19	1,059.79	1,058.48	1,061.53	1,065.92

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	5-Mar-2019	13-May-2019	16-Sep-2019	9-Mar-2020	26-May-2020	21-Sep-2020	1-Feb-2021	11-Oct-2021	7-Mar-2022	6-Jun-2022	12-Sep-2022	27-Mar-2023	11-Sep-2023
MW-1R	1,077.64	36.95	1,074.9	1,054.90	1,067.44	1,071.26	1,061.33	1,060.87	1,057.78	1,052.73	1,056.94	1,050.89	1,055.09	1,056.74	1,054.15	1,057.46
MW-2 ^a	1,078.07	50.34	1,074.9	1,054.85	1,067.51	1,071.55	1,061.42	1,060.90	1,057.75	1,052.56	1,056.87	1,050.77	1,055.00	1,056.65	1,054.00	1,057.52
MW-3R	1,075.94	36.60	1,074.2	1,056.18	1,067.52	1,070.52	1,061.76	1,061.55	1,058.54	1,053.43	1,057.36	1,051.89	1,055.64	1,057.08	1,054.12	1,057.69
MW-4 ^a	1,076.18	45.64	1,074.2	1,056.18	1,067.53	1,070.63	1,061.78	1,061.59	1,058.56	1,053.87	1,057.39	1,051.92	1,055.65	1,057.11	1,054.07	1,057.77
MW-5R	1,079.54	36.65	1,077.4	1,055.59	1,067.40	1,070.76	1,061.66	1,061.67	1,058.12	1,053.31	1,057.12	1,051.44	1,055.35	1,056.89	1,054.19	1,057.63
MW-6 ^a	1,079.12	46.87	1,077.4	1,055.60	1,067.40	1,070.87	1,061.67	1,060.83	1,058.16	1,053.20	1,057.11	1,051.47	1,055.94	1,056.88	1,054.20	1,057.64
MW-7	1,075.96	18.45	1,073.6	Dry	1,067.04	1,070.84	1,060.98	1,060.48	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-8 ^a	1,075.96	45.30	1,073.6	1,054.48	1,066.99	1,067.87	1,060.95	1,060.47	1,057.27	1,052.16	1,056.46	1,050.41	1,054.53	1,056.24	1,053.50	1,057.15
MW-9	1,088.63	28.65	1,086.6	Dry	1,066.50	1,069.82	1,060.62	1,060.36	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-10 ^a	1,088.69	55.66	1,086.6	1,054.97	1,066.55	1,069.90	1,060.63	1,060.36	1,057.34	1,052.39	1,056.28	1,050.64	1,054.36	1,055.97	1,052.83	1,056.89
MW-11	1,089.96	33.94	1,087.5	1,059.94	1,067.51	1,069.22	1,063.67	1,063.63	1,060.94	NA	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-11R	1,091.23	41.10	1,088.3	NA	NA	NA	NA	NA	NA	NA	1,058.72	1,055.04	1,057.29	1,058.33	1,055.35	1,058.51
MW-12 ^a	1,089.79	57.21	1,087.5	1,059.98	1,067.55	1,069.33	1,063.68	1,063.68	1,060.95	1,056.91	1,058.87	1,055.28	1,057.43	1,058.46	1,055.68	1,058.66
MW-13	1,088.12	30.58	1,086.7	1,062.21	1,068.06	1,069.47	1,065.10	1,065.18	1,062.61	1,058.85	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-13R	1,089.22	38.16	1,086.0	NA	NA	NA	NA	NA	NA	NA	1,059.91	1,057.21	1,058.69	1,059.43	1,057.12	1,059.43
MW-14 ^a	1,087.64	55.70	1,086.7	1,062.11	1,067.99	1,069.34	1,064.85	1,065.13	1,062.56	1,058.81	1,060.02	1,057.33	1,058.82	1,059.54	1,057.24	1,059.54
MW-15R	1,089.45	37.20	1,087.0	1,061.34	1,067.98	1,069.69	1,064.65	1,065.20	NA	1,058.15	1,059.65	1,056.54	1,058.32	1,059.19	1,056.65	1,059.23
MW-16 ^a	1,089.82	52.65	1,087.0	NA	1,067.98	1,069.73	1,064.62	1,064.69	NA	1,058.12	1,059.61	1,056.52	1,058.25	1,059.12	1,056.61	1,059.14
MW-17	1,088.34	25.62	1,086.3	1,063.10	1,071.04	1,071.48	1,070.08	1,070.81	1,068.43	1,068.67	1,068.57	1,067.93	1,068.01	1,067.26	1,068.39	1,066.79
MW-18 ^a	1,088.34	57.16	1,086.3	1,059.28	1,067.79	1,070.24	1,063.43	1,063.42	1,060.67	1,056.39	1,061.42	1,054.64	1,057.05	1,058.27	1,055.39	1,058.48
MW-19	1,088.76	28.91	1,086.6	1,074.18	1,076.27	1,076.01	1,074.41	1,075.18	1,073.60	1,073.03	1,073.12	1,073.43	1,073.41	1,073.29	1,073.33	1,072.73
MW-20 ^a	1,088.56	56.71	1,086.6	1,065.60	1,068.98	1,070.64	1,067.20	1,067.66	1,065.78	1,063.19	1,064.40	1,061.83	1,063.10	1,063.74	1,062.01	1,063.61
MW-21	1,087.51	31.61	1,083.9	1,072.59	1,078.78	1,077.02	1,077.20	1,076.43	1,070.71	1,066.85	1,069.09	1,065.68	1,066.23	1,065.18	1,063.94	1,065.53
MW-22 ^a	1,087.40	56.50	1,083.9	1,057.24	1,067.50	1,070.45	1,062.38	1,062.19	1,059.25	1,055.13	1,057.82	1,052.92	1,056.14	1,057.54	1,054.68	1,058.02
MW-23	1,089.80	33.60	1,086.2	1,057.29	1,066.40	1,068.65	1,061.42	1,061.43	1,058.61	1,055.82	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-23R	1,089.13	41.25	1,086.4	NA	NA	NA	NA	NA	NA	NA	1,056.71	1,052.23	1,054.94	1,056.30	1,053.10	1,056.98
MW-24 ^a	1,090.00	58.80	1,086.2	1,057.14	1,066.26	1,068.60	1,061.40	1,061.35	1,058.53	1,054.18	1,056.97	1,052.47	1,055.15	1,056.56	1,053.39	1,057.25
MW-25	1,089.62	33.72	1,085.9	1,068.67	1,071.37	1,070.24	1,069.63	1,069.59	1,067.59	1,066.37	1,065.61	1,065.01	1,064.76	1,063.71	1,061.80	1,060.78
MW-26 ^a	1,089.59	57.69	1,085.9	1,060.01	1,067.54	1,069.40	1,063.71	1,063.71	1,061.03	1,056.99	1,058.94	1,055.38	1,057.47	1,058.56	1,054.82	1,058.75
MW-27	1,087.29	33.39	1,083.9	1,061.39	1,067.68	1,069.18	1,064.43	1,064.53	1,061.96	1,058.13	1,059.61	1,056.67	1,058.41	1,059.20	1,056.71	1,059.30
MW-28 ^a	1,087.17	58.27	1,083.9	1,061.43	1,067.74	1,069.21	1,064.51	1,065.12	1,062.01	1,058.18	1,059.63	1,056.68	1,058.31	1,059.18	1,056.71	1,059.28
MW-29	1,090.01	29.71	1,086.3	1,062.28	1,068.10	1,069.46	1,065.22	1,065.31	1,062.74	1,059.83	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-29R	1,088.92	35.20	1,086.0	NA	NA	NA	NA	NA	NA	NA	1,059.83	1,057.16	1,058.64	1,059.37	1,057.06	1,059.32
MW-30 ^a	1,090.13	54.83	1,086.3	1,062.31	1,068.11	1,069.47	1,065.21	1,065.32	1,062.73	1,058.99	1,060.13	1,057.48	1,058.95	1,059.67	1,057.37	1,059.61
MW-31	1,091.78	33.48	1,088.3	1,063.42	1,070.78	1,071.29	1,069.47	1,068.64	1,064.46	1,059.58	1,061.16	DRY	1,059.62	1,060.27	DRY	1,060.06
MW-32 ^a	1,091.78	57.48	1,088.3	1,060.87	1,067.87	1,069.70	1,064.38	1,064.42	1,061.69	1,059.74	1,059.41	1,056.13	1,058.03	1,058.98	1,056.39	1,059.01
MW-56 ^a	1,094.60	72.20	1,090.2	1,058.01	1,067.46	1,070.10	1,062.67	1,062.56	1,059.70	1,055.25	1,058.04	1,053.55	1,056.43	1,057.72	1,054.80	1,058.11
MW-57	1,094.76	39.60	1,090.2	1,058.17	1,073.62	1,070.28	1,062.83	1,062.72	1,059.84	1,055.46	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa													
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	18-Mar-2024	4-Jun-2024	20-Aug-2024	9-Sep-2024	11-Nov-2024	9-Dec-2024	10-Mar-2025	7-Apr-2025	19-May-2025	15-Sep-2025
MW-1R	1,077.64	36.95	1,074.9	1,052.45	1,058.82	1,057.26	1,058.18	NA	NA	1,051.59	NA	NA	1,055.66
MW-2 ^a	1,078.07	50.34	1,074.9	1,052.56	1,058.86	1,057.23	1,058.21	NA	NA	1,051.55	NA	NA	1,055.61
MW-3R	1,075.94	36.60	1,074.2	1,052.98	1,058.78	1,057.98	1,058.73	NA	NA	1,052.79	NA	1,056.26	1,056.38
MW-4 ^a	1,076.18	45.64	1,074.2	1,053.03	1,058.82	1,058.06	1,058.75	NA	NA	1,052.80	NA	1,056.30	1,056.39
MW-5R	1,079.54	36.65	1,077.4	1,052.93	1,058.97	1,057.71	1,058.47	NA	NA	1,052.24	NA	1,056.12	1,056.06
MW-6 ^a	1,079.12	46.87	1,077.4	1,052.96	1,058.93	1,057.70	1,058.53	NA	NA	1,052.24	NA	1,056.09	1,056.05
MW-7	1,075.96	18.45	1,073.6	DRY	1,058.47	DRY	1,057.86	NA	NA	DRY	NA	DRY	DRY
MW-8 ^a	1,075.96	45.30	1,073.6	1,052.03	1,058.45	1,056.93	1,057.85	NA	NA	1,051.19	NA	1,055.45	1,055.17
MW-9	1,088.63	28.65	1,086.6	DRY	DRY	DRY	DRY	NA	NA	DRY	NA	DRY	DRY
MW-10 ^a	1,088.69	55.66	1,086.6	1,051.79	1,057.72	1,057.08	1,058.82	NA	NA	1,051.61	NA	1,055.19	1,055.24
MW-11	1,089.96	33.94	1,087.5	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-11R	1,091.23	41.10	1,088.3	1,055.64	1,059.63	1,060.28	1,060.66	NA	NA	1,056.14	NA	1,057.68	1,058.49
MW-12 ^a	1,089.79	57.21	1,087.5	1,055.78	1,059.76	1,060.42	1,060.79	NA	NA	1,056.22	NA	1,057.85	1,058.63
MW-13	1,088.12	30.58	1,086.7	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-13R	1,089.22	38.16	1,086.0	1,057.48	1,060.67	1,062.07	1,061.84	1,061.57	1,060.72	1,058.16	1,058.83	1,058.91	1,060.02
MW-14 ^a	1,087.64	55.70	1,086.7	1,057.58	1,060.78	1,061.91	1,062.10	NA	NA	1,058.30	NA	1,059.04	1,060.20
MW-15R	1,089.45	37.20	1,087.0	1,056.44	1,060.46	1,061.30	1,061.50	1,061.16	1,059.97	1,057.54	1,058.47	NA	1,059.65
MW-16 ^a	1,089.82	52.65	1,087.0	1,067.29	1,060.39	1,061.22	1,061.42	NA	NA	1,057.45	NA	NA	1,059.56
MW-17	1,088.34	25.62	1,086.3	1,068.76	1,070.38	1,069.47	1,069.20	1,067.99	1,067.88	1,068.18	1,069.80	NA	1,069.27
MW-18 ^a	1,088.34	57.16	1,086.3	1,055.30	1,059.64	1,059.90	1,060.29	1,059.89	1,057.76	1,055.62	1,057.18	NA	1,058.23
MW-19	1,088.76	28.91	1,086.6	1,074.97	1,078.39	1,076.32	1,075.82	NA	NA	1,074.41	NA	1,075.96	1,076.35
MW-20 ^a	1,088.56	56.71	1,086.6	1,062.41	1,064.55	1,065.55	1,065.47	NA	NA	1,062.95	NA	1,063.76	1,064.54
MW-21	1,087.51	31.61	1,083.9	1,062.46	1,074.36	1,075.09	1,074.14	NA	NA	1,066.40	NA	1,071.56	1,068.91
MW-22 ^a	1,087.40	56.50	1,083.9	1,054.00	1,059.15	1,058.69	1,059.27	NA	NA	1,053.56	NA	1,056.75	1,057.04
MW-23	1,089.80	33.60	1,086.2	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-23R	1,089.13	41.25	1,086.4	1,052.92	1,057.60	1,058.14	1,059.62	NA	NA	1,053.33	NA	1,055.63	1,056.19
MW-24 ^a	1,090.00	58.80	1,086.2	1,053.15	1,057.86	1,058.39	1,058.98	NA	NA	1,053.56	NA	1,055.90	1,056.44
MW-25	1,089.62	33.72	1,085.9	1,059.78	1,059.36	1,059.65	1,059.74	NA	NA	1,058.85	NA	1,057.98	1,058.10
MW-26 ^a	1,089.59	57.69	1,085.9	1,055.89	1,059.80	1,060.51	1,060.78	NA	NA	1,056.36	NA	1,058.01	1,058.81
MW-27	1,087.29	33.39	1,083.9	1,057.02	1,060.40	1,061.51	1,061.45	1,061.34	1,060.27	1,057.70	1,058.51	1,058.67	1,059.79
MW-28 ^a	1,087.17	58.27	1,083.9	1,057.11	1,060.33	1,061.50	1,061.62	NA	NA	1,057.66	NA	1,058.62	1,059.76
MW-29	1,090.01	29.71	1,086.3	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-29R	1,088.92	35.20	1,086.0	1,057.43	1,060.59	1,061.67	1,061.75	1,061.48	1,060.65	1,057.94	1,058.77	1,058.82	1,059.95
MW-30 ^a	1,090.13	54.83	1,086.3	1,056.71	1,060.87	1,061.98	1,062.06	NA	NA	1,058.43	NA	1,059.13	1,060.25
MW-31	1,091.78	33.48	1,088.3	1,058.41	1,069.65	1,063.15	1,063.07	NA	NA	1,058.15	NA	1,059.53	1,060.25
MW-32 ^a	1,091.78	57.48	1,088.3	1,056.54	1,060.24	1,060.96	1,061.21	NA	NA	1,057.07	NA	1,058.37	1,059.23
MW-56 ^a	1,094.60	72.20	1,090.2	1,054.38	1,059.22	1,059.18	1,059.70	NA	NA	1,054.49	NA	1,057.02	1,057.47
MW-57	1,094.76	39.60	1,090.2	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	8-Dec-2015	1-Mar-2016	7-Jun-2016	20-Sep-2016	19-Dec-2016	21-Feb-2017	24-Apr-2017	6-Jul-2017	12-Sep-2017	19-Dec-2017	29-Jan-2018	16-Apr-2018	27-Aug-2018
MW-57R	1,094.61	47.75	1,091.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-58S	1,089.12	34.13	1,087.0	1,063.67	1,063.18	1,064.00	1,063.60	1,062.09	1,061.64	1,062.69	1,063.81	1,063.68	1,062.88	1,061.67	1,062.89	1,061.09
MW-59S	1,090.33	40.28	1,087.8	1,060.27	1,060.26	1,062.17	1,060.91	1,059.02	1,058.96	1,060.66	1,061.84	1,061.32	1,060.14	1,058.88	1,061.29	1,065.75
MW-60S	1,094.85	45.05	1,092.6	1,059.13	1,059.29	1,061.26	1,060.06	1,057.91	1,058.11	1,060.10	1,061.21	1,060.54	1,059.15	1,057.83	1,060.88	1,065.01
MW-102A	1,078.45	17.61	1,076.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,066.43	NA	1,069.44	1,069.87
MW-102B ^a	1,079.30	38.05	1,076.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,060.18	NA	1,062.18	1,066.42
MW-103	1,077.85	27.45	1,076.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.22	NA	1,060.40	1,064.75
MW-104	1,076.93	21.40	1,073.9	1,061.52	1,061.22	1,062.08	1,061.78	1,060.16	1,059.82	1,061.30	1,062.49	1,062.19	1,061.17	1,059.84	1,061.83	1,066.22
MW-104R	1,076.98	21.40	1,073.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-207	1,079.33	26.10	1,075.7	1,062.92	1,062.40	1,064.21	1,062.88	1,061.47	1,060.91	1,062.00	1,063.27	1,063.14	1,062.38	1,061.10	1,062.34	1,066.62
MW-208 ^a	1,079.15	52.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-209	1,077.04	18.40	1,073.9	1,064.51	1,064.00	1,065.69	1,064.26	1,062.94	1,062.33	1,063.18	1,064.31	1,064.27	1,063.65	1,062.47	1,063.29	1,067.31
MW-209R	1,076.68	27.25	1,073.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-210 ^a	1,077.12	48.80	1,074.1	1,064.63	1,064.10	1,065.79	1,064.36	1,063.01	1,062.41	1,063.31	1,064.40	1,064.36	1,063.74	1,062.55	1,063.40	1,066.42
MW-217S	1,092.11	38.24	1,092.4	1,063.18	1,062.77	1,064.55	1,063.63	1,061.87	1,061.94	1,062.75	1,064.27	1,063.80	1,062.60	1,061.38	1,062.98	1,066.63
MW-218S	1,089.35	30.12	1,089.7	1,076.30	1,076.94	1,076.50	1,077.08	1,077.00	1,076.83	1,077.13	1,076.65	1,077.06	1,076.31	1,076.28	1,076.41	1,074.73
MW-219S	1,087.33	30.17	1,087.6	1,076.12	1,074.48	1,073.44	1,075.57	1,075.74	1,075.73	1,075.83	1,074.78	1,075.72	1,075.32	1,075.61	1,075.23	1,075.39
MW-220S	1,085.88	33.39	1,086.2	1,063.93	1,063.43	1,065.21	1,063.83	1,062.34	1,061.89	1,062.95	1,064.44	1,064.69	1,066.05	1,064.21	1,065.55	1,068.84
MW-221S	1,085.75	29.36	1,086.1	1,064.34	1,063.76	1,065.48	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-221SR	1,085.10	30.35	1,085.6	NA	NA	NA	1,063.99	1,062.61	1,062.06	1,062.95	1,064.06	1,064.02	1,063.34	1,062.14	1,063.08	1,067.13
MW-222S	1,086.57	30.09	1,087.0	1,063.89	1,063.35	1,065.09	1,063.73	1,062.37	1,061.74	1,062.67	1,063.89	1,063.85	1,063.18	1,061.96	1,062.85	1,066.97
MW-223S	1,081.33	26.74	1,081.7	1,064.94	1,064.40	1,066.04	1,064.56	1,063.31	1,062.65	1,063.37	1,064.48	1,064.49	1,064.01	1,062.81	1,063.41	1,067.34
MW-224S	1,089.19	40.43	1,089.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,058.65	NA	1,060.80	1,065.34
MW-225S	1,077.96	32.13	1,075.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.49	NA	1,060.45	1,064.79
MW-226S	1,081.44	34.82	1,079.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.01	NA	1,060.44	1,064.71
MW-227S	1,081.56	35.10	1,079.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.08	NA	1,060.41	1,064.71
MW-228S	1,084.07	35.30	1,084.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,057.45	NA	1,060.51	1,064.97
MW-229S	1,078.44	27.65	1,076.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,056.69	NA	1,060.33	1,064.57
MW-230S	1,078.83	29.61	1,076.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,058.50	NA	1,060.85	1,065.10
MW-231S	1,079.55	26.58	1,077.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,060.25	NA	1,060.92	1,065.58
MW-231SR	1,080.09	29.07	1,077.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-232S	1,088.18	35.05	1,088.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,061.27	NA	1,061.90	1,066.27
MW-233S	1,091.82	33.94	1,089.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,068.25	NA	1,067.90	1,069.30
MW-234S	1,089.57	39.45	1,089.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,058.39	NA	1,060.75	1,065.28
MW-235S	1,080.47	29.85	1,078.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,060.05	NA	1,061.32	1,065.72
MW-236S	1,089.79	41.30	1,086.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-237S	1,090.77	42.30	1,087.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-238S	1,092.62	42.90	1,090.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	5-Mar-2019	13-May-2019	16-Sep-2019	9-Mar-2020	26-May-2020	21-Sep-2020	1-Feb-2021	11-Oct-2021	7-Mar-2022	6-Jun-2022	12-Sep-2022	27-Mar-2023	11-Sep-2023
MW-57R	1,094.61	47.75	1,091.5	NA	NA	NA	NA	NA	NA	NA	1,057.77	1,053.28	1,056.17	1,057.44	1,054.45	1,057.86
MW-58S	1,089.12	34.13	1,087.0	1,061.76	1,067.94	1,069.49	1,064.82	1,064.92	1,062.31	1,058.50	1,059.82	1,056.95	1,058.53	1,059.35	1,056.91	1,059.33
MW-59S	1,090.33	40.28	1,087.8	1,058.29	1,067.26	1,069.48	1,062.78	1,062.75	1,060.00	1,055.71	1,058.10	1,054.03	1,056.55	1,057.76	1,054.73	1,058.11
MW-60S	1,094.85	45.05	1,092.6	1,057.29	1,067.17	1,069.73	1,062.17	1,062.08	1,059.83	1,054.85	1,057.62	1,053.01	1,056.00	1,057.27	1,054.18	1,057.76
MW-102A	1,078.45	17.61	1,076.0	1,066.21	1,067.69	1,072.65	1,062.52	NA	1,065.65	1,065.44	1,065.65	1,064.51	1,068.36	1,064.74	1,064.38	1,065.38
MW-102B ^a	1,079.30	38.05	1,076.6	1,058.40	1,071.10	1,072.31	1,071.24	NA	1,060.34	1,056.00	1,058.78	1,054.02	1,057.09	1,058.38	1,055.22	1,058.74
MW-103	1,077.85	27.45	1,076.7	1,054.04	1,067.60	1,069.55	1,060.90	1,060.37	1,057.17	1,052.78	1,056.58	1,050.57	1,054.69	1,056.42	1,053.68	1,057.31
MW-104	1,076.93	21.40	1,073.9	1,059.81	1,067.72	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-104R	1,076.98	21.40	1,073.7	NA	NA	1,069.79	1,063.47	1,063.55	1,060.74	1,056.66	1,058.59	DRY	1,056.88	1,058.03	DRY	1,058.94
MW-207	1,079.33	26.10	1,075.7	1,061.23	1,067.77	1,069.48	1,064.40	1,064.53	1,061.81	1,058.07	1,059.32	NA	NA	1,058.62	DRY	1,058.53
MW-208 ^a	1,079.15	52.90	NA	NA	1,067.77	1,069.55	1,064.40	1,064.56	1,061.84	1,058.09	1,059.32	1,056.16	1,056.35	1,058.66	1,055.95	1,058.55
MW-209	1,077.04	18.40	1,073.9	1,062.72	1,068.16	1,069.64	1,065.47	1,065.56	1,062.95	1,059.36	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-209R	1,076.68	27.25	1,073.4	NA	NA	NA	NA	NA	NA	NA	1,059.98	1,057.42	1,058.53	1,059.38	1,057.08	1,059.18
MW-210 ^a	1,077.12	48.80	1,074.1	1,062.77	1,068.25	1,069.73	1,065.65	1,065.64	1,063.04	1,059.44	1,060.31	1,057.73	1,058.92	1,059.69	1,057.37	1,059.51
MW-217S	1,092.11	38.24	1,092.4	1,060.97	1,067.84	1,069.69	1,064.26	1,064.36	1,061.70	1,057.90	1,059.28	1,056.03	1,057.66	1,058.66	1,055.93	1,058.61
MW-218S	1,089.35	30.12	1,089.7	1,073.20	1,074.46	1,073.50	1,073.34	1,074.25	1,073.23	1,073.61	1,072.11	1,070.92	1,070.92	1,070.48	1,069.60	1,069.48
MW-219S	1,087.33	30.17	1,087.6	1,073.84	1,074.62	1,073.32	1,073.97	1,074.36	1,071.28	1,071.55	1,072.12	1,071.21	1,070.23	1,072.04	1,071.13	1,070.51
MW-220S	1,085.88	33.39	1,086.2	1,064.05	1,070.35	1,071.18	1,068.18	1,068.76	1,067.07	1,063.56	1,060.21	1,057.29	1,058.75	1,059.44	1,057.07	1,059.39
MW-221S	1,085.75	29.36	1,086.1	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-221SR	1,085.10	30.35	1,085.6	1,062.28	1,068.05	1,069.49	1,065.15	1,065.25	1,062.66	1,059.02	1,059.96	1,057.32	1,058.67	1,059.41	1,057.04	1,059.24
MW-222S	1,086.57	30.09	1,087.0	1,062.17	1,067.95	1,069.45	1,065.02	1,065.14	1,062.55	1,058.96	1,059.80	1,057.05	1,058.29	1,059.14	1,056.66	1,058.97
MW-223S	1,081.33	26.74	1,081.7	1,063.19	1,068.10	1,069.53	1,065.78	1,065.84	1,063.29	1,059.83	1,060.38	NA	1,058.75	1,059.43	1,057.27	1,059.15
MW-224S	1,089.19	40.43	1,089.9	1,056.71	1,067.43	1,070.80	1,061.77	1,061.83	1,058.82	1,054.09	1,057.52	1,052.29	1,055.78	1,057.13	1,053.89	1,057.58
MW-225S	1,077.96	32.13	1,075.4	1,054.25	1,067.42	1,069.21	1,060.95	1,060.45	1,057.30	1,052.05	1,056.56	1,050.21	1,054.65	1,056.33	1,053.51	1,057.13
MW-226S	1,081.44	34.82	1,079.2	1,053.92	1,067.60	1,072.94	1,060.90	1,060.29	1,057.13	1,051.77	1,056.65	1,050.06	1,054.63	1,056.43	1,053.83	1,057.39
MW-227S	1,081.56	35.10	1,079.3	1,053.83	1,067.59	1,072.58	1,060.86	1,060.28	1,056.89	1,051.86	1,056.51	1,049.97	1,054.58	1,056.37	1,053.71	1,057.26
MW-228S	1,084.07	35.30	1,084.9	1,055.26	1,067.48	1,071.05	1,061.22	1,061.04	1,057.92	1,052.85	1,056.97	1,051.06	1,055.09	1,056.70	1,053.52	1,057.36
MW-229S	1,078.44	27.65	1,076.1	1,054.65	1,067.33	1,072.36	1,060.92	NA	1,057.41	1,052.39	1,056.58	1,051.05	1,054.70	1,056.43	1,053.43	1,057.07
MW-230S	1,078.83	29.61	1,076.6	1,056.51	1,067.33	1,071.45	1,061.84	NA	1,058.68	1,053.99	1,057.30	1,052.20	1,055.54	1,056.99	1,053.80	1,057.39
MW-231S	1,079.55	26.58	1,077.1	1,058.82	1,067.23	1,069.20	1,062.73	1,062.90	1,060.01	1,055.85	1,058.06	Plugged	Plugged	Plugged	Plugged	Plugged
MW-231SR	1,080.09	29.07	1,077.3	NA	NA	NA	NA	NA	NA	NA	NA	1,047.04	1,056.25	1,057.44	1,054.21	1,057.50
MW-232S	1,088.18	35.05	1,088.5	1,059.87	1,067.62	1,069.84	1,063.63	1,063.67	1,060.99	1,056.87	1,058.89	1,055.13	1,057.27	1,058.36	1,055.48	1,058.44
MW-233S	1,091.82	33.94	1,089.8	1,067.87	1,069.57	1,070.64	1,068.27	1,069.08	1,067.72	1,066.92	1,067.10	1,066.47	1,066.49	1,066.13	1,066.79	1,065.88
MW-234S	1,089.57	39.45	1,089.8	1,056.34	1,067.53	1,070.85	1,061.62	1,061.62	1,058.62	1,053.78	1,057.41	1,052.02	1,055.59	1,057.06	1,053.81	1,057.67
MW-235S	1,080.47	29.85	1,078.0	1,058.56	1,067.89	1,070.15	1,062.82	1,062.87	1,059.94	1,055.71	1,058.18	1,053.91	1,056.42	1,057.69	1,054.55	1,057.90
MW-236S	1,089.79	41.30	1,086.9	NA	NA	NA	NA	1,061.70	1,058.73	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-237S	1,090.77	42.30	1,087.9	NA	NA	NA	NA	1,061.42	1,058.42	1,053.52	1,057.21	1,051.72	1,055.44	1,056.87	1,053.58	1,057.38
MW-238S	1,092.62	42.90	1,090.0	NA	NA	NA	NA	1,061.25	1,058.22	1,053.29	1,057.13	1,051.48	1,055.34	1,056.78	1,053.32	1,057.28

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa													
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	18-Mar-2024	4-Jun-2024	20-Aug-2024	9-Sep-2024	11-Nov-2024	9-Dec-2024	10-Mar-2025	7-Apr-2025	19-May-2025	15-Sep-2025
MW-57R	1,094.61	47.75	1,091.5	1,054.10	1,058.96	1,058.92	1,059.45	NA	NA	1,054.27	NA	1,057.02	1,057.21
MW-58S	1,089.12	34.13	1,087.0	1,057.24	1,060.57	1,061.58	1,061.72	NA	NA	1,057.92	NA	1,058.79	1,059.92
MW-59S	1,090.33	40.28	1,087.8	1,054.62	1,059.06	1,059.49	1,059.89	NA	NA	1,055.03	NA	1,057.16	1,057.74
MW-60S	1,094.85	45.05	1,092.6	1,053.82	1,058.72	1,058.74	1,058.25	NA	NA	1,054.00	NA	1,056.63	1,057.00
MW-102A	1,078.45	17.61	1,076.0	1,065.43	1,067.96	1,066.70	1,065.91	1,065.32	1,065.06	1,065.62	1,066.47	NA	1,067.90
MW-102B ^a	1,079.30	38.05	1,076.6	1,054.89	1,059.89	1,059.62	1,060.15	1,059.77	1,056.93	1,054.91	1,057.20	NA	1,057.87
MW-103	1,077.85	27.45	1,076.7	1,051.94	1,058.70	1,056.77	1,057.78	1,057.22	1,052.11	1,050.89	DRY	NA	1,055.19
MW-104	1,076.93	21.40	1,073.9	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-104R	1,076.98	21.40	1,073.7	DRY	1,059.16	1,059.66	1,059.96	1,059.67	1,058.05	1,055.55	1,056.80	NA	1,058.04
MW-207	1,079.33	26.10	1,075.7	1,056.30	1,059.72	1,060.59	1,060.76	NA	NA	1,056.91	NA	NA	1,058.92
MW-208 ^a	1,079.15	52.90	NA	1,056.31	1,059.73	1,060.60	1,060.75	NA	NA	1,056.93	NA	NA	1,058.93
MW-209	1,077.04	18.40	1,073.9	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-209R	1,076.68	27.25	1,073.4	1,057.53	1,060.52	1,061.08	1,061.63	NA	NA	1,058.19	NA	NA	1,060.00
MW-210 ^a	1,077.12	48.80	1,074.1	1,057.82	1,060.84	1,061.90	1,061.94	NA	NA	1,058.49	NA	NA	1,060.34
MW-217S	1,092.11	38.24	1,092.4	1,056.28	1,059.79	1,060.61	1,060.78	1,060.51	1,059.41	1,056.88	1,057.69	NA	1,058.99
MW-218S	1,089.35	30.12	1,089.7	1,069.31	1,071.10	1,071.16	1,071.15	1,070.16	1,069.93	1,069.60	1,069.15	NA	1,069.57
MW-219S	1,087.33	30.17	1,087.6	1,071.05	1,073.92	1,073.51	1,072.85	1,071.82	1,071.47	1,070.70	1,071.82	NA	1,072.23
MW-220S	1,085.88	33.39	1,086.2	1,057.58	1,061.97	1,063.94	1,064.17	NA	NA	1,058.39	NA	NA	1,060.44
MW-221S	1,085.75	29.36	1,086.1	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-221SR	1,085.10	30.35	1,085.6	1,057.48	1,060.59	1,061.63	1,061.68	NA	NA	1,058.12	NA	NA	1,060.02
MW-222S	1,086.57	30.09	1,087.0	1,057.12	1,060.25	1,061.27	1,061.36	NA	NA	1,057.87	1,058.38	NA	1,059.72
MW-223S	1,081.33	26.74	1,081.7	1,057.77	1,060.56	1,061.70	1,061.68	1,061.49	1,061.05	1,058.50	1,058.90	1,058.99	1,060.19
MW-224S	1,089.19	40.43	1,089.9	1,053.29	1,058.64	NA	1,058.79	1,058.48	1,056.31	1,053.26	1,055.83	NA	1,056.61
MW-225S	1,077.96	32.13	1,075.4	1,052.01	1,058.49	1,056.77	1,057.72	1,057.17	1,052.22	1,050.91	1,054.82	NA	1,055.15
MW-226S	1,081.44	34.82	1,079.2	1,052.09	1,058.84	1,056.69	1,057.75	1,057.18	1,051.72	1,050.69	1,054.94	NA	1,055.12
MW-227S	1,081.56	35.10	1,079.3	1,052.05	1,058.72	1,056.62	1,057.68	1,057.11	1,051.74	1,050.77	1,054.85	NA	1,054.99
MW-228S	1,084.07	35.30	1,084.9	1,052.34	1,058.44	1,057.45	1,058.17	1,057.80	1,053.39	1,051.98	1,055.26	NA	1,055.73
MW-229S	1,078.44	27.65	1,076.1	1,052.02	1,058.42	1,056.94	1,057.82	1,057.34	1,053.18	1,051.32	1,054.97	NA	1,055.26
MW-230S	1,078.83	29.61	1,076.6	1,053.23	1,058.58	1,058.04	1,058.66	1,058.23	1,054.94	1,053.09	1,055.70	NA	1,056.29
MW-231S	1,079.55	26.58	1,077.1	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-231SR	1,080.09	29.07	1,077.3	1,054.41	1,058.53	1,059.06	1,059.35	1,059.12	1,057.53	1,054.87	1,056.15	1,056.79	1,057.31
MW-232S	1,088.18	35.05	1,088.5	1,055.58	1,059.65	1,060.13	1,060.48	1,060.11	1,058.38	1,056.05	1,057.34	NA	1,058.42
MW-233S	1,091.82	33.94	1,089.8	1,067.55	1,068.91	1,068.20	1,067.88	1,066.99	1,066.80	1,066.54	1,067.32	NA	1,067.17
MW-234S	1,089.57	39.45	1,089.8	1,053.02	1,058.60	1,058.02	1,058.67	1,058.32	1,054.68	1,053.00	1,055.66	NA	1,056.33
MW-235S	1,080.47	29.85	1,078.0	1,054.56	1,059.02	1,059.23	1,059.61	1,059.30	1,057.22	1,054.84	1,056.45	NA	1,057.58
MW-236S	1,089.79	41.30	1,086.9	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-237S	1,090.77	42.30	1,087.9	1,052.79	1,058.47	1,057.83	1,058.46	1,058.11	1,054.48	1,052.69	1,055.42	NA	1,056.15
MW-238S	1,092.62	42.90	1,090.0	1,052.52	1,058.29	1,057.63	1,058.29	1,057.95	1,054.27	1,052.48	1,055.27	NA	1,055.96

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	8-Dec-2015	1-Mar-2016	7-Jun-2016	20-Sep-2016	19-Dec-2016	21-Feb-2017	24-Apr-2017	6-Jul-2017	12-Sep-2017	19-Dec-2017	29-Jan-2018	16-Apr-2018	27-Aug-2018
MW-239S	1,092.69	44.10	1,089.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-240S	1,082.05	33.10	1,079.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-240SR	1,081.75	33.42	1,079.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-241S	1,081.57	34.30	1,078.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-241SR	1,081.03	33.37	1,078.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-242S	1,080.06	32.70	1,077.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-242SR	1,075.69	27.72	1,073.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-243S	1,079.58	27.98	1,077.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-244S	1,079.71	30.78	1,077.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-245S	1,080.26	31.20	1,077.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-246S	1,080.17	31.38	1,077.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-247S	1,076.29	27.80	1,073.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-248S	1,077.57	28.10	1,074.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-249S	1,076.60	26.99	1,073.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-250S	1,074.25	28.54	1,071.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-251S	1,079.94	32.75	1,077.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-252S	1,078.10	32.89	1,075.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-253S	1,081.52	33.63	1,078.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-254S	1,090.57	36.70	1,086.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-255S	1,090.59	37.95	1,087.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-256S	1,077.01	31.97	1,073.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-257S	1,075.27	28.15	1,072.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa																
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	5-Mar-2019	13-May-2019	16-Sep-2019	9-Mar-2020	26-May-2020	21-Sep-2020	1-Feb-2021	11-Oct-2021	7-Mar-2022	6-Jun-2022	12-Sep-2022	27-Mar-2023	11-Sep-2023
MW-239S	1,092.69	44.10	1,089.8	NA	NA	NA	NA	1,061.46	1,058.48	1,053.59	1,057.28	Plugged	Plugged	Plugged	Plugged	Plugged
MW-240S	1,082.05	33.10	1,079.1	NA	NA	NA	NA	1,060.77	1,057.65	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-240SR	1,081.75	33.42	1,079.4	NA	NA	NA	NA	NA	NA	NA	1,056.82	1,050.70	1,054.95	1,056.54	1,053.38	1,057.21
MW-241S	1,081.57	34.30	1,078.5	NA	NA	NA	NA	1,061.29	1,058.25	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-241SR	1,081.03	33.37	1,078.7	NA	NA	NA	NA	NA	NA	NA	1,057.13	1,051.48	1,055.34	1,056.82	1,052.63	1,057.39
MW-242S	1,080.06	32.70	1,077.5	NA	NA	NA	NA	1,061.30	1,058.24	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-242SR	1,075.69	27.72	1,073.1	NA	NA	NA	NA	NA	NA	NA	1,057.23	1,051.68	1,055.44	1,056.89	1,053.69	1,057.45
MW-243S	1,079.58	27.98	1,077.0	NA	NA	NA	NA	NA	NA	NA	1,058.26	1,054.39	1,056.53	1,057.65	1,054.69	1,057.71
MW-244S	1,079.71	30.78	1,077.2	NA	NA	NA	NA	NA	NA	NA	1,058.12	1,054.03	1,056.39	1,057.56	1,054.46	1,057.67
MW-245S	1,080.26	31.20	1,077.8	NA	NA	NA	NA	NA	NA	NA	1,057.89	1,053.70	1,056.12	1,057.32	1,054.13	1,057.45
MW-246S	1,080.17	31.38	1,077.5	NA	NA	NA	NA	NA	NA	NA	1,058.16	1,054.15	1,056.45	1,057.35	1,054.45	1,057.61
MW-247S	1,076.29	27.80	1,073.4	NA	NA	NA	NA	NA	NA	NA	1,058.85	1,055.14	1,057.11	1,058.24	1,055.29	1,058.24
MW-248S	1,077.57	28.10	1,074.1	NA	NA	NA	NA	NA	NA	NA	1,058.65	1,054.69	1,056.92	1,058.09	1,055.09	1,058.15
MW-249S	1,076.60	26.99	1,073.2	NA	NA	NA	NA	NA	NA	NA	1,058.51	1,054.52	1,056.77	1,057.94	1,054.89	1,058.05
MW-250S	1,074.25	28.54	1,071.4	NA	NA	NA	NA	NA	NA	NA	1,057.58	1,052.35	1,055.76	1,057.09	1,053.92	1,057.56
MW-251S	1,079.94	32.75	1,077.1	NA	NA	NA	NA	NA	NA	NA	1,056.53	1,050.17	1,054.62	1,056.41	1,053.29	1,057.19
MW-252S	1,078.10	32.89	1,075.2	NA	NA	NA	NA	NA	NA	NA	1,056.40	1,050.01	1,054.46	1,056.31	1,053.36	1,057.03
MW-253S	1,081.52	33.63	1,078.8	NA	NA	NA	NA	NA	NA	NA	1,056.65	1,050.53	1,054.78	1,056.52	1,053.49	1,057.21
MW-254S	1,090.57	36.70	1,086.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,061.35	1,067.44	1,065.80
MW-255S	1,090.59	37.95	1,087.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,057.75	1,054.77	1,058.01
MW-256S	1,077.01	31.97	1,073.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,057.89	1,054.95	1,058.10
MW-257S	1,075.27	28.15	1,072.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,057.73	1,054.72	1,057.97

Table 3.1

Groundwater Elevation Data MidAmerican Energy Company Neal North CCR - Sergeant Bluff, Iowa													
Well	Top of Casing (NAVD)	Total Depth (feet BTOC)	Ground Surface (NAVD)	18-Mar-2024	4-Jun-2024	20-Aug-2024	9-Sep-2024	11-Nov-2024	9-Dec-2024	10-Mar-2025	7-Apr-2025	19-May-2025	15-Sep-2025
MW-239S	1,092.69	44.10	1,089.8	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-240S	1,082.05	33.10	1,079.1	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-240SR	1,081.75	33.42	1,079.4	1,051.97	1,058.35	1,057.19	1,057.96	NA	NA	1,051.59	NA	NA	1,055.59
MW-241S	1,081.57	34.30	1,078.5	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-241SR	1,081.03	33.37	1,078.7	1,052.59	1,058.49	1,057.70	1,058.37	NA	NA	1,052.41	1,055.39	NA	1,056.06
MW-242S	1,080.06	32.70	1,077.5	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged	Plugged
MW-242SR	1,075.69	27.72	1,073.1	1,052.72	1,058.52	1,057.81	1,058.46	NA	NA	1,052.61	1,055.53	NA	1,056.19
MW-243S	1,079.58	27.98	1,077.0	1,054.81	1,058.86	1,059.30	1,059.64	1,059.35	1,057.70	1,055.22	1,056.49	NA	1,057.63
MW-244S	1,079.71	30.78	1,077.2	1,054.52	1,058.81	1,059.10	1,059.48	1,059.20	1,056.28	1,054.86	1,056.33	NA	1,057.45
MW-245S	1,080.26	31.20	1,077.8	1,054.20	1,058.54	1,059.02	1,059.21	1,058.93	1,057.01	1,054.56	1,056.03	NA	1,057.19
MW-246S	1,080.17	31.38	1,077.5	1,054.58	1,058.72	1,059.14	1,059.46	1,059.20	1,057.42	1,054.97	1,056.31	NA	1,057.51
MW-247S	1,076.29	27.80	1,073.4	1,055.48	1,059.40	1,059.95	1,060.21	1,059.94	1,058.41	1,055.92	1,057.09	NA	1,058.32
MW-248S	1,077.57	28.10	1,074.1	1,055.14	1,059.26	1,059.66	1,060.00	1,059.72	1,057.96	1,055.51	1,056.87	NA	1,058.05
MW-249S	1,076.60	26.99	1,073.2	1,054.97	1,059.17	1,059.52	1,059.86	1,059.59	1,057.73	1,055.34	1,056.74	NA	1,058.07
MW-250S	1,074.25	28.54	1,071.4	1,053.26	1,058.60	1,058.20	1,058.78	1,058.44	1,055.18	1,053.23	1,055.74	NA	1,056.54
MW-251S	1,079.94	32.75	1,077.1	1,051.63	1,058.40	1,056.77	1,057.70	1,057.23	1,051.11	1,051.03	1,054.94	NA	1,055.11
MW-252S	1,078.10	32.89	1,075.2	1,051.61	1,058.45	1,056.55	1,057.59	1,057.03	1,050.45	1,050.71	1,054.77	NA	1,054.90
MW-253S	1,081.52	33.63	1,078.8	1,052.08	1,058.52	1,056.98	1,057.91	1,057.41	1,055.29	1,051.37	1,055.04	NA	1,055.32
MW-254S	1,090.57	36.70	1,086.6	1,068.05	1,069.47	1,068.66	1,068.29	1,067.24	1,067.09	1,067.10	1,068.36	NA	1,067.59
MW-255S	1,090.59	37.95	1,087.9	1,054.63	1,059.65	1,059.37	1,059.73	1,059.38	1,057.22	1,055.00	1,056.67	NA	1,057.69
MW-256S	1,077.01	31.97	1,073.6	1,054.89	1,061.19	1,061.43	1,061.17	1,060.70	1,060.37	1,056.72	1,060.27	NA	1,060.67
MW-257S	1,075.27	28.15	1,072.3	1,054.55	1,059.12	1,059.23	1,059.65	1,059.33	1,057.06	1,054.83	1,058.32	NA	1,057.57

Notes:

^a Well is screened in deep portion of the alluvial aquifer.

BTOC - Below top of casing.

CCR - Coal combustion residual.

NA - Not applicable/not available.

NAVD - North American Vertical Datum 1988.

Well casings at MW-224S, MW-228S, and MW-234S were cut for final surface completion following the Dec. 19, 2017 event.

MW-223S was modified on June 1, 2022 to accommodate recent construction; the TOC was extended from 1077.99 to 1081.33 and ground surface was raised from 1076.3 to 1081.7.

MW-250S had an initial elevation of 1073.47 prior to final well completion. Following completion on Dec. 14, 2021, TOC elevation was 1074.38. On Aug. 25, 2022, TOC elevation was adjusted to 1074.25.

MW-27 and MW-28 were modified on Oct. 26, 2022 to accommodate well pad settlement; the TOC was cut from 1087.56 to 1087.29 (MW-27) and 1087.49 to 1087.17 (MW-28).

**Horizontal Gradients and Average Linear Groundwater Flow Velocities
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa**

Date	Horizontal Hydraulic Gradient	Average Linear Groundwater Flow Velocity (meters per day)	Average Linear Groundwater Flow Velocity (feet per year)
Shallow Portion of Alluvial Aquifer			
7-Dec-2015	0.002	0.014	16
29-Feb-2016	0.002	0.012	14
6-Jun-2016	0.001	0.011	14
19-Sep-2016	0.001	0.010	12
19-Dec-2016	0.002	0.012	15
20-Feb-2017	0.001	0.011	13
24-Apr-2017	0.001	0.008	10
5-Jul-2017	0.001	0.008	10
11-Sep-2017	0.001	0.010	12
29-Jan-2018	0.001	0.011	14
16-Apr-2018	0.001	0.007	8
27-Aug-2018	0.001	0.006	7
5-Mar-2019	0.002	0.013	15
13-May-2019	0.0004	0.003	4
18-Sep-2019	0.0002	0.001	2
9-Mar-2020	0.001	0.008	10
26-May-2020	0.001	0.009	11
21-Sep-2020	0.001	0.010	11
1-Feb-2021	0.003	0.020	24
12-Jul-2021	0.001	0.008	9
7-Mar-2022	0.002	0.012	15
6-Jun-2022	0.001	0.008	10
12-Sep-2022	0.001	0.006	8
27-Mar-2023	0.001	0.010	12
11-Sep-2023	0.001	0.005	6
18-Mar-2024	0.001	0.010	13
4-Jun-2024	0.001	0.006	7
9-Sep-2024	0.001	0.007	8
10-Mar-2025	0.002	0.012	14
19-May-2025	0.001	0.007	8
15-Sep-2025	0.001	0.009	10

**Horizontal Gradients and Average Linear Groundwater Flow Velocities
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa**

Date	Horizontal Hydraulic Gradient	Average Linear Groundwater Flow Velocity (meters per day)	Average Linear Groundwater Flow Velocity (feet per year)
Deep Portion of Alluvial Aquifer			
7-Dec-2015	0.002	0.083	100
29-Feb-2016	0.002	0.067	80
6-Jun-2016	0.002	0.067	80
19-Sep-2016	0.001	0.061	73
19-Dec-2016	0.002	0.076	91
20-Feb-2017	0.001	0.060	72
24-Apr-2017	0.001	0.041	49
5-Jul-2017	0.001	0.045	53
11-Sep-2017	0.001	0.054	65
29-Jan-2018	0.002	0.071	85
16-Apr-2018	0.001	0.029	34
27-Aug-2018	0.001	0.026	31
5-Mar-2019	0.002	0.079	94
13-May-2019	0.001	0.048	57
18-Sep-2019	0.001	0.041	49
9-Mar-2020	0.001	0.041	50
26-May-2020	0.001	0.053	63
21-Sep-2020	0.001	0.054	64
1-Feb-2021	0.002	0.068	81
12-Jul-2021	0.001	0.042	51
7-Mar-2022	0.002	0.070	84
6-Jun-2022	0.001	0.035	42
12-Sep-2022	0.001	0.033	39
27-Mar-2023	0.001	0.037	45
11-Sep-2023	0.001	0.023	28
18-Mar-2024	0.001	0.044	53
4-Jun-2024	0.001	0.023	27
9-Sep-2024	0.001	0.041	50
10-Mar-2025	0.002	0.073	87
19-May-2025	0.001	0.036	43
15-Sep-2025	0.001	0.049	59

Table 4.1

**Baseline Period Groundwater Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa**

Well	Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-5R	12/10/2015	0.163 J / 0.259	120 / 78.4	10.5 J / 17.9 J	0.500 U / 1.56 J	7.41 J / 7.29 J	154 / 158	646 / 652
MW-5R	3/2/2016	0.221 / 0.226	118 / 119	10.3 / 11.1	0.500 U / 0.500 U	7.44 J / 7.25 J	151 / 157	646 / 624
MW-5R	6/8/2016	0.400 U / 0.335	124 / 131	11.2 / 12.5	0.509 / 0.500 U	7.05 J / 7.04 J	165 / 171	690 / 658
MW-5R	9/21/2016	0.260 / 0.298	113 / 112	9.03 / 9.98	0.500 U / 0.500 U	7.2 J / 7.2 J	171 / 142	660 / 694
MW-5R	12/20/2016	0.350/0.359	122 / 128	10.6 / 11.1	0.601 / 0.589	7.3 J / 7.3 J	195 / 194	696 / 690
MW-5R	2/23/2017	0.200 U / 0.210	127 / 117	9.66 / 9.16	0.500 U / 0.500 U	7.2 J / 7.3 J	150 / 157	652 / 684
MW-5R	4/26/2017	0.200 U / 0.200 U	117 / 113	15.0 / 13.5	2.11 J / 1.58 J	7.2 J / 7.1 J	139 / 137	706 / 630
MW-5R	7/6/2017	0.200 U / 0.200 U	115 / 109	12.4 / 11.6	0.623 / 0.500 U	7.1 J / 7.1 J	133 / 141	634 / 690
MW-5R	9/13/2017	0.200 U / 0.200 U	110 / 110	9.87/9.81	0.500 U/0.500 U	7.2 J/7.2 J	137/135	640/672
MW-5R	4/18/2018	0.200 U / 0.200 U	109 / 110	18.5 J/16.1 J	0.500 U/0.500 U	7.3 J/7.2 J	142/141	566/580
MW-5R	8/28/2018	1.65/1.54	211/184	19.8/20.5	0.500 U/0.500 U	7.1 J/7.1 J	498 /516	1500/1410
MW-5R	3/12/2019	0.209	122	10.5	0.500 U	7.5 J	150	604
MW-5R	9/18/2019	0.432	120	11.3	0.500 U	7.3 J	162	575
MW-5R	03/09/2020	0.240 /0.222	152 /153	17.2 /12.3	0.500 U /0.500 U	7.1 J /7.1 J	323 /288	840 /844
MW-5R	09/23/2020	0.233	92.8	9.02	0.500 U	7.3 J	130	512
MW-11	12/10/2015	0.159 J	215	19.3	0.500 U	7.14 J	153	1140
MW-11	3/2/2016	0.200 U	218	14.0	0.816	7.28 J	142	1030
MW-11	6/8/2016	0.607	242	62.4	0.504	6.93 J	174	1220
MW-11	9/21/2016	0.200 U	205	48.1	0.500 U	7.1 J	148	1030
MW-11	12/20/2016	0.200 U	242	90.6	12.2	7.2 J	182	1050
MW-11	2/21/2017	0.200 U	149	5.00 U	0.500 U	7.1 J	145	766
MW-11	4/24/2017	0.200 U	150	13.0	3.01	7.3 J	143	764
MW-11	7/7/2017	0.200 U	168	25.9	0.500 U	7.1 J	136	894
MW-11	9/13/2017	0.200 U	159	25.2	0.500 U	7.2 J	131	874
MW-11	4/18/2018	0.200 U	151	5.00 UJ	0.500 U	7.4 J	174	710
MW-11	8/28/2018	0.200 U	147	5.00 U	0.500 U	8.0 J	140	778
MW-11	3/12/2019	0.200 U	203	14.6	0.500 U	7.2 J	136	916
MW-11	9/18/2019	0.200 U	148	5.00 U	0.526	7.4 J	130	666
MW-11	03/09/2020	0.200 U	131	5.00 U	0.500 U	7.3 J	120	630
MW-11	09/22/2020	0.100 U	144	10.6	0.500 U	7.3 J	128	538
MW-13	12/10/2015	0.136 J	171	7.93	0.500 U	7.30 J	77.9	876
MW-13	3/2/2016	0.200 U	171	9.48	1.39	7.29 J	71.1	824
MW-13	6/8/2016	0.678	306	10.7	0.500 U	6.96 J	96.5	928
MW-13	9/21/2016	0.200 U	173	8.01	0.500 U	7.1 J	65.6	884
MW-13	12/20/2016	0.200 U	154	23.2	6.49	7.3 J	81.5	860
MW-13	2/21/2017	0.200 U	166	5.00 U	0.500 U	7.2 J	80.2	804
MW-13	4/26/2017	0.200 U	149	15.1	2.98	7.3 J	66.7	706
MW-13	7/6/2017	0.200 U	145	5.16	0.500 U	7.2 J	67.2	730
MW-13	9/13/2017	0.200 U	162	6.81	0.500 U	7.2 J	68.0	876
MW-13	4/18/2018	0.200 U	152	9.99 J	0.500 U	7.3 J	73.9	588
MW-13	8/28/2018	0.200 U	169	16.7	0.500 U	7.6 J	56.1	668
MW-13	3/7/2019	0.200 U	178	7.37	0.500 U	7.1 J	75.8	840
MW-13	9/17/2019	0.200 U	161	18.1	0.500 U	7.2 J	69.5	710
MW-13	03/11/2020	0.200 U	163	28.4	0.500 U	7.0 J	74.7	852
MW-13	09/22/2020	0.100 U	160	15.3	0.500 U	7.2 J	79	790
MW-13*	07/13/2021	0.114	158	35.9 J-	0.500 UJ	7.2 J	51.6	506
MW-13*	10/14/2021	0.134	150	42.1	0.500 U	7.2 J	47.5	548
MW-13*	3/9/2022	0.108 /0.112	175 /172	73.3 /74.6	0.500 U /0.500 U	7.2 J /7.2 J	68.4 /69.5	604 /630
MW-13*	6/8/2022	0.105 /0.11	129 /126	42.8 /42.5	0.500 U /0.500 U	7.2 J /7.3 J	61.1 /60.8	620 /606
MW-13*	9/14/2022	0.113	137	16.7	0.500 U	7.2 J	56.4	518
MW-13*	3/27/2023	0.138	130	18.9	0.500 U	7.3 J	68.4	502
MW-13*	9/12/2023	0.122 J+	135	12.3	1.00 U	7.2 J	58.6	542
MW-13*	3/18/2024	0.163	119	9.26	1.00 U	7.3 J	61.8	522
MW-13*	9/11/2024	0.100 U	138	10.5	1.00 U	7.1 J	29.0	566
MW-13*	3/11/2025	0.136	147	17.3	1.00 U	7.8 J	38.7	580
MW-19	12/10/2015	0.463 J	450	24.6	0.500 U	6.63 J	1190	2740
MW-19	3/2/2016	0.703	340	27.0	2.01	6.78 J	712	1990
MW-19	6/8/2016	0.694	355	25.7	0.500 U	6.58 J	748	2100
MW-19	9/20/2016	0.639	381	19.1	0.500 U	6.8 J	919	2370
MW-19	12/20/2016	0.642	374	73.9	12.2	6.9 J	926	2330
MW-19	2/22/2017	0.561	324	4.26	0.100 U	7.1 J	796	2410
MW-19	4/24/2017	0.532	444	28.8	2.55	6.6 J	1150	3380
MW-19	7/7/2017	0.681	401	24.7	0.500 U	6.7 J	985	3320
MW-19	9/13/2017	0.587	384	19.8	0.500 U	6.7 J	891	2570
MW-19	4/17/2018	0.697	322	21.3 J-	0.500 U	6.9 J	698	1720
MW-19	8/28/2018	0.590	326	22.0	0.500 U	7.4 J	932	2270
MW-19	3/12/2019	0.609	345	21.0	0.500 U	6.6 J	961	2450
MW-19	9/18/2019	0.524	415	20.4	0.500 U	6.9 J	971	2240
MW-19	03/10/2020	0.631	400	16.9	0.500 U	6.6 J	990	2280
MW-19	09/23/2020	0.589	350	19.0	0.500 U	6.7 J	984	2330

**Baseline Period Groundwater Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa**

Well	Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-21	12/10/2015	0.440 J	182	5.00 U	0.500 U	7.05 J	212	1040
MW-21	3/2/2016	0.406	187	6.08	0.500 U	7.11 J	202	920
MW-21	6/8/2016	0.472	232	6.77	0.500 U	6.94 J	203	890
MW-21	9/20/2016	0.415	179	7.79	0.500 U	7.1 J	225	1030
MW-21	12/20/2016	0.439	211	34.8	4.41	7.1 J	333	1100
MW-21	2/22/2017	0.365	209	9.21	1.66	7.1 J	320	1180
MW-21	4/24/2017	0.333	199	9.34	1.57	7.0 J	269	1110
MW-21	7/7/2017	0.359	190	7.16	0.500 U	6.9 J	280	1180
MW-21	9/13/2017	0.385	200	5.85	0.500 U	6.9 J	305	1150
MW-21	4/17/2018	0.322	212	7.37 J-	0.500 U	7.1 J	321	1010
MW-21	8/28/2018	0.286	356	5.59	0.500 U	6.9 J	971	1870
MW-21	3/12/2019	0.374	228	7.60	0.500 U	7.1 J	284	1040
MW-21	9/18/2019	0.319	406	7.27	0.500 U	6.8 J	991	2170
MW-21	03/10/2020	0.344	180	5.00 U	6.75	6.9 J	228	958
MW-21	09/23/2020	0.352	341	6.61	0.500 U	7.2 J	924	2020
MW-23	12/10/2015	0.304 J	236	9.53	0.500 U	7.14 J	225	1070
MW-23	3/2/2016	0.318	245	9.63	0.500 U	6.90 J	257	1030
MW-23	6/8/2016	0.282	341	10.9	0.500 U	6.65 J	496	1440
MW-23	9/20/2016	0.309	357	6.86	0.500 U	6.9 J	655	1720
MW-23	12/21/2016	0.287	252	8.07	0.500 U	6.9 J	306	1220
MW-23	2/22/2017	0.282	243	12.3	1.54	6.9 J	285	1340
MW-23	4/24/2017	0.272	232	9.98	0.500 U	6.8 J	236	1270
MW-23	7/6/2017	0.310	228	9.43	0.500 U	6.7 J	242	1140
MW-23	9/13/2017	0.284	247	8.16	0.500 U	6.7 J	234	1280
MW-23	4/18/2018	0.250	190	10.1 J-	0.500 U	6.9 J	190	880
MW-23	8/28/2018	0.260	216	10.3	0.500 U	6.8 J	198	866
MW-23	3/12/2019	0.263	231	9.51	0.500 U	6.9 J	219	1100
MW-23	9/18/2019	0.265	268	8.62	0.500 U	6.8 J	287	1150
MW-23	03/09/2020	0.312	299	8.78	0.500 U	6.7 J	321	1230
MW-23	09/23/2020	0.250	263	8.21	0.500 U	6.9 J	292	1320
MW-25	12/10/2015	0.333 J	233	5.00 U	0.500 U	7.19 J	447	1350
MW-25	3/2/2016	0.338	252	5.00 U	0.500 U	7.11 J	452	1330
MW-25	6/8/2016	0.246	276	7.64	0.500 U	6.98 J	506	1550
MW-25	9/21/2016	0.316	245	5.00 U	0.500 U	7.0 J	401	1420
MW-25	12/20/2016	0.289	244	15.7	3.54	7.1 J	311	1490
MW-25	2/21/2017	0.267	241	5.08	0.500 U	7.0 J	519	2330
MW-25	4/26/2017	0.275	261	10.5	2.26	7.0 J	511	2350
MW-25	7/7/2017	0.308	235	5.62	0.500 U	6.9 J	487	1620
MW-25	9/13/2017	0.314	248	5.00 U	0.500 U	7.0 J	478	1710
MW-25	4/18/2018	0.281	248	5.00 UJ	0.500 U	7.1 J	518	1300
MW-25	8/28/2018	0.304	257	5.00 U	0.500 U	7.0 J	454	1260
MW-25	3/12/2019	0.313	246	5.00 U	0.500 U	7.1 J	450	1410
MW-25	9/18/2019	0.293	243	5.00 U	0.500 U	7.1 J	469	1400
MW-25	03/09/2020	0.355	229	5.00 U	0.500 U	6.9 J	458	1310
MW-25	09/22/2020	0.291	235	5.00 U	0.500 U	7.3 J	476	1070
MW-27	12/10/2015	0.223 J	158	26.3	0.500 U	7.11 J	155	866
MW-27	3/2/2016	0.264	162	22.4	0.500 U	7.04 J	131	840
MW-27	6/8/2016	0.239	173	23.9	0.500 U	6.93 J	137	908
MW-27	9/21/2016	0.253	154	18.8	0.500 U	7.0 J	95.2	776
MW-27	12/20/2016	0.252	168	28.7	1.55	7.2 J	138	856
MW-27	2/21/2017	0.284	189	25.8	0.500 U	7.0 J	147	904
MW-27	4/26/2017	0.271	187	28.8	0.731	7.0 J	169	1140
MW-27	7/6/2017	0.247	152	22.0	0.500 U	6.9 J	121	886
MW-27	9/13/2017	0.225	149	20.5	0.500 U	7.0 J	112	876
MW-27	4/18/2018	0.262	170	19.9 J-	0.500 U	7.5 J	133	778
MW-27	8/28/2018	0.211	140	14.5	0.500 U	7.8 J	78.0	698
MW-27	3/7/2019	0.268	180	20.7	0.500 U	6.9 J	131	790
MW-27	9/17/2019	0.200 /0.212	160 /160	17.3 /16.2	0.500 U /0.500 U	7.0 J /7.1 J	170 /157	886 /800
MW-27	03/11/2020	0.228	142	16.4	0.500 U	7.0 J	137	818
MW-27	09/22/2020	0.302	178	18.9	0.500 U	7.0 J	199	496
MW-27*	02/03/2021	0.272	170	22.9	0.500 U	7.1 J	259	1030
MW-27*	05/11/2021	0.271	174	16.9	0.500 U	7.0 J	191	856
MW-27*	07/14/2021	0.274	184	13.1 J-	0.500 UJ	7.1 J	100	662
MW-27*	10/14/2021	0.243	162	17.7	0.500 U	7.1 J	175	760
MW-27*	3/8/2022	0.251	166	15.2	0.500 U	7.3 J	144	698
MW-27*	6/9/2022	0.203	118	11.8	0.500 U	7.2 J	101	622
MW-27*	9/14/2022	0.226	162	12.5	0.500 U	7.2 J	111	712
MW-27*	3/29/2023	0.246	158	11.9	0.500 U	7.1 J	96.4	634
MW-27*	9/12/2023	0.222 J+	169	13.9	1.00 U	7.1 J	97.1	716
MW-27*	3/18/2024	0.254	156	17.3	1.00 U	7.2 J	105	704
MW-27*	9/10/2024	0.179 /0.182	167 /170	24.9 /24.8	1.00 U /1.00 U	7.0 J /7.0 J	78.4 /78.3	682 /638
MW-27*	3/12/2025	0.228	157	24.5	1.00 U	7.8 J	81.1	692

Table 4.1

**Baseline Period Groundwater Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa**

Well	Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-29	12/10/2015	0.150 UJ	193	6.69	0.500 U	7.30 J	115	828
MW-29	3/2/2016	0.200 U	208	6.66	0.500 U	6.99 J	121	814
MW-29	6/8/2016	0.200 U	184	10.0	0.661	6.87 J	105	842
MW-29	9/21/2016	0.200 U	194	5.00 U	0.500 U	7.0 J	159	884
MW-29	12/21/2016	0.200 U	214	21.0	6.44	7.0 J	185	1190
MW-29	2/21/2017	0.200 U	230	5.02	0.500 U	7.0 J	179	964
MW-29	4/26/2017	0.200 U	225	5.84	0.901	7.0 J	186	1160
MW-29	7/6/2017	0.200 U	193	8.50	0.768	6.9 J	153	992
MW-29	9/13/2017	0.200 U	194	6.40	0.500 U	7.0 J	141	892
MW-29	4/18/2018	0.200 U	207	7.70 J-	0.500 U	7.0 J	173	832
MW-29	8/27/2018	0.200 U	190	5.07	0.500 U	7.9 J	130	830
MW-29	3/7/2019	0.205	209	6.70	0.500 U	7.0 J	140	806
MW-29	9/17/2019	0.200 U	190	7.12	0.500 U	7.0 J	136	740
MW-29	03/11/2020	0.200 U / 0.200 U	189 / 174	9.2 / 9.09	0.500 U / 0.500 U	7.0 J / 7.0 J	133 / 133	818 / 806
MW-29	09/22/2020	0.197	148	10.1	0.500 U	7.0 J	67	594
MW-29*	07/13/2021	0.230	209	9.75 J-	0.500 UJ	7.0 J	191	856
MW-29*	10/14/2021	0.194	207	9.81	0.500 U	7.1 J	172	826
MW-29*	3/8/2022	0.199	201	12.1	0.500 U	7.2 J	185	808
MW-29*	6/9/2022	0.144	136	12.0	0.500 U	7.1 J	82.3	704
MW-29*	9/14/2022	0.143	177	10.6	0.500 U	7.1 J	66.4	670
MW-29*	3/29/2023	0.158	200	11.9	0.500 U	7.1 J	121	724
MW-29*	9/12/2023	0.184 J+	222	10.8	1.00 U	7.0 J	205	906
MW-29*	3/18/2024	0.166	166	10.3	1.00 U	7.2 J	109	698
MW-29*	9/10/2024	0.114	163	11.3	1.00 U	7.0 J	60.4	606
MW-29*	3/12/2025	0.158 / 0.156	187 / 190	12 / 9.49	1.00 U / 1.00 U	7.7 J / 7.7 J	140 / 136	774 / 768
MW-57	12/10/2015	0.335 J	324	6.24	0.500 U	7.08 J	735	2060
MW-57	3/3/2016	0.361	386	7.19	0.507	6.93 J	1090	2070
MW-57	6/8/2016	0.339	381	7.48	0.500 U	6.72 J	863	2150
MW-57	9/21/2016	0.348	351	5.12	0.500 U	7.0 J	942	2190
MW-57	12/21/2016	0.355	372	6.61	0.500 U	6.9 J	926	2110
MW-57	2/22/2017	0.350	405	5.14	0.500 U	7.0 J	831	2720
MW-57	4/26/2017	0.348	363	6.80	1.00	6.9 J	737	2190
MW-57	7/6/2017	0.367	339	5.97	0.500 U	6.8 J	901	2450
MW-57	9/13/2017	0.325	344	5.55	0.500 U	6.8 J	817	2070
MW-57	4/18/2018	0.336	321	10.9 J-	0.500 U	6.9 J	713	1820
MW-57	8/28/2018	0.349	327	6.10	0.500 U	6.8 J	841	2050
MW-57	3/12/2019	0.358	355	11.0	0.500 U	6.9 J	713	1930
MW-57	9/18/2019	0.403	384	6.16	0.500 U	6.9 J	901	2060
MW-57	03/09/2020	0.393	312	5.71	0.500 U	6.8 J	728	1850
MW-57	09/23/2020	0.364	314	5.22	0.500 U	7.1 J	737	1890
MW-59S	12/11/2015	0.192 J	141	6.53	0.500 U	7.20 J	121	744
MW-59S	3/3/2016	0.204	141	7.83	0.781	7.12 J	110	676
MW-59S	6/8/2016	0.200 U	148	8.21	0.500 U	6.94 J	136	730
MW-59S	9/21/2016	0.200 U	133	5.93	0.500 U	7.2 J	107	708
MW-59S	12/20/2016	0.200 U	140	15.1	3.84	7.2 J	132	742
MW-59S	2/22/2017	0.200 U	150	8.12	0.759	7.2 J	121	752
MW-59S	4/26/2017	0.200 U	143	7.10	0.500 U	7.0 J	116	758
MW-59S	7/6/2017	0.200 U	138	7.77	0.500 U	7.0 J	115	786
MW-59S	9/13/2017	0.200 U	133	6.13	0.500 U	7.0 J	109	786
MW-59S	4/18/2018	0.200 U	135	6.13 J-	0.500 U	7.1 J	111	626
MW-59S	8/28/2018	0.200 U	130	6.14	0.500 U	7.1 J	108	650
MW-59S	3/12/2019	0.200 U	144	6.21	0.500 U	7.1 J	104	688
MW-59S	9/18/2019	0.200 U	127	7.80	0.500 U	7.3 J	118	595
MW-59S	03/10/2020	0.200 U	137	5.73	0.500 U	7.0 J	102	648
MW-59S	09/23/2020	0.151	133	5.00 U	0.500 U	7.2 J	112	678
MW-60S	12/11/2015	0.153 J	118	7.83	0.500 U	7.26 J	138	660
MW-60S	3/3/2016	0.200 U	114	9.08	0.500 U	7.22 J	129	590
MW-60S	6/8/2016	0.330	130	11.4	0.500 U	7.02 J	169	688
MW-60S	9/21/2016	0.200 U	116	10.1	0.500 U	7.2 J	136	642
MW-60S	12/20/2016	0.200 U	131	8.81	0.732	7.1 J	157	670
MW-60S	2/22/2017	0.200 U	125	10.3	0.500 U	7.1 J	154	672
MW-60S	4/26/2017	0.200 U	117	14.7	1.21	7.1 J	155	650
MW-60S	7/6/2017	0.200 U	108	14.0	0.627	7.1 J	151	676
MW-60S	9/13/2017	0.200 U	119	9.97	0.500 U	7.1 J	154	804
MW-60S	4/18/2018	0.200 U	122	10.9 J-	0.500 U	7.2 J	142	572
MW-60S	8/28/2018	0.200 U	109	10.6	0.500 U	7.2 J	144	632
MW-60S	3/12/2019	0.200 U	123	9.63	0.627	7.2 J	143	622
MW-60S	9/18/2019	0.200 U	103	12.7	0.500 U	7.2 J	157	550
MW-60S	03/09/2020	0.200 U	113	9.00	0.500 U	7.1 J	140	594
MW-60S	09/23/2020	0.127	117	5.25	0.500 U	7.2 J	152	592

Baseline Period Groundwater Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-223S	12/11/2015	0.100 U	112	12.1	3.15	7.38 J	40.6	488
MW-223S	3/3/2016	0.200 U	114	5.00 U	0.500 U	7.42 J	35.3	444
MW-223S	6/7/2016	0.200 U	131	6.03	0.500 U	7.26 J	34.9	452
MW-223S	9/20/2016	0.200 U	119	5.66	0.500 U	7.5 J	24.7	440
MW-223S	12/22/2016	0.200 U	127	10.7	2.98	7.5 J	38.0	424
MW-223S	2/22/2017	0.200 U	125	18.1	6.15	7.4 J	41.4	486
MW-223S	4/25/2017	0.200 U	121	11.4	2.39	7.5 J	37.3	504
MW-223S	7/6/2017	0.200 U	109	7.47	0.500 U	7.3 J	33.0	520
MW-223S	9/12/2017	0.200 U	117	10.4	1.14	7.4 J	34.3	492
MW-223S	10/18/2017	0.200 U	107	7.86	0.500 U	7.5 J	28.5	534
MW-223S	11/20/2017	0.200 U	119	9.35	0.500 U	7.3 J	44.2	492
MW-223S	12/21/2017	0.200 U	115	6.23	0.500 U	7.5 J	39.0	780
MW-223S	4/17/2018	0.200 U	109	7.40	0.500 U	7.6 J	28.0	380
MW-223S	6/7/2018	0.200 U	119	8.58	0.500 U	7.6 J	23.5	396
MW-223S	8/28/2018	0.200 U	107	6.38	0.500 U	7.9 J	19.0	422
MW-223S	12/6/2018	0.200 U	90.5	5.00 U	0.500 U	7.4 J	5.00 U	352
MW-223S	3/7/2019	0.200 U	112	5.06	0.500 U	7.4 J	29.4	400
MW-223S	9/17/2019	0.200 U	95.8	5.00 U	0.500 U	7.5 J	15.2	318
MW-223S	03/11/2020	0.200 U	104	5.94	0.500 U	7.4 J	28.2	406
MW-223S	09/22/2020	0.100 U /0.100 U	104 /105	5.12 /5.00 U	0.500 U /0.500 U	7.5 J /7.5 J	32.9 /32.9	240 /290
MW-223S*	02/02/2021	0.100 U /0.100 U	106 /105	6.03 /6.27	0.500 U /0.500 U	7.6 J /7.6 J	34.8 /36.1	402 /370
MW-223S*	05/11/2021	0.100 U /0.100 U	120 /116	5.00 U /5.00 U	0.500 U /0.500 U	7.6 J /7.5 J	35.7 /36.1	412 /408
MW-223S*	07/13/2021	0.100 U /0.100 U	119 /112	6.40 J- /6.26 J-	0.500 UJ /0.500 UJ	7.5 J /7.4 J	43.3 /43.1	352 /392
MW-223S*	10/12/2021	0.112 /0.121	126 /129	5.24 /5.25	0.100 U /0.100 U	7.9 J /7.4 J	113 /113	464 /470
MW-223S*	3/15/2022	0.103	117	5.00 U	0.500 U	7.4 J	35.6	366
MW-223S*	6/9/2022	0.100 U	114	5.58	0.500 U	7.5 J	81.8	514
MW-223S*	9/14/2022	0.1 /0.106	138 /135	4.02 /4.08	0.100 U /0.100 U	7.4 J /7.5 J	65.5 /64.3	460 /476
MW-223S*	3/29/2023	0.14 /0.137	186 /188	1.00 UJ /6.06 J	0.269 /0.500 U	7.4 J /7.4 J	113 /110	600 /606
MW-223S*	9/12/2023	0.149 J+ /0.154 J+	126 /122	4.37 /5	0.200 U /1.00 U	7.5 J /7.4 J	64.3 /61.1	474 /456
MW-223S*	3/18/2024	0.135 /0.129	161 /160	5.64 /5.43	0.200 U /1.00 U	7.3 J /7.3 J	214 /217	702 /698
MW-223S*	9/10/2024	0.172	167	39.8	0.200 U	7.5 J	120	594
MW-223S*	3/13/2025	0.142	130	15.2	0.200 U	7.6 J	88.5	510
MW-231S	10/18/2017	0.200 U	213	15.7	0.500 U	7.1 J	181	864
MW-231S	11/20/2017	0.200 U	212	11.8	0.500 U	6.9 J	139	1010
MW-231S	12/21/2017	0.200 U	192	14.6	0.500 U	7.1 J	219	1020
MW-231S	4/17/2018	0.200 U	195	7.48	0.500 U	7.1 J	149	734
MW-231S	6/6/2018	0.200 U	225	7.68	0.500 U	7.0 J	131	734
MW-231S	8/29/2018	0.200 U	200	11.4	0.500 U	7.3	125	712
MW-231S	12/6/2018	0.200 U	190	15.4	0.500 U	7.2 J	210	790
MW-231S	3/6/2019	0.256	202	10.3	0.500 U	7.3 J	189	794
MW-231S	09/17/2019	0.200 U	163	6.15	0.500 U	7.1 J	91.6	650
MW-231S	03/11/2020	0.254	209	11.4	0.500 U	7.0 J	269	972
MW-231S	09/22/2020	0.222	196	10.6	0.500 U	7.1 J	284	824
MW-231S*	02/02/2021	0.337	216	9.58	0.500 U	7.2 J	331	986
MW-231S*	04/22/2021	0.263	216	5.08	0.500 U	7.2 J	241	876
MW-231S*	05/11/2021	0.291	234	6.12	0.500 U	7.2 J	287	948
MW-231S*	07/13/2021	0.358	294	9.27 J-	0.500 UJ	7.2 J	485	1200
MW-231S*	10/12/2021	0.415	215	9.62	0.100 U	7.4 J	322	920
MW-231S*	3/9/2022	0.231	191	5.37	0.500 U	7.4 J	127	706
MW-231S*	6/8/2022	0.297	178	12.8	0.500 U	7.2 J	305	932
MW-231S*	9/14/2022	0.312	200	5.69	0.100 U	7.1 J	110	710
MW-231S*	3/28/2023	0.500	204	9.32	0.163	7.2 J	176	788
MW-231S*	9/13/2023	0.253	172	1.00 U	0.200 U	7.1 J	158	716
MW-231S*	1/23/2024	0.208	169	7.78	1.00 U	7.1 J	121	628
MW-231S*	2/20/2024	0.220 J	169	8.37	1.00 U	7.2 J	154	694
MW-231S*	3/19/2024	0.227	216	10.2	0.200 U	7.1 J	287	898
MW-231S*	9/10/2024	0.400	259	116	0.200 U	7.1 J	177	960
MW-231S*	3/13/2025	0.200	190	9.30	0.200 U	7.8 J	177	788

Note:

* - The 2021-2025 data for upgradient wells (MW-13, MW-27, MW-29, MW-223S, MW-231S) are used only for the inter-well comparison value calculations (see text).

Table 4.2

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:			MW-5R	MW-5R	MW-5R	MW-11	MW-11	MW-11	MW-11
Sample ID:			MW05R-GW-0325	MW05R-GW-0525	MW05R-GW-0925	MW11R-GW-0325	DP04-GW-0325	MW11R-GW-0925	DP04-GW-0925
Sample Date:			3/17/2025	5/20/2025	9/19/2025	3/17/2025	3/17/2025	9/19/2025	9/19/2025
GWPS							(Duplicate)		(Duplicate)
Parameters	Units								
Appendix III									
Boron	mg/L	NA	0.37	--	0.208	0.172	0.168	0.159	0.133
Calcium	mg/L	NA	160	--	109	123	134	110	110
Chloride	mg/L	NA	10	--	9.06	5.00 U	5.07	5.00 U	5.00 U
Fluoride	mg/L	4.0	1.0 U	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
pH, lab	s.u.	NA	7.7 J	7.3 J	7.7 J	7.9 J	7.8 J	7.8 J	7.8 J
Sulfate	mg/L	NA	320	--	121	86.9	85.5	74.0	71.7
Total dissolved solids (TDS)	mg/L	NA	930	--	556	530	558	474	502

Table 4.2

**2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa**

Sample Location:		MW-13	MW-13	MW-19	MW-19	MW-19	MW-21	MW-21
Sample ID:		MW13R-GW-0325	MW13R-GW-0925	MW19-GW-0325	MW19-GW-0525	MW19-GW-0925	MW21-GW-0325	MW21-GW-0525
Sample Date:		3/11/2025	9/17/2025	3/17/2025	5/19/2025	9/19/2025	3/17/2025	5/19/2025
Parameters	Units							
Appendix III								
Boron	mg/L	0.136	0.131	0.64	--	0.554	0.46	--
Calcium	mg/L	147	141	420	--	364	560	441
Chloride	mg/L	17.3	11.0	20	--	19.3	6.7	--
Fluoride	mg/L	1.00 U	1.00 U	1.0 U	--	1.00 U	1.0 U	--
pH, lab	s.u.	7.8 J	7.1 J	7.4 J	6.6 J	7.3 J	7.4 J	6.8 J
Sulfate	mg/L	38.7	47.4	1000	--	854	1600	1690
Total dissolved solids (TDS)	mg/L	580	540	2300	--	2130	3000	2730

Table 4.2

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:	MW-21	MW-23	MW-23	MW-25	MW-27	MW-27	MW-29
Sample ID:	MW21-GW-0925	MW23R-GW-0325	MW23R-GW-0925	MW25-GW-0325	MW27-GW-0325	MW27-GW-0925	MW29R-GW-0325
Sample Date:	9/19/2025	3/17/2025	9/19/2025	3/17/2025	3/12/2025	9/16/2025	3/12/2025

Parameters**Units****Appendix III**

Boron	mg/L	0.348	0.208	0.216	0.512	0.228	0.274	0.158
Calcium	mg/L	437	191	194	197	157	160	187
Chloride	mg/L	6.51	12.9	13.2	5.00 U	24.5	15.5	12.0
Fluoride	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
pH, lab	s.u.	7.4 J	7.7 J	7.6 J	7.8 J	7.8 J	7.1 J	7.7 J
Sulfate	mg/L	1180	241	298	394	81.1	53.7	140
Total dissolved solids (TDS)	mg/L	2350	958	960	1130	692	658	774

Table 4.2

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-29	MW-29	MW-57	MW-57	MW-57	MW-57	MW-59S
Sample ID:		DP01-GW-0325	MW29R-GW-0925	MW57R-GW-0325	MW57R-GW-0525	DP01-GW-0525	MW57R-GW-0925	MW59S-GW-0325
Sample Date:		3/12/2025	9/16/2025	3/17/2025	5/20/2025	5/20/2025	9/19/2025	3/17/2025
		(Duplicate)				(Duplicate)		
Parameters	Units							
Appendix III								
Boron	mg/L	0.156	0.173	0.362	--	--	0.309	0.235
Calcium	mg/L	190	203	205	--	--	224	157
Chloride	mg/L	9.49	8.73	17.5	--	--	19.2	5.96
Fluoride	mg/L	1.00 U	1.00 U	1.00 U	--	--	1.00 U	1.00 U
pH, lab	s.u.	7.7 J	7.0 J	7.8 J	7.1 J	7.1 J	7.6 J	7.7 J
Sulfate	mg/L	136	133	274	--	--	323	124
Total dissolved solids (TDS)	mg/L	768	850	1080	--	--	1180	748

Table 4.2

2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-59S	MW-59S	MW-60S	MW-60S	MW-60S	MW-223S	MW-223S
Sample ID:		MW59S-GW-0525	MW59S-GW-0925	MW60S-GW-0325	MW60S-GW-0525	MW60S-GW-0925	MW223S-GW-0325	MW223S-GW-0925
Sample Date:		5/19/2025	9/19/2025	3/17/2025	5/19/2025	9/18/2025	3/13/2025	9/17/2025
Parameters	Units							
Appendix III								
Boron	mg/L	--	0.195	0.194	--	0.155	0.142	0.180
Calcium	mg/L	143	147	135	--	122	130	200
Chloride	mg/L	--	5.43	6.56	--	8.66	15.2	22.8
Fluoride	mg/L	--	1.00 U	1.00 U	--	1.00 U	0.200 U	0.200 U
pH, lab	s.u.	7.2 J	7.6 J	7.8 J	7.2 J	7.7 J	7.6 J	7.0 J
Sulfate	mg/L	--	117	137	--	142	88.5	222
Total dissolved solids (TDS)	mg/L	--	718	648	--	640	510	778

Table 4.2

**2025 Monitoring Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa**

Sample Location:		MW-231S	MW-231S	MW-231S	MW-231S
Sample ID:		MW231SR-GW-0325	MW231SR-GW-0525	MW231SR-GW-0925	DP01-GW-0925
Sample Date:		3/13/2025	5/20/2025	9/17/2025	9/17/2025 (Duplicate)
Parameters	Units				
Appendix III					
Boron	mg/L	0.200	--	0.221	0.231
Calcium	mg/L	190	--	171	177
Chloride	mg/L	9.30	--	16.3	14.2
Fluoride	mg/L	0.200 U	--	0.200 U	1.00 U
pH, lab	s.u.	7.8 J	7.2 J	7.0 J	7.1 J
Sulfate	mg/L	177	--	110	103
Total dissolved solids (TDS)	mg/L	788	--	740	648

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

Table 4.3

Inter-Well Comparison Values
(Statistical Upper Tolreance Limits based on Data from Upgradient Wells)
MidAmerican Energy Company
Neal North CCR Active Monofil
Sergeant Bluff, Iowa

Analyte	Unit	Date	Number of Samples	Percent ND	Minimum	Maximum	Data Distribution ⁽¹⁾	Statistical Outliers	Mann-Kendall Trend Test				Upper Tolerance Limit (UTL)		
									Method	Statistic	Probability	Conclusion	Method	95/95 UTL	99/95 UTL
Appendix III															
Boron	mg/L	12/2016 - 03/2025	124	38%	0.100 U	0.5	Approx. Normal	1	Regional-Kendall	-0.75	0.455	No trend	Normal (KM) UTL	0.328	0.385
Calcium	mg/L	12/2016 - 03/2025	124	0%	83.7	294	Normal	0	Regional-Kendall	-1.25	0.212	No trend	Normal UTL	242	271
Chloride	mg/L	12/2016 - 03/2025	124	5%	1.00 U	116	Approx. Lognormal	7	Regional-Kendall	-0.45	0.651	No trend	Lognormal (KM) UTL	41.6	70.8
Fluoride	mg/L	12/2016 - 03/2025	124	88%	0.100 U / 0.100 U	6.49	Not Normal	10	> 50 Percent ND	--	--	--	NP UTL	2.98	6.49
pH, lab	s.u.	09/2017 - 03/2025	107	0%	6.9 J / 6.9 J	7.9 J	Not Normal	0	Regional-Kendall	1.39	0.165	No trend	NP UTL	6.9 J - 7.9 J	6.9 J - 7.9 J
Sulfate	mg/L	12/2016 - 03/2025	129	1%	5.00 U	524	Gamma	2	Regional-Kendall	-0.76	0.446	No trend	Gamma (KM) UTL	318	336
TDS	mg/L	12/2016 - 03/2025	82	0%	240 / 290	1730	Approx. Normal	1	Regional-Kendall	-1.53	0.127	No trend	Normal UTL	1128	1306

Notes:

0.100 U - Not detected at the associated reporting limit.

6.9 J - Estimated concentration.

UTLs were calculated using pooled data from Upgradient wells MW-13/MW-13R, MW-27, MW-29/MW-29R, MW-223S, and MW-231S/MW-231SR, sampled between 2016 and March 2025.

KM - UTLs were calculated using Kaplan-Meyer estimates for non-detects.

Gamma UTL - UTLs were calculated using gamma distribution and the Wilson-Hilferty method.

⁽¹⁾ Data distribution from ProUCL based on detected data.

Table 4.4

Intra-Well Comparison Values
(Upper Tolerance Limits based on Baseline Period Data at each Well)
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Analyte	Date Range	N	%ND	Summary Statistics		Statistical Outliers	Data Distribution	Mann-Kendall Trend Test Results			Upper Tolerance Limits		
					Minimum	Maximum			Stat.	Prob.	Conclusion	Method	95/95 UTL	99/95 UTL
MW-13/MW-13R (Background)														
	Appendix III													
	Boron	12/2015 - 9/2020	15	87%	0.100 U	0.678	--	>50% ND	--	--	>50% ND	Non-parametric	0.678	0.678
	Calcium	12/2015 - 9/2020	15	0%	145	306	1	Not Normal	-24	0.254	No trend	Non-parametric	306	306
	Chloride	12/2015 - 9/2020	15	7%	5.00 U	28.4	0	Normal	31	0.138	No trend	Normal	30.1	36.6
	Fluoride	12/2015 - 9/2020	15	80%	0.500 U	6.49	--	>50% ND	--	--	>50% ND	Non-parametric	6.49	6.49
	pH, lab	12/2015 - 9/2020	15	0%	6.96 J	7.6 J	1	Normal	-10	0.645	No trend	Normal	6.76 - 7.67	6.63 - 7.8
	Sulfate	12/2015 - 9/2020	15	0%	56.1	96.5	1	Normal	-5	0.843	No trend	Normal	97.3	106
	TDS	12/2015 - 9/2020	15	0%	588	928	0	Normal	-36	0.083	No trend	Normal	1041	1132
MW-27 (Background)														
	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.206	0.302	0	Normal	-1	1.000	No trend	Normal	0.319	0.345
	Calcium	12/2015 - 9/2020	15	0%	140	189	0	Normal	-9	0.692	No trend	Normal	204	218
	Chloride	12/2015 - 9/2020	15	0%	14.5	28.8	0	Normal	-51	0.013	Decreasing	--	14.5 - 28.8	14.5 - 28.8
	Fluoride	12/2015 - 9/2020	15	87%	0.500 U	1.55	--	>50% ND	--	--	>50% ND	Non-parametric	1.55	1.55
	pH, lab	12/2015 - 9/2020	15	0%	6.9 J	7.8 J	1	Not Normal	-5	0.837	No trend	Non-parametric	6.9 J - 7.8 J	6.9 J - 7.8 J
	Sulfate	12/2015 - 9/2020	15	0%	78	199	0	Normal	9	0.691	No trend	Normal	212	240
	TDS	12/2015 - 9/2020	15	0%	496	1140	2	Normal	-35	0.092	No trend	Normal	1176	1303
MW-29/MW-29R (Background)														
	Appendix III													
	Boron	12/2015 - 9/2020	15	87%	0.150 UJ	0.205	--	>50% ND	--	--	>50% ND	Non-parametric	0.205	0.205
	Calcium	12/2015 - 9/2020	15	0%	148	230	1	Normal	-30	0.150	No trend	Normal	248	267
	Chloride	12/2015 - 9/2020	15	7%	5.00 U	21	1	Gamma	23	0.276	No trend	WH Approx. Gamma (KM)	18.09	21.06
	Fluoride	12/2015 - 9/2020	15	73%	0.500 U	6.44	--	>50% ND	--	--	>50% ND	Non-parametric	6.44	6.44
	pH, lab	12/2015 - 9/2020	15	0%	6.87 J	7.9 J	2	Not Normal	14	0.440	No trend	Non-parametric	6.87 J - 7.9 J	6.87 J - 7.9 J
	Sulfate	12/2015 - 9/2020	15	0%	67	186	0	Normal	-15	0.488	No trend	Normal	225	257
	TDS	12/2015 - 9/2020	15	0%	594	1190	1	Normal	-39	0.060	No trend	Normal	1266	1410
MW-223S (Background)														
	Appendix III													
	Boron	12/2015 - 9/2020	20	100%	0.100 U	0.200 U	--	100% ND	--	--	100% ND	Detection Limit	0.200 U	0.200 U
	Calcium	12/2015 - 9/2020	20	0%	90.5	131	0	Normal	-94	0.002	Decreasing	--	90.5 - 131	90.5 - 131
	Chloride	12/2015 - 9/2020	20	15%	5.00 U	18.1	0	Normal	-69	0.027	Decreasing	--	5.00 U - 18.1	5.00 U - 18.1
	Fluoride	12/2015 - 9/2020	20	75%	0.500 U	6.15	--	>50% ND	--	--	>50% ND	Non-parametric	6.15	6.15
	pH, lab	12/2015 - 9/2020	20	0%	7.26 J	7.9 J	1	Not Normal	43	0.158	No trend	Non-parametric	7.26 J - 7.9 J	7.26 J - 7.9 J
	Sulfate	12/2015 - 9/2020	20	5%	5.00 U	44.2	0	Normal	-78	0.012	Decreasing	--	5.00 U - 44.2	5.00 U - 44.2
	TDS	12/2015 - 9/2020	20	0%	265	780	1	Gamma	-67	0.032	Decreasing	--	265 - 780	265 - 780

Table 4.4

Intra-Well Comparison Values
(Upper Tolerance Limits based on Baseline Period Data at each Well)
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Analyte	Date Range	N	%ND	Summary Statistics		Statistical Outliers	Data Distribution	Mann-Kendall Trend Test Results			Upper Tolerance Limits		
					Minimum	Maximum			Stat.	Prob.	Conclusion	Method	95/95 UTL	99/95 UTL
MW-231S/MW-231SR (Background)														
	Appendix III													
	Boron	10/2017 - 9/2020	11	73%	0.200 U	0.256	--	>50% ND	--	--	>50% ND	Non-parametric	0.256	0.256
	Calcium	10/2017 - 9/2020	11	0%	163	225	1	Normal	-13	0.350	No trend	Normal	245	262
	Chloride	10/2017 - 9/2020	11	0%	6.15	15.7	0	Normal	-16	0.241	No trend	Normal	20.2	23.5
	Fluoride	10/2017 - 9/2020	11	100%	0.500 U	0.500 U	--	100% ND	--	--	100% ND	Detection Limit	0.500 U	0.500 U
	pH, lab	10/2017 - 9/2020	11	0%	6.9 J	7.3	0	Normal	7	0.621	No trend	Normal	6.71 - 7.45	6.59 - 7.58
	Sulfate	10/2017 - 9/2020	11	0%	91.6	284	0	Normal	9	0.533	No trend	Normal	352	415
	TDS	10/2017 - 9/2020	11	0%	650	1020	0	Normal	-8	0.585	No trend	Normal	1181	1311
MW-5R														
	Appendix III													
	Boron	12/2015 - 9/2020	15	27%	ND(0.2)	1.595	1	Not Normal	3	0.920	No trend	Non-parametric	1.60	1.60
	Calcium	12/2015 - 9/2020	15	0%	92.8	197.5	1	Not Normal	-2	0.960	No trend	Non-parametric	198	198
	Chloride	12/2015 - 9/2020	15	0%	9.02	20.15	0	Normal	5	0.843	No trend	Normal	20.6	23.6
	Fluoride	12/2015 - 9/2020	15	67%	ND(0.5)	1.845	--	>50% ND	--	--	>50% ND	Non-parametric	1.85	1.85
	pH, lab	12/2015 - 9/2020	15	0%	7.045	7.5 J	0	Normal	-7	0.764	No trend	Normal	6.87 - 7.60	6.76 - 7.71
	Sulfate	12/2015 - 9/2020	15	0%	130	507	1	Not Normal	-13	0.553	No trend	Non-parametric	507	507
	TDS	12/2015 - 9/2020	15	0%	512	1455	1	Not Normal	-22	0.298	No trend	Non-parametric	1455	1455
MW-11/MW-11R														
	Appendix III													
	Boron	12/2015 - 9/2020	15	87%	0.100 U	0.607	--	>50% ND	--	--	>50% ND	Non-parametric	0.607	0.607
	Calcium	12/2015 - 9/2020	15	0%	131	242	0	Not Normal	-62	0.003	Decreasing	--	131 - 242	131 - 242
	Chloride	12/2015 - 9/2020	15	33%	5.00 U	90.6	0	Gamma	-41	0.043	Decreasing	--	5.00 U - 90.6	5.00 U - 90.6
	Fluoride	12/2015 - 9/2020	15	67%	0.500 U	12.2	--	>50% ND	--	--	>50% ND	Non-parametric	12.2	12.2
	pH, lab	12/2015 - 9/2020	15	0%	6.93 J	8.0 J	1	Not Normal	45	0.027	Increasing	--	6.93 J - 8.0 J	6.93 J - 8.0 J
	Sulfate	12/2015 - 9/2020	15	0%	120	182	0	Normal	-63	0.002	Decreasing	--	120 - 182	120 - 182
	TDS	12/2015 - 9/2020	15	0%	538	1220	0	Normal	-70	0.001	Decreasing	--	538 - 1220	538 - 1220
MW-19														
	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.463 J	0.703	0	Normal	-15	0.488	No trend	Normal	0.790	0.857
	Calcium	12/2015 - 9/2020	15	0%	322	450	0	Normal	-5	0.843	No trend	Normal	481	521
	Chloride	12/2015 - 9/2020	15	0%	4.26	73.9	2	Not Normal	-41	0.048	Decreasing	--	4.26 - 73.9	4.26 - 73.9
	Fluoride	12/2015 - 9/2020	15	80%	0.100 U	12.2	--	>50% ND	--	--	>50% ND	Non-parametric	12.2	12.2
	pH, lab	12/2015 - 9/2020	15	0%	6.58 J	7.4 J	1	Normal	8	0.725	No trend	Normal	6.22 - 7.37	6.00 - 7.58
	Sulfate	12/2015 - 9/2020	15	0%	698	1190	0	Normal	27	0.198	No trend	Normal	1287	1423
	TDS	12/2015 - 9/2020	15	0%	1720	3380	0	Normal	-4	0.882	No trend	Normal	3565	3986

Table 4.4

Intra-Well Comparison Values
(Upper Tolerance Limits based on Baseline Period Data at each Well)
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Analyte	Date Range	N	%ND	Summary Statistics		Statistical Outliers	Data Distribution	Mann-Kendall Trend Test Results			Upper Tolerance Limits		
					Minimum	Maximum			Stat.	Prob.	Conclusion	Method	95/95 UTL	99/95 UTL
MW-21	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.286	0.472	0	Normal	-57	0.006	Decreasing	--	0.286 - 0.472	0.286 - 0.472
	Calcium	12/2015 - 9/2020	15	0%	179	406	0	Not Normal	39	0.060	No trend	Non-parametric	406	406
	Chloride	12/2015 - 9/2020	15	13%	5.00 U	34.8	1	Not Normal	-10	0.656	No trend	Non-parametric	34.8	34.8
	Fluoride	12/2015 - 9/2020	15	73%	0.500 U	6.75	--	>50% ND	--	--	>50% ND	Non-parametric	6.75	6.75
	pH, lab	12/2015 - 9/2020	15	0%	6.8 J	7.2 J	0	Normal	-21	0.307	No trend	Normal	6.72 - 7.31	6.61 - 7.42
	Sulfate	12/2015 - 9/2020	15	0%	202	991	0	Not Normal	53	0.010	Increasing	--	202 - 991	202 - 991
	TDS	12/2015 - 9/2020	15	0%	890	2170	0	Not Normal	39	0.059	No trend	Non-parametric	2170	2170
MW-23/MW-23R	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.25	0.318	0	Normal	-41	0.047	Decreasing	--	0.25 - 0.318	0.25 - 0.318
	Calcium	12/2015 - 9/2020	15	0%	190	357	0	Normal	-7	0.767	No trend	Normal	372	414
	Chloride	12/2015 - 9/2020	15	0%	6.86	12.3	0	Normal	-13	0.553	No trend	Normal	12.8	14.0
	Fluoride	12/2015 - 9/2020	15	93%	0.500 U	1.54	--	>50% ND	--	--	>50% ND	Non-parametric	1.54	1.54
	pH, lab	12/2015 - 9/2020	15	0%	6.65 J	7.14 J	1	Not Normal	-20	0.314	No trend	Non-parametric	6.65 J - 7.14 J	6.65 J - 7.14 J
	Sulfate	12/2015 - 9/2020	15	0%	190	655	1	Lognormal	-11	0.621	No trend	Lognormal	655	899
	TDS	12/2015 - 9/2020	15	0%	866	1720	1	Normal	-7	0.767	No trend	Normal	1757	1962
MW-25	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.246	0.355	0	Normal	1	1.000	No trend	Normal	0.375	0.402
	Calcium	12/2015 - 9/2020	15	0%	229	276	0	Normal	-23	0.275	No trend	Normal	277	289
	Chloride	12/2015 - 9/2020	15	67%	5.00 U	15.7	--	>50% ND	--	--	>50% ND	Non-parametric	15.7	15.7
	Fluoride	12/2015 - 9/2020	15	87%	0.500 U	3.54	--	>50% ND	--	--	>50% ND	Non-parametric	3.54	3.54
	pH, lab	12/2015 - 9/2020	15	0%	6.9 J	7.3 J	1	Normal	-2	0.959	No trend	Normal	6.73 - 7.32	6.64 - 7.43
	Sulfate	12/2015 - 9/2020	15	0%	311	519	1	Not Normal	7	0.767	No trend	Non-parametric	519	519
	TDS	12/2015 - 9/2020	15	0%	1070	2350	1	Normal	-27	0.198	No trend	Normal	2461	2808
MW-57/MW-57R	Appendix III													
	Boron	12/2015 - 9/2020	15	0%	0.325	0.403	1	Normal	38	0.067	No trend	Normal	0.409	0.429
	Calcium	12/2015 - 9/2020	15	0%	312	405	0	Normal	-37	0.075	No trend	Normal	427	455
	Chloride	12/2015 - 9/2020	15	0%	5.12	11	1	Gamma	-9	0.692	No trend	WH Approx. Gamma	11.8	14.3
	Fluoride	12/2015 - 9/2020	15	87%	0.500 U	1	--	>50% ND	--	--	>50% ND	Non-parametric	1	1
	pH, lab	12/2015 - 9/2020	15	0%	6.72 J	7.1 J	0	Normal	-16	0.443	No trend	Normal	6.58 - 7.18	6.48 - 7.28
	Sulfate	12/2015 - 9/2020	15	0%	713	1090	0	Normal	-36	0.082	No trend	Normal	1110	1214
	TDS	12/2015 - 9/2020	15	0%	1820	2720	1	Gamma	-38	0.066	No trend	WH Approx. Gamma	2723	2982

Table 4.4

Intra-Well Comparison Values
(Upper Tolerance Limits based on Baseline Period Data at each Well)
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Analyte	Date Range	N	%ND	Summary Statistics		Statistical Outliers	Data Distribution	Mann-Kendall Trend Test Results			Upper Tolerance Limits		
					Minimum	Maximum			Stat.	Prob.	Conclusion	Method	95/95 UTL	99/95 UTL
MW-59S														
	Appendix III													
	Boron	12/2015 - 9/2020	15	80%	0.151	0.204	--	>50% ND	--	--	>50% ND	Non-parametric	0.204	0.204
	Calcium	12/2015 - 9/2020	15	0%	127	150	0	Normal	-39	0.059	No trend	Normal	155	161
	Chloride	12/2015 - 9/2020	15	7%	5.00 U	15.1	2	Not Normal	-40	0.053	No trend	Non-parametric	15.1	15.1
	Fluoride	12/2015 - 9/2020	15	80%	0.500 U	3.84	--	>50% ND	--	--	>50% ND	Non-parametric	3.84	3.84
	pH, lab	12/2015 - 9/2020	15	0%	6.94 J	7.3 J	0	Normal	0	1.000	No trend	Normal	6.80 - 7.38	6.70 - 7.48
	Sulfate	12/2015 - 9/2020	15	0%	102	136	0	Normal	-42	0.042	Decreasing	--	102 - 136	102 - 136
	TDS	12/2015 - 9/2020	15	0%	595	786	0	Normal	-22	0.299	No trend	Normal	855	911
MW-60S														
	Appendix III													
	Boron	12/2015 - 9/2020	15	80%	0.127	0.33	--	>50% ND	--	--	>50% ND	Non-parametric	0.33	0.33
	Calcium	12/2015 - 9/2020	15	0%	103	131	0	Normal	-22	0.298	No trend	Normal	138	145
	Chloride	12/2015 - 9/2020	15	0%	5.25	14.7	0	Normal	-1	1.000	No trend	Normal	16.3	18.6
	Fluoride	12/2015 - 9/2020	15	73%	0.500 U	1.21	--	>50% ND	--	--	>50% ND	Non-parametric	1.21	1.21
	pH, lab	12/2015 - 9/2020	15	0%	7.02 J	7.26 J	0	Not Normal	1	1.000	No trend	Non-parametric	7.02 J - 7.26 J	7.02 J - 7.26 J
	Sulfate	12/2015 - 9/2020	15	0%	129	169	0	Normal	1	1.000	No trend	Normal	175	184
	TDS	12/2015 - 9/2020	15	0%	550	804	1	Normal	-33	0.113	No trend	Normal	799	857

Notes:

N - number of samples

%ND - percent non-detects

Statistic: calculated as the sum of the signs of all possible pair-wise data comparisons.

Probability of significance: A value less than 0.05 indicates greater than 95 percent confidence of a statistically significant trend.

5.00 U - Not detected at the associated reporting limit.

0.136 J - Estimated concentration.

When a trend is present during the baseline period, no UTL was calculated. Instead, the baseline range is listed for comparison.

KM - UTLs were calculated using Kaplan-Meier estimates for non-detects.

WH - UTLs were calculated using gamma distribution and the Wilson-Hilferty method.

TDS - Total dissolved solids

The following actual confidence coefficients were achieved for the following number of baseline samples:

<i>n</i>	<i>at 95 percent coverage</i>	<i>at 99 percent coverage</i>
11	0.43 (43% confidence)	0.101 (11% confidence)
15	0.54 (54% confidence)	0.14 (14% confidence)
20	0.64 (64% confidence)	0.182 (18% confidence)

Table 4.5

Inter-Well Comparisons for 2025 Monitoring Data vs. Upgradient Background UTLs
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Observation	Monitoring Event	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
	Pooled	<i>Baseline 95/95 UTL</i>	0.328	242	41.6	2.98	6.9 J - 7.9 J	318	1128
	Background	<i>Baseline 99/95 UTL</i>	0.385	271	70.8	6.49	6.9 J - 7.9 J	336	1306
MW-5R	3/17/2025	Detection	0.370	160	10.0	1.0 U	7.7 J	320	930
	5/20/2025	Verification	--	--	--	--	7.3 J	--	--
	9/19/2025	Detection	0.208	109	9.06	1.00 U	7.7 J	121	556
MW-11/	3/17/2025	Detection	0.172 /0.168	123 /134	5.00 U /5.07	1.00 U / 1.00 U	7.9 J /7.8 J	86.9 /85.5	530 /558
MW-11R	9/19/2025	Detection	0.159 /0.133	110 /110	5.00 U /5.00 U	1.00 U / 1.00 U	7.8 J / 7.8 J	74.0 /71.7	474 /502
MW-19	3/17/2025	Detection	0.640	420	20.0	1.0 U	7.4 J	1000	2300
	5/19/2025	Verification	--	--	--	--	6.6 J	--	--
	9/19/2025	Detection	0.554	364	19.3	1.00 U	7.3 J	854	2130
MW-21	3/17/2025	Detection	0.460	560	6.70	1.0 U	7.4 J	1600	3000
	5/19/2025	Verification	--	441	--	--	6.8 J	1690	2730
	9/19/2025	Detection	0.348	437	6.51	1.00 U	7.4 J	1180	2350
MW-23/	3/17/2025	Detection	0.208	191	12.9	1.00 U	7.7 J	241	958
MW-23R	9/19/2025	Detection	0.216	194	13.2	1.00 U	7.6 J	298	960
MW-25	3/17/2025	Detection	0.512	197	5.00 U	1.00 U	7.8 J	394	1130
	5/20/2025	Detection	no sample	no sample	no sample	no sample	no sample	no sample	no sample
	9/19/2025	Detection	no sample	no sample	no sample	no sample	no sample	no sample	no sample
MW-57/	3/17/2025	Detection	0.362	205	17.5	1.00 U	7.8 J	274	1080
	5/20/2025	Verification	--	--	--	--	7.1 J / 7.1 J	--	--
	9/19/2025	Detection	0.309	224	19.2	1.00 U	7.6 J	323	1180

Table 4.5

Inter-Well Comparisons for 2025 Monitoring Data vs. Upgradient Background UTLs
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Observation	Monitoring Event	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
	Pooled	<i>Baseline 95/95 UTL</i>	0.328	242	41.6	2.98	6.9 J - 7.9 J	318	1128
	Background	<i>Baseline 99/95 UTL</i>	0.385	271	70.8	6.49	6.9 J - 7.9 J	336	1306
MW-59S	3/17/2025	Detection	0.235	157	5.96	1.00 U	7.7 J	124	748
	5/19/2025	Verification	--	143	--	--	7.2 J	--	--
	9/19/2025	Detection	0.195	147	5.43	1.00 U	7.6 J	117	718
MW-60S	3/17/2025	Detection	0.194	135	6.56	1.00 U	7.8 J	137	648
	5/19/2025	Verification	--	--	--	--	7.2 J	--	--
	9/18/2025	Detection	0.155	122	8.66	1.00 U	7.7 J	142	640

Notes:

9.87/9.81 - Field duplicate results.

U - Not detected at the associated reporting limit.

J - Estimated concentration.

340 Value exceeds inter-well baseline 95/95 UTL or is outside of baseline range.

0.740 Value exceeds inter-well baseline 99/95 UTL.

Pooled Background consists of MW-13R, MW-27, MW-29R, MW-223S, and MW-231SR.

† - Trend present during baseline period, no UTL values calculated (baseline range listed for comparison).

Table 4.6

Intra-Well Comparisons for 2025 Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Observation	Monitoring Event	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-13/MW-13R (Background)	Baseline 95/95 UTL		0.678	306	30.1	6.49	6.76 - 7.67	97.3	1041
	Baseline 99/95 UTL		0.678	306	36.6	6.49	6.63 - 7.8	106	1132
	3/11/2025	Detection	0.136	147	17.3	1.00 U	7.8 J	38.7	580
	9/17/2025	Detection	0.131	141	11.0	1.00 U	7.1 J	47.4	540
MW-27 (Background)	Baseline 95/95 UTL		0.319	204	14.5 - 28.8 †	1.55	6.9 J - 7.8 J	212	1176
	Baseline 99/95 UTL		0.345	218	14.5 - 28.8 †	1.55	6.9 J - 7.8 J	240	1303
	3/12/2025	Detection	0.228	157	24.5	1.00 U	7.8 J	81.1	692
	9/16/2025	Detection	0.274	160	15.5	1.00 U	7.1 J	53.7	658
MW-29/MW-29R (Background)	Baseline 95/95 UTL		0.205	248	18.1	6.44	6.87 J - 7.9 J	225	1266
	Baseline 99/95 UTL		0.205	267	21.1	6.44	6.87 J - 7.9 J	257	1410
	3/12/2025	Detection	0.158 / 0.156	187 / 190	12.0 / 9.49	1.00 U / 1.00 U	7.7 J / 7.7 J	140 / 136	774 / 768
	9/16/2025	Detection	0.173	203	8.73	1.00 U	7.0 J	133	850
MW-223S (Background)	Baseline 95/95 UTL		0.200 U	90.5 - 131 †	5.00 U - 18.1 †	6.15	7.26 J - 7.9 J	5.00 U - 44.2 †	265 - 780 †
	Baseline 99/95 UTL		0.200 U	90.5 - 131 †	5.00 U - 18.1 †	6.15	7.26 J - 7.9 J	5.00 U - 44.2 †	265 - 780 †
	3/13/2025	Detection	0.142	130	15.2	0.200 U	7.6 J	88.5	510
	9/17/2025	Detection	0.180	200	22.8	0.200 U	7.0 J	222	778
MW-231S/ MW-231SR (Background)	Baseline 95/95 UTL		0.256	245	20.2	0.500 U	6.71 - 7.45	352	1181
	Baseline 99/95 UTL		0.256	262	23.5	0.500 U	6.59 - 7.58	415	1311
	3/13/2025	Detection	0.200	190	9.30	0.200 U	7.8 J	177	788
	5/20/2025	Verification	--	--	--	--	7.2 J	--	--
	9/17/2025	Detection	0.221 / 0.231	171 / 177	16.3 / 14.2	0.200 U / 1.00 U	7.0 J / 7.1 J	110 / 103	740 / 648
MW-5R	Baseline 95/95 UTL		1.60	198	20.6	1.85	6.87 - 7.60	507	1455
	Baseline 99/95 UTL		1.60	198	23.6	1.85	6.76 - 7.71	507	1455
	3/17/2025	Detection	0.370	160	10.0	1.0 U	7.7 J	320	930
	5/20/2025	Verification	--	--	--	--	7.3 J	--	--
	9/19/2025	Detection	0.208	109	9.06	1.00 U	7.7 J	121	556

Table 4.6

Intra-Well Comparisons for 2025 Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Observation	Monitoring Event	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-11/MW-11R	Baseline 95/95 UTL		0.607	131 - 242	5.00 U - 90.6	12.2	6.93 J - 8.0 J	120 - 182	538 - 1220
	Baseline 99/95 UTL		0.607	131 - 242	5.00 U - 90.6	12.2	6.93 J - 8.0 J	120 - 182	538 - 1220
	3/17/2025	Detection	0.172 / 0.168	123 / 134	5.00 U / 5.07	1.00 U / 1.00 U	7.9 J / 7.8 J	86.9 / 85.5	530 / 558
	9/19/2025	Detection	0.159 / 0.133	110 / 110	5.00 U / 5.00 U	1.00 U / 1.00 U	7.8 J / 7.8 J	74.0 / 71.7	474 / 502
MW-19	Baseline 95/95 UTL		0.790	481	4.26 - 73.9	12.2	6.22 - 7.37	1287	3565
	Baseline 99/95 UTL		0.857	521	4.26 - 73.9	12.2	6.00 - 7.58	1423	3986
	3/17/2025	Detection	0.640	420	20.0	1.0 U	7.4 J	1000	2300
	5/19/2025	Verification	--	--	--	--	6.6 J	--	--
	9/19/2025	Detection	0.554	364	19.3	1.00 U	7.3 J	854	2130
MW-21	Baseline 95/95 UTL		0.286 - 0.472	406	34.8	6.75	6.72 - 7.31	202 - 991	2170
	Baseline 99/95 UTL		0.286 - 0.472	406	34.8	6.75	6.61 - 7.42	202 - 991	2170
	3/17/2025	Detection	0.460	560	6.70	1.0 U	7.4 J	1600	3000
	5/19/2025	Verification	--	441	--	--	6.8 J	1690	2730
	9/19/2025	Detection	0.348	437	6.51	1.00 U	7.4 J	1180	2350
MW-23/MW-23R	Baseline 95/95 UTL		0.25 - 0.318	372	12.8	1.54	6.65 J - 7.14 J	655	1757
	Baseline 99/95 UTL		0.25 - 0.318	414	14.0	1.54	6.65 J - 7.14 J	899	1962
	3/17/2025	Detection	0.208	191	12.9	1.00 U	7.7 J	241	958
	9/19/2025	Detection	0.216	194	13.2	1.00 U	7.6 J	298	960
MW-25	Baseline 95/95 UTL		0.375	277	15.7	3.54	6.73 - 7.32	519	2461
	Baseline 99/95 UTL		0.402	289	15.7	3.54	6.64 - 7.43	519	2808
	3/17/2025	Detection	0.512	197	5.00 U	1.00 U	7.8 J	394	1130
	9/19/2025	Detection	no sample	no sample	no sample	no sample	no sample	no sample	no sample
MW-57/MW-57R	Baseline 95/95 UTL		0.409	427	11.8	1.00	6.58 - 7.18	1110	2723
	Baseline 99/95 UTL		0.429	455	14.3	1.00	6.48 - 7.28	1214	2982
	3/17/2025	Detection	0.362	205	17.5	1.00 U	7.8 J	274	1080
	5/20/2025	Verification	--	--	--	--	7.1 J / 7.1 J	--	--
	9/19/2025	Detection	0.309	224	19.2	1.00 U	7.6 J	323	1180

Table 4.6

Intra-Well Comparisons for 2025 Monitoring Data
MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

Well	Observation	Monitoring Event	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH, lab s.u.	Sulfate mg/L	TDS mg/L
MW-59S	Baseline 95/95 UTL		0.204	155	15.1	3.84	6.80 - 7.38	102 - 136	855
	Baseline 99/95 UTL		0.204	161	15.1	3.84	6.70 - 7.48	102 - 136	911
	3/17/2025	Detection	0.235	157	5.96	1.00 U	7.7 J	124	748
	5/19/2025	Verification	--	143	--	--	7.2 J	--	--
	9/19/2025	Detection	0.195	147	5.43	1.00 U	7.6 J	117	718
MW-60S	Baseline 95/95 UTL		0.330	138	16.3	1.21	7.02 J - 7.26 J	175	799
	Baseline 99/95 UTL		0.330	145	18.6	1.21	7.02 J - 7.26 J	184	857
	3/17/2025	Detection	0.194	135	6.56	1.00 U	7.8 J	137	648
	5/19/2025	Verification	--	--	--	--	7.2 J	--	--
	9/18/2025	Detection	0.155	122	8.66	1.00 U	7.7 J	142	640

Notes:

368/370 - Field duplicate results.

U - Not detected at the associated reporting limit.

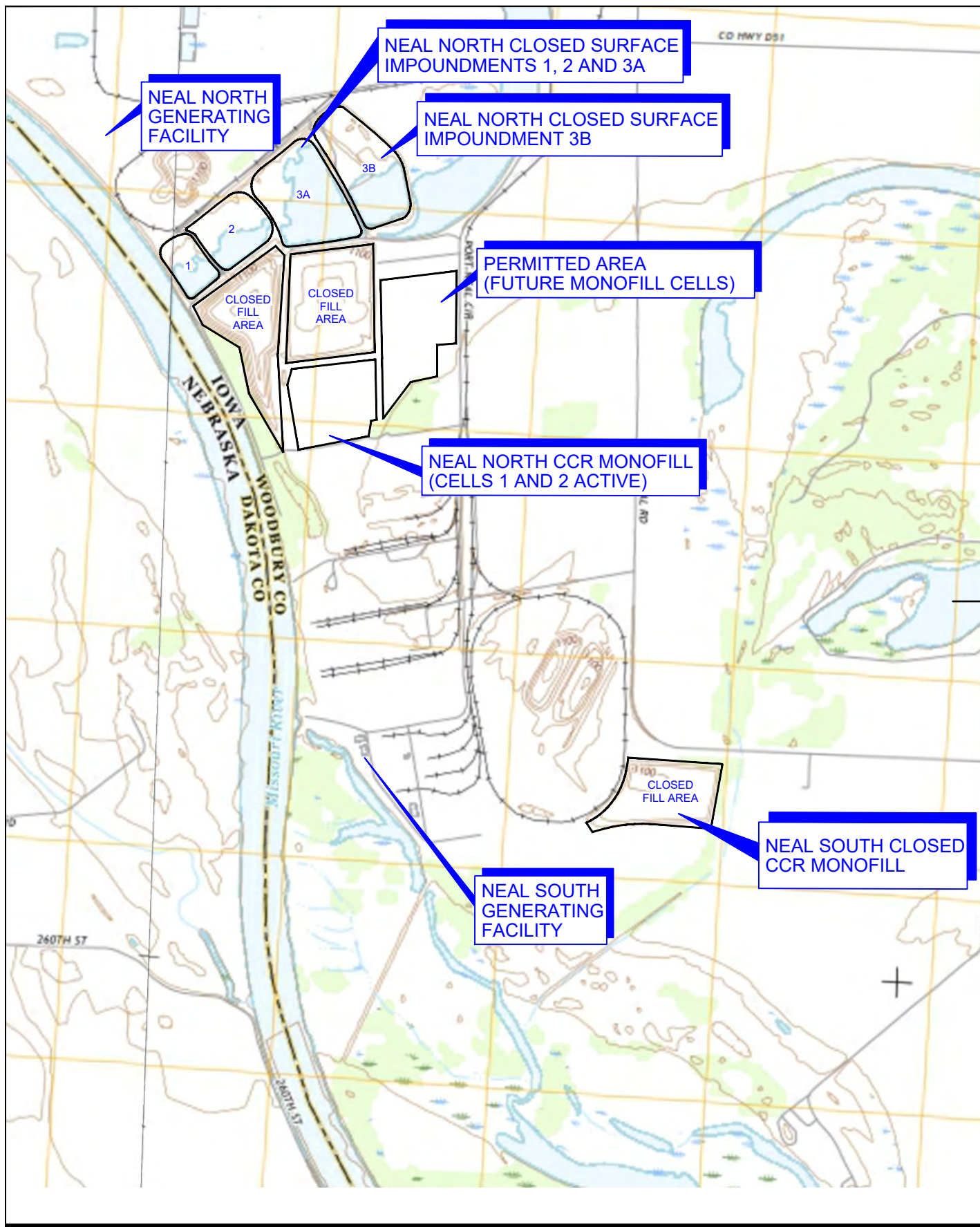
J - Estimated concentration.

28.0 Value exceeds intra-well baseline 95/95 UTL or is outside of baseline range (for baseline data sets with temporal trends).

7.2 J Value exceeds intra-well baseline 99/95 UTL.

† - Trend present during baseline period, no UTL values calculated (baseline range listed for comparison).

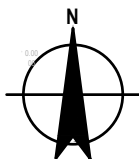
Figures



0 1000 2000 ft

1" = 2000 ft

Coordinate System:
UTM ZONE 17, NAD83



MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

SITE LOCATION MAP

Project No. 12576482
Date December 2025

FIGURE 1.1



LEGEND

- MW-29

MW-10

1051.61

SHALLOW GROUNDWATER MONITORING WELL

DEEP GROUNDWATER MONITORING WELL

GROUNDWATER ELEVATION (ft. NAVD88)

1054

GROUNDWATER CONTOUR (ft NAVD88)

GROUNDWATER FLOW DIRECTION

GROUNDWATER ELEVATION NOT USED FOR CONTOURING

BACKGROUND SAMPLING LOCATION

DOWNGRAIDENT SAMPLING LOCATION

GAUGING LOCATION
-
-
-
- MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

DEEP ALLUVIAL AQUIFER
GROUNDWATER FLOW MAP
MARCH 10, 2025
- Project No. 12576482
Date December 2025
- FIGURE 3.2
- Filename: N:\US\Des Moines\Projects\56312576482\Digital_Design\ACAD\Figures\RPT020\12576482-GHD-00-00-RPT-EN-D104_020.dwg
Plot Date: 10 December 2025 1:05 AM



LEGEND

● MW-60S SHALLOW GROUNDWATER MONITORING WELL

● MW-30 DEEP GROUNDWATER MONITORING WELL

1056.63 GROUNDWATER ELEVATION (ft. NAVD88)

— 1055 — GROUNDWATER CONTOUR (ft NAVD88)

➔ GROUNDWATER FLOW DIRECTION

* GROUNDWATER ELEVATION NOT USED FOR CONTOURING

△ BACKGROUND SAMPLING LOCATION

□ DOWNGRADIENT SAMPLING LOCATION

◇ GAUGING LOCATION

0 250 500 ft

1" = 500 ft

Coordinate System:
STATE PLANE
IOWA NORTH NAD83

MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

**SHALLOW ALLUVIAL AQUIFER
GROUNDWATER FLOW MAP -
MAY 19, 2025**

Project No. 12576482
Date December 2025

FIGURE 3.3



LEGEND

- MW-29

MW-10

1055.19

SHALLOW GROUNDWATER MONITORING WELL

DEEP GROUNDWATER MONITORING WELL

GROUNDWATER ELEVATION (ft. NAVD88)

1054

GROUNDWATER CONTOUR (ft NAVD88)

GROUNDWATER FLOW DIRECTION

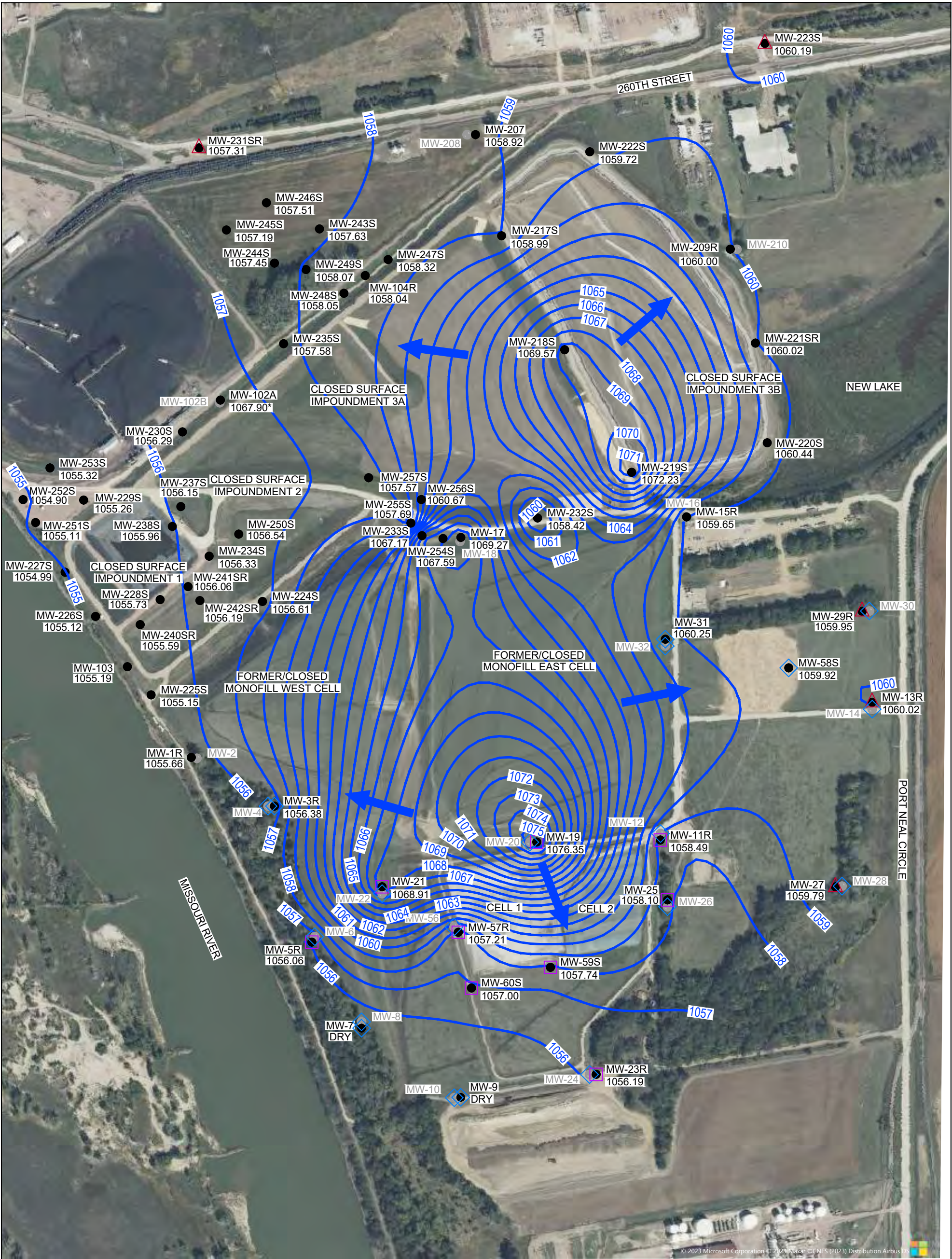
GROUNDWATER ELEVATION NOT USED FOR CONTOURING

BACKGROUND SAMPLING LOCATION

DOWNGRAIDENT SAMPLING LOCATION

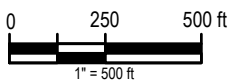
GAUGING LOCATION
-
-
-
- MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

DEEP ALLUVIAL AQUIFER
GROUNDWATER FLOW MAP -
MAY 19, 2025
- Project No. 12576482
Date December 2025
- FIGURE 3.4
- Filename: N:\US\Des Moines\Projects\56312576482\Digital_Design\ACAD\Figures\RPT020\12576482-GHD-00-00-RPT-EN-D106_020.dwg
Plot Date: 10 December 2025 12:56 AM

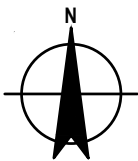


LEGEND

- | | | | | | |
|---------|-------------------------------------|----------|---|---|--------------------------------|
| ● MW-31 | SHALLOW GROUNDWATER MONITORING WELL | — 1061 — | GROUNDWATER CONTOUR (ft NAVD88) | △ | BACKGROUND SAMPLING LOCATION |
| ● MW-30 | DEEP GROUNDWATER MONITORING WELL | → | GROUNDWATER FLOW DIRECTION | □ | DOWNGRADIENT SAMPLING LOCATION |
| 1060.25 | GROUNDWATER ELEVATION (ft. NAVD88) | * | GROUNDWATER ELEVATION NOT USED FOR CONTOURING | ◇ | GAUGING LOCATION |



Coordinate System:
NAD83 STATE PLANE
IOWA NORTH



MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

SHALLOW ALLUVIAL AQUIFER
GROUNDWATER FLOW MAP
SEPTEMBER 15, 2025

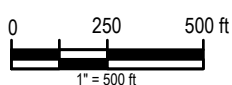
Project No. 12576482
Date December 2025

FIGURE 3.5

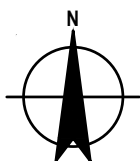


LEGEND

- MW-29 SHALLOW GROUNDWATER MONITORING WELL
 ● MW-10 DEEP GROUNDWATER MONITORING WELL
 1055.24 GROUNDWATER ELEVATION (ft. NAVD88)
- 1056 — GROUNDWATER CONTOUR (ft NAVD88)
 → GROUNDWATER FLOW DIRECTION
 * GROUNDWATER ELEVATION NOT USED FOR CONTOURING
- ▲ BACKGROUND SAMPLING LOCATION
 □ DOWNGRADIENT SAMPLING LOCATION
 ◆ GAUGING LOCATION



Coordinate System:
NAD83 STATE PLANE
IOWA NORTH



MIDAMERICAN ENERGY COMPANY
NEAL NORTH CCR ACTIVE MONOFILL
SERGEANT BLUFF, IOWA

**DEEP ALLUVIAL AQUIFER
GROUNDWATER FLOW MAP
SEPTEMBER 15, 2025**

Project No. **12576482**
Date **December 2025**

FIGURE 3.6

Appendices

Appendix A

Groundwater Sample Collection Records

Low-Flow Test Report:

Test Date / Time: 3/17/2025 5:53:27 PM
Project: Neal North MW-5R
Operator Name: Thao Larson

Location Name: MW-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 25 ft Top of Screen: 11.64 ft Total Depth: 36.7 ft Initial Depth to Water: 27.4 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 32.4 ft Pump Intake From TOC: 34.4 ft Estimated Total Volume Pumped: 4739.583 ml Flow Cell Volume: 130 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1630

Weather Conditions:
Sunny 61°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 5:53 PM	00:00	7.21 pH	16.23 °C	1.26 mS/cm	2.71 mg/L	48.33 NTU	-141.2 mV	27.40 ft	175.00 ml/min
3/17/2025 5:55 PM	02:05	7.28 pH	15.33 °C	1.29 mS/cm	0.82 mg/L	21.33 NTU	-156.7 mV	27.45 ft	175.00 ml/min
3/17/2025 5:57 PM	04:10	6.98 pH	15.04 °C	1.31 mS/cm	0.63 mg/L	20.90 NTU	-143.7 mV	27.45 ft	175.00 ml/min
3/17/2025 5:59 PM	06:15	6.91 pH	14.42 °C	1.31 mS/cm	0.58 mg/L	11.24 NTU	-140.1 mV	27.45 ft	250.00 ml/min
3/17/2025 6:01 PM	08:20	6.87 pH	14.29 °C	1.33 mS/cm	0.44 mg/L	12.80 NTU	-138.9 mV	27.45 ft	250.00 ml/min
3/17/2025 6:03 PM	10:25	6.85 pH	13.81 °C	1.34 mS/cm	0.40 mg/L	15.09 NTU	-138.7 mV	27.45 ft	250.00 ml/min
3/17/2025 6:05 PM	12:30	6.84 pH	13.81 °C	1.37 mS/cm	0.39 mg/L	11.44 NTU	-138.2 mV	27.45 ft	250.00 ml/min
3/17/2025 6:08 PM	14:35	6.84 pH	13.74 °C	1.37 mS/cm	0.37 mg/L	5.82 NTU	-138.5 mV	27.45 ft	250.00 ml/min
3/17/2025 6:10 PM	16:40	6.85 pH	13.54 °C	1.38 mS/cm	0.34 mg/L	5.38 NTU	-139.1 mV	27.45 ft	250.00 ml/min
3/17/2025 6:12 PM	18:45	6.85 pH	13.57 °C	1.38 mS/cm	0.32 mg/L	6.36 NTU	-139.8 mV	27.45 ft	250.00 ml/min
3/17/2025 6:14 PM	20:50	6.86 pH	13.54 °C	1.39 mS/cm	0.29 mg/L	3.84 NTU	-140.2 mV	27.45 ft	250.00 ml/min

Samples

Sample ID:	Description:
MW05R-GW-0325	APP III & IV

Low-Flow Test Report:

Test Date / Time: 3/17/2025 12:37:20 PM
Project: Neal North MW-11R
Operator Name: Thao Larson

Location Name: MW-11R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 26.1 ft Total Depth: 41.1 ft Initial Depth to Water: 35.19 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 38.6 ft Pump Intake From TOC: 40.6 ft Estimated Total Volume Pumped: 9030 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1350

Weather Conditions:
Sunny 61°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 12:37 PM	00:00	7.34 pH	14.09 °C	1.03 mS/cm	1.50 mg/L	1.79 NTU	0.9 mV	35.19 ft	200.00 ml/min
3/17/2025 12:39 PM	02:09	7.21 pH	14.25 °C	1.03 mS/cm	1.30 mg/L	1.63 NTU	17.8 mV	35.23 ft	200.00 ml/min
3/17/2025 12:41 PM	04:18	7.04 pH	15.24 °C	1.02 mS/cm	2.09 mg/L	4.10 NTU	32.5 mV	35.22 ft	200.00 ml/min
3/17/2025 12:43 PM	06:27	7.03 pH	15.41 °C	1.02 mS/cm	2.24 mg/L	6.75 NTU	36.9 mV	35.22 ft	200.00 ml/min
3/17/2025 12:45 PM	08:36	7.04 pH	15.56 °C	1.01 mS/cm	2.23 mg/L	11.26 NTU	39.2 mV	35.22 ft	200.00 ml/min
3/17/2025 12:48 PM	10:45	7.07 pH	15.49 °C	1.01 mS/cm	2.25 mg/L	17.13 NTU	40.3 mV	35.22 ft	200.00 ml/min
3/17/2025 12:50 PM	12:54	7.09 pH	15.57 °C	1.00 mS/cm	2.29 mg/L	27.62 NTU	41.2 mV	35.23 ft	200.00 ml/min
3/17/2025 12:52 PM	15:03	7.13 pH	15.62 °C	1.00 mS/cm	2.29 mg/L	6.30 NTU	41.3 mV	35.23 ft	200.00 ml/min
3/17/2025 12:54 PM	17:12	7.16 pH	15.55 °C	0.99 mS/cm	2.25 mg/L	13.12 NTU	41.3 mV	35.24 ft	200.00 ml/min
3/17/2025 12:56 PM	19:21	7.17 pH	15.58 °C	0.99 mS/cm	2.39 mg/L	19.73 NTU	42.2 mV	35.23 ft	200.00 ml/min
3/17/2025 12:58 PM	21:30	7.18 pH	15.73 °C	1.00 mS/cm	2.67 mg/L	32.71 NTU	42.4 mV	35.23 ft	200.00 ml/min

3/17/2025 1:00 PM	23:39	7.18 pH	15.55 °C	0.99 mS/cm	2.47 mg/L	3.51 NTU	43.8 mV	35.24 ft	200.00 ml/min
3/17/2025 1:03 PM	25:48	7.17 pH	15.49 °C	0.99 mS/cm	2.61 mg/L	5.88 NTU	45.5 mV	35.23 ft	200.00 ml/min
3/17/2025 1:05 PM	27:57	7.16 pH	15.47 °C	0.99 mS/cm	2.65 mg/L	7.00 NTU	47.0 mV	35.23 ft	200.00 ml/min
3/17/2025 1:07 PM	30:06	7.15 pH	15.46 °C	0.99 mS/cm	2.62 mg/L	14.84 NTU	48.8 mV	35.23 ft	200.00 ml/min
3/17/2025 1:09 PM	32:15	7.15 pH	15.39 °C	0.99 mS/cm	2.59 mg/L	20.94 NTU	50.0 mV	35.23 ft	150.00 ml/min
3/17/2025 1:11 PM	34:24	7.15 pH	15.58 °C	0.99 mS/cm	2.58 mg/L	44.57 NTU	51.1 mV	35.22 ft	150.00 ml/min
3/17/2025 1:13 PM	36:33	7.15 pH	15.65 °C	0.99 mS/cm	2.65 mg/L	47.58 NTU	51.9 mV	35.22 ft	150.00 ml/min
3/17/2025 1:16 PM	38:42	7.15 pH	15.70 °C	1.00 mS/cm	2.54 mg/L	20.18 NTU	52.6 mV	35.22 ft	150.00 ml/min
3/17/2025 1:18 PM	40:51	7.13 pH	15.68 °C	1.00 mS/cm	3.80 mg/L	1.61 NTU	50.3 mV	35.22 ft	150.00 ml/min
3/17/2025 1:20 PM	43:00	7.14 pH	15.59 °C	1.00 mS/cm	2.04 mg/L	1.54 NTU	50.0 mV	35.22 ft	150.00 ml/min
3/17/2025 1:22 PM	45:09	7.14 pH	15.67 °C	1.00 mS/cm	1.85 mg/L	1.43 NTU	51.1 mV	35.22 ft	150.00 ml/min
3/17/2025 1:24 PM	47:18	7.14 pH	15.33 °C	1.00 mS/cm	1.77 mg/L	1.72 NTU	52.0 mV	35.22 ft	150.00 ml/min
3/17/2025 1:26 PM	49:27	7.15 pH	15.63 °C	1.00 mS/cm	1.72 mg/L	1.49 NTU	52.5 mV	35.22 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW11R-GW-0325	APP III
DP04-GW-0325	APP III

Low-Flow Test Report:

Test Date / Time: 3/11/2025 4:54:15 PM
Project: Neal North MW-13R
Operator Name: Thao Larson

Location Name: MW-13R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 23.2 ft Total Depth: 38.2 ft Initial Depth to Water: 31.07 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 35.7 ft Pump Intake From TOC: 37.7 ft Estimated Total Volume Pumped: 18838.334 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1940

Weather Conditions:
Sunny 50°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/11/2025 4:54 PM	00:00	7.02 pH	13.81 °C	1.14 mS/cm	6.00 mg/L	691.47 NTU	-80.9 mV	31.07 ft	250.00 ml/min
3/11/2025 4:56 PM	02:07	7.20 pH	12.75 °C	1.21 mS/cm	1.33 mg/L	371.56 NTU	-119.3 mV	31.11 ft	250.00 ml/min
3/11/2025 4:58 PM	04:14	7.23 pH	12.37 °C	1.17 mS/cm	0.64 mg/L	97.36 NTU	-125.0 mV	31.13 ft	250.00 ml/min
3/11/2025 5:00 PM	06:21	7.17 pH	12.45 °C	1.14 mS/cm	0.53 mg/L	84.24 NTU	-123.6 mV	31.13 ft	250.00 ml/min
3/11/2025 5:02 PM	08:28	7.11 pH	12.28 °C	1.13 mS/cm	0.49 mg/L	38.47 NTU	-121.2 mV	31.13 ft	250.00 ml/min
3/11/2025 5:04 PM	10:35	7.07 pH	12.39 °C	1.13 mS/cm	0.47 mg/L	35.28 NTU	-119.8 mV	31.13 ft	250.00 ml/min
3/11/2025 5:06 PM	12:42	7.05 pH	12.29 °C	1.12 mS/cm	0.48 mg/L	26.38 NTU	-118.4 mV	31.13 ft	250.00 ml/min
3/11/2025 5:09 PM	14:49	7.03 pH	12.36 °C	1.12 mS/cm	0.48 mg/L	18.63 NTU	-117.5 mV	31.13 ft	250.00 ml/min
3/11/2025 5:11 PM	16:56	7.02 pH	12.36 °C	1.12 mS/cm	0.49 mg/L	32.58 NTU	-116.1 mV	31.13 ft	250.00 ml/min
3/11/2025 5:13 PM	19:03	7.02 pH	12.39 °C	1.12 mS/cm	0.48 mg/L	21.47 NTU	-115.3 mV	31.13 ft	250.00 ml/min
3/11/2025 5:15 PM	21:10	7.02 pH	12.34 °C	1.11 mS/cm	0.46 mg/L	25.87 NTU	-115.2 mV	31.13 ft	250.00 ml/min

3/11/2025 5:17 PM	23:17	7.03 pH	12.38 °C	1.12 mS/cm	0.46 mg/L	31.94 NTU	-115.1 mV	31.13 ft	250.00 ml/min
3/11/2025 5:19 PM	25:24	7.04 pH	12.46 °C	1.11 mS/cm	0.46 mg/L	35.35 NTU	-115.7 mV	31.13 ft	250.00 ml/min
3/11/2025 5:21 PM	27:31	7.05 pH	12.44 °C	1.12 mS/cm	0.60 mg/L	20.76 NTU	-112.8 mV	31.13 ft	250.00 ml/min
3/11/2025 5:23 PM	29:38	7.06 pH	12.40 °C	1.12 mS/cm	0.34 mg/L	20.50 NTU	-115.6 mV	31.13 ft	250.00 ml/min
3/11/2025 5:26 PM	31:45	7.06 pH	12.40 °C	1.12 mS/cm	0.29 mg/L	11.76 NTU	-117.5 mV	31.13 ft	250.00 ml/min
3/11/2025 5:28 PM	33:52	7.07 pH	12.42 °C	1.12 mS/cm	0.27 mg/L	9.87 NTU	-118.4 mV	31.13 ft	250.00 ml/min
3/11/2025 5:30 PM	35:59	7.07 pH	12.37 °C	1.12 mS/cm	0.24 mg/L	10.35 NTU	-119.4 mV	31.13 ft	250.00 ml/min
3/11/2025 5:32 PM	38:06	7.08 pH	12.36 °C	1.12 mS/cm	0.45 mg/L	22.19 NTU	-119.5 mV	31.13 ft	200.00 ml/min
3/11/2025 5:34 PM	40:13	7.08 pH	12.56 °C	1.12 mS/cm	0.34 mg/L	35.48 NTU	-119.8 mV	31.13 ft	200.00 ml/min
3/11/2025 5:36 PM	42:20	7.08 pH	12.69 °C	1.12 mS/cm	0.39 mg/L	56.20 NTU	-119.3 mV	31.13 ft	200.00 ml/min
3/11/2025 5:38 PM	44:27	7.09 pH	12.64 °C	1.14 mS/cm	0.39 mg/L	109.30 NTU	-120.6 mV	31.13 ft	200.00 ml/min
3/11/2025 5:40 PM	46:34	7.09 pH	12.67 °C	1.13 mS/cm	0.36 mg/L	62.36 NTU	-121.0 mV	31.13 ft	200.00 ml/min
3/11/2025 5:42 PM	48:41	7.10 pH	12.68 °C	1.13 mS/cm	0.38 mg/L	48.34 NTU	-120.9 mV	31.13 ft	200.00 ml/min
3/11/2025 5:45 PM	50:48	7.10 pH	12.55 °C	1.12 mS/cm	0.41 mg/L	16.35 NTU	-119.7 mV	31.13 ft	200.00 ml/min
3/11/2025 5:47 PM	52:55	7.10 pH	12.26 °C	1.12 mS/cm	0.35 mg/L	9.66 NTU	-120.1 mV	31.13 ft	200.00 ml/min
3/11/2025 5:49 PM	55:02	7.11 pH	12.20 °C	1.12 mS/cm	0.29 mg/L	10.44 NTU	-120.3 mV	31.13 ft	200.00 ml/min
3/11/2025 5:51 PM	57:09	7.11 pH	12.15 °C	1.12 mS/cm	0.25 mg/L	20.87 NTU	-120.9 mV	31.13 ft	200.00 ml/min
3/11/2025 5:53 PM	59:16	7.11 pH	12.10 °C	1.12 mS/cm	0.24 mg/L	16.46 NTU	-121.0 mV	31.13 ft	200.00 ml/min
3/11/2025 5:55 PM	01:01:23	7.11 pH	11.97 °C	1.12 mS/cm	0.22 mg/L	23.70 NTU	-120.8 mV	31.13 ft	200.00 ml/min
3/11/2025 5:57 PM	01:03:30	7.10 pH	11.97 °C	1.12 mS/cm	0.22 mg/L	20.66 NTU	-120.7 mV	31.13 ft	200.00 ml/min
3/11/2025 5:59 PM	01:05:37	7.10 pH	11.86 °C	1.12 mS/cm	0.21 mg/L	19.13 NTU	-120.4 mV	31.13 ft	200.00 ml/min
3/11/2025 6:01 PM	01:07:44	7.09 pH	11.83 °C	1.12 mS/cm	0.20 mg/L	12.67 NTU	-120.1 mV	31.13 ft	200.00 ml/min
3/11/2025 6:04 PM	01:09:51	7.09 pH	11.86 °C	1.12 mS/cm	0.20 mg/L	16.24 NTU	-119.8 mV	31.11 ft	200.00 ml/min
3/11/2025 6:06 PM	01:11:58	7.08 pH	11.82 °C	1.12 mS/cm	0.20 mg/L	8.28 NTU	-119.4 mV	31.11 ft	200.00 ml/min
3/11/2025 6:08 PM	01:14:05	7.08 pH	11.79 °C	1.12 mS/cm	0.19 mg/L	8.19 NTU	-119.0 mV	31.11 ft	200.00 ml/min
3/11/2025 6:10 PM	01:16:12	7.07 pH	11.78 °C	1.11 mS/cm	0.19 mg/L	24.57 NTU	-118.9 mV	31.11 ft	200.00 ml/min
3/11/2025 6:12 PM	01:18:19	7.07 pH	11.74 °C	1.12 mS/cm	0.19 mg/L	10.08 NTU	-118.8 mV	31.11 ft	200.00 ml/min
3/11/2025 6:14 PM	01:20:26	7.07 pH	11.71 °C	1.12 mS/cm	0.18 mg/L	9.11 NTU	-118.9 mV	31.11 ft	200.00 ml/min
3/11/2025 6:16 PM	01:22:33	7.07 pH	11.61 °C	1.11 mS/cm	0.18 mg/L	12.77 NTU	-118.7 mV	31.11 ft	200.00 ml/min

3/11/2025 6:18 PM	01:24:40	7.07 pH	11.62 °C	1.11 mS/cm	0.18 mg/L	8.39 NTU	-118.3 mV	31.11 ft	200.00 ml/min
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Samples

Sample ID:	Description:
MW13R-GW-0325	
MW13R-GW-0325 MS	
MW13R-GW-0325 MSD	

Low-Flow Test Report:

Test Date / Time: 3/17/2025 6:46:29 PM
Project: Neal North MW-19
Operator Name: Paige Richards

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 18.6 ft Total Depth: 33.6 ft Initial Depth to Water: 14.52 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 22.6 ft Pump Intake From TOC: 24.6 ft Estimated Total Volume Pumped: 3146.667 ml Flow Cell Volume: 130 ml Final Flow Rate: 125 ml/min Final Draw Down: 3.03 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1945

Weather Conditions:
Cloudy, 77 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 6:46 PM	00:00	6.77 pH	13.85 °C	2.79 mS/cm	7.25 mg/L	13.10 NTU	19.2 mV	14.52 ft	250.00 ml/min
3/17/2025 6:48 PM	01:58	6.43 pH	12.41 °C	3.59 mS/cm	0.65 mg/L	3.89 NTU	8.1 mV	15.82 ft	250.00 ml/min
3/17/2025 6:50 PM	03:56	6.48 pH	12.46 °C	3.42 mS/cm	0.29 mg/L	2.12 NTU	-10.7 mV	15.82 ft	225.00 ml/min
3/17/2025 6:52 PM	05:54	6.51 pH	12.62 °C	3.27 mS/cm	0.23 mg/L	2.26 NTU	-27.3 mV	16.31 ft	125.00 ml/min
3/17/2025 6:54 PM	07:52	6.51 pH	12.88 °C	3.23 mS/cm	0.27 mg/L	2.05 NTU	-35.5 mV	16.60 ft	125.00 ml/min
3/17/2025 6:56 PM	09:50	6.49 pH	12.82 °C	3.23 mS/cm	0.28 mg/L	3.01 NTU	-37.9 mV	16.79 ft	125.00 ml/min
3/17/2025 6:58 PM	11:48	6.49 pH	12.70 °C	3.18 mS/cm	0.29 mg/L	2.13 NTU	-38.2 mV	16.79 ft	125.00 ml/min
3/17/2025 7:00 PM	13:46	6.49 pH	12.53 °C	3.13 mS/cm	0.27 mg/L	2.35 NTU	-37.5 mV	17.09 ft	125.00 ml/min
3/17/2025 7:02 PM	15:44	6.48 pH	12.59 °C	3.07 mS/cm	0.25 mg/L	2.27 NTU	-35.8 mV	17.09 ft	125.00 ml/min
3/17/2025 7:04 PM	17:42	6.47 pH	12.66 °C	3.03 mS/cm	0.24 mg/L	1.78 NTU	-33.0 mV	17.09 ft	125.00 ml/min
3/17/2025 7:06 PM	19:40	6.46 pH	12.65 °C	2.99 mS/cm	0.23 mg/L	1.14 NTU	-28.9 mV	17.55 ft	125.00 ml/min

Samples

Sample ID:	Description:
MW19-GW-0325	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 3/17/2025 6:45:25 PM
Project: Neal North MW-21
Operator Name: Thao Larson

Location Name: MW-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 8.2 ft Total Depth: 23.2 ft Initial Depth to Water: 21.23 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 27.3 ft Pump Intake From TOC: 29.3 ft Estimated Total Volume Pumped: 1915.833 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.9 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1925

Weather Conditions:
Sunny 61°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 6:45 PM	00:00	6.59 pH	14.88 °C	2.34 mS/cm	6.16 mg/L	4.71 NTU	9.7 mV	21.23 ft	200.00 ml/min
3/17/2025 6:47 PM	02:01	6.47 pH	13.25 °C	3.33 mS/cm	1.42 mg/L	1.43 NTU	34.4 mV	21.66 ft	150.00 ml/min
3/17/2025 6:49 PM	04:02	6.41 pH	13.47 °C	3.35 mS/cm	1.45 mg/L	1.34 NTU	43.3 mV	21.72 ft	150.00 ml/min
3/17/2025 6:51 PM	06:03	6.40 pH	13.33 °C	3.36 mS/cm	1.41 mg/L	1.36 NTU	48.3 mV	21.83 ft	150.00 ml/min
3/17/2025 6:53 PM	08:04	6.39 pH	13.22 °C	3.36 mS/cm	1.36 mg/L	1.36 NTU	52.0 mV	21.91 ft	150.00 ml/min
3/17/2025 6:55 PM	10:05	6.39 pH	13.32 °C	3.36 mS/cm	1.30 mg/L	1.35 NTU	55.0 mV	22.02 ft	150.00 ml/min
3/17/2025 6:57 PM	12:06	6.38 pH	13.20 °C	3.36 mS/cm	1.26 mg/L	1.40 NTU	57.5 mV	22.13 ft	150.00 ml/min

Samples

Sample ID:	Description:
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MW21-GW-0325	APP III & IV
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/17/2025 2:03:40 PM
Project: Neal North MW-23R
Operator Name: Thao Larson

Location Name: MW-23R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 26.3 ft Total Depth: 41.3 ft Initial Depth to Water: 35.98 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 38.8 ft Pump Intake From TOC: 40.8 ft Estimated Total Volume Pumped: 4983.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1510

Weather Conditions:
Sunny 61°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 2:03 PM	00:00	6.97 pH	18.91 °C	1.31 mS/cm	6.62 mg/L	209.20 NTU	-111.7 mV	35.98 ft	100.00 ml/min
3/17/2025 2:05 PM	02:10	7.03 pH	17.83 °C	1.59 mS/cm	2.97 mg/L	189.54 NTU	-132.6 mV	36.02 ft	100.00 ml/min
3/17/2025 2:08 PM	04:20	7.08 pH	17.42 °C	1.63 mS/cm	1.91 mg/L	73.61 NTU	-136.5 mV	36.02 ft	100.00 ml/min
3/17/2025 2:10 PM	06:30	7.08 pH	17.03 °C	1.62 mS/cm	1.69 mg/L	42.72 NTU	-136.5 mV	36.02 ft	100.00 ml/min
3/17/2025 2:12 PM	08:40	7.08 pH	17.25 °C	1.61 mS/cm	1.57 mg/L	30.94 NTU	-136.5 mV	36.02 ft	100.00 ml/min
3/17/2025 2:14 PM	10:50	7.07 pH	17.11 °C	1.59 mS/cm	1.55 mg/L	22.92 NTU	-136.9 mV	36.02 ft	100.00 ml/min
3/17/2025 2:16 PM	13:00	7.07 pH	17.02 °C	1.58 mS/cm	1.52 mg/L	17.43 NTU	-137.5 mV	36.02 ft	100.00 ml/min
3/17/2025 2:18 PM	15:10	7.07 pH	17.21 °C	1.58 mS/cm	1.51 mg/L	17.77 NTU	-137.9 mV	36.02 ft	100.00 ml/min
3/17/2025 2:21 PM	17:20	7.07 pH	17.18 °C	1.58 mS/cm	1.53 mg/L	16.37 NTU	-138.0 mV	36.02 ft	100.00 ml/min
3/17/2025 2:23 PM	19:30	7.07 pH	17.16 °C	1.57 mS/cm	1.52 mg/L	15.34 NTU	-137.7 mV	36.02 ft	100.00 ml/min
3/17/2025 2:25 PM	21:40	7.07 pH	17.06 °C	1.58 mS/cm	1.45 mg/L	28.51 NTU	-137.5 mV	36.02 ft	100.00 ml/min

3/17/2025 2:27 PM	23:50	7.08 pH	16.76 °C	1.57 mS/cm	1.47 mg/L	13.46 NTU	-137.9 mV	36.02 ft	100.00 ml/min
3/17/2025 2:29 PM	26:00	7.09 pH	16.87 °C	1.56 mS/cm	1.44 mg/L	18.97 NTU	-138.4 mV	36.02 ft	100.00 ml/min
3/17/2025 2:31 PM	28:10	7.08 pH	16.93 °C	1.57 mS/cm	1.45 mg/L	17.42 NTU	-137.7 mV	36.02 ft	100.00 ml/min
3/17/2025 2:34 PM	30:20	7.08 pH	16.92 °C	1.57 mS/cm	1.48 mg/L	23.22 NTU	-136.7 mV	36.02 ft	100.00 ml/min
3/17/2025 2:36 PM	32:30	7.08 pH	16.98 °C	1.56 mS/cm	1.43 mg/L	20.29 NTU	-136.9 mV	36.02 ft	100.00 ml/min
3/17/2025 2:38 PM	34:40	7.07 pH	17.04 °C	1.56 mS/cm	1.41 mg/L	28.16 NTU	-137.3 mV	36.02 ft	100.00 ml/min
3/17/2025 2:40 PM	36:50	7.08 pH	16.72 °C	1.56 mS/cm	1.41 mg/L	31.76 NTU	-137.2 mV	36.02 ft	100.00 ml/min
3/17/2025 2:42 PM	39:00	7.10 pH	16.58 °C	1.56 mS/cm	2.69 mg/L	9.44 NTU	-134.2 mV	36.02 ft	100.00 ml/min
3/17/2025 2:44 PM	41:10	7.11 pH	16.49 °C	1.57 mS/cm	1.75 mg/L	8.57 NTU	-136.4 mV	36.02 ft	100.00 ml/min
3/17/2025 2:47 PM	43:20	7.10 pH	16.48 °C	1.56 mS/cm	1.62 mg/L	8.72 NTU	-136.8 mV	36.02 ft	100.00 ml/min
3/17/2025 2:49 PM	45:30	7.08 pH	16.53 °C	1.57 mS/cm	1.53 mg/L	10.00 NTU	-136.1 mV	36.02 ft	100.00 ml/min
3/17/2025 2:51 PM	47:40	7.08 pH	16.52 °C	1.57 mS/cm	1.47 mg/L	7.11 NTU	-136.1 mV	36.02 ft	100.00 ml/min
3/17/2025 2:53 PM	49:50	7.08 pH	16.49 °C	1.56 mS/cm	1.43 mg/L	5.88 NTU	-135.9 mV	36.02 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW23R-GW-0325	APP III

Low-Flow Test Report:

Test Date / Time: 3/17/2025 11:24:53 AM
Project: Neal North MW-25
Operator Name: Thao Larson

Location Name: MW-25 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 56.54 ft Total Depth: 61.54 ft Initial Depth to Water: 30.81 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 29.4 ft Pump Intake From TOC: 31.4 ft Estimated Total Volume Pumped: 1383.75 ml Flow Cell Volume: 130 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.63 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1225

Weather Conditions:
Sunny 51°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 11:24 AM	00:00	6.98 pH	18.23 °C	1.67 mS/cm	9.39 mg/L	18.82 NTU	116.3 mV	30.81 ft	75.00 ml/min
3/17/2025 11:26 AM	02:03	6.83 pH	17.64 °C	1.71 mS/cm	6.36 mg/L	5.77 NTU	103.2 mV	31.01 ft	75.00 ml/min
3/17/2025 11:28 AM	04:06	6.78 pH	17.25 °C	1.72 mS/cm	4.67 mg/L	2.86 NTU	96.6 mV	31.10 ft	75.00 ml/min
3/17/2025 11:31 AM	06:09	6.78 pH	17.15 °C	1.71 mS/cm	4.05 mg/L	3.33 NTU	94.0 mV	31.17 ft	75.00 ml/min
3/17/2025 11:33 AM	08:12	6.76 pH	17.13 °C	1.71 mS/cm	3.62 mg/L	3.34 NTU	93.2 mV	31.22 ft	75.00 ml/min
3/17/2025 11:35 AM	10:15	6.75 pH	16.94 °C	1.71 mS/cm	3.42 mg/L	3.12 NTU	93.3 mV	31.27 ft	75.00 ml/min
3/17/2025 11:37 AM	12:18	6.74 pH	17.01 °C	1.72 mS/cm	3.23 mg/L	3.30 NTU	92.7 mV	31.32 ft	75.00 ml/min
3/17/2025 11:39 AM	14:21	6.74 pH	17.10 °C	1.72 mS/cm	3.15 mg/L	4.20 NTU	90.2 mV	31.34 ft	75.00 ml/min
3/17/2025 11:41 AM	16:24	6.73 pH	17.25 °C	1.72 mS/cm	3.08 mg/L	5.07 NTU	87.6 mV	31.38 ft	75.00 ml/min
3/17/2025 11:43 AM	18:27	6.73 pH	17.30 °C	1.72 mS/cm	2.97 mg/L	4.12 NTU	84.3 mV	31.44 ft	75.00 ml/min

Samples

Sample ID:	Description:
MW25-GW-0325	APP III

Low-Flow Test Report:

Test Date / Time: 3/12/2025 5:19:05 PM
Project: Neal North MW-27
Operator Name: Paige Richards

Location Name: MW-27 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23.7 ft Total Depth: 33.7 ft Initial Depth to Water: 29.65 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 29.4 ft Pump Intake From TOC: 31.4 ft Estimated Total Volume Pumped: 3280 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.28 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1905

Weather Conditions:
Sunny, 71 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/12/2025 5:19 PM	00:00	7.40 pH	21.31 °C	1.29 mS/cm	7.85 mg/L	54.59 NTU	-23.3 mV	29.65 ft	100.00 ml/min
3/12/2025 5:21 PM	02:03	6.92 pH	16.52 °C	1.13 mS/cm	3.56 mg/L	57.14 NTU	-111.4 mV	29.80 ft	100.00 ml/min
3/12/2025 5:23 PM	04:06	6.77 pH	15.59 °C	1.09 mS/cm	1.58 mg/L	30.68 NTU	-107.4 mV	29.80 ft	100.00 ml/min
3/12/2025 5:25 PM	06:09	6.73 pH	15.02 °C	1.11 mS/cm	1.10 mg/L	36.10 NTU	-105.0 mV	29.80 ft	100.00 ml/min
3/12/2025 5:27 PM	08:12	6.71 pH	14.85 °C	1.10 mS/cm	0.89 mg/L	37.27 NTU	-104.0 mV	29.80 ft	100.00 ml/min
3/12/2025 5:29 PM	10:15	6.70 pH	14.80 °C	1.10 mS/cm	0.79 mg/L	41.60 NTU	-102.8 mV	29.80 ft	100.00 ml/min
3/12/2025 5:31 PM	12:18	6.70 pH	14.75 °C	1.09 mS/cm	0.75 mg/L	39.60 NTU	-102.8 mV	29.80 ft	100.00 ml/min
3/12/2025 5:33 PM	14:21	6.71 pH	14.58 °C	1.09 mS/cm	0.71 mg/L	34.94 NTU	-103.8 mV	29.80 ft	100.00 ml/min
3/12/2025 5:35 PM	16:24	6.71 pH	14.38 °C	1.10 mS/cm	0.67 mg/L	25.75 NTU	-104.9 mV	29.80 ft	100.00 ml/min
3/12/2025 5:37 PM	18:27	6.71 pH	14.43 °C	1.10 mS/cm	0.63 mg/L	18.86 NTU	-105.8 mV	29.80 ft	100.00 ml/min
3/12/2025 5:39 PM	20:30	6.70 pH	14.47 °C	1.10 mS/cm	0.62 mg/L	14.36 NTU	-106.4 mV	29.80 ft	100.00 ml/min

3/12/2025 5:41 PM	22:33	6.70 pH	14.55 °C	1.10 mS/cm	0.60 mg/L	9.63 NTU	-107.3 mV	29.90 ft	100.00 ml/min
3/12/2025 5:43 PM	24:36	6.70 pH	14.39 °C	1.10 mS/cm	0.60 mg/L	7.79 NTU	-108.5 mV	29.90 ft	100.00 ml/min
3/12/2025 5:45 PM	26:39	6.71 pH	14.35 °C	1.10 mS/cm	0.59 mg/L	6.57 NTU	-109.3 mV	29.90 ft	100.00 ml/min
3/12/2025 5:47 PM	28:42	6.71 pH	14.34 °C	1.09 mS/cm	0.58 mg/L	5.44 NTU	-110.6 mV	29.90 ft	100.00 ml/min
3/12/2025 5:49 PM	30:45	6.71 pH	14.36 °C	1.10 mS/cm	0.57 mg/L	5.14 NTU	-110.8 mV	29.90 ft	100.00 ml/min
3/12/2025 5:51 PM	32:48	6.72 pH	14.11 °C	1.09 mS/cm	0.56 mg/L	4.71 NTU	-111.5 mV	29.93 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW27-GW-0325	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 3/12/2025 3:07:55 PM
Project: Neal North MW-29R
Operator Name: Thao Larson

Location Name: MW-29R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 20.2 ft Total Depth: 35.2 ft Initial Depth to Water: 30.83 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 32.7 ft Pump Intake From TOC: 34.7 ft Estimated Total Volume Pumped: 7916.667 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 1750

Weather Conditions:
Sunny 58°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/12/2025 3:07 PM	00:00	7.14 pH	22.42 °C	1.04 mS/cm	7.83 mg/L	269.35 NTU	-71.2 mV	30.83 ft	100.00 ml/min
3/12/2025 3:10 PM	02:05	6.66 pH	18.23 °C	1.24 mS/cm	3.13 mg/L	420.99 NTU	-80.2 mV	30.85 ft	100.00 ml/min
3/12/2025 3:12 PM	04:10	6.55 pH	16.70 °C	1.28 mS/cm	1.64 mg/L	157.13 NTU	-77.7 mV	30.84 ft	100.00 ml/min
3/12/2025 3:14 PM	06:15	6.53 pH	16.41 °C	1.29 mS/cm	1.27 mg/L	133.29 NTU	-79.9 mV	30.84 ft	100.00 ml/min
3/12/2025 3:16 PM	08:20	6.54 pH	16.56 °C	1.29 mS/cm	1.14 mg/L	107.25 NTU	-83.5 mV	30.84 ft	100.00 ml/min
3/12/2025 3:18 PM	10:25	6.55 pH	16.28 °C	1.29 mS/cm	1.09 mg/L	88.64 NTU	-85.5 mV	30.84 ft	100.00 ml/min
3/12/2025 3:20 PM	12:30	6.56 pH	16.39 °C	1.29 mS/cm	1.06 mg/L	83.49 NTU	-86.4 mV	30.84 ft	100.00 ml/min
3/12/2025 3:22 PM	14:35	6.57 pH	16.49 °C	1.29 mS/cm	1.00 mg/L	65.66 NTU	-87.0 mV	30.84 ft	100.00 ml/min
3/12/2025 3:24 PM	16:40	6.58 pH	16.23 °C	1.29 mS/cm	0.89 mg/L	59.48 NTU	-88.7 mV	30.84 ft	100.00 ml/min
3/12/2025 3:26 PM	18:45	6.58 pH	16.45 °C	1.29 mS/cm	0.79 mg/L	51.14 NTU	-88.8 mV	30.84 ft	100.00 ml/min
3/12/2025 3:28 PM	20:50	6.58 pH	16.34 °C	1.28 mS/cm	0.71 mg/L	41.23 NTU	-89.4 mV	30.84 ft	100.00 ml/min

3/12/2025 3:30 PM	22:55	6.59 pH	15.92 °C	1.28 mS/cm	0.65 mg/L	44.99 NTU	-89.4 mV	30.84 ft	100.00 ml/min
3/12/2025 3:32 PM	25:00	6.59 pH	16.08 °C	1.28 mS/cm	0.62 mg/L	33.41 NTU	-89.6 mV	30.84 ft	100.00 ml/min
3/12/2025 3:35 PM	27:05	6.59 pH	16.16 °C	1.28 mS/cm	0.60 mg/L	45.14 NTU	-89.3 mV	30.84 ft	100.00 ml/min
3/12/2025 3:37 PM	29:10	6.59 pH	16.29 °C	1.27 mS/cm	0.59 mg/L	54.92 NTU	-89.5 mV	30.84 ft	100.00 ml/min
3/12/2025 3:39 PM	31:15	6.63 pH	16.15 °C	1.28 mS/cm	4.08 mg/L	32.83 NTU	-85.0 mV	30.84 ft	100.00 ml/min
3/12/2025 3:41 PM	33:20	6.62 pH	15.94 °C	1.29 mS/cm	1.68 mg/L	22.48 NTU	-83.8 mV	30.84 ft	100.00 ml/min
3/12/2025 3:43 PM	35:25	6.60 pH	16.02 °C	1.29 mS/cm	1.15 mg/L	19.21 NTU	-83.8 mV	30.84 ft	100.00 ml/min
3/12/2025 3:45 PM	37:30	6.60 pH	15.95 °C	1.28 mS/cm	1.00 mg/L	16.09 NTU	-84.8 mV	30.84 ft	100.00 ml/min
3/12/2025 3:47 PM	39:35	6.60 pH	15.99 °C	1.28 mS/cm	0.91 mg/L	14.44 NTU	-85.4 mV	30.84 ft	100.00 ml/min
3/12/2025 3:49 PM	41:40	6.60 pH	15.84 °C	1.28 mS/cm	0.80 mg/L	14.74 NTU	-85.6 mV	30.84 ft	100.00 ml/min
3/12/2025 3:51 PM	43:45	6.61 pH	15.41 °C	1.28 mS/cm	0.77 mg/L	9.98 NTU	-86.2 mV	30.84 ft	100.00 ml/min
3/12/2025 3:53 PM	45:50	6.61 pH	15.49 °C	1.28 mS/cm	0.71 mg/L	9.15 NTU	-87.3 mV	30.84 ft	100.00 ml/min
3/12/2025 3:55 PM	47:55	6.61 pH	15.61 °C	1.28 mS/cm	0.66 mg/L	10.42 NTU	-87.6 mV	30.84 ft	100.00 ml/min
3/12/2025 3:57 PM	50:00	6.61 pH	15.60 °C	1.28 mS/cm	0.62 mg/L	12.83 NTU	-88.0 mV	30.84 ft	100.00 ml/min
3/12/2025 4:00 PM	52:05	6.61 pH	15.69 °C	1.28 mS/cm	0.57 mg/L	13.09 NTU	-88.7 mV	30.84 ft	100.00 ml/min
3/12/2025 4:02 PM	54:10	6.62 pH	15.76 °C	1.27 mS/cm	0.52 mg/L	11.72 NTU	-88.8 mV	30.84 ft	100.00 ml/min
3/12/2025 4:04 PM	56:15	6.62 pH	15.42 °C	1.27 mS/cm	0.50 mg/L	14.91 NTU	-89.3 mV	30.84 ft	100.00 ml/min
3/12/2025 4:06 PM	58:20	6.63 pH	15.37 °C	1.27 mS/cm	0.48 mg/L	15.22 NTU	-89.6 mV	30.84 ft	100.00 ml/min
3/12/2025 4:08 PM	01:00:25	6.64 pH	15.32 °C	1.27 mS/cm	0.82 mg/L	10.49 NTU	-88.5 mV	30.84 ft	100.00 ml/min
3/12/2025 4:10 PM	01:02:30	6.63 pH	15.22 °C	1.26 mS/cm	1.08 mg/L	9.64 NTU	-85.9 mV	30.84 ft	100.00 ml/min
3/12/2025 4:12 PM	01:04:35	6.63 pH	14.96 °C	1.27 mS/cm	1.08 mg/L	8.07 NTU	-85.3 mV	30.84 ft	100.00 ml/min
3/12/2025 4:14 PM	01:06:40	6.64 pH	14.96 °C	1.27 mS/cm	1.02 mg/L	8.15 NTU	-85.1 mV	30.84 ft	100.00 ml/min
3/12/2025 4:16 PM	01:08:45	6.64 pH	14.95 °C	1.27 mS/cm	0.94 mg/L	8.52 NTU	-85.5 mV	30.84 ft	100.00 ml/min
3/12/2025 4:18 PM	01:10:50	6.64 pH	14.78 °C	1.26 mS/cm	0.91 mg/L	7.97 NTU	-85.2 mV	30.84 ft	100.00 ml/min
3/12/2025 4:20 PM	01:12:55	6.64 pH	14.74 °C	1.27 mS/cm	0.84 mg/L	8.90 NTU	-85.7 mV	30.84 ft	100.00 ml/min
3/12/2025 4:22 PM	01:15:00	6.65 pH	14.71 °C	1.26 mS/cm	0.78 mg/L	6.55 NTU	-85.8 mV	30.84 ft	100.00 ml/min
3/12/2025 4:25 PM	01:17:05	6.65 pH	14.54 °C	1.26 mS/cm	0.75 mg/L	6.02 NTU	-85.9 mV	30.84 ft	100.00 ml/min
3/12/2025 4:27 PM	01:19:10	6.65 pH	14.65 °C	1.26 mS/cm	0.71 mg/L	5.16 NTU	-86.8 mV	30.84 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW29R-GW-0325	
DP01-GW-0325	

Low-Flow Test Report:

Test Date / Time: 3/17/2025 12:50:42 PM
Project: Neal North MW-57R
Operator Name: Paige Richards

Location Name: MW-57R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 32.8 ft Total Depth: 47.8 ft Initial Depth to Water: 40.53 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 45.3 ft Pump Intake From TOC: 47.3 ft Estimated Total Volume Pumped: 6979.167 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1410

Weather Conditions:
Sunny, 77 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 12:50 PM	00:00	7.09 pH	16.08 °C	1.73 mS/cm	5.65 mg/L	138.34 NTU	66.5 mV	40.53 ft	175.00 ml/min
3/17/2025 12:52 PM	02:14	6.97 pH	14.77 °C	1.72 mS/cm	1.17 mg/L	97.64 NTU	-121.3 mV	40.55 ft	175.00 ml/min
3/17/2025 12:55 PM	04:28	6.97 pH	14.71 °C	1.70 mS/cm	0.37 mg/L	43.13 NTU	-129.2 mV	40.55 ft	175.00 ml/min
3/17/2025 12:57 PM	06:42	6.97 pH	14.78 °C	1.70 mS/cm	0.26 mg/L	29.69 NTU	-131.6 mV	40.55 ft	175.00 ml/min
3/17/2025 12:59 PM	08:56	6.98 pH	14.69 °C	1.69 mS/cm	0.22 mg/L	31.43 NTU	-133.2 mV	40.55 ft	175.00 ml/min
3/17/2025 1:01 PM	11:10	6.99 pH	14.73 °C	1.69 mS/cm	0.22 mg/L	26.10 NTU	-134.0 mV	40.55 ft	150.00 ml/min
3/17/2025 1:04 PM	13:24	7.00 pH	14.81 °C	1.70 mS/cm	0.21 mg/L	24.61 NTU	-134.5 mV	40.55 ft	150.00 ml/min
3/17/2025 1:06 PM	15:38	7.00 pH	14.85 °C	1.70 mS/cm	0.20 mg/L	19.89 NTU	-134.8 mV	40.55 ft	150.00 ml/min
3/17/2025 1:08 PM	17:52	7.01 pH	14.85 °C	1.70 mS/cm	0.20 mg/L	18.63 NTU	-135.0 mV	40.55 ft	150.00 ml/min
3/17/2025 1:10 PM	20:06	7.01 pH	14.80 °C	1.70 mS/cm	0.20 mg/L	18.37 NTU	-135.0 mV	40.55 ft	150.00 ml/min
3/17/2025 1:13 PM	22:20	7.01 pH	14.90 °C	1.70 mS/cm	0.20 mg/L	15.68 NTU	-135.1 mV	40.55 ft	150.00 ml/min

3/17/2025 1:15 PM	24:34	7.01 pH	15.00 °C	1.70 mS/cm	0.20 mg/L	16.13 NTU	-135.3 mV	40.55 ft	150.00 ml/min
3/17/2025 1:17 PM	26:48	7.01 pH	14.80 °C	1.70 mS/cm	0.18 mg/L	12.56 NTU	-135.1 mV	40.55 ft	150.00 ml/min
3/17/2025 1:19 PM	29:02	7.01 pH	14.90 °C	1.70 mS/cm	0.19 mg/L	13.51 NTU	-135.1 mV	40.55 ft	150.00 ml/min
3/17/2025 1:21 PM	31:16	7.01 pH	14.83 °C	1.70 mS/cm	0.18 mg/L	7.93 NTU	-134.8 mV	40.55 ft	150.00 ml/min
3/17/2025 1:24 PM	33:30	7.01 pH	14.83 °C	1.70 mS/cm	0.18 mg/L	10.06 NTU	-134.7 mV	40.55 ft	150.00 ml/min
3/17/2025 1:26 PM	35:44	7.01 pH	14.98 °C	1.70 mS/cm	0.18 mg/L	17.01 NTU	-134.8 mV	40.55 ft	150.00 ml/min
3/17/2025 1:28 PM	37:58	7.01 pH	14.95 °C	1.70 mS/cm	0.17 mg/L	11.42 NTU	-134.8 mV	40.55 ft	150.00 ml/min
3/17/2025 1:30 PM	40:12	7.01 pH	15.20 °C	1.70 mS/cm	0.17 mg/L	14.92 NTU	-134.9 mV	40.55 ft	150.00 ml/min
3/17/2025 1:33 PM	42:26	7.01 pH	15.12 °C	1.70 mS/cm	0.17 mg/L	2.86 NTU	-134.6 mV	40.55 ft	150.00 ml/min
3/17/2025 1:35 PM	44:40	7.01 pH	15.31 °C	1.71 mS/cm	0.17 mg/L	2.09 NTU	-134.9 mV	40.55 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW57R-GW-0325	1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1
MS/MSD	

Low-Flow Test Report:

Test Date / Time: 3/17/2025 2:22:59 PM
Project: Neal North MW-59S
Operator Name: Paige Richards

Location Name: MW-59S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 25.3 ft Total Depth: 40.3 ft Initial Depth to Water: 35.48 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 37.8 ft Pump Intake From TOC: 39.8 ft Estimated Total Volume Pumped: 6450 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1550

Weather Conditions:
Sunny, 77 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 2:22 PM	00:00	6.56 pH	19.25 °C	1.11 mS/cm	2.43 mg/L	94.75 NTU	1.8 mV	35.48 ft	100.00 ml/min
3/17/2025 2:25 PM	02:09	6.85 pH	18.80 °C	1.24 mS/cm	0.76 mg/L	42.70 NTU	-100.6 mV	35.49 ft	100.00 ml/min
3/17/2025 2:27 PM	04:18	6.92 pH	18.40 °C	1.27 mS/cm	0.44 mg/L	31.44 NTU	-130.6 mV	35.49 ft	100.00 ml/min
3/17/2025 2:29 PM	06:27	6.94 pH	18.20 °C	1.27 mS/cm	0.33 mg/L	33.94 NTU	-140.3 mV	35.49 ft	100.00 ml/min
3/17/2025 2:31 PM	08:36	6.95 pH	18.41 °C	1.27 mS/cm	0.29 mg/L	33.01 NTU	-144.4 mV	35.49 ft	100.00 ml/min
3/17/2025 2:33 PM	10:45	6.96 pH	18.36 °C	1.28 mS/cm	0.28 mg/L	81.09 NTU	-147.3 mV	35.49 ft	100.00 ml/min
3/17/2025 2:35 PM	12:54	6.97 pH	18.54 °C	1.28 mS/cm	0.39 mg/L	43.53 NTU	-148.6 mV	35.49 ft	100.00 ml/min
3/17/2025 2:38 PM	15:03	6.98 pH	18.54 °C	1.28 mS/cm	0.44 mg/L	32.71 NTU	-149.3 mV	35.49 ft	100.00 ml/min
3/17/2025 2:40 PM	17:12	7.00 pH	18.40 °C	1.28 mS/cm	0.42 mg/L	30.73 NTU	-150.3 mV	35.49 ft	100.00 ml/min
3/17/2025 2:42 PM	19:21	7.00 pH	17.99 °C	1.28 mS/cm	0.42 mg/L	26.95 NTU	-150.4 mV	35.49 ft	100.00 ml/min
3/17/2025 2:44 PM	21:30	7.00 pH	17.90 °C	1.28 mS/cm	0.39 mg/L	28.42 NTU	-150.5 mV	35.49 ft	100.00 ml/min

3/17/2025 2:46 PM	23:39	7.00 pH	18.02 °C	1.28 mS/cm	0.37 mg/L	24.41 NTU	-151.1 mV	35.49 ft	100.00 ml/min
3/17/2025 2:48 PM	25:48	7.01 pH	18.06 °C	1.28 mS/cm	0.36 mg/L	24.16 NTU	-151.6 mV	35.49 ft	100.00 ml/min
3/17/2025 2:50 PM	27:57	7.01 pH	18.13 °C	1.28 mS/cm	0.34 mg/L	19.93 NTU	-152.4 mV	35.49 ft	100.00 ml/min
3/17/2025 2:53 PM	30:06	7.02 pH	18.02 °C	1.28 mS/cm	0.32 mg/L	17.22 NTU	-153.0 mV	35.49 ft	100.00 ml/min
3/17/2025 2:55 PM	32:15	7.02 pH	18.07 °C	1.27 mS/cm	0.30 mg/L	16.89 NTU	-153.4 mV	35.49 ft	100.00 ml/min
3/17/2025 2:57 PM	34:24	7.02 pH	18.21 °C	1.28 mS/cm	0.29 mg/L	20.00 NTU	-154.0 mV	35.49 ft	100.00 ml/min
3/17/2025 2:59 PM	36:33	7.02 pH	18.43 °C	1.28 mS/cm	0.28 mg/L	14.28 NTU	-154.9 mV	35.49 ft	100.00 ml/min
3/17/2025 3:01 PM	38:42	7.02 pH	18.60 °C	1.28 mS/cm	0.27 mg/L	13.91 NTU	-155.4 mV	35.49 ft	100.00 ml/min
3/17/2025 3:03 PM	40:51	7.02 pH	18.50 °C	1.28 mS/cm	0.27 mg/L	20.50 NTU	-155.7 mV	35.49 ft	100.00 ml/min
3/17/2025 3:05 PM	43:00	7.02 pH	18.49 °C	1.28 mS/cm	0.27 mg/L	17.44 NTU	-155.7 mV	35.49 ft	100.00 ml/min
3/17/2025 3:08 PM	45:09	7.03 pH	18.53 °C	1.28 mS/cm	0.27 mg/L	15.85 NTU	-155.9 mV	35.49 ft	100.00 ml/min
3/17/2025 3:10 PM	47:18	7.03 pH	18.04 °C	1.27 mS/cm	0.27 mg/L	17.31 NTU	-155.6 mV	35.49 ft	100.00 ml/min
3/17/2025 3:12 PM	49:27	7.03 pH	18.16 °C	1.28 mS/cm	0.33 mg/L	26.53 NTU	-155.4 mV	35.49 ft	100.00 ml/min
3/17/2025 3:14 PM	51:36	7.03 pH	17.80 °C	1.27 mS/cm	0.44 mg/L	7.87 NTU	-153.5 mV	35.49 ft	100.00 ml/min
3/17/2025 3:16 PM	53:45	7.03 pH	18.13 °C	1.28 mS/cm	0.44 mg/L	7.40 NTU	-153.0 mV	35.49 ft	100.00 ml/min
3/17/2025 3:18 PM	55:54	7.03 pH	18.21 °C	1.28 mS/cm	0.40 mg/L	5.20 NTU	-153.5 mV	35.49 ft	100.00 ml/min
3/17/2025 3:21 PM	58:03	7.03 pH	18.32 °C	1.28 mS/cm	0.38 mg/L	5.84 NTU	-153.9 mV	35.49 ft	100.00 ml/min
3/17/2025 3:23 PM	01:00:12	7.03 pH	18.63 °C	1.28 mS/cm	0.34 mg/L	5.57 NTU	-154.7 mV	35.49 ft	100.00 ml/min
3/17/2025 3:25 PM	01:02:21	7.03 pH	18.50 °C	1.28 mS/cm	0.32 mg/L	5.17 NTU	-155.2 mV	35.49 ft	100.00 ml/min
3/17/2025 3:27 PM	01:04:30	7.03 pH	18.47 °C	1.28 mS/cm	0.30 mg/L	4.17 NTU	-155.6 mV	35.49 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW59S-GW-0325	1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 3/17/2025 4:02:24 PM
Project: Neal North MW-60S
Operator Name: Paige Richards

Location Name: MW-60S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 30.1 ft Total Depth: 45.1 ft Initial Depth to Water: 41.08 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 42.6 ft Pump Intake From TOC: 44.6 ft Estimated Total Volume Pumped: 2805 ml Flow Cell Volume: 130 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1720

Weather Conditions:
Sunny, 77 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/17/2025 4:02 PM	00:00	6.58 pH	18.98 °C	1.02 mS/cm	4.10 mg/L	26.56 NTU	-1.2 mV	41.08 ft	75.00 ml/min
3/17/2025 4:04 PM	02:12	6.68 pH	19.52 °C	1.05 mS/cm	3.44 mg/L	18.02 NTU	-40.4 mV	41.09 ft	75.00 ml/min
3/17/2025 4:06 PM	04:24	6.83 pH	18.99 °C	1.07 mS/cm	2.90 mg/L	14.87 NTU	-66.7 mV	41.09 ft	75.00 ml/min
3/17/2025 4:09 PM	06:36	6.94 pH	18.14 °C	1.07 mS/cm	2.75 mg/L	10.12 NTU	-89.1 mV	41.09 ft	75.00 ml/min
3/17/2025 4:11 PM	08:48	6.96 pH	17.81 °C	1.07 mS/cm	2.90 mg/L	9.15 NTU	-94.3 mV	41.09 ft	75.00 ml/min
3/17/2025 4:13 PM	11:00	6.95 pH	17.82 °C	1.07 mS/cm	2.70 mg/L	9.87 NTU	-94.7 mV	41.09 ft	75.00 ml/min
3/17/2025 4:15 PM	13:12	6.96 pH	17.85 °C	1.07 mS/cm	2.35 mg/L	7.75 NTU	-96.4 mV	41.09 ft	75.00 ml/min
3/17/2025 4:17 PM	15:24	6.95 pH	17.60 °C	1.07 mS/cm	2.27 mg/L	9.90 NTU	-95.9 mV	41.09 ft	75.00 ml/min
3/17/2025 4:20 PM	17:36	6.97 pH	17.46 °C	1.07 mS/cm	2.29 mg/L	10.69 NTU	-97.3 mV	41.09 ft	75.00 ml/min
3/17/2025 4:22 PM	19:48	6.98 pH	17.64 °C	1.07 mS/cm	2.41 mg/L	10.03 NTU	-99.4 mV	41.09 ft	75.00 ml/min
3/17/2025 4:24 PM	22:00	6.99 pH	17.84 °C	1.07 mS/cm	2.43 mg/L	10.90 NTU	-100.9 mV	41.09 ft	75.00 ml/min

3/17/2025 4:26 PM	24:12	7.00 pH	17.80 °C	1.07 mS/cm	2.55 mg/L	8.57 NTU	-100.7 mV	41.09 ft	75.00 ml/min
3/17/2025 4:28 PM	26:24	7.01 pH	17.83 °C	1.07 mS/cm	2.56 mg/L	7.86 NTU	-102.4 mV	41.09 ft	75.00 ml/min
3/17/2025 4:31 PM	28:36	7.03 pH	17.79 °C	1.07 mS/cm	2.56 mg/L	9.81 NTU	-103.0 mV	41.09 ft	75.00 ml/min
3/17/2025 4:33 PM	30:48	7.03 pH	17.77 °C	1.07 mS/cm	2.65 mg/L	11.39 NTU	-102.8 mV	41.09 ft	75.00 ml/min
3/17/2025 4:35 PM	33:00	7.04 pH	17.79 °C	1.07 mS/cm	2.65 mg/L	10.77 NTU	-104.0 mV	41.09 ft	75.00 ml/min
3/17/2025 4:37 PM	35:12	7.05 pH	17.90 °C	1.07 mS/cm	2.73 mg/L	6.81 NTU	-104.4 mV	41.09 ft	75.00 ml/min
3/17/2025 4:39 PM	37:24	7.07 pH	17.16 °C	1.07 mS/cm	2.53 mg/L	3.81 NTU	-105.4 mV	41.09 ft	75.00 ml/min

Samples

Sample ID:	Description:
MW60S-GW-0325	1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 3/13/2025 8:17:22 AM
Project: Neal North MW-223S
Operator Name: Paige Richards

Location Name: MW-223S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 11.7 ft Total Depth: 26.7 ft Initial Depth to Water: 22.88 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 22.4 ft Pump Intake From TOC: 24.4 ft Estimated Total Volume Pumped: 5175 ml Flow Cell Volume: 130 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time: 1035

Weather Conditions:
Sunny, 33 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/13/2025 8:17 AM	00:00	6.80 pH	6.72 °C	1.03 mS/cm	7.46 mg/L	134.87 NTU	40.7 mV	22.88 ft	75.00 ml/min
3/13/2025 8:19 AM	01:55	6.79 pH	8.01 °C	0.85 mS/cm	2.60 mg/L	589.20 NTU	-9.3 mV	22.89 ft	75.00 ml/min
3/13/2025 8:21 AM	03:50	6.84 pH	8.41 °C	0.81 mS/cm	1.20 mg/L	502.19 NTU	-30.2 mV	22.89 ft	75.00 ml/min
3/13/2025 8:23 AM	05:45	6.86 pH	8.64 °C	0.80 mS/cm	0.70 mg/L	413.43 NTU	-40.5 mV	22.89 ft	75.00 ml/min
3/13/2025 8:25 AM	07:40	6.89 pH	8.84 °C	0.80 mS/cm	0.54 mg/L	391.23 NTU	-51.2 mV	22.89 ft	75.00 ml/min
3/13/2025 8:26 AM	09:35	6.91 pH	8.93 °C	0.80 mS/cm	0.46 mg/L	201.75 NTU	-62.3 mV	22.89 ft	75.00 ml/min
3/13/2025 8:28 AM	11:30	6.94 pH	9.04 °C	0.80 mS/cm	0.43 mg/L	135.40 NTU	-68.4 mV	22.89 ft	75.00 ml/min
3/13/2025 8:30 AM	13:25	6.94 pH	9.12 °C	0.80 mS/cm	0.41 mg/L	84.93 NTU	-69.6 mV	22.89 ft	75.00 ml/min
3/13/2025 8:32 AM	15:20	6.95 pH	9.22 °C	0.80 mS/cm	0.40 mg/L	59.07 NTU	-70.6 mV	22.89 ft	75.00 ml/min
3/13/2025 8:34 AM	17:15	6.95 pH	9.28 °C	0.80 mS/cm	0.39 mg/L	100.10 NTU	-69.7 mV	22.89 ft	75.00 ml/min
3/13/2025 8:36 AM	19:10	6.94 pH	9.31 °C	0.80 mS/cm	0.38 mg/L	73.44 NTU	-68.1 mV	22.89 ft	75.00 ml/min

3/13/2025 8:38 AM	21:05	6.95 pH	9.35 °C	0.80 mS/cm	0.38 mg/L	36.15 NTU	-67.7 mV	22.89 ft	75.00 ml/min
3/13/2025 8:40 AM	23:00	6.94 pH	9.39 °C	0.80 mS/cm	0.38 mg/L	23.00 NTU	-66.7 mV	22.89 ft	75.00 ml/min
3/13/2025 8:42 AM	24:55	6.94 pH	9.43 °C	0.80 mS/cm	0.38 mg/L	16.59 NTU	-65.8 mV	22.89 ft	75.00 ml/min
3/13/2025 8:44 AM	26:50	6.95 pH	9.41 °C	0.80 mS/cm	0.37 mg/L	12.91 NTU	-66.6 mV	22.89 ft	75.00 ml/min
3/13/2025 8:46 AM	28:45	6.96 pH	9.47 °C	0.80 mS/cm	0.37 mg/L	47.71 NTU	-67.7 mV	22.89 ft	75.00 ml/min
3/13/2025 8:48 AM	30:40	6.97 pH	9.40 °C	0.80 mS/cm	0.36 mg/L	22.28 NTU	-69.5 mV	22.89 ft	75.00 ml/min
3/13/2025 8:49 AM	32:35	6.97 pH	9.40 °C	0.80 mS/cm	0.36 mg/L	18.90 NTU	-68.7 mV	22.89 ft	75.00 ml/min
3/13/2025 8:51 AM	34:30	6.98 pH	9.38 °C	0.80 mS/cm	0.35 mg/L	129.42 NTU	-70.0 mV	22.89 ft	75.00 ml/min
3/13/2025 8:53 AM	36:25	6.98 pH	9.39 °C	0.80 mS/cm	0.35 mg/L	75.93 NTU	-71.3 mV	22.89 ft	75.00 ml/min
3/13/2025 8:55 AM	38:20	7.00 pH	9.41 °C	0.80 mS/cm	0.35 mg/L	41.94 NTU	-73.5 mV	22.89 ft	75.00 ml/min
3/13/2025 8:57 AM	40:15	6.99 pH	9.42 °C	0.80 mS/cm	0.35 mg/L	29.61 NTU	-72.6 mV	22.89 ft	75.00 ml/min
3/13/2025 8:59 AM	42:10	6.99 pH	9.51 °C	0.80 mS/cm	0.35 mg/L	35.99 NTU	-73.0 mV	22.89 ft	75.00 ml/min
3/13/2025 9:01 AM	44:05	7.00 pH	9.49 °C	0.80 mS/cm	0.34 mg/L	11.45 NTU	-74.0 mV	22.89 ft	75.00 ml/min
3/13/2025 9:03 AM	46:00	7.01 pH	9.54 °C	0.80 mS/cm	0.34 mg/L	11.59 NTU	-74.8 mV	22.89 ft	75.00 ml/min
3/13/2025 9:05 AM	47:55	7.01 pH	9.56 °C	0.80 mS/cm	0.34 mg/L	12.62 NTU	-75.5 mV	22.89 ft	75.00 ml/min
3/13/2025 9:07 AM	49:50	7.01 pH	9.62 °C	0.80 mS/cm	0.33 mg/L	154.66 NTU	-76.7 mV	22.89 ft	75.00 ml/min
3/13/2025 9:09 AM	51:45	7.01 pH	9.63 °C	0.80 mS/cm	0.33 mg/L	79.87 NTU	-75.8 mV	22.89 ft	75.00 ml/min
3/13/2025 9:11 AM	53:40	7.01 pH	9.61 °C	0.80 mS/cm	0.33 mg/L	49.04 NTU	-76.3 mV	22.89 ft	75.00 ml/min
3/13/2025 9:12 AM	55:35	7.02 pH	9.64 °C	0.80 mS/cm	0.33 mg/L	39.67 NTU	-78.3 mV	22.89 ft	75.00 ml/min
3/13/2025 9:14 AM	57:30	7.02 pH	9.67 °C	0.80 mS/cm	0.33 mg/L	19.83 NTU	-78.2 mV	22.89 ft	75.00 ml/min
3/13/2025 9:16 AM	59:25	7.03 pH	9.75 °C	0.80 mS/cm	0.33 mg/L	10.60 NTU	-79.2 mV	22.89 ft	75.00 ml/min
3/13/2025 9:18 AM	01:01:20	7.02 pH	9.83 °C	0.80 mS/cm	0.32 mg/L	12.14 NTU	-79.2 mV	22.89 ft	75.00 ml/min
3/13/2025 9:20 AM	01:03:15	7.03 pH	9.83 °C	0.80 mS/cm	0.32 mg/L	17.63 NTU	-80.3 mV	22.89 ft	75.00 ml/min
3/13/2025 9:22 AM	01:05:10	7.03 pH	9.92 °C	0.81 mS/cm	0.32 mg/L	11.51 NTU	-80.2 mV	22.89 ft	75.00 ml/min
3/13/2025 9:24 AM	01:07:05	7.03 pH	9.88 °C	0.80 mS/cm	0.32 mg/L	17.13 NTU	-80.4 mV	22.89 ft	75.00 ml/min
3/13/2025 9:26 AM	01:09:00	7.03 pH	9.81 °C	0.80 mS/cm	0.32 mg/L	4.85 NTU	-80.8 mV	22.89 ft	75.00 ml/min

Samples

Sample ID:	Description:
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MW223S-GW-0325	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x2 250mL plastic unpreserved x1 40mL voa vials w/ sulfuric x3
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Low-Flow Test Report:

Test Date / Time: 3/12/2025 6:10:01 PM
Project: Neal North MW-231SR
Operator Name: Thao Larson

Location Name: MW-231SR Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 14.07 ft Total Depth: 29.07 ft Initial Depth to Water: 25.27 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 26.57 ft Pump Intake From TOC: 28.57 ft Estimated Total Volume Pumped: 4386.25 ml Flow Cell Volume: 130 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time 0905
Stabilized 3/12, sample collected 3/13

Weather Conditions:
Sunny 64°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
3/12/2025 6:10 PM	00:00	7.12 pH	18.30 °C	1.43 mS/cm	7.16 mg/L	29.14 NTU	-74.4 mV	25.27 ft	75.00 ml/min
3/12/2025 6:12 PM	02:01	7.16 pH	16.93 °C	1.32 mS/cm	4.47 mg/L	26.12 NTU	-97.4 mV	25.28 ft	75.00 ml/min
3/12/2025 6:14 PM	04:02	6.82 pH	15.66 °C	1.24 mS/cm	2.32 mg/L	16.90 NTU	-83.8 mV	25.28 ft	75.00 ml/min
3/12/2025 6:16 PM	06:03	6.73 pH	15.12 °C	1.22 mS/cm	1.78 mg/L	12.02 NTU	-79.6 mV	25.28 ft	75.00 ml/min
3/12/2025 6:18 PM	08:04	6.70 pH	14.74 °C	1.21 mS/cm	1.55 mg/L	11.15 NTU	-76.9 mV	25.28 ft	75.00 ml/min
3/12/2025 6:20 PM	10:05	6.68 pH	14.49 °C	1.21 mS/cm	1.45 mg/L	14.62 NTU	-74.8 mV	25.28 ft	75.00 ml/min
3/12/2025 6:22 PM	12:06	6.68 pH	14.27 °C	1.21 mS/cm	1.40 mg/L	17.26 NTU	-72.5 mV	25.28 ft	75.00 ml/min
3/12/2025 6:24 PM	14:07	6.68 pH	14.06 °C	1.20 mS/cm	1.35 mg/L	18.67 NTU	-71.2 mV	25.28 ft	75.00 ml/min
3/12/2025 6:26 PM	16:08	6.67 pH	13.80 °C	1.21 mS/cm	1.26 mg/L	15.29 NTU	-69.8 mV	25.28 ft	75.00 ml/min
3/12/2025 6:28 PM	18:09	6.68 pH	13.72 °C	1.21 mS/cm	1.23 mg/L	17.72 NTU	-68.9 mV	25.28 ft	75.00 ml/min
3/12/2025 6:30 PM	20:10	6.68 pH	13.56 °C	1.21 mS/cm	1.28 mg/L	16.26 NTU	-68.3 mV	25.28 ft	75.00 ml/min

3/12/2025 6:32 PM	22:11	6.68 pH	13.47 °C	1.22 mS/cm	1.26 mg/L	11.78 NTU	-67.8 mV	25.28 ft	75.00 ml/min
3/12/2025 6:34 PM	24:12	6.68 pH	13.31 °C	1.22 mS/cm	1.22 mg/L	12.96 NTU	-67.5 mV	25.28 ft	75.00 ml/min
3/12/2025 6:36 PM	26:13	6.69 pH	13.26 °C	1.22 mS/cm	1.22 mg/L	14.07 NTU	-66.9 mV	25.28 ft	75.00 ml/min
3/12/2025 6:38 PM	28:14	6.69 pH	13.27 °C	1.22 mS/cm	1.38 mg/L	11.20 NTU	-66.5 mV	25.28 ft	75.00 ml/min
3/12/2025 6:40 PM	30:15	6.69 pH	13.27 °C	1.22 mS/cm	1.34 mg/L	7.51 NTU	-65.8 mV	25.28 ft	75.00 ml/min
3/12/2025 6:42 PM	32:16	6.68 pH	13.21 °C	1.21 mS/cm	1.27 mg/L	12.30 NTU	-65.3 mV	25.28 ft	75.00 ml/min
3/12/2025 6:44 PM	34:17	6.68 pH	13.15 °C	1.22 mS/cm	1.23 mg/L	8.28 NTU	-64.9 mV	25.28 ft	75.00 ml/min
3/12/2025 6:46 PM	36:18	6.71 pH	12.99 °C	1.22 mS/cm	1.59 mg/L	9.55 NTU	-65.9 mV	25.28 ft	75.00 ml/min
3/12/2025 6:48 PM	38:19	6.72 pH	12.88 °C	1.22 mS/cm	2.02 mg/L	7.22 NTU	-65.4 mV	25.28 ft	75.00 ml/min
3/12/2025 6:50 PM	40:20	6.73 pH	12.85 °C	1.22 mS/cm	2.30 mg/L	9.04 NTU	-64.7 mV	25.28 ft	75.00 ml/min
3/12/2025 6:52 PM	42:21	6.70 pH	12.84 °C	1.22 mS/cm	2.02 mg/L	7.69 NTU	-62.6 mV	25.28 ft	75.00 ml/min
3/12/2025 6:54 PM	44:22	6.69 pH	12.76 °C	1.22 mS/cm	1.74 mg/L	8.56 NTU	-61.7 mV	25.28 ft	75.00 ml/min
3/12/2025 6:56 PM	46:23	6.69 pH	12.70 °C	1.22 mS/cm	1.58 mg/L	7.51 NTU	-61.5 mV	25.28 ft	75.00 ml/min
3/12/2025 6:58 PM	48:24	6.69 pH	12.66 °C	1.22 mS/cm	1.48 mg/L	6.27 NTU	-61.4 mV	25.28 ft	75.00 ml/min
3/12/2025 7:00 PM	50:25	6.68 pH	12.59 °C	1.22 mS/cm	1.41 mg/L	6.19 NTU	-61.2 mV	25.28 ft	75.00 ml/min
3/12/2025 7:02 PM	52:26	6.69 pH	12.52 °C	1.22 mS/cm	1.30 mg/L	5.95 NTU	-61.7 mV	25.28 ft	75.00 ml/min
3/12/2025 7:04 PM	54:27	6.69 pH	12.51 °C	1.22 mS/cm	1.25 mg/L	6.51 NTU	-62.3 mV	25.28 ft	75.00 ml/min
3/12/2025 7:06 PM	56:28	6.69 pH	12.43 °C	1.22 mS/cm	1.20 mg/L	5.05 NTU	-62.5 mV	25.28 ft	75.00 ml/min
3/12/2025 7:08 PM	58:29	6.69 pH	12.38 °C	1.22 mS/cm	1.16 mg/L	5.08 NTU	-62.5 mV	25.28 ft	75.00 ml/min

Samples

Sample ID:	Description:
MW231SR-GW-0325	MNA

Low-Flow Test Report:

Test Date / Time: 5/20/2025 9:14:22 AM
Project: Neal North MW-5R
Operator Name: Paige Richards

Location Name: MW-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 25 ft Top of Screen: 11.64 ft Total Depth: 36.7 ft Initial Depth to Water: 23.25 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 32.4 ft Pump Intake From TOC: 34.4 ft Estimated Total Volume Pumped: 5208.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 0950

Water visually clear

Weather Conditions:
Cloudy, 55 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/20/2025 9:14 AM	00:00	7.09 pH	13.01 °C	1.17 mS/cm		79.41 NTU	-0.2 mV	23.25 ft	100.00 ml/min
5/20/2025 9:16 AM	02:05	7.10 pH	12.67 °C	0.90 mS/cm		117.33 NTU	-89.0 mV	23.25 ft	100.00 ml/min
5/20/2025 9:18 AM	04:10	7.09 pH	12.58 °C	0.87 mS/cm		77.23 NTU	-105.9 mV	23.25 ft	100.00 ml/min
5/20/2025 9:20 AM	06:15	7.07 pH	12.36 °C	0.86 mS/cm		39.35 NTU	-114.7 mV	23.26 ft	200.00 ml/min
5/20/2025 9:22 AM	08:20	7.06 pH	12.37 °C	0.86 mS/cm		61.75 NTU	-120.1 mV	23.26 ft	200.00 ml/min
5/20/2025 9:24 AM	10:25	7.04 pH	12.35 °C	0.86 mS/cm		153.04 NTU	-122.9 mV	23.26 ft	200.00 ml/min
5/20/2025 9:26 AM	12:30	7.03 pH	12.29 °C	0.86 mS/cm		171.14 NTU	-123.9 mV	23.26 ft	200.00 ml/min
5/20/2025 9:28 AM	14:35	7.02 pH	12.30 °C	0.86 mS/cm		30.25 NTU	-125.5 mV	23.26 ft	200.00 ml/min
5/20/2025 9:31 AM	16:40	7.01 pH	12.32 °C	0.86 mS/cm		44.98 NTU	-126.5 mV	23.26 ft	200.00 ml/min
5/20/2025 9:33 AM	18:45	7.00 pH	12.29 °C	0.86 mS/cm		28.89 NTU	-127.3 mV	23.26 ft	200.00 ml/min

5/20/2025 9:35 AM	20:50	6.99 pH	12.29 °C	0.86 mS/cm		18.04 NTU	-127.7 mV	23.26 ft	200.00 ml/min
5/20/2025 9:37 AM	22:55	6.98 pH	12.29 °C	0.86 mS/cm		17.20 NTU	-128.0 mV	23.26 ft	200.00 ml/min
5/20/2025 9:39 AM	25:00	6.98 pH	12.26 °C	0.86 mS/cm		13.42 NTU	-128.4 mV	23.26 ft	200.00 ml/min
5/20/2025 9:41 AM	27:05	6.97 pH	12.27 °C	0.86 mS/cm		3.17 NTU	-128.0 mV	23.26 ft	200.00 ml/min
5/20/2025 9:43 AM	29:10	6.96 pH	12.28 °C	0.86 mS/cm		2.14 NTU	-127.8 mV	23.26 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW5R-GW-0525	1L plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 5/19/2025 4:29:08 PM
Project: Neal North MW-19
Operator Name: Paige Richards

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 18.6 ft Total Depth: 33.6 ft Initial Depth to Water: 12.53 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 29.6 ft Pump Intake From TOC: 24.6 ft Estimated Total Volume Pumped: 5525.833 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.75 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 1735
Water visually clear; final live reading:
T: 12.58 °C
ORP: -34.0 mV
pH: 6.17
Conductivity: 2.68 mS/cm
Turbidity: 0.64 NTU

Weather Conditions:
Cloudy, rain, 61 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/19/2025 4:29 PM	00:00	6.74 pH	13.60 °C	2.51 mS/cm		20.50 NTU	61.0 mV	12.53 ft	150.00 ml/min
5/19/2025 4:31 PM	02:03	6.31 pH	12.70 °C	3.29 mS/cm		7.75 NTU	7.3 mV	12.53 ft	150.00 ml/min
5/19/2025 4:33 PM	04:06	6.31 pH	12.76 °C	3.21 mS/cm		6.26 NTU	-11.1 mV	13.55 ft	150.00 ml/min
5/19/2025 4:35 PM	06:09	6.32 pH	12.70 °C	3.17 mS/cm		13.67 NTU	-21.0 mV	13.83 ft	150.00 ml/min
5/19/2025 4:37 PM	08:12	6.33 pH	12.28 °C	3.05 mS/cm		18.39 NTU	-26.7 mV	13.83 ft	150.00 ml/min
5/19/2025 4:39 PM	10:15	6.34 pH	12.65 °C	2.93 mS/cm		11.05 NTU	-33.0 mV	14.43 ft	100.00 ml/min
5/19/2025 4:41 PM	12:18	6.35 pH	12.84 °C	2.84 mS/cm		8.11 NTU	-36.2 mV	14.43 ft	100.00 ml/min

5/19/2025 4:43 PM	14:21	6.34 pH	12.83 °C	2.83 mS/cm		11.26 NTU	-35.1 mV	14.70 ft	100.00 ml/min
5/19/2025 4:45 PM	16:24	6.32 pH	12.84 °C	2.84 mS/cm		15.49 NTU	-31.7 mV	14.70 ft	100.00 ml/min
5/19/2025 4:47 PM	18:27	6.30 pH	12.83 °C	2.83 mS/cm		22.78 NTU	-28.6 mV	14.70 ft	100.00 ml/min
5/19/2025 4:49 PM	20:30	6.29 pH	12.87 °C	2.85 mS/cm		28.09 NTU	-25.1 mV	15.07 ft	100.00 ml/min
5/19/2025 4:51 PM	22:33	6.28 pH	12.88 °C	2.78 mS/cm		25.28 NTU	-22.2 mV	15.07 ft	100.00 ml/min
5/19/2025 4:53 PM	24:36	6.28 pH	12.85 °C	2.72 mS/cm		27.76 NTU	-18.4 mV	15.07 ft	100.00 ml/min
5/19/2025 4:55 PM	26:39	6.25 pH	12.84 °C	2.73 mS/cm		31.98 NTU	-13.6 mV	15.42 ft	100.00 ml/min
5/19/2025 4:57 PM	28:42	6.23 pH	12.85 °C	2.70 mS/cm		40.63 NTU	-9.8 mV	15.42 ft	100.00 ml/min
5/19/2025 4:59 PM	30:45	6.21 pH	12.84 °C	2.68 mS/cm		58.34 NTU	-7.1 mV	15.42 ft	100.00 ml/min
5/19/2025 5:01 PM	32:48	6.20 pH	12.86 °C	2.65 mS/cm		77.14 NTU	-5.3 mV	15.42 ft	100.00 ml/min
5/19/2025 5:03 PM	34:51	6.18 pH	12.88 °C	2.67 mS/cm		146.35 NTU	-4.5 mV	15.77 ft	100.00 ml/min
5/19/2025 5:06 PM	36:54	6.17 pH	12.86 °C	2.67 mS/cm		157.89 NTU	-3.6 mV	15.77 ft	100.00 ml/min
5/19/2025 5:09 PM	40:39	6.18 pH	13.24 °C	2.84 mS/cm		1.41 NTU	-43.6 mV	16.02 ft	100.00 ml/min
5/19/2025 5:11 PM	42:42	6.15 pH	13.00 °C	2.80 mS/cm		1.03 NTU	-24.6 mV	16.02 ft	100.00 ml/min
5/19/2025 5:13 PM	44:45	6.14 pH	12.89 °C	2.71 mS/cm		2.98 NTU	-17.3 mV	16.02 ft	100.00 ml/min
5/19/2025 5:15 PM	46:48	6.13 pH	12.90 °C	2.77 mS/cm		7.19 NTU	-13.5 mV	16.28 ft	100.00 ml/min
5/19/2025 5:17 PM	48:05	6.13 pH	12.90 °C	2.78 mS/cm		34.63 NTU	-12.3 mV	16.28 ft	100.00 ml/min
5/19/2025 5:19 PM	50:08	6.12 pH	12.91 °C	2.77 mS/cm		55.44 NTU	-10.5 mV	16.28 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW19-GW-0525	1L plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 5/19/2025 3:47:52 PM
Project: Neal North MW-21
Operator Name: Paige Richards

Location Name: MW-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 16.6 ft Total Depth: 31.6 ft Initial Depth to Water: 15.89 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 27.3 ft Pump Intake From TOC: 29.3 ft Estimated Total Volume Pumped: 2016.667 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.73 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 1615

Water visually clear

Weather Conditions:
Cloudy, 61 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/19/2025 3:47 PM	00:00	6.66 pH	13.28 °C	2.90 mS/cm		4.39 NTU	40.1 mV	15.89 ft	400.00 ml/min
5/19/2025 3:49 PM	02:01	6.40 pH	12.79 °C	2.87 mS/cm		0.00 NTU	49.9 mV	15.89 ft	150.00 ml/min
5/19/2025 3:51 PM	04:02	6.38 pH	12.85 °C	2.87 mS/cm		1.11 NTU	52.3 mV	16.30 ft	150.00 ml/min
5/19/2025 3:53 PM	06:03	6.37 pH	12.81 °C	2.87 mS/cm		0.77 NTU	53.5 mV	16.46 ft	150.00 ml/min
5/19/2025 3:55 PM	08:04	6.36 pH	12.75 °C	2.87 mS/cm		0.93 NTU	54.5 mV	16.46 ft	150.00 ml/min
5/19/2025 3:57 PM	10:05	6.35 pH	12.75 °C	2.86 mS/cm		0.93 NTU	55.4 mV	16.62 ft	150.00 ml/min

Samples

Sample ID:	Description:
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MW21-GW-0525	1L plastic unpreserved x1 250mL plastic unpreserved x1 250mL plastic w/ nitric x1
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Low-Flow Test Report:

Test Date / Time: 5/20/2025 8:15:42 AM
Project: Neal North MW-57R
Operator Name: Paige Richards

Location Name: MW-57R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 32.8 ft Total Depth: 47.8 ft Initial Depth to Water: 37.74 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 45.3 ft Pump Intake From TOC: 47.3 ft Estimated Total Volume Pumped: 4299.167 ml Flow Cell Volume: 130 ml Final Flow Rate: 175 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 0900

Water visually clear

Weather Conditions:
Cloudy, rain, 53 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/20/2025 8:15 AM	00:00	6.94 pH	13.03 °C	1.60 mS/cm		134.71 NTU	-17.4 mV	37.74 ft	175.00 ml/min
5/20/2025 8:17 AM	02:14	6.89 pH	12.58 °C	1.69 mS/cm		57.68 NTU	-114.8 mV	37.74 ft	175.00 ml/min
5/20/2025 8:20 AM	04:28	6.87 pH	12.47 °C	1.68 mS/cm		44.18 NTU	-123.5 mV	37.74 ft	175.00 ml/min
5/20/2025 8:22 AM	06:42	6.86 pH	12.43 °C	1.67 mS/cm		24.69 NTU	-126.7 mV	37.76 ft	175.00 ml/min
5/20/2025 8:24 AM	08:56	6.84 pH	12.42 °C	1.66 mS/cm		39.09 NTU	-128.4 mV	37.76 ft	175.00 ml/min
5/20/2025 8:26 AM	11:10	6.83 pH	12.40 °C	1.65 mS/cm		28.07 NTU	-129.4 mV	37.76 ft	175.00 ml/min
5/20/2025 8:29 AM	13:24	6.82 pH	12.39 °C	1.65 mS/cm		31.59 NTU	-130.0 mV	37.76 ft	175.00 ml/min
5/20/2025 8:31 AM	15:38	6.81 pH	12.44 °C	1.65 mS/cm		20.43 NTU	-130.4 mV	37.76 ft	175.00 ml/min
5/20/2025 8:33 AM	17:52	6.80 pH	12.45 °C	1.64 mS/cm		13.12 NTU	-130.5 mV	37.76 ft	175.00 ml/min
5/20/2025 8:35 AM	20:06	6.79 pH	12.48 °C	1.64 mS/cm		8.27 NTU	-130.5 mV	37.76 ft	175.00 ml/min

5/20/2025 8:38 AM	22:20	6.79 pH	12.49 °C	1.64 mS/cm		7.60 NTU	-130.3 mV	37.76 ft	175.00 ml/min
5/20/2025 8:40 AM	24:34	6.78 pH	12.48 °C	1.64 mS/cm		4.24 NTU	-130.2 mV	37.76 ft	175.00 ml/min

Samples

Sample ID:	Description:
MW57R-GW-0525	1L plastic unpreserved x1
DP01-GW-0525	

Low-Flow Test Report:

Test Date / Time: 5/19/2025 2:26:41 PM
Project: Neal North MW-59S
Operator Name: Paige Richards

Location Name: MW-59S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 25.3 ft Total Depth: 40.3 ft Initial Depth to Water: 33.17 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 37.8 ft Pump Intake From TOC: 39.8 ft Estimated Total Volume Pumped: 2580 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 1530

Water visually clear, possible sediment/flecks

Weather Conditions:
Cloudy, 60 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/19/2025 2:26 PM	00:00	6.25 pH	14.09 °C	1.17 mS/cm		83.64 NTU	15.8 mV	33.17 ft	100.00 ml/min
5/19/2025 2:28 PM	02:09	6.50 pH	13.53 °C	1.13 mS/cm		34.22 NTU	-81.3 mV	33.17 ft	100.00 ml/min
5/19/2025 2:30 PM	04:18	6.62 pH	13.34 °C	1.12 mS/cm		19.18 NTU	-109.6 mV	33.17 ft	100.00 ml/min
5/19/2025 2:33 PM	06:27	6.65 pH	13.35 °C	1.11 mS/cm		17.32 NTU	-116.2 mV	33.17 ft	100.00 ml/min
5/19/2025 2:35 PM	08:36	6.65 pH	13.27 °C	1.11 mS/cm		12.92 NTU	-119.1 mV	33.17 ft	100.00 ml/min
5/19/2025 2:37 PM	10:45	6.64 pH	13.23 °C	1.11 mS/cm		9.89 NTU	-119.9 mV	33.17 ft	100.00 ml/min
5/19/2025 2:39 PM	12:54	6.64 pH	13.26 °C	1.11 mS/cm		13.32 NTU	-120.2 mV	33.17 ft	100.00 ml/min
5/19/2025 2:41 PM	15:03	6.64 pH	13.25 °C	1.11 mS/cm		16.86 NTU	-119.9 mV	33.17 ft	100.00 ml/min
5/19/2025 2:43 PM	17:12	6.63 pH	13.28 °C	1.11 mS/cm		6.40 NTU	-119.5 mV	33.17 ft	100.00 ml/min
5/19/2025 2:46 PM	19:21	6.63 pH	13.28 °C	1.11 mS/cm		8.33 NTU	-118.9 mV	33.17 ft	100.00 ml/min

5/19/2025 2:48 PM	21:30	6.63 pH	13.26 °C	1.11 mS/cm		10.81 NTU	-118.9 mV	33.17 ft	100.00 ml/min
5/19/2025 2:50 PM	23:39	6.63 pH	13.29 °C	1.11 mS/cm		6.41 NTU	-118.2 mV	33.17 ft	100.00 ml/min
5/19/2025 2:52 PM	25:48	6.63 pH	13.28 °C	1.11 mS/cm		4.59 NTU	-118.1 mV	33.17 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW59S-GW-0525	1L plastic unpreserved x1 250mL plastic w/ nitric x1
MS/MSD	

Low-Flow Test Report:

Test Date / Time: 5/19/2025 1:51:42 PM
Project: Neal North MW-60S
Operator Name: Paige Richards

Location Name: MW-60S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 30.1 ft Total Depth: 45.1 ft Initial Depth to Water: 38.22 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 42.6 ft Pump Intake From TOC: 44.6 ft Estimated Total Volume Pumped: 3300 ml Flow Cell Volume: 130 ml Final Flow Rate: 300 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 1410

Water visually clear with some reddish flecks

Weather Conditions:
Cloudy, rain, 59 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/19/2025 1:51 PM	00:00	6.31 pH	13.86 °C	1.02 mS/cm		19.49 NTU	0.3 mV	38.22 ft	300.00 ml/min
5/19/2025 1:53 PM	02:12	6.61 pH	12.78 °C	0.98 mS/cm		3.69 NTU	-99.0 mV	38.22 ft	300.00 ml/min
5/19/2025 1:56 PM	04:24	6.65 pH	12.59 °C	0.98 mS/cm		6.41 NTU	-107.4 mV	38.22 ft	300.00 ml/min
5/19/2025 1:58 PM	06:36	6.64 pH	12.48 °C	0.97 mS/cm		1.48 NTU	-105.6 mV	38.22 ft	300.00 ml/min
5/19/2025 2:00 PM	08:48	6.66 pH	12.59 °C	0.97 mS/cm		1.98 NTU	-105.7 mV	38.22 ft	300.00 ml/min
5/19/2025 2:02 PM	11:00	6.65 pH	12.56 °C	0.97 mS/cm		0.68 NTU	-101.7 mV	38.22 ft	300.00 ml/min

Samples

Sample ID:	Description:
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MW60S-GW-0525	1L plastic unpreserved x1
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Low-Flow Test Report:

Test Date / Time: 5/20/2025 10:08:25 AM
Project: Neal North MW-231SR
Operator Name: Paige Richards

Location Name: MW-231SR Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 14.07 ft Total Depth: 29.07 ft Initial Depth to Water: 23.2 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 26.57 ft Pump Intake From TOC: 28.57 ft Estimated Total Volume Pumped: 10083.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1170039
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Test Notes:
Sample time: 1110

Water visually clear

Weather Conditions:
Cloudy, 53 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
5/20/2025 10:08 AM	00:00	6.77 pH	13.43 °C	1.15 mS/cm		35.33 NTU	8.6 mV	23.20 ft	200.00 ml/min
5/20/2025 10:10 AM	02:01	6.72 pH	12.80 °C	1.21 mS/cm		87.51 NTU	-49.3 mV	23.22 ft	200.00 ml/min
5/20/2025 10:12 AM	04:02	6.71 pH	12.68 °C	1.21 mS/cm		63.59 NTU	-62.3 mV	23.22 ft	200.00 ml/min
5/20/2025 10:14 AM	06:03	6.70 pH	12.61 °C	1.21 mS/cm		55.78 NTU	-67.7 mV	23.22 ft	200.00 ml/min
5/20/2025 10:16 AM	08:04	6.70 pH	12.54 °C	1.21 mS/cm		32.30 NTU	-70.3 mV	23.22 ft	200.00 ml/min
5/20/2025 10:18 AM	10:05	6.69 pH	12.52 °C	1.20 mS/cm		26.38 NTU	-71.3 mV	23.22 ft	200.00 ml/min
5/20/2025 10:20 AM	12:06	6.68 pH	12.54 °C	1.20 mS/cm		18.55 NTU	-72.2 mV	23.22 ft	200.00 ml/min
5/20/2025 10:22 AM	14:07	6.67 pH	12.54 °C	1.19 mS/cm		18.54 NTU	-72.6 mV	23.22 ft	200.00 ml/min
5/20/2025 10:24 AM	16:08	6.67 pH	12.57 °C	1.19 mS/cm		44.67 NTU	-73.5 mV	23.22 ft	200.00 ml/min
5/20/2025 10:26 AM	18:09	6.67 pH	12.51 °C	1.19 mS/cm		42.31 NTU	-73.0 mV	23.22 ft	200.00 ml/min

5/20/2025 10:28 AM	20:10	6.67 pH	12.53 °C	1.18 mS/cm		37.26 NTU	-72.8 mV	23.22 ft	200.00 ml/min
5/20/2025 10:30 AM	22:11	6.66 pH	12.54 °C	1.18 mS/cm		31.66 NTU	-72.0 mV	23.22 ft	200.00 ml/min
5/20/2025 10:32 AM	24:12	6.66 pH	12.53 °C	1.18 mS/cm		27.72 NTU	-71.3 mV	23.22 ft	200.00 ml/min
5/20/2025 10:34 AM	26:13	6.66 pH	12.51 °C	1.18 mS/cm		24.07 NTU	-70.6 mV	23.22 ft	200.00 ml/min
5/20/2025 10:36 AM	28:14	6.66 pH	12.48 °C	1.17 mS/cm		21.63 NTU	-70.0 mV	23.22 ft	200.00 ml/min
5/20/2025 10:38 AM	30:15	6.66 pH	12.49 °C	1.17 mS/cm		21.87 NTU	-69.4 mV	23.22 ft	200.00 ml/min
5/20/2025 10:40 AM	32:16	6.66 pH	12.52 °C	1.17 mS/cm		19.15 NTU	-68.7 mV	23.22 ft	200.00 ml/min
5/20/2025 10:42 AM	34:17	6.67 pH	12.49 °C	1.17 mS/cm		15.15 NTU	-68.5 mV	23.22 ft	200.00 ml/min
5/20/2025 10:44 AM	36:18	6.66 pH	12.49 °C	1.17 mS/cm		10.03 NTU	-68.4 mV	23.22 ft	200.00 ml/min
5/20/2025 10:46 AM	38:19	6.66 pH	12.52 °C	1.17 mS/cm		13.69 NTU	-67.6 mV	23.22 ft	200.00 ml/min
5/20/2025 10:48 AM	40:20	6.66 pH	12.60 °C	1.17 mS/cm		12.06 NTU	-67.1 mV	23.22 ft	200.00 ml/min
5/20/2025 10:50 AM	42:21	6.67 pH	12.67 °C	1.16 mS/cm		7.52 NTU	-67.2 mV	23.22 ft	200.00 ml/min
5/20/2025 10:52 AM	44:22	6.66 pH	12.67 °C	1.16 mS/cm		10.38 NTU	-66.6 mV	23.22 ft	200.00 ml/min
5/20/2025 10:54 AM	46:23	6.66 pH	12.71 °C	1.16 mS/cm		6.93 NTU	-65.4 mV	23.22 ft	200.00 ml/min
5/20/2025 10:56 AM	48:24	6.66 pH	12.73 °C	1.16 mS/cm		8.06 NTU	-65.0 mV	23.22 ft	200.00 ml/min
5/20/2025 10:58 AM	50:25	6.66 pH	12.75 °C	1.16 mS/cm		3.67 NTU	-65.3 mV	23.22 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW231SR-GW-0525	1L plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 9/19/2025 11:08:22 AM
Project: Neal North MW-5R
Operator Name: Paige Richards

Location Name: MW-5R Well Diameter: 2 in Casing Type: PVC Screen Length: 25 ft Top of Screen: 11.64 ft Total Depth: 36.7 ft Initial Depth to Water: 23.61 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 32.4 ft Pump Intake From TOC: 34.4 ft Estimated Total Volume Pumped: 4687.5 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time: 1215

Water visually clear

Weather Conditions:
Cloudy, 66 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 11:08 AM	00:00	7.33 pH	16.12 °C	0.86 mS/cm	9.27 mg/L	54.08 NTU	-14.3 mV	23.61 ft	150.00 ml/min
9/19/2025 11:10 AM	02:05	7.27 pH	14.88 °C	0.86 mS/cm	2.14 mg/L	46.58 NTU	-102.3 mV	23.61 ft	150.00 ml/min
9/19/2025 11:12 AM	04:10	7.29 pH	14.55 °C	0.85 mS/cm	0.77 mg/L	29.67 NTU	-119.2 mV	23.61 ft	150.00 ml/min
9/19/2025 11:14 AM	06:15	7.28 pH	14.39 °C	0.85 mS/cm	0.48 mg/L	37.95 NTU	-125.5 mV	23.61 ft	150.00 ml/min
9/19/2025 11:16 AM	08:20	7.27 pH	14.42 °C	0.85 mS/cm	0.40 mg/L	28.92 NTU	-128.6 mV	23.61 ft	150.00 ml/min
9/19/2025 11:18 AM	10:25	7.26 pH	14.44 °C	0.85 mS/cm	0.35 mg/L	17.17 NTU	-130.5 mV	23.61 ft	150.00 ml/min
9/19/2025 11:20 AM	12:30	7.25 pH	14.40 °C	0.86 mS/cm	0.33 mg/L	30.65 NTU	-131.3 mV	23.61 ft	150.00 ml/min
9/19/2025 11:22 AM	14:35	7.24 pH	14.42 °C	0.85 mS/cm	0.32 mg/L	19.54 NTU	-131.8 mV	23.61 ft	150.00 ml/min
9/19/2025 11:25 AM	16:40	7.23 pH	14.50 °C	0.85 mS/cm	0.31 mg/L	9.31 NTU	-132.5 mV	23.61 ft	150.00 ml/min
9/19/2025 11:27 AM	18:45	7.22 pH	14.42 °C	0.85 mS/cm	0.29 mg/L	12.81 NTU	-132.9 mV	23.61 ft	150.00 ml/min

9/19/2025 11:29 AM	20:50	7.21 pH	14.46 °C	0.85 mS/cm	0.25 mg/L	11.09 NTU	-132.8 mV	23.61 ft	150.00 ml/min
9/19/2025 11:31 AM	22:55	7.21 pH	14.43 °C	0.85 mS/cm	0.23 mg/L	10.20 NTU	-133.0 mV	23.61 ft	150.00 ml/min
9/19/2025 11:33 AM	25:00	7.19 pH	14.40 °C	0.85 mS/cm	0.21 mg/L	9.36 NTU	-133.1 mV	23.61 ft	150.00 ml/min
9/19/2025 11:35 AM	27:05	7.19 pH	14.44 °C	0.85 mS/cm	0.22 mg/L	5.39 NTU	-132.8 mV	23.61 ft	150.00 ml/min
9/19/2025 11:37 AM	29:10	7.18 pH	14.42 °C	0.85 mS/cm	0.22 mg/L	8.99 NTU	-132.7 mV	23.61 ft	150.00 ml/min
9/19/2025 11:39 AM	31:15	7.18 pH	14.44 °C	0.85 mS/cm	0.22 mg/L	4.38 NTU	-132.7 mV	23.61 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW5R-GW-0925	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Low-Flow Test Report:

Test Date / Time: 9/19/2025 10:36:06 AM
Project: Neal North MW-11R
Operator Name: Thao Larson

Location Name: MW-11R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 26.1 ft Total Depth: 41.1 ft Initial Depth to Water: 32.16 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 38.6 ft Pump Intake From TOC: 40.6 ft Estimated Total Volume Pumped: 6020 ml Flow Cell Volume: 130 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.49 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1100

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 10:36 AM	00:00	7.281 pH	13.45 °C	0.791 mS/cm	1.951 mg/L	4.893 NTU	43.3 mV	32.16 ft	400.0 ml/min
9/19/2025 10:38 AM	02:09	7.192 pH	12.98 °C	0.774 mS/cm	1.072 mg/L	2.977 NTU	60.8 mV	32.65 ft	400.0 ml/min
9/19/2025 10:40 AM	04:18	7.252 pH	12.81 °C	0.771 mS/cm	1.049 mg/L	2.627 NTU	63.1 mV	32.65 ft	400.0 ml/min
9/19/2025 10:42 AM	06:27	7.273 pH	12.79 °C	0.768 mS/cm	1.019 mg/L	2.532 NTU	65.8 mV	32.65 ft	400.0 ml/min
9/19/2025 10:44 AM	08:36	7.275 pH	12.84 °C	0.765 mS/cm	1.013 mg/L	2.531 NTU	68.4 mV	32.65 ft	400.0 ml/min
9/19/2025 10:46 AM	10:45	7.276 pH	12.75 °C	0.766 mS/cm	1.015 mg/L	2.461 NTU	70.9 mV	32.65 ft	400.0 ml/min
9/19/2025 10:49 AM	12:54	7.273 pH	12.81 °C	0.766 mS/cm	0.959 mg/L	2.427 NTU	73.1 mV	32.65 ft	400.0 ml/min
9/19/2025 10:51 AM	15:03	7.273 pH	12.78 °C	0.766 mS/cm	0.963 mg/L	2.383 NTU	74.8 mV	32.65 ft	400.0 ml/min

Samples

Sample ID:	Description:
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MW11R-GW-0925	APP III
DP04-GW-0925	APP III

Low-Flow Test Report:

Test Date / Time: 9/17/2025 2:01:51 PM
Project: Neal North MW-13R
Operator Name: Thao Larson

Location Name: MW-13R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 23.2 ft Total Depth: 38.2 ft Initial Depth to Water: 29.05 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 35.7 ft Pump Intake From TOC: 37.7 ft Estimated Total Volume Pumped: 23706.666 ml Flow Cell Volume: 130 ml Final Flow Rate: 400 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1515

Weather Conditions:
Overcast 73°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/17/2025 2:01 PM	00:00	7.106 pH	16.23 °C	0.874 mS/cm	4.247 mg/L	2,190 NTU	-57.3 mV	29.05 ft	400.0 ml/min
9/17/2025 2:03 PM	02:07	7.047 pH	13.68 °C	0.857 mS/cm	0.572 mg/L	361.9 NTU	-85.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:06 PM	04:14	7.044 pH	13.74 °C	0.859 mS/cm	0.372 mg/L	86.28 NTU	-89.1 mV	29.05 ft	400.0 ml/min
9/17/2025 2:08 PM	06:21	7.056 pH	13.47 °C	0.871 mS/cm	0.310 mg/L	31.37 NTU	-91.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:10 PM	08:28	7.045 pH	13.55 °C	0.873 mS/cm	0.267 mg/L	37.56 NTU	-91.4 mV	29.05 ft	400.0 ml/min
9/17/2025 2:12 PM	10:35	7.040 pH	13.55 °C	0.874 mS/cm	0.232 mg/L	32.12 NTU	-92.1 mV	29.05 ft	400.0 ml/min
9/17/2025 2:14 PM	12:42	7.039 pH	13.53 °C	0.871 mS/cm	0.209 mg/L	16.05 NTU	-92.9 mV	29.05 ft	400.0 ml/min
9/17/2025 2:16 PM	14:49	7.036 pH	13.58 °C	0.876 mS/cm	0.190 mg/L	41.33 NTU	-93.1 mV	29.05 ft	400.0 ml/min
9/17/2025 2:18 PM	16:56	7.036 pH	13.49 °C	0.877 mS/cm	0.179 mg/L	13.56 NTU	-93.6 mV	29.05 ft	400.0 ml/min
9/17/2025 2:20 PM	19:03	7.041 pH	13.51 °C	0.879 mS/cm	0.161 mg/L	35.55 NTU	-94.2 mV	29.05 ft	400.0 ml/min
9/17/2025 2:23 PM	21:10	7.049 pH	13.43 °C	0.876 mS/cm	0.149 mg/L	33.81 NTU	-95.2 mV	29.05 ft	400.0 ml/min

9/17/2025 2:25 PM	23:17	7.054 pH	13.47 °C	0.879 mS/cm	0.138 mg/L	21.88 NTU	-96.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:27 PM	25:24	7.067 pH	13.41 °C	0.881 mS/cm	0.407 mg/L	18.56 NTU	-91.6 mV	29.05 ft	400.0 ml/min
9/17/2025 2:29 PM	27:31	7.078 pH	13.47 °C	0.881 mS/cm	0.155 mg/L	12.22 NTU	-94.3 mV	29.05 ft	400.0 ml/min
9/17/2025 2:31 PM	29:38	7.093 pH	13.46 °C	0.880 mS/cm	0.134 mg/L	11.76 NTU	-95.9 mV	29.05 ft	400.0 ml/min
9/17/2025 2:33 PM	31:45	7.104 pH	13.44 °C	0.882 mS/cm	0.113 mg/L	11.74 NTU	-97.2 mV	29.05 ft	400.0 ml/min
9/17/2025 2:35 PM	33:52	7.111 pH	13.54 °C	0.883 mS/cm	0.103 mg/L	10.08 NTU	-97.9 mV	29.05 ft	400.0 ml/min
9/17/2025 2:37 PM	35:59	7.119 pH	13.42 °C	0.883 mS/cm	0.100 mg/L	9.746 NTU	-98.8 mV	29.05 ft	400.0 ml/min
9/17/2025 2:39 PM	38:06	7.125 pH	13.46 °C	0.885 mS/cm	0.094 mg/L	11.24 NTU	-99.3 mV	29.05 ft	400.0 ml/min
9/17/2025 2:42 PM	40:13	7.128 pH	13.37 °C	0.887 mS/cm	0.090 mg/L	9.698 NTU	-99.5 mV	29.05 ft	400.0 ml/min
9/17/2025 2:44 PM	42:20	7.132 pH	13.43 °C	0.883 mS/cm	0.085 mg/L	9.558 NTU	-100.1 mV	29.05 ft	400.0 ml/min
9/17/2025 2:46 PM	44:27	7.139 pH	13.40 °C	0.882 mS/cm	0.081 mg/L	8.571 NTU	-101.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:48 PM	46:34	7.137 pH	13.40 °C	0.887 mS/cm	0.076 mg/L	12.93 NTU	-101.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:50 PM	48:41	7.143 pH	13.42 °C	0.883 mS/cm	0.075 mg/L	6.220 NTU	-101.4 mV	29.05 ft	400.0 ml/min
9/17/2025 2:52 PM	50:48	7.149 pH	13.40 °C	0.884 mS/cm	0.072 mg/L	7.914 NTU	-102.1 mV	29.05 ft	400.0 ml/min
9/17/2025 2:54 PM	52:55	7.151 pH	13.49 °C	0.883 mS/cm	0.069 mg/L	6.693 NTU	-102.0 mV	29.05 ft	400.0 ml/min
9/17/2025 2:56 PM	55:02	7.153 pH	13.42 °C	0.884 mS/cm	0.068 mg/L	5.735 NTU	-102.4 mV	29.05 ft	400.0 ml/min
9/17/2025 2:59 PM	57:09	7.151 pH	13.43 °C	0.890 mS/cm	0.068 mg/L	6.053 NTU	-102.2 mV	29.05 ft	400.0 ml/min
9/17/2025 3:01 PM	59:16	7.161 pH	13.37 °C	0.882 mS/cm	0.064 mg/L	4.705 NTU	-103.2 mV	29.05 ft	400.0 ml/min

Samples

Sample ID:	Description:
MW13R-GW-0925	Background
MW13R-GW-0925 MS	Background
MW13R-GW-0925 MSD	Background

Low-Flow Test Report:

Test Date / Time: 9/19/2025 9:28:36 AM
Project: Neal North MW-19
Operator Name: Thao Larson

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.9 ft Total Depth: 28.9 ft Initial Depth to Water: 12.44 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 22.6 ft Pump Intake From TOC: 24.6 ft Estimated Total Volume Pumped: 3933.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 3.93 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1000

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 9:28 AM	00:00	6.718 pH	14.23 °C	3.232 mS/cm	3.941 mg/L	16.59 NTU	-5.1 mV	12.44 ft	200.0 ml/min
9/19/2025 9:30 AM	01:58	6.638 pH	13.65 °C	3.252 mS/cm	0.740 mg/L	6.289 NTU	-20.6 mV	13.16 ft	200.0 ml/min
9/19/2025 9:32 AM	03:56	6.681 pH	13.40 °C	3.117 mS/cm	0.356 mg/L	3.915 NTU	-33.5 mV	13.75 ft	200.0 ml/min
9/19/2025 9:34 AM	05:54	6.720 pH	13.38 °C	2.971 mS/cm	0.258 mg/L	3.470 NTU	-41.7 mV	14.31 ft	200.0 ml/min
9/19/2025 9:36 AM	07:52	6.737 pH	13.43 °C	2.848 mS/cm	0.241 mg/L	3.134 NTU	-43.2 mV	14.82 ft	200.0 ml/min
9/19/2025 9:38 AM	09:50	6.737 pH	13.37 °C	2.737 mS/cm	0.230 mg/L	3.000 NTU	-38.8 mV	14.82 ft	200.0 ml/min
9/19/2025 9:40 AM	11:48	6.727 pH	13.37 °C	2.636 mS/cm	0.221 mg/L	3.067 NTU	-29.5 mV	15.30 ft	200.0 ml/min
9/19/2025 9:42 AM	13:46	6.709 pH	13.47 °C	2.561 mS/cm	0.217 mg/L	3.006 NTU	-14.4 mV	15.56 ft	200.0 ml/min
9/19/2025 9:44 AM	15:44	6.694 pH	13.54 °C	2.502 mS/cm	0.220 mg/L	2.613 NTU	-3.6 mV	15.83 ft	200.0 ml/min
9/19/2025 9:46 AM	17:42	6.689 pH	13.56 °C	2.466 mS/cm	0.219 mg/L	2.568 NTU	-0.5 mV	16.10 ft	200.0 ml/min
9/19/2025 9:48 AM	19:40	6.689 pH	13.65 °C	2.432 mS/cm	0.222 mg/L	2.525 NTU	0.2 mV	16.37 ft	200.0 ml/min

Samples

Sample ID:	Description:
MW19-GW-0925	APP III &IV

Low-Flow Test Report:

Test Date / Time: 9/19/2025 8:40:36 AM
Project: Neal North MW-21
Operator Name: Thao Larson

Location Name: MW-21 Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 16.6 ft Total Depth: 31.6 ft Initial Depth to Water: 18.66 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 27.3 ft Pump Intake From TOC: 29.3 ft Estimated Total Volume Pumped: 4033.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.7 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 0910

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 8:40 AM	00:00	6.807 pH	13.23 °C	2.791 mS/cm	3.782 mg/L	2.949 NTU	41.9 mV	18.66 ft	400.0 ml/min
9/19/2025 8:42 AM	02:01	6.711 pH	12.17 °C	2.808 mS/cm	0.669 mg/L	2.628 NTU	78.8 mV	19.34 ft	200.0 ml/min
9/19/2025 8:44 AM	04:02	6.705 pH	12.50 °C	2.851 mS/cm	0.443 mg/L	2.436 NTU	92.4 mV	19.53 ft	200.0 ml/min
9/19/2025 8:46 AM	06:03	6.703 pH	12.65 °C	2.848 mS/cm	0.255 mg/L	2.424 NTU	100.5 mV	19.53 ft	200.0 ml/min
9/19/2025 8:48 AM	08:04	6.705 pH	12.67 °C	2.848 mS/cm	0.395 mg/L	2.313 NTU	106.3 mV	19.70 ft	200.0 ml/min
9/19/2025 8:50 AM	10:05	6.706 pH	12.61 °C	2.826 mS/cm	0.488 mg/L	2.328 NTU	110.7 mV	19.83 ft	200.0 ml/min
9/19/2025 8:52 AM	12:06	6.716 pH	12.66 °C	2.781 mS/cm	0.533 mg/L	2.341 NTU	113.9 mV	19.83 ft	200.0 ml/min
9/19/2025 8:54 AM	14:07	6.733 pH	12.66 °C	2.720 mS/cm	0.502 mg/L	2.318 NTU	116.2 mV	19.97 ft	200.0 ml/min
9/19/2025 8:56 AM	16:08	6.734 pH	12.63 °C	2.698 mS/cm	0.488 mg/L	2.282 NTU	118.5 mV	20.15 ft	200.0 ml/min
9/19/2025 8:58 AM	18:09	6.736 pH	12.65 °C	2.689 mS/cm	0.474 mg/L	2.236 NTU	120.4 mV	20.36 ft	200.0 ml/min

Samples

Sample ID:	Description:
MW21-GW-0925	APP III & IV

Low-Flow Test Report:

Test Date / Time: 9/19/2025 11:18:27 AM
Project: Neal North MW-23R
Operator Name: Thao Larson

Location Name: MW-23R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 26.3 ft Total Depth: 41.3 ft Initial Depth to Water: 33.01 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 38.8 ft Pump Intake From TOC: 40.8 ft Estimated Total Volume Pumped: 8775 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1230

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 11:18 AM	00:00	7.055 pH	16.11 °C	1.355 mS/cm	5.708 mg/L	190.8 NTU	-49.7 mV	33.01 ft	150.0 ml/min
9/19/2025 11:20 AM	02:10	7.102 pH	14.59 °C	1.515 mS/cm	2.469 mg/L	31.46 NTU	-106.2 mV	33.03 ft	150.0 ml/min
9/19/2025 11:22 AM	04:20	7.153 pH	14.25 °C	1.454 mS/cm	1.995 mg/L	27.73 NTU	-112.6 mV	33.03 ft	150.0 ml/min
9/19/2025 11:24 AM	06:30	7.172 pH	14.27 °C	1.442 mS/cm	1.955 mg/L	16.37 NTU	-115.0 mV	33.03 ft	150.0 ml/min
9/19/2025 11:27 AM	08:40	7.185 pH	14.41 °C	1.395 mS/cm	1.979 mg/L	13.66 NTU	-115.4 mV	33.03 ft	150.0 ml/min
9/19/2025 11:29 AM	10:50	7.216 pH	14.31 °C	1.262 mS/cm	1.938 mg/L	9.296 NTU	-116.9 mV	33.03 ft	150.0 ml/min
9/19/2025 11:31 AM	13:00	7.222 pH	14.22 °C	1.401 mS/cm	1.899 mg/L	5.933 NTU	-117.2 mV	33.03 ft	150.0 ml/min
9/19/2025 11:33 AM	15:10	7.208 pH	14.33 °C	1.398 mS/cm	1.911 mg/L	5.120 NTU	-115.6 mV	33.03 ft	150.0 ml/min
9/19/2025 11:35 AM	17:20	7.229 pH	14.28 °C	1.476 mS/cm	1.846 mg/L	4.954 NTU	-116.8 mV	33.03 ft	150.0 ml/min
9/19/2025 11:37 AM	19:30	7.233 pH	14.34 °C	1.327 mS/cm	1.958 mg/L	4.786 NTU	-116.6 mV	33.03 ft	150.0 ml/min
9/19/2025 11:40 AM	21:40	7.239 pH	14.34 °C	1.412 mS/cm	1.933 mg/L	6.009 NTU	-116.3 mV	33.03 ft	150.0 ml/min

9/19/2025 11:42 AM	23:50	7.236 pH	14.31 °C	1.319 mS/cm	1.995 mg/L	5.612 NTU	-115.7 mV	33.03 ft	150.0 ml/min
9/19/2025 11:44 AM	26:00	7.227 pH	14.34 °C	1.377 mS/cm	1.955 mg/L	5.249 NTU	-114.7 mV	33.03 ft	150.0 ml/min
9/19/2025 11:46 AM	28:10	7.240 pH	14.21 °C	1.314 mS/cm	1.960 mg/L	4.651 NTU	-114.7 mV	33.03 ft	150.0 ml/min
9/19/2025 11:48 AM	30:20	7.236 pH	14.16 °C	1.429 mS/cm	1.992 mg/L	5.507 NTU	-114.1 mV	33.03 ft	150.0 ml/min
9/19/2025 11:50 AM	32:30	7.229 pH	14.24 °C	1.416 mS/cm	1.966 mg/L	5.295 NTU	-113.3 mV	33.03 ft	150.0 ml/min
9/19/2025 11:53 AM	34:40	7.247 pH	14.25 °C	1.325 mS/cm	2.009 mg/L	4.056 NTU	-114.1 mV	33.03 ft	150.0 ml/min
9/19/2025 11:55 AM	36:50	7.242 pH	14.21 °C	1.140 mS/cm	1.958 mg/L	3.881 NTU	-113.6 mV	33.03 ft	150.0 ml/min
9/19/2025 11:57 AM	39:00	7.225 pH	14.27 °C	1.184 mS/cm	1.955 mg/L	4.529 NTU	-112.0 mV	33.03 ft	150.0 ml/min
9/19/2025 11:59 AM	41:10	7.242 pH	14.13 °C	1.222 mS/cm	1.954 mg/L	5.190 NTU	-112.4 mV	33.03 ft	150.0 ml/min
9/19/2025 12:01 PM	43:20	7.234 pH	14.17 °C	1.374 mS/cm	1.939 mg/L	7.575 NTU	-111.8 mV	33.03 ft	150.0 ml/min
9/19/2025 12:03 PM	45:30	7.219 pH	14.20 °C	1.247 mS/cm	1.857 mg/L	4.671 NTU	-111.1 mV	33.03 ft	150.0 ml/min
9/19/2025 12:06 PM	47:40	7.240 pH	14.16 °C	1.301 mS/cm	1.801 mg/L	5.362 NTU	-112.3 mV	33.03 ft	150.0 ml/min
9/19/2025 12:08 PM	49:50	7.210 pH	14.27 °C	1.374 mS/cm	1.251 mg/L	4.585 NTU	-110.3 mV	33.03 ft	150.0 ml/min
9/19/2025 12:10 PM	52:00	7.179 pH	14.36 °C	1.369 mS/cm	0.912 mg/L	4.255 NTU	-110.1 mV	33.03 ft	150.0 ml/min
9/19/2025 12:12 PM	54:10	7.209 pH	14.43 °C	1.363 mS/cm	0.766 mg/L	4.603 NTU	-112.5 mV	33.03 ft	150.0 ml/min
9/19/2025 12:14 PM	56:20	7.202 pH	14.45 °C	1.365 mS/cm	0.683 mg/L	5.282 NTU	-112.6 mV	33.03 ft	150.0 ml/min
9/19/2025 12:16 PM	58:30	7.217 pH	14.48 °C	1.360 mS/cm	0.596 mg/L	5.953 NTU	-114.1 mV	33.03 ft	150.0 ml/min

Samples

Sample ID:	Description:
MW23R-GW-0925	APP III

Low-Flow Test Report:

Test Date / Time: 9/19/2025 7:14:09 AM
Project: Neal North MW-25
Operator Name: Thao Larson

Location Name: MW-25 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23.72 ft Total Depth: 33.72 ft Initial Depth to Water: 31.53 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 29.4 ft Pump Intake From TOC: 31.4 ft Estimated Total Volume Pumped: 410 ml Flow Cell Volume: 130 ml Final Flow Rate: 25 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
No sample collected. Well ran dry before 3 well volumes.

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 7:14 AM	00:00	6.865 pH	14.86 °C	1.525 mS/cm	4.697 mg/L	8.392 NTU	163.9 mV	31.53 ft	25.00 ml/min
9/19/2025 7:16 AM	02:03	6.890 pH	14.88 °C	1.532 mS/cm	5.270 mg/L	9.654 NTU	108.2 mV	31.73 ft	25.00 ml/min
9/19/2025 7:18 AM	04:06	6.932 pH	14.99 °C	1.530 mS/cm	5.522 mg/L	7.039 NTU	59.3 mV	31.73 ft	25.00 ml/min
9/19/2025 7:20 AM	06:09	6.974 pH	15.07 °C	1.526 mS/cm	5.644 mg/L	9.150 NTU	45.6 mV	31.73 ft	25.00 ml/min
9/19/2025 7:22 AM	08:12	7.004 pH	15.16 °C	1.522 mS/cm	5.704 mg/L	7.290 NTU	43.1 mV	31.73 ft	25.00 ml/min
9/19/2025 7:24 AM	10:15	7.031 pH	15.21 °C	1.519 mS/cm	5.755 mg/L	6.610 NTU	42.1 mV	31.73 ft	25.00 ml/min
9/19/2025 7:26 AM	12:18	7.050 pH	15.26 °C	1.516 mS/cm	5.785 mg/L	6.365 NTU	41.8 mV	31.73 ft	25.00 ml/min
9/19/2025 7:28 AM	14:21	7.064 pH	15.30 °C	1.513 mS/cm	5.811 mg/L	6.177 NTU	42.8 mV	31.73 ft	25.00 ml/min
9/19/2025 7:30 AM	16:24	7.073 pH	15.32 °C	1.512 mS/cm	5.831 mg/L	5.758 NTU	41.7 mV	31.73 ft	25.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/16/2025 4:33:00 PM
Project: Neal North MW-27
Operator Name: Paige Richards/Thao Larson

Location Name: MW-27 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23.7 ft Total Depth: 33.7 ft Initial Depth to Water: 27.46 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 29.4 ft Pump Intake From TOC: 31.4 ft Estimated Total Volume Pumped: 2562.5 ml Flow Cell Volume: 130 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.4 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1710

Weather Conditions:
Sunny 90°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/16/2025 4:33 PM	00:00	7.162 pH	21.43 °C	1.348 mS/cm	7.241 mg/L	58.34 NTU	-60.8 mV	27.46 ft	50.00 ml/min
9/16/2025 4:35 PM	02:03	6.892 pH	17.07 °C	1.383 mS/cm	3.089 mg/L	28.48 NTU	-101.4 mV	27.73 ft	75.00 ml/min
9/16/2025 4:37 PM	04:06	6.877 pH	16.65 °C	1.384 mS/cm	2.835 mg/L	35.53 NTU	-100.4 mV	27.73 ft	75.00 ml/min
9/16/2025 4:39 PM	06:09	6.827 pH	16.77 °C	1.383 mS/cm	2.852 mg/L	35.29 NTU	-97.6 mV	27.79 ft	75.00 ml/min
9/16/2025 4:41 PM	08:12	6.797 pH	16.64 °C	1.384 mS/cm	2.896 mg/L	38.64 NTU	-95.3 mV	27.79 ft	75.00 ml/min
9/16/2025 4:43 PM	10:15	6.781 pH	16.75 °C	1.384 mS/cm	2.760 mg/L	34.44 NTU	-94.6 mV	27.79 ft	75.00 ml/min
9/16/2025 4:45 PM	12:18	6.771 pH	16.89 °C	1.381 mS/cm	2.643 mg/L	28.89 NTU	-94.2 mV	27.79 ft	75.00 ml/min
9/16/2025 4:47 PM	14:21	6.766 pH	16.87 °C	1.378 mS/cm	2.666 mg/L	19.45 NTU	-93.4 mV	27.79 ft	75.00 ml/min
9/16/2025 4:49 PM	16:24	6.763 pH	16.80 °C	1.376 mS/cm	2.564 mg/L	16.86 NTU	-93.3 mV	27.84 ft	75.00 ml/min
9/16/2025 4:51 PM	18:27	6.763 pH	16.74 °C	1.374 mS/cm	2.500 mg/L	11.20 NTU	-93.4 mV	27.84 ft	75.00 ml/min
9/16/2025 4:53 PM	20:30	6.763 pH	16.65 °C	1.376 mS/cm	2.398 mg/L	7.715 NTU	-93.8 mV	27.84 ft	75.00 ml/min

9/16/2025 4:55 PM	22:33	6.765 pH	16.74 °C	1.377 mS/cm	2.348 mg/L	7.583 NTU	-94.8 mV	27.86 ft	75.00 ml/min
9/16/2025 4:57 PM	24:36	6.771 pH	16.71 °C	1.377 mS/cm	2.314 mg/L	8.539 NTU	-95.3 mV	27.86 ft	75.00 ml/min
9/16/2025 4:59 PM	26:39	6.777 pH	16.69 °C	1.376 mS/cm	2.264 mg/L	7.078 NTU	-95.8 mV	27.86 ft	75.00 ml/min
9/16/2025 5:01 PM	28:42	6.780 pH	16.85 °C	1.375 mS/cm	2.223 mg/L	8.528 NTU	-96.7 mV	27.86 ft	75.00 ml/min
9/16/2025 5:03 PM	30:45	6.788 pH	16.97 °C	1.374 mS/cm	2.160 mg/L	8.509 NTU	-97.6 mV	27.86 ft	75.00 ml/min
9/16/2025 5:05 PM	32:48	6.800 pH	16.95 °C	1.374 mS/cm	2.074 mg/L	6.113 NTU	-98.6 mV	27.86 ft	75.00 ml/min
9/16/2025 5:07 PM	34:51	6.809 pH	17.11 °C	1.373 mS/cm	2.018 mg/L	5.191 NTU	-99.1 mV	27.86 ft	75.00 ml/min

Samples

Sample ID:	Description:
MW27-GW-0925	Background

Low-Flow Test Report:

Test Date / Time: 9/16/2025 6:08:44 PM
Project: Neal North MW-29R
Operator Name: Paige Richards/Thao Larson

Location Name: MW-29R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 20.2 ft Total Depth: 35.2 ft Initial Depth to Water: 28.81 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 32.7 ft Pump Intake From TOC: 34.7 ft Estimated Total Volume Pumped: 8333.333 ml Flow Cell Volume: 130 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1855

Weather Conditions:
Sunny 90°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/16/2025 6:08 PM	00:00	6.883 pH	17.13 °C	1.424 mS/cm	5.119 mg/L	510.1 NTU	-66.4 mV	28.81 ft	200.0 ml/min
9/16/2025 6:10 PM	02:05	6.772 pH	14.86 °C	1.494 mS/cm	1.214 mg/L	148.5 NTU	-69.1 mV	28.81 ft	200.0 ml/min
9/16/2025 6:12 PM	04:10	6.728 pH	14.70 °C	1.499 mS/cm	1.061 mg/L	189.3 NTU	-68.3 mV	28.81 ft	200.0 ml/min
9/16/2025 6:14 PM	06:15	6.692 pH	14.34 °C	1.492 mS/cm	1.023 mg/L	167.8 NTU	-68.0 mV	28.87 ft	200.0 ml/min
9/16/2025 6:17 PM	08:20	6.671 pH	14.26 °C	1.499 mS/cm	0.855 mg/L	68.00 NTU	-67.7 mV	28.87 ft	200.0 ml/min
9/16/2025 6:19 PM	10:25	6.662 pH	14.00 °C	1.496 mS/cm	0.822 mg/L	103.5 NTU	-66.6 mV	28.87 ft	200.0 ml/min
9/16/2025 6:21 PM	12:30	6.654 pH	13.93 °C	1.493 mS/cm	0.925 mg/L	18.86 NTU	-64.6 mV	28.87 ft	200.0 ml/min
9/16/2025 6:23 PM	14:35	6.647 pH	13.81 °C	1.494 mS/cm	0.958 mg/L	37.62 NTU	-63.2 mV	28.87 ft	200.0 ml/min
9/16/2025 6:25 PM	16:40	6.640 pH	13.90 °C	1.493 mS/cm	0.705 mg/L	8.362 NTU	-63.4 mV	28.87 ft	200.0 ml/min
9/16/2025 6:27 PM	18:45	6.640 pH	13.83 °C	1.491 mS/cm	0.704 mg/L	9.273 NTU	-64.3 mV	28.87 ft	200.0 ml/min
9/16/2025 6:29 PM	20:50	6.641 pH	13.73 °C	1.488 mS/cm	0.733 mg/L	9.078 NTU	-64.7 mV	28.87 ft	200.0 ml/min

9/16/2025 6:31 PM	22:55	6.643 pH	13.69 °C	1.489 mS/cm	0.762 mg/L	16.29 NTU	-64.9 mV	28.87 ft	200.0 ml/min
9/16/2025 6:33 PM	25:00	6.645 pH	13.72 °C	1.490 mS/cm	0.757 mg/L	9.939 NTU	-65.3 mV	28.87 ft	200.0 ml/min
9/16/2025 6:35 PM	27:05	6.649 pH	13.70 °C	1.489 mS/cm	0.743 mg/L	10.73 NTU	-65.5 mV	28.87 ft	200.0 ml/min
9/16/2025 6:37 PM	29:10	6.651 pH	13.81 °C	1.490 mS/cm	0.720 mg/L	41.66 NTU	-65.7 mV	28.87 ft	200.0 ml/min
9/16/2025 6:39 PM	31:15	6.658 pH	13.80 °C	1.490 mS/cm	0.755 mg/L	29.03 NTU	-66.1 mV	28.87 ft	200.0 ml/min
9/16/2025 6:42 PM	33:20	6.664 pH	13.72 °C	1.488 mS/cm	0.785 mg/L	20.85 NTU	-66.4 mV	28.87 ft	200.0 ml/min
9/16/2025 6:44 PM	35:25	6.668 pH	13.64 °C	1.489 mS/cm	0.765 mg/L	7.078 NTU	-66.4 mV	28.87 ft	200.0 ml/min
9/16/2025 6:46 PM	37:30	6.672 pH	13.65 °C	1.489 mS/cm	0.708 mg/L	6.839 NTU	-67.1 mV	28.87 ft	200.0 ml/min
9/16/2025 6:48 PM	39:35	6.678 pH	13.55 °C	1.491 mS/cm	0.730 mg/L	6.641 NTU	-67.3 mV	28.87 ft	200.0 ml/min
9/16/2025 6:50 PM	41:40	6.682 pH	13.55 °C	1.491 mS/cm	0.706 mg/L	4.121 NTU	-67.5 mV	28.87 ft	200.0 ml/min

Samples

Sample ID:	Description:
MW27R-GW-0925	MNA

Low-Flow Test Report:

Test Date / Time: 9/19/2025 12:43:06 PM
Project: Neal North MW-57R
Operator Name: Thao Larson

Location Name: MW-57R Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 32.8 ft Total Depth: 47.8 ft Initial Depth to Water: 33.4 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 45.3 ft Pump Intake From TOC: 47.3 ft Estimated Total Volume Pumped: 7370 ml Flow Cell Volume: 130 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1345

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 12:43 PM	00:00	7.089 pH	18.18 °C	1.455 mS/cm	4.493 mg/L	170.4 NTU	-25.0 mV	33.40 ft	150.0 ml/min
9/19/2025 12:45 PM	02:14	7.050 pH	15.80 °C	1.682 mS/cm	2.892 mg/L	32.62 NTU	-102.7 mV	33.43 ft	150.0 ml/min
9/19/2025 12:47 PM	04:28	7.039 pH	15.31 °C	1.708 mS/cm	2.660 mg/L	17.05 NTU	-106.5 mV	33.41 ft	150.0 ml/min
9/19/2025 12:49 PM	06:42	7.074 pH	15.10 °C	1.697 mS/cm	2.714 mg/L	15.10 NTU	-108.9 mV	33.41 ft	150.0 ml/min
9/19/2025 12:52 PM	08:56	7.115 pH	14.89 °C	1.695 mS/cm	2.582 mg/L	9.359 NTU	-112.0 mV	33.41 ft	150.0 ml/min
9/19/2025 12:54 PM	11:10	7.161 pH	14.91 °C	1.693 mS/cm	2.660 mg/L	9.166 NTU	-114.7 mV	33.41 ft	150.0 ml/min
9/19/2025 12:56 PM	13:24	7.182 pH	14.91 °C	1.686 mS/cm	2.571 mg/L	8.482 NTU	-116.1 mV	33.41 ft	150.0 ml/min
9/19/2025 12:58 PM	15:38	7.196 pH	14.80 °C	1.692 mS/cm	2.548 mg/L	9.033 NTU	-117.1 mV	33.41 ft	150.0 ml/min
9/19/2025 1:00 PM	17:52	7.201 pH	14.86 °C	1.692 mS/cm	2.510 mg/L	9.089 NTU	-117.1 mV	33.41 ft	150.0 ml/min
9/19/2025 1:03 PM	20:06	7.210 pH	14.85 °C	1.688 mS/cm	2.541 mg/L	6.680 NTU	-118.1 mV	33.41 ft	150.0 ml/min
9/19/2025 1:05 PM	22:20	7.218 pH	14.87 °C	1.602 mS/cm	2.563 mg/L	8.404 NTU	-118.3 mV	33.41 ft	150.0 ml/min

9/19/2025 1:07 PM	24:34	7.219 pH	14.84 °C	1.683 mS/cm	2.491 mg/L	6.177 NTU	-118.3 mV	33.41 ft	150.0 ml/min
9/19/2025 1:09 PM	26:48	7.218 pH	14.75 °C	1.678 mS/cm	2.529 mg/L	5.473 NTU	-118.0 mV	33.41 ft	150.0 ml/min
9/19/2025 1:12 PM	29:02	7.215 pH	14.74 °C	1.635 mS/cm	2.478 mg/L	5.756 NTU	-117.8 mV	33.41 ft	150.0 ml/min
9/19/2025 1:14 PM	31:16	7.209 pH	14.71 °C	1.678 mS/cm	2.423 mg/L	6.072 NTU	-117.4 mV	33.41 ft	150.0 ml/min
9/19/2025 1:16 PM	33:30	7.206 pH	14.77 °C	1.670 mS/cm	2.488 mg/L	6.356 NTU	-117.0 mV	33.41 ft	150.0 ml/min
9/19/2025 1:18 PM	35:44	7.220 pH	14.74 °C	1.664 mS/cm	2.491 mg/L	10.45 NTU	-117.7 mV	33.41 ft	150.0 ml/min
9/19/2025 1:21 PM	37:58	7.203 pH	14.94 °C	1.678 mS/cm	2.291 mg/L	5.308 NTU	-115.4 mV	33.41 ft	150.0 ml/min
9/19/2025 1:23 PM	40:12	7.167 pH	14.76 °C	1.677 mS/cm	1.813 mg/L	5.245 NTU	-112.7 mV	33.41 ft	150.0 ml/min
9/19/2025 1:25 PM	42:26	7.153 pH	14.75 °C	1.675 mS/cm	1.709 mg/L	5.242 NTU	-111.9 mV	33.41 ft	150.0 ml/min
9/19/2025 1:27 PM	44:40	7.149 pH	14.65 °C	1.674 mS/cm	1.617 mg/L	6.376 NTU	-111.8 mV	33.41 ft	150.0 ml/min
9/19/2025 1:30 PM	46:54	7.146 pH	14.80 °C	1.675 mS/cm	1.542 mg/L	6.565 NTU	-112.2 mV	33.41 ft	150.0 ml/min
9/19/2025 1:32 PM	49:08	7.148 pH	14.78 °C	1.675 mS/cm	1.468 mg/L	5.177 NTU	-112.5 mV	33.41 ft	150.0 ml/min

Samples

Sample ID:	Description:
MW57R-GW-0925	APP III
MW57R-GW-0925 MS	APP III
MW57R-GW-0925 MSD	APP III

Low-Flow Test Report:

Test Date / Time: 9/19/2025 7:50:32 AM
Project: Neal North MW-59S
Operator Name: Thao Larson

Location Name: MW-59S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 25.3 ft Total Depth: 40.3 ft Initial Depth to Water: 32.56 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 37.8 ft Pump Intake From TOC: 39.8 ft Estimated Total Volume Pumped: 1720 ml Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 0815

Weather Conditions:
Overcast 59°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/19/2025 7:50 AM	00:00	6.867 pH	14.98 °C	1.145 mS/cm	1.720 mg/L	96.23 NTU	-72.1 mV	32.56 ft	100.0 ml/min
9/19/2025 7:52 AM	02:09	7.009 pH	14.55 °C	1.086 mS/cm	0.937 mg/L	15.41 NTU	-115.7 mV	32.58 ft	100.0 ml/min
9/19/2025 7:54 AM	04:18	7.103 pH	14.31 °C	1.096 mS/cm	0.720 mg/L	4.659 NTU	-126.6 mV	32.58 ft	100.0 ml/min
9/19/2025 7:56 AM	06:27	7.135 pH	14.27 °C	1.117 mS/cm	0.625 mg/L	4.278 NTU	-129.5 mV	32.58 ft	100.0 ml/min
9/19/2025 7:59 AM	08:36	7.163 pH	14.23 °C	1.099 mS/cm	0.594 mg/L	3.682 NTU	-130.8 mV	32.58 ft	100.0 ml/min
9/19/2025 8:01 AM	10:45	7.172 pH	14.22 °C	1.119 mS/cm	0.581 mg/L	2.793 NTU	-130.7 mV	32.58 ft	100.0 ml/min
9/19/2025 8:03 AM	12:54	7.182 pH	14.23 °C	1.091 mS/cm	0.574 mg/L	2.865 NTU	-130.2 mV	32.58 ft	100.0 ml/min
9/19/2025 8:05 AM	15:03	7.184 pH	14.21 °C	1.069 mS/cm	0.569 mg/L	7.515 NTU	-129.4 mV	32.58 ft	100.0 ml/min
9/19/2025 8:07 AM	17:12	7.183 pH	14.26 °C	1.098 mS/cm	0.561 mg/L	4.507 NTU	-128.6 mV	32.58 ft	100.0 ml/min

Samples

Sample ID:	Description:
MW59S-GW-0925	APP III

Low-Flow Test Report:

Test Date / Time: 9/18/2025 6:28:22 PM
Project: Neal North MW-60S
Operator Name: Paige Richards

Location Name: MW-60S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 30.1 ft Total Depth: 45.1 ft Initial Depth to Water: 37.9 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 42.6 ft Pump Intake From TOC: 44.6 ft Estimated Total Volume Pumped: 3300 ml Flow Cell Volume: 130 ml Final Flow Rate: 250 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time: 1900

Water visually clear

Weather Conditions:
Partly cloudy, 71 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/18/2025 6:28 PM	00:00	6.55 pH	17.26 °C	0.92 mS/cm	2.53 mg/L	16.00 NTU	22.6 mV	37.90 ft	250.00 ml/min
9/18/2025 6:30 PM	02:12	6.80 pH	14.53 °C	0.94 mS/cm	0.18 mg/L	4.00 NTU	-51.8 mV	37.90 ft	250.00 ml/min
9/18/2025 6:32 PM	04:24	6.85 pH	14.15 °C	0.94 mS/cm	0.03 mg/L	2.07 NTU	-67.0 mV	37.90 ft	250.00 ml/min
9/18/2025 6:34 PM	06:36	6.88 pH	14.07 °C	0.94 mS/cm	0.00 mg/L	1.74 NTU	-75.6 mV	37.90 ft	250.00 ml/min
9/18/2025 6:37 PM	08:48	6.89 pH	13.97 °C	0.94 mS/cm	0.00 mg/L	1.74 NTU	-80.7 mV	37.90 ft	250.00 ml/min
9/18/2025 6:39 PM	11:00	6.89 pH	13.80 °C	0.94 mS/cm	0.00 mg/L	1.65 NTU	-83.4 mV	37.90 ft	250.00 ml/min
9/18/2025 6:41 PM	13:12	6.89 pH	13.81 °C	0.94 mS/cm	0.00 mg/L	1.71 NTU	-85.7 mV	37.90 ft	250.00 ml/min

Samples

Sample ID:	Description:
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MW60S-GW-0925	1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1
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Low-Flow Test Report:

Test Date / Time: 9/17/2025 9:46:53 AM
Project: Neal North MW-223S
Operator Name: Thao Larson

Location Name: MW-223S Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 11.7 ft Total Depth: 26.7 ft Initial Depth to Water: 21.14 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 22.4 ft Pump Intake From TOC: 24.4 ft Estimated Total Volume Pumped: 2300 ml Flow Cell Volume: 130 ml Final Flow Rate: 50 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 600 Serial Number: 876572
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Test Notes:
Sample time 1040

Weather Conditions:
Overcast 60°F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/17/2025 9:46 AM	00:00	7.470 pH	18.55 °C	0.995 mS/cm	2.949 mg/L	536.1 NTU	-85.0 mV	21.14 ft	50.00 ml/min
9/17/2025 9:48 AM	01:55	7.044 pH	18.12 °C	1.105 mS/cm	1.795 mg/L	434.4 NTU	-72.4 mV	21.14 ft	50.00 ml/min
9/17/2025 9:50 AM	03:50	6.930 pH	17.70 °C	1.121 mS/cm	1.412 mg/L	328.7 NTU	-69.8 mV	21.14 ft	50.00 ml/min
9/17/2025 9:52 AM	05:45	6.854 pH	17.37 °C	1.122 mS/cm	1.488 mg/L	327.8 NTU	-67.2 mV	21.14 ft	50.00 ml/min
9/17/2025 9:54 AM	07:40	6.836 pH	17.26 °C	1.113 mS/cm	1.629 mg/L	171.0 NTU	-64.9 mV	21.14 ft	50.00 ml/min
9/17/2025 9:56 AM	09:35	6.829 pH	16.96 °C	1.113 mS/cm	1.727 mg/L	164.2 NTU	-63.3 mV	21.14 ft	50.00 ml/min
9/17/2025 9:58 AM	11:30	6.830 pH	16.81 °C	1.108 mS/cm	1.742 mg/L	129.7 NTU	-63.2 mV	21.14 ft	50.00 ml/min
9/17/2025 10:00 AM	13:25	6.848 pH	16.67 °C	1.101 mS/cm	1.784 mg/L	74.16 NTU	-64.6 mV	21.14 ft	50.00 ml/min
9/17/2025 10:02 AM	15:20	6.857 pH	16.52 °C	1.095 mS/cm	1.803 mg/L	82.27 NTU	-64.2 mV	21.14 ft	50.00 ml/min
9/17/2025 10:04 AM	17:15	6.861 pH	16.53 °C	1.089 mS/cm	1.745 mg/L	96.33 NTU	-63.6 mV	21.14 ft	50.00 ml/min
9/17/2025 10:06 AM	19:10	6.878 pH	16.49 °C	1.091 mS/cm	1.771 mg/L	123.2 NTU	-64.1 mV	21.14 ft	50.00 ml/min

9/17/2025 10:07 AM	21:05	6.886 pH	16.47 °C	1.083 mS/cm	1.733 mg/L	114.4 NTU	-64.2 mV	21.14 ft	50.00 ml/min
9/17/2025 10:09 AM	23:00	6.892 pH	16.48 °C	1.090 mS/cm	1.751 mg/L	68.14 NTU	-64.0 mV	21.14 ft	50.00 ml/min
9/17/2025 10:11 AM	24:55	6.905 pH	16.48 °C	1.087 mS/cm	1.730 mg/L	50.05 NTU	-63.8 mV	21.14 ft	50.00 ml/min
9/17/2025 10:13 AM	26:50	6.906 pH	16.51 °C	1.086 mS/cm	1.741 mg/L	27.22 NTU	-63.5 mV	21.14 ft	50.00 ml/min
9/17/2025 10:15 AM	28:45	6.901 pH	16.62 °C	1.081 mS/cm	1.762 mg/L	36.78 NTU	-62.3 mV	21.14 ft	50.00 ml/min
9/17/2025 10:17 AM	30:40	6.914 pH	16.70 °C	1.084 mS/cm	1.763 mg/L	23.98 NTU	-62.4 mV	21.14 ft	50.00 ml/min
9/17/2025 10:19 AM	32:35	6.912 pH	16.75 °C	1.083 mS/cm	1.705 mg/L	23.95 NTU	-61.8 mV	21.14 ft	50.00 ml/min
9/17/2025 10:21 AM	34:30	6.899 pH	16.87 °C	1.077 mS/cm	1.745 mg/L	26.32 NTU	-60.2 mV	21.14 ft	50.00 ml/min
9/17/2025 10:23 AM	36:25	6.914 pH	16.95 °C	1.081 mS/cm	1.741 mg/L	74.04 NTU	-60.9 mV	21.14 ft	50.00 ml/min
9/17/2025 10:25 AM	38:20	6.910 pH	17.03 °C	1.078 mS/cm	1.684 mg/L	42.61 NTU	-60.8 mV	21.14 ft	50.00 ml/min
9/17/2025 10:27 AM	40:15	6.916 pH	17.11 °C	1.076 mS/cm	1.713 mg/L	29.73 NTU	-60.7 mV	21.14 ft	50.00 ml/min
9/17/2025 10:29 AM	42:10	6.915 pH	17.13 °C	1.081 mS/cm	1.710 mg/L	24.76 NTU	-60.7 mV	21.14 ft	50.00 ml/min
9/17/2025 10:30 AM	44:05	6.907 pH	17.25 °C	1.082 mS/cm	1.665 mg/L	19.11 NTU	-60.4 mV	21.14 ft	50.00 ml/min
9/17/2025 10:32 AM	46:00	6.916 pH	17.32 °C	1.081 mS/cm	1.667 mg/L	12.64 NTU	-60.6 mV	21.14 ft	50.00 ml/min

Samples

Sample ID:	Description:
MW223S-GW-0925	MNA BACKGROUND

Low-Flow Test Report:

Test Date / Time: 9/17/2025 10:08:21 AM
Project: Neal North MW-231SR
Operator Name: Paige Richards

Location Name: MW-231SR Well Diameter: 2 in Casing Type: PVC Screen Length: 15 ft Top of Screen: 14.07 ft Total Depth: 29.07 ft Initial Depth to Water: 22.79 ft	Pump Type: Solinst Model 407 Bladder Pump Tubing Type: Teflon-lined 1/4" x 1/4" twin-bonded tubing Tubing Inner Diameter: 0.125 in Tubing Length: 26.57 ft Pump Intake From TOC: 28.57 ft Estimated Total Volume Pumped: 3630 ml Flow Cell Volume: 130 ml Final Flow Rate: 300 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 600 Vented Serial Number: 1050309
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Test Notes:
Sample time: 1050

Water visually clear

Weather Conditions:
Cloudy, rain, 68 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 3 %	+/- 0.2	+/- 10	+/- 20	+/- 5	
9/17/2025 10:08 AM	00:00	6.56 pH	14.37 °C	1.08 mS/cm	0.09 mg/L	9.55 NTU	-15.5 mV	22.79 ft	300.00 ml/min
9/17/2025 10:10 AM	02:01	6.54 pH	14.36 °C	1.08 mS/cm	0.08 mg/L	11.37 NTU	-17.4 mV	22.81 ft	300.00 ml/min
9/17/2025 10:12 AM	04:02	6.53 pH	14.37 °C	1.08 mS/cm	0.12 mg/L	8.55 NTU	-18.3 mV	22.81 ft	300.00 ml/min
9/17/2025 10:14 AM	06:03	6.53 pH	14.40 °C	1.08 mS/cm	0.11 mg/L	7.87 NTU	-23.8 mV	22.81 ft	300.00 ml/min
9/17/2025 10:16 AM	08:04	6.54 pH	14.40 °C	1.07 mS/cm	0.10 mg/L	7.19 NTU	-28.5 mV	22.81 ft	300.00 ml/min
9/17/2025 10:18 AM	10:05	6.52 pH	14.45 °C	1.07 mS/cm	0.12 mg/L	5.54 NTU	-29.4 mV	22.81 ft	300.00 ml/min
9/17/2025 10:20 AM	12:06	6.53 pH	14.42 °C	1.08 mS/cm	0.13 mg/L	4.76 NTU	-29.3 mV	22.81 ft	300.00 ml/min

Samples

Sample ID:	Description:
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MW231SR-GW-0925	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x2 250mL plastic unpreserved x1 40mL voa vials w/ sulfuric x3
DP01-GW-0925	1L plastic w/ nitric x2 1L plastic unpreserved x1 250mL plastic w/ nitric x1 250mL plastic unpreserved x1

Appendix B

Laboratory Analytical Reports

ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 4/24/2025 1:13:52 PM

JOB DESCRIPTION

MEC Neal North-Background
MEC Neal North-Background

JOB NUMBER

310-302066-1

Eurofins Cedar Falls

Job Notes

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Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North-Background

Job ID: 310-302066-1

Job ID: 310-302066-1

Eurofins Cedar Falls

Job Narrative 310-302066-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/14/2025 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 4.1°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW13R-GW-0325 (310-302066-1), MW27-GW-0325 (310-302066-2) and MW29R-GW-0325 (310-302066-3). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: DP01-GW-0325 (310-302066-6). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North-Background

Job ID: 310-302066-1

Job ID: 310-302066-3

Eurofins Cedar Falls

Job Narrative 310-302066-3

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/14/2025 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 4.1°C.

HPLC/IC

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-302066-1	MW13R-GW-0325	Water	03/11/25 19:40	03/14/25 09:00
310-302066-2	MW27-GW-0325	Water	03/12/25 19:05	03/14/25 09:00
310-302066-3	MW29R-GW-0325	Water	03/12/25 17:50	03/14/25 09:00
310-302066-5	MW231SR-GW-0325	Water	03/13/25 09:05	03/14/25 09:00
310-302066-6	DP01-GW-0325	Water	03/12/25 00:00	03/14/25 09:00
310-302066-7	MW223S-GW-0325	Water	03/13/25 10:35	03/14/25 09:00

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW13R-GW-0325

Lab Sample ID: 310-302066-1

Date Collected: 03/11/25 19:40

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.3		5.00		mg/L			03/18/25 11:19	5
Fluoride	<1.00		1.00		mg/L			03/18/25 11:19	5
Sulfate	38.7		5.00		mg/L			03/18/25 11:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:44	1
Arsenic	0.0592		0.00200		mg/L		03/17/25 09:00	03/24/25 17:44	1
Barium	0.226		0.00200		mg/L		03/17/25 09:00	03/24/25 17:44	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:44	1
Boron	0.136		0.100		mg/L		03/17/25 09:00	03/24/25 17:44	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 17:44	1
Calcium	147		0.500		mg/L		03/17/25 09:00	03/25/25 15:14	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:44	1
Cobalt	0.00102		0.000500		mg/L		03/17/25 09:00	03/24/25 17:44	1
Lithium	0.0846		0.0100		mg/L		03/17/25 09:00	03/24/25 17:44	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:14	1
Molybdenum	0.00377		0.00200		mg/L		03/17/25 09:00	03/24/25 17:44	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:44	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	580		50.0		mg/L			03/17/25 11:48	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/14/25 17:22	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW27-GW-0325

Lab Sample ID: 310-302066-2

Date Collected: 03/12/25 19:05

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.5		5.00		mg/L			03/18/25 12:09	5
Fluoride	<1.00		1.00		mg/L			03/18/25 12:09	5
Sulfate	81.1		5.00		mg/L			03/18/25 12:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:58	1
Arsenic	0.0613		0.00200		mg/L		03/17/25 09:00	03/24/25 17:58	1
Barium	0.158		0.00200		mg/L		03/17/25 09:00	03/24/25 17:58	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:58	1
Boron	0.228		0.100		mg/L		03/17/25 09:00	03/24/25 17:58	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 17:58	1
Calcium	157		0.500		mg/L		03/17/25 09:00	03/25/25 15:31	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:58	1
Cobalt	0.000635		0.000500		mg/L		03/17/25 09:00	03/24/25 17:58	1
Lithium	0.110		0.0100		mg/L		03/17/25 09:00	03/24/25 17:58	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:31	1
Molybdenum	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:58	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:58	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 10:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	692		50.0		mg/L			03/17/25 11:48	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/14/25 17:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW29R-GW-0325

Lab Sample ID: 310-302066-3

Date Collected: 03/12/25 17:50

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.0		5.00		mg/L			03/18/25 12:19	5
Fluoride	<1.00		1.00		mg/L			03/18/25 12:19	5
Sulfate	140		5.00		mg/L			03/18/25 12:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:01	1
Arsenic	0.0240		0.00200		mg/L		03/17/25 09:00	03/24/25 18:01	1
Barium	0.213		0.00200		mg/L		03/17/25 09:00	03/24/25 18:01	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:01	1
Boron	0.158		0.100		mg/L		03/17/25 09:00	03/24/25 18:01	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 18:01	1
Calcium	187		0.500		mg/L		03/17/25 09:00	03/25/25 15:34	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:01	1
Cobalt	0.00280		0.000500		mg/L		03/17/25 09:00	03/24/25 18:01	1
Lithium	0.0957		0.0100		mg/L		03/17/25 09:00	03/24/25 18:01	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:34	1
Molybdenum	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:01	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:01	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	774		50.0		mg/L			03/17/25 11:48	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			03/14/25 17:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW231SR-GW-0325

Lab Sample ID: 310-302066-5

Date Collected: 03/13/25 09:05

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.30		1.00		mg/L			03/14/25 12:28	1
Nitrate as N	<0.200		0.200		mg/L			03/14/25 12:28	1
Fluoride	<0.200		0.200		mg/L			03/14/25 12:28	1
Sulfate	177		10.0		mg/L			03/14/25 14:59	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:03	1
Arsenic	0.00229		0.00200		mg/L		03/17/25 09:00	03/24/25 18:03	1
Barium	0.147		0.00200		mg/L		03/17/25 09:00	03/24/25 18:03	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:03	1
Boron	0.200		0.100		mg/L		03/17/25 09:00	03/24/25 18:03	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 18:03	1
Calcium	190		0.500		mg/L		03/17/25 09:00	03/25/25 15:37	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:03	1
Cobalt	0.00253		0.000500		mg/L		03/17/25 09:00	03/24/25 18:03	1
Iron	6.38		0.100		mg/L		03/17/25 09:00	03/25/25 15:37	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:37	1
Lithium	0.0856		0.0100		mg/L		03/17/25 09:00	03/24/25 18:03	1
Manganese	1.07		0.0100		mg/L		03/17/25 09:00	03/24/25 18:03	1
Molybdenum	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:03	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:03	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	5.53		0.100		mg/L		03/19/25 08:30	03/19/25 16:01	1
Manganese	1.21		0.0100		mg/L		03/19/25 08:30	03/19/25 16:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 11:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	3.73		1.00		mg/L			03/24/25 19:46	1
Total Dissolved Solids (SM 2540C)	788		50.0		mg/L			03/18/25 14:18	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/14/25 17:38	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: DP01-GW-0325

Lab Sample ID: 310-302066-6

Date Collected: 03/12/25 00:00

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.49		5.00		mg/L			03/28/25 15:34	5
Fluoride	<1.00		1.00		mg/L			03/28/25 15:34	5
Sulfate	136		5.00		mg/L			03/28/25 15:34	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:05	1
Arsenic	0.0241		0.00200		mg/L		03/17/25 09:00	03/24/25 18:05	1
Barium	0.222		0.00200		mg/L		03/17/25 09:00	03/24/25 18:05	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:05	1
Boron	0.156		0.100		mg/L		03/17/25 09:00	03/24/25 18:05	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 18:05	1
Calcium	190		0.500		mg/L		03/17/25 09:00	03/25/25 15:40	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:05	1
Cobalt	0.00285		0.000500		mg/L		03/17/25 09:00	03/24/25 18:05	1
Lithium	0.0968		0.0100		mg/L		03/17/25 09:00	03/24/25 18:05	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:40	1
Molybdenum	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:05	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:05	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:05	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 11:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	768		50.0		mg/L			03/17/25 11:48	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			03/14/25 17:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW223S-GW-0325

Lab Sample ID: 310-302066-7

Date Collected: 03/13/25 10:35

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.2		1.00		mg/L			03/14/25 11:58	1
Nitrate as N	<0.200		0.200		mg/L			03/14/25 11:58	1
Fluoride	<0.200		0.200		mg/L			03/14/25 11:58	1
Sulfate	88.5		1.00		mg/L			03/14/25 11:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 18:08	1
Arsenic	0.0116		0.00200		mg/L		03/17/25 09:00	03/24/25 18:08	1
Barium	0.166		0.00200		mg/L		03/17/25 09:00	03/24/25 18:08	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:08	1
Boron	0.142		0.100		mg/L		03/17/25 09:00	03/24/25 18:08	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 18:08	1
Calcium	130		0.500		mg/L		03/17/25 09:00	03/25/25 15:42	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:08	1
Cobalt	0.000767		0.000500		mg/L		03/17/25 09:00	03/24/25 18:08	1
Iron	5.79		0.100		mg/L		03/17/25 09:00	03/25/25 15:42	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:42	1
Lithium	0.0540		0.0100		mg/L		03/17/25 09:00	03/24/25 18:08	1
Manganese	2.59		0.0100		mg/L		03/17/25 09:00	03/24/25 18:08	1
Molybdenum	0.00205		0.00200		mg/L		03/17/25 09:00	03/24/25 18:08	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 18:08	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 18:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	4.20		0.100		mg/L		03/19/25 08:30	03/19/25 16:04	1
Manganese	2.95		0.0100		mg/L		03/19/25 08:30	03/19/25 16:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 11:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	2.81		1.00		mg/L			03/20/25 15:38	1
Total Dissolved Solids (SM 2540C)	510		50.0		mg/L			03/18/25 14:18	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.6	HF	1.0		SU			03/14/25 18:36	1

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-449523/3

Matrix: Water

Analysis Batch: 449523

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/18/25 09:48	1
Fluoride	<0.200		0.200		mg/L			03/18/25 09:48	1
Sulfate	<1.00		1.00		mg/L			03/18/25 09:48	1

Lab Sample ID: LCS 310-449523/4

Matrix: Water

Analysis Batch: 449523

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.29		mg/L		103	90 - 110
Fluoride	2.00	2.123		mg/L		106	90 - 110
Sulfate	10.0	10.32		mg/L		103	90 - 110

Lab Sample ID: 310-302066-1 MS

Matrix: Water

Analysis Batch: 449523

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	17.3		25.0	41.38		mg/L		96	80 - 120
Fluoride	<1.00		5.00	5.569		mg/L		111	80 - 120
Sulfate	38.7		25.0	64.96		mg/L		105	80 - 120

Lab Sample ID: 310-302066-1 MSD

Matrix: Water

Analysis Batch: 449523

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	17.3		25.0	41.19		mg/L		95	80 - 120	0	15
Fluoride	<1.00		5.00	5.546		mg/L		111	80 - 120	0	15
Sulfate	38.7		25.0	64.87		mg/L		105	80 - 120	0	15

Lab Sample ID: MB 310-449542/3

Matrix: Water

Analysis Batch: 449542

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/14/25 11:38	1
Nitrate as N	<0.200		0.200		mg/L			03/14/25 11:38	1
Fluoride	<0.200		0.200		mg/L			03/14/25 11:38	1
Sulfate	<1.00		1.00		mg/L			03/14/25 11:38	1

Lab Sample ID: LCS 310-449542/4

Matrix: Water

Analysis Batch: 449542

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.21		mg/L		102	90 - 110
Nitrate as N	2.00	2.097		mg/L		105	90 - 110
Fluoride	2.00	2.107		mg/L		105	90 - 110
Sulfate	10.0	10.22		mg/L		102	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 310-302066-7 MS

Matrix: Water

Analysis Batch: 449542

Client Sample ID: MW223S-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.2		5.00	19.26		mg/L		81	80 - 120
Nitrate as N	<0.200		1.00	1.002		mg/L		100	80 - 120
Fluoride	<0.200		1.00	1.008		mg/L		89	80 - 120
Sulfate	88.5		5.00	92.58	4	mg/L		83	80 - 120

Lab Sample ID: 310-302066-7 MSD

Matrix: Water

Analysis Batch: 449542

Client Sample ID: MW223S-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15.2		5.00	19.31		mg/L		82	80 - 120	0	15
Nitrate as N	<0.200		1.00	0.9976		mg/L		100	80 - 120	0	15
Fluoride	<0.200		1.00	1.142		mg/L		102	80 - 120	12	15
Sulfate	88.5		5.00	92.62	4	mg/L		83	80 - 120	0	15

Lab Sample ID: MB 310-450143/3

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/28/25 15:04	1
Fluoride	<0.200		0.200		mg/L			03/28/25 15:04	1
Sulfate	<1.00		1.00		mg/L			03/28/25 15:04	1

Lab Sample ID: LCS 310-450143/4

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.951		mg/L		100	90 - 110
Fluoride	2.00	2.005		mg/L		100	90 - 110
Sulfate	10.0	10.19		mg/L		102	90 - 110

Lab Sample ID: 310-302066-6 MS

Matrix: Water

Analysis Batch: 450143

Client Sample ID: DP01-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	9.49		25.0	32.59		mg/L		92	80 - 120
Fluoride	<1.00		5.00	5.010		mg/L		100	80 - 120
Sulfate	136		25.0	158.3	4	mg/L		89	80 - 120

Lab Sample ID: 310-302066-6 MSD

Matrix: Water

Analysis Batch: 450143

Client Sample ID: DP01-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	9.49		25.0	33.09		mg/L		94	80 - 120	1	15
Fluoride	<1.00		5.00	5.246		mg/L		105	80 - 120	5	15
Sulfate	136		25.0	158.6	4	mg/L		90	80 - 120	0	15

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-448970/1-A

Matrix: Water

Analysis Batch: 449682

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:34	1
Arsenic	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:34	1
Barium	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:34	1
Beryllium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:34	1
Boron	<0.100		0.100		mg/L		03/17/25 09:00	03/24/25 17:34	1
Cadmium	<0.000200		0.000200		mg/L		03/17/25 09:00	03/24/25 17:34	1
Chromium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:34	1
Cobalt	<0.000500		0.000500		mg/L		03/17/25 09:00	03/24/25 17:34	1
Iron	<0.100		0.100		mg/L		03/17/25 09:00	03/24/25 17:34	1
Lithium	<0.0100		0.0100		mg/L		03/17/25 09:00	03/24/25 17:34	1
Manganese	<0.0100		0.0100		mg/L		03/17/25 09:00	03/24/25 17:34	1
Molybdenum	<0.00200		0.00200		mg/L		03/17/25 09:00	03/24/25 17:34	1
Selenium	<0.00500		0.00500		mg/L		03/17/25 09:00	03/24/25 17:34	1
Thallium	<0.00100		0.00100		mg/L		03/17/25 09:00	03/24/25 17:34	1

Lab Sample ID: MB 310-448970/1-A

Matrix: Water

Analysis Batch: 449792

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.500		0.500		mg/L		03/17/25 09:00	03/25/25 15:03	1
Lead	<0.000500		0.000500		mg/L		03/17/25 09:00	03/25/25 15:03	1

Lab Sample ID: LCS 310-448970/2-A

Matrix: Water

Analysis Batch: 449682

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2238		mg/L		112	80 - 120
Arsenic	0.200	0.1980		mg/L		99	80 - 120
Barium	0.100	0.1025		mg/L		102	80 - 120
Beryllium	0.100	0.1014		mg/L		101	80 - 120
Boron	0.200	0.2068		mg/L		103	80 - 120
Cadmium	0.100	0.09647		mg/L		96	80 - 120
Chromium	0.100	0.1014		mg/L		101	80 - 120
Cobalt	0.100	0.1082		mg/L		108	80 - 120
Iron	0.200	0.2167		mg/L		108	80 - 120
Lithium	0.200	0.2050		mg/L		102	80 - 120
Manganese	0.100	0.09537		mg/L		95	80 - 120
Molybdenum	0.200	0.2129		mg/L		106	80 - 120
Selenium	0.400	0.3866		mg/L		97	80 - 120
Thallium	0.100	0.09185		mg/L		92	80 - 120

Lab Sample ID: LCS 310-448970/2-A

Matrix: Water

Analysis Batch: 449792

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 448970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	1.946		mg/L		97	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

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

Lab Sample ID: LCS 310-448970/2-A
Matrix: Water
Analysis Batch: 449792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 448970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.200	0.2050		mg/L		103	80 - 120

Lab Sample ID: 310-302066-1 MS
Matrix: Water
Analysis Batch: 449682

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA
Prep Batch: 448970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2342		mg/L		117	75 - 125
Arsenic	0.0592		0.200	0.2678		mg/L		104	75 - 125
Barium	0.226		0.100	0.3386		mg/L		112	75 - 125
Beryllium	<0.00100		0.100	0.1093		mg/L		109	75 - 125
Boron	0.136		0.200	0.3230		mg/L		93	75 - 125
Cadmium	<0.000200		0.100	0.09679		mg/L		97	75 - 125
Chromium	<0.00500		0.100	0.1013		mg/L		101	75 - 125
Cobalt	0.00102		0.100	0.1064		mg/L		105	75 - 125
Lithium	0.0846		0.200	0.2919		mg/L		104	75 - 125
Molybdenum	0.00377		0.200	0.2214		mg/L		109	75 - 125
Selenium	<0.00500		0.400	0.3987		mg/L		100	75 - 125
Thallium	<0.00100		0.100	0.08277		mg/L		83	75 - 125

Lab Sample ID: 310-302066-1 MS
Matrix: Water
Analysis Batch: 449792

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA
Prep Batch: 448970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	147		2.00	149.2	4	mg/L		119	75 - 125
Lead	<0.000500		0.200	0.2155		mg/L		108	75 - 125

Lab Sample ID: 310-302066-1 MSD
Matrix: Water
Analysis Batch: 449682

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA
Prep Batch: 448970

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Antimony	<0.00200		0.200	0.2247		mg/L		112	75 - 125	4	20
Arsenic	0.0592		0.200	0.2594		mg/L		100	75 - 125	3	20
Barium	0.226		0.100	0.3327		mg/L		106	75 - 125	2	20
Beryllium	<0.00100		0.100	0.1068		mg/L		107	75 - 125	2	20
Boron	0.136		0.200	0.3207		mg/L		92	75 - 125	1	20
Cadmium	<0.000200		0.100	0.09260		mg/L		93	75 - 125	4	20
Chromium	<0.00500		0.100	0.09826		mg/L		98	75 - 125	3	20
Cobalt	0.00102		0.100	0.1054		mg/L		104	75 - 125	1	20
Lithium	0.0846		0.200	0.2876		mg/L		101	75 - 125	2	20
Molybdenum	0.00377		0.200	0.2163		mg/L		106	75 - 125	2	20
Selenium	<0.00500		0.400	0.3938		mg/L		98	75 - 125	1	20
Thallium	<0.00100		0.100	0.07836		mg/L		78	75 - 125	5	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

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

Lab Sample ID: 310-302066-1 MSD

Matrix: Water

Analysis Batch: 449792

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Prep Batch: 448970

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	147		2.00	148.8	4	mg/L		97	75 - 125	0	20
Lead	<0.000500		0.200	0.2099		mg/L		105	75 - 125	3	20

Lab Sample ID: MB 310-449194/1-A

Matrix: Water

Analysis Batch: 449331

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.100		0.100		mg/L		03/19/25 08:30	03/19/25 14:44	1
Manganese	<0.0100		0.0100		mg/L		03/19/25 08:30	03/19/25 14:44	1

Lab Sample ID: LCS 310-449194/2-A

Matrix: Water

Analysis Batch: 449331

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	0.200	0.1939		mg/L		97	80 - 120
Manganese	0.100	0.09896		mg/L		99	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-450153/1-A

Matrix: Water

Analysis Batch: 450371

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 450153

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/31/25 14:25	04/01/25 10:44	1

Lab Sample ID: LCS 310-450153/2-A

Matrix: Water

Analysis Batch: 450371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 450153

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001697		mg/L		102	80 - 120

Lab Sample ID: 310-302066-1 MS

Matrix: Water

Analysis Batch: 450371

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Prep Batch: 450153

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.000200		0.00167	0.001825		mg/L		110	80 - 120

Lab Sample ID: 310-302066-1 MSD

Matrix: Water

Analysis Batch: 450371

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Prep Batch: 450153

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001803		mg/L		108	80 - 120	1	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

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

Lab Sample ID: MB 310-449466/11
Matrix: Water
Analysis Batch: 449466

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00		mg/L			03/20/25 14:25	1

Lab Sample ID: LCS 310-449466/12
Matrix: Water
Analysis Batch: 449466

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.67		mg/L		107	85 - 115

Lab Sample ID: 310-302066-7 DU
Matrix: Water
Analysis Batch: 449466

Client Sample ID: MW223S-GW-0325
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.81		2.791		mg/L		0.7	15

Lab Sample ID: MB 310-449734/11
Matrix: Water
Analysis Batch: 449734

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00		mg/L			03/24/25 14:22	1

Lab Sample ID: LCS 310-449734/12
Matrix: Water
Analysis Batch: 449734

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.44		mg/L		104	85 - 115

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

Lab Sample ID: MB 310-449070/1
Matrix: Water
Analysis Batch: 449070

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			03/17/25 11:48	1

Lab Sample ID: LCS 310-449070/2
Matrix: Water
Analysis Batch: 449070

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	998.0		mg/L		100	88 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

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

Lab Sample ID: MB 310-449203/1
Matrix: Water
Analysis Batch: 449203

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			03/18/25 14:18	1

Lab Sample ID: LCS 310-449203/2
Matrix: Water
Analysis Batch: 449203

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1004		mg/L		100	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-448986/1
Matrix: Water
Analysis Batch: 448986

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	98 - 102

Lab Sample ID: 310-302066-1 DU
Matrix: Water
Analysis Batch: 448986

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.8		SU		0.5	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

HPLC/IC

Analysis Batch: 449523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	9056A	
310-302066-2	MW27-GW-0325	Total/NA	Water	9056A	
310-302066-3	MW29R-GW-0325	Total/NA	Water	9056A	
MB 310-449523/3	Method Blank	Total/NA	Water	9056A	
LCS 310-449523/4	Lab Control Sample	Total/NA	Water	9056A	
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	9056A	
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	9056A	

Analysis Batch: 449542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-5	MW231SR-GW-0325	Total/NA	Water	9056A	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	9056A	
310-302066-7	MW223S-GW-0325	Total/NA	Water	9056A	
MB 310-449542/3	Method Blank	Total/NA	Water	9056A	
LCS 310-449542/4	Lab Control Sample	Total/NA	Water	9056A	
310-302066-7 MS	MW223S-GW-0325	Total/NA	Water	9056A	
310-302066-7 MSD	MW223S-GW-0325	Total/NA	Water	9056A	

Analysis Batch: 450143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-6	DP01-GW-0325	Total/NA	Water	9056A	
MB 310-450143/3	Method Blank	Total/NA	Water	9056A	
LCS 310-450143/4	Lab Control Sample	Total/NA	Water	9056A	
310-302066-6 MS	DP01-GW-0325	Total/NA	Water	9056A	
310-302066-6 MSD	DP01-GW-0325	Total/NA	Water	9056A	

Metals

Prep Batch: 448970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	3005A	
310-302066-2	MW27-GW-0325	Total/NA	Water	3005A	
310-302066-3	MW29R-GW-0325	Total/NA	Water	3005A	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	3005A	
310-302066-6	DP01-GW-0325	Total/NA	Water	3005A	
310-302066-7	MW223S-GW-0325	Total/NA	Water	3005A	
MB 310-448970/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-448970/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	3005A	
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	3005A	

Prep Batch: 449194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-5	MW231SR-GW-0325	Dissolved	Water	3005A	
310-302066-7	MW223S-GW-0325	Dissolved	Water	3005A	
MB 310-449194/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-449194/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 449331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-5	MW231SR-GW-0325	Dissolved	Water	6020B	449194

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Metals (Continued)

Analysis Batch: 449331 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-7	MW223S-GW-0325	Dissolved	Water	6020B	449194
MB 310-449194/1-A	Method Blank	Total/NA	Water	6020B	449194
LCS 310-449194/2-A	Lab Control Sample	Total/NA	Water	6020B	449194

Analysis Batch: 449682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	6020B	448970
310-302066-2	MW27-GW-0325	Total/NA	Water	6020B	448970
310-302066-3	MW29R-GW-0325	Total/NA	Water	6020B	448970
310-302066-5	MW231SR-GW-0325	Total/NA	Water	6020B	448970
310-302066-6	DP01-GW-0325	Total/NA	Water	6020B	448970
310-302066-7	MW223S-GW-0325	Total/NA	Water	6020B	448970
MB 310-448970/1-A	Method Blank	Total/NA	Water	6020B	448970
LCS 310-448970/2-A	Lab Control Sample	Total/NA	Water	6020B	448970
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	6020B	448970
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	6020B	448970

Analysis Batch: 449792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	6020B	448970
310-302066-2	MW27-GW-0325	Total/NA	Water	6020B	448970
310-302066-3	MW29R-GW-0325	Total/NA	Water	6020B	448970
310-302066-5	MW231SR-GW-0325	Total/NA	Water	6020B	448970
310-302066-6	DP01-GW-0325	Total/NA	Water	6020B	448970
310-302066-7	MW223S-GW-0325	Total/NA	Water	6020B	448970
MB 310-448970/1-A	Method Blank	Total/NA	Water	6020B	448970
LCS 310-448970/2-A	Lab Control Sample	Total/NA	Water	6020B	448970
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	6020B	448970
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	6020B	448970

Prep Batch: 450153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	7470A	
310-302066-2	MW27-GW-0325	Total/NA	Water	7470A	
310-302066-3	MW29R-GW-0325	Total/NA	Water	7470A	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	7470A	
310-302066-6	DP01-GW-0325	Total/NA	Water	7470A	
310-302066-7	MW223S-GW-0325	Total/NA	Water	7470A	
MB 310-450153/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-450153/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	7470A	
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	7470A	

Analysis Batch: 450371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	7470A	450153
310-302066-2	MW27-GW-0325	Total/NA	Water	7470A	450153
310-302066-3	MW29R-GW-0325	Total/NA	Water	7470A	450153
310-302066-5	MW231SR-GW-0325	Total/NA	Water	7470A	450153
310-302066-6	DP01-GW-0325	Total/NA	Water	7470A	450153
310-302066-7	MW223S-GW-0325	Total/NA	Water	7470A	450153

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Metals (Continued)

Analysis Batch: 450371 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-450153/1-A	Method Blank	Total/NA	Water	7470A	450153
LCS 310-450153/2-A	Lab Control Sample	Total/NA	Water	7470A	450153
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	7470A	450153
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	7470A	450153

General Chemistry

Analysis Batch: 448986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302066-2	MW27-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302066-3	MW29R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302066-6	DP01-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302066-7	MW223S-GW-0325	Total/NA	Water	SM 4500 H+ B	
LCS 310-448986/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-302066-1 DU	MW13R-GW-0325	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 449070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	SM 2540C	
310-302066-2	MW27-GW-0325	Total/NA	Water	SM 2540C	
310-302066-3	MW29R-GW-0325	Total/NA	Water	SM 2540C	
310-302066-6	DP01-GW-0325	Total/NA	Water	SM 2540C	
MB 310-449070/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-449070/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 449203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-5	MW231SR-GW-0325	Total/NA	Water	SM 2540C	
310-302066-7	MW223S-GW-0325	Total/NA	Water	SM 2540C	
MB 310-449203/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-449203/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 449466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-7	MW223S-GW-0325	Total/NA	Water	9060A	
MB 310-449466/11	Method Blank	Total/NA	Water	9060A	
LCS 310-449466/12	Lab Control Sample	Total/NA	Water	9060A	
310-302066-7 DU	MW223S-GW-0325	Total/NA	Water	9060A	

Analysis Batch: 449734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-5	MW231SR-GW-0325	Total/NA	Water	9060A	
MB 310-449734/11	Method Blank	Total/NA	Water	9060A	
LCS 310-449734/12	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW13R-GW-0325

Lab Sample ID: 310-302066-1

Date Collected: 03/11/25 19:40

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449523	WZC8	EET CF	03/18/25 11:19
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 17:44
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:14
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 10:48
Total/NA	Analysis	SM 2540C		1	449070	MDU9	EET CF	03/17/25 11:48
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 17:22

Client Sample ID: MW27-GW-0325

Lab Sample ID: 310-302066-2

Date Collected: 03/12/25 19:05

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449523	WZC8	EET CF	03/18/25 12:09
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 17:58
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:31
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 10:55
Total/NA	Analysis	SM 2540C		1	449070	MDU9	EET CF	03/17/25 11:48
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 17:30

Client Sample ID: MW29R-GW-0325

Lab Sample ID: 310-302066-3

Date Collected: 03/12/25 17:50

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449523	WZC8	EET CF	03/18/25 12:19
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 18:01
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:34
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 10:57
Total/NA	Analysis	SM 2540C		1	449070	MDU9	EET CF	03/17/25 11:48
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 17:34

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW231SR-GW-0325

Lab Sample ID: 310-302066-5

Date Collected: 03/13/25 09:05

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	449542	WZC8	EET CF	03/14/25 12:28
Total/NA	Analysis	9056A		10	449542	WZC8	EET CF	03/14/25 14:59
Dissolved	Prep	3005A			449194	F5MW	EET CF	03/19/25 08:30
Dissolved	Analysis	6020B		1	449331	NFT2	EET CF	03/19/25 16:01
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 18:03
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:37
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 11:03
Total/NA	Analysis	9060A		1	449734	HE7K	EET CF	03/24/25 19:46
Total/NA	Analysis	SM 2540C		1	449203	XJ7V	EET CF	03/18/25 14:18
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 17:38

Client Sample ID: DP01-GW-0325

Lab Sample ID: 310-302066-6

Date Collected: 03/12/25 00:00

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 15:34
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 18:05
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:40
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 11:05
Total/NA	Analysis	SM 2540C		1	449070	MDU9	EET CF	03/17/25 11:48
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 17:43

Client Sample ID: MW223S-GW-0325

Lab Sample ID: 310-302066-7

Date Collected: 03/13/25 10:35

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	449542	WZC8	EET CF	03/14/25 11:58
Dissolved	Prep	3005A			449194	F5MW	EET CF	03/19/25 08:30
Dissolved	Analysis	6020B		1	449331	NFT2	EET CF	03/19/25 16:04
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449682	NFT2	EET CF	03/24/25 18:08
Total/NA	Prep	3005A			448970	QTZ5	EET CF	03/17/25 09:00
Total/NA	Analysis	6020B		1	449792	NFT2	EET CF	03/25/25 15:42
Total/NA	Prep	7470A			450153	QTZ5	EET CF	03/31/25 14:25
Total/NA	Analysis	7470A		1	450371	F5MW	EET CF	04/01/25 11:07
Total/NA	Analysis	9060A		1	449466	HE7K	EET CF	03/20/25 15:38

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Client Sample ID: MW223S-GW-0325
Date Collected: 03/13/25 10:35
Date Received: 03/14/25 09:00

Lab Sample ID: 310-302066-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	449203	XJ7V	EET CF	03/18/25 14:18
Total/NA	Analysis	SM 4500 H+ B		1	448986	WZC8	EET CF	03/14/25 18:36

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
6020B	3005A	Water	Lithium

Method Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
9060A	Organic Carbon, Total (TOC)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

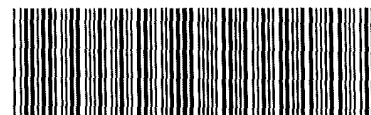
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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



Environment Testing
America



310-302066 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GTHD Services</u>			
City/State:	<u>Des Moines</u>	<u>IA</u>	Project:
Receipt Information			
Date/Time Received:	<u>3-14-25</u>	<u>0900</u>	Received By:
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>1</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.1</u>		Corrected Temp (°C): <u>0.1</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GHD Services</u>			
City/State:	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>3.14.25</u>	TIME <u>0900</u>	Received By: <u>CGL</u>
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>2</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>4.1</u>		Corrected Temp (°C): <u>4.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			
<u>MW 2235-GW-0325 not received</u>			

Chain of Custody Record

214 DSM



Environmental Testing

Client Information		Lab PM		Carrier Tracking No(s)		COC No:											
Client Contact: Kevin Armstrong		Zach Sindert		State of Origin: Iowa		Page: Page 1 of 1											
Company: GHD Services Inc.		E-Mail: zach.sindert@ghd.com		Job #:		Job #:											
Address: 11228 Aurora Avenue		City: Des Moines		State, Zip: IA, 50322-7905		Phone: 515-414-3935											
Email: Kevin.Armstrong@ghd.com		Project #: MEC Neal North-Background		Site: Neal North CCR		SSON#: 12576482-002											
Due Date Requested:		TAT Requested (days): Standard		Compliance Project: ☐ Yes ☒ No		PO #: 340-017045											
WO #: 12576482-004 01		Project #: 31017263		SSON#: 12576482-002													
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (View: Water, Solid, On-waste, Soil, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9316_Ra226 - Standard Target List	9320_Ra228 - Standard Target List	9064A_ORGFM_28D - Chloride, Fluoride & Sulfate	6020B_7470A - Appendix III and IV Metals	2640C_Calcd, SM4500_H+	6020B - Dissolved Fe and Mn (field-filtered)	9064A_ORGFM_48H SHORT HOLD	6020B_7470A - Appendix III and IV Metals + Iron and Manganese	Total Number of Containers	Special Instructions/Note:	
MW13R-GW-0325	3/11/25	1940	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	
MW27-GW-0325	3/12/25	1905	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	
MW29R-GW-0325	3/12/25	1750	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	
MW23S-GW-0325	3/13/25	1035	G	Water	Y	N	X	X	X	X	X	X	X	X	X	X	Short Hold
MW231SR-GW-0325	3/13/25	0905	G	Water	Y	N	X	X	X	X	X	X	X	X	X	X	Short Hold
DP01-GW-0325	3/17/25	—	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	
PT																	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																	
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months																	
Special Instructions/QC Requirements, Database Facility Code 11114842-GD-MidAmeri																	
Empty Kit Relinquished by: _____ Date: _____ Time: _____																	
Possible Hazard Identification																	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological																	
Deliverable Requested I, II, III, IV, Other (specify)																	
Relinquished by: _____ Date/Time: 3/13/25 1710 Company: GHD																	
Relinquished by: _____ Date/Time: _____ Company: _____																	
Relinquished by: _____ Date/Time: _____ Company: _____																	
Custody Seals Intact: ☐ Yes ☐ No ☐ No																	
Custody Seal No																	
Cooler Temperature(s) °C and Other Remarks:																	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-302066-1

Login Number: 302066

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 5/8/2025 2:43:42 PM

JOB DESCRIPTION

MEC Neal North-Background
MEC Neal North-Background

JOB NUMBER

310-302066-2

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Generated
5/8/2025 2:43:42 PM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North-Background

Job ID: 310-302066-2

Job ID: 310-302066-2

Eurofins Cedar Falls

Job Narrative 310-302066-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/14/2025 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 4.1°C.

Gas Flow Proportional Counter

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

Rad

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.

Job ID: 310-302066-2

Project/Site: MEC Neal North-Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-302066-1	MW13R-GW-0325	Water	03/11/25 19:40	03/14/25 09:00
310-302066-2	MW27-GW-0325	Water	03/12/25 19:05	03/14/25 09:00
310-302066-3	MW29R-GW-0325	Water	03/12/25 17:50	03/14/25 09:00
310-302066-5	MW231SR-GW-0325	Water	03/13/25 09:05	03/14/25 09:00
310-302066-6	DP01-GW-0325	Water	03/12/25 00:00	03/14/25 09:00
310-302066-7	MW223S-GW-0325	Water	03/13/25 10:35	03/14/25 09:00

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW13R-GW-0325

Lab Sample ID: 310-302066-1

Date Collected: 03/11/25 19:40

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.296		0.103	0.107	1.00	0.106	pCi/L	04/16/25 07:43	05/08/25 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.2		30 - 110					04/16/25 07:43	05/08/25 07:35	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.551	U	0.365	0.368	1.00	0.551	pCi/L	04/16/25 07:46	04/23/25 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.2		30 - 110					04/16/25 07:46	04/23/25 11:47	1
Y Carrier	85.2		30 - 110					04/16/25 07:46	04/23/25 11:47	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.828		0.379	0.383	5.00	0.551	pCi/L		05/07/25 17:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW27-GW-0325

Lab Sample ID: 310-302066-2

Date Collected: 03/12/25 19:05

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.217		0.0908	0.0929	1.00	0.0939	pCi/L	04/16/25 07:43	05/08/25 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.6		30 - 110					04/16/25 07:43	05/08/25 07:35	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.718	U	0.396	0.396	1.00	0.718	pCi/L	04/16/25 07:46	04/23/25 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.6		30 - 110					04/16/25 07:46	04/23/25 11:48	1
Y Carrier	80.4		30 - 110					04/16/25 07:46	04/23/25 11:48	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.718	U	0.406	0.407	5.00	0.718	pCi/L		05/07/25 17:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW29R-GW-0325

Lab Sample ID: 310-302066-3

Date Collected: 03/12/25 17:50

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.0782	0.0798	1.00	0.0753	pCi/L	04/16/25 07:43	05/08/25 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.9		30 - 110					04/16/25 07:43	05/08/25 07:35	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.596	U	0.389	0.392	1.00	0.596	pCi/L	04/16/25 07:46	04/23/25 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.9		30 - 110					04/16/25 07:46	04/23/25 11:48	1
Y Carrier	79.3		30 - 110					04/16/25 07:46	04/23/25 11:48	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.696		0.397	0.400	5.00	0.596	pCi/L		05/07/25 17:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW231SR-GW-0325

Lab Sample ID: 310-302066-5

Date Collected: 03/13/25 09:05

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.258		0.0920	0.0949	1.00	0.0871	pCi/L	04/16/25 07:43	05/08/25 07:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	93.2		30 - 110					04/16/25 07:43	05/08/25 07:45	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.499	U	0.316	0.318	1.00	0.499	pCi/L	04/16/25 07:46	04/23/25 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	93.2		30 - 110					04/16/25 07:46	04/23/25 11:48	1
Y Carrier	86.0		30 - 110					04/16/25 07:46	04/23/25 11:48	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.612		0.329	0.332	5.00	0.499	pCi/L		05/07/25 17:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: DP01-GW-0325

Lab Sample ID: 310-302066-6

Date Collected: 03/12/25 00:00

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.164		0.0807	0.0821	1.00	0.0946	pCi/L	04/16/25 07:43	05/08/25 07:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.9		30 - 110					04/16/25 07:43	05/08/25 07:45	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.580	U	0.365	0.367	1.00	0.580	pCi/L	04/16/25 07:46	04/23/25 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.9		30 - 110					04/16/25 07:46	04/23/25 11:48	1
Y Carrier	80.7		30 - 110					04/16/25 07:46	04/23/25 11:48	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.580	U	0.374	0.376	5.00	0.580	pCi/L		05/07/25 17:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW223S-GW-0325

Lab Sample ID: 310-302066-7

Date Collected: 03/13/25 10:35

Matrix: Water

Date Received: 03/14/25 09:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.159		0.0906	0.0917	1.00	0.121	pCi/L	04/16/25 07:43	05/08/25 07:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	92.9		30 - 110					04/16/25 07:43	05/08/25 07:45	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.528	U	0.339	0.342	1.00	0.528	pCi/L	04/16/25 07:46	04/23/25 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	92.9		30 - 110					04/16/25 07:46	04/23/25 11:48	1
Y Carrier	84.5		30 - 110					04/16/25 07:46	04/23/25 11:48	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.577		0.351	0.354	5.00	0.528	pCi/L		05/08/25 14:36	1

Definitions/Glossary

Client: GHD Services Inc.

Job ID: 310-302066-2

Project/Site: MEC Neal North-Background

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-712637/1-A

Matrix: Water

Analysis Batch: 716565

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 712637

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.100	U	0.0474	0.0474	1.00	0.100	pCi/L	04/16/25 07:43	05/08/25 07:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	87.6		30 - 110					04/16/25 07:43	05/08/25 07:33	1

Lab Sample ID: LCS 160-712637/2-A

Matrix: Water

Analysis Batch: 716565

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 712637

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226		9.58	10.47		1.08	1.00	0.103	pCi/L	109	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Barium	87.6		30 - 110							

Lab Sample ID: 310-302066-1 MS

Matrix: Water

Analysis Batch: 716556

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Prep Batch: 712637

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	0.296		9.57	8.192		0.880	1.00	0.0902	pCi/L	82	60 - 140
Carrier	MS %Yield	MS Qualifier	Limits								
Barium	88.1		30 - 110								

Lab Sample ID: 310-302066-1 MSD

Matrix: Water

Analysis Batch: 716556

Client Sample ID: MW13R-GW-0325

Prep Type: Total/NA

Prep Batch: 712637

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.296		9.57	8.019		0.863	1.00	0.0982	pCi/L	81	60 - 140	0.1	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Barium	88.6		30 - 110										

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-712638/1-A

Matrix: Water

Analysis Batch: 713902

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 712638

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.597	U	0.323	0.323	1.00	0.597	pCi/L	04/16/25 07:46	04/23/25 11:46	1

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Yield	Qualifier				
Barium	87.6		30 - 110	04/16/25 07:46	04/23/25 11:46	1
Y Carrier	83.4		30 - 110	04/16/25 07:46	04/23/25 11:46	1

Lab Sample ID: LCS 160-712638/2-A
Matrix: Water
Analysis Batch: 713902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712638

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	9.51	10.01		1.33	1.00	0.499	pCi/L	105	75 - 125

Carrier	LCS LCS		Limits
	%Yield	Qualifier	
Barium	87.6		30 - 110
Y Carrier	86.7		30 - 110

Lab Sample ID: 310-302066-1 MS
Matrix: Water
Analysis Batch: 713893

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA
Prep Batch: 712638

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	<0.551	U	9.51	10.82		1.44	1.00	0.577	pCi/L	108	60 - 140

Carrier	MS MS		Limits
	%Yield	Qualifier	
Barium	88.1		30 - 110
Y Carrier	81.5		30 - 110

Lab Sample ID: 310-302066-1 MSD
Matrix: Water
Analysis Batch: 713893

Client Sample ID: MW13R-GW-0325
Prep Type: Total/NA
Prep Batch: 712638

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	Limit
Radium-228	<0.551	U	9.50	10.98		1.44	1.00	0.528	pCi/L	110	60 - 140	0.06	1

Carrier	MSD MSD		Limits
	%Yield	Qualifier	
Barium	88.6		30 - 110
Y Carrier	84.1		30 - 110

QC Association Summary

Client: GHD Services Inc.

Job ID: 310-302066-2

Project/Site: MEC Neal North-Background

Rad

Prep Batch: 712637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-2	MW27-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-3	MW29R-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-6	DP01-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-7	MW223S-GW-0325	Total/NA	Water	PrecSep-21	
MB 160-712637/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-712637/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	PrecSep-21	
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	PrecSep-21	

Prep Batch: 712638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302066-1	MW13R-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-2	MW27-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-3	MW29R-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-5	MW231SR-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-6	DP01-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-7	MW223S-GW-0325	Total/NA	Water	PrecSep_0	
MB 160-712638/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-712638/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-302066-1 MS	MW13R-GW-0325	Total/NA	Water	PrecSep_0	
310-302066-1 MSD	MW13R-GW-0325	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: MW13R-GW-0325

Lab Sample ID: 310-302066-1

Date Collected: 03/11/25 19:40

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716556	SWS	EET SL	05/08/25 07:35
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:47
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Client Sample ID: MW27-GW-0325

Lab Sample ID: 310-302066-2

Date Collected: 03/12/25 19:05

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716556	SWS	EET SL	05/08/25 07:35
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Client Sample ID: MW29R-GW-0325

Lab Sample ID: 310-302066-3

Date Collected: 03/12/25 17:50

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716556	SWS	EET SL	05/08/25 07:35
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Client Sample ID: MW231SR-GW-0325

Lab Sample ID: 310-302066-5

Date Collected: 03/13/25 09:05

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716563	SWS	EET SL	05/08/25 07:45
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Client Sample ID: DP01-GW-0325

Lab Sample ID: 310-302066-6

Date Collected: 03/12/25 00:00

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716563	SWS	EET SL	05/08/25 07:45
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Client Sample ID: MW223S-GW-0325

Lab Sample ID: 310-302066-7

Date Collected: 03/13/25 10:35

Matrix: Water

Date Received: 03/14/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			712637	OGC	EET SL	04/16/25 07:43
Total/NA	Analysis	9315		1	716563	SWS	EET SL	05/08/25 07:45
Total/NA	Prep	PrecSep_0			712638	OGC	EET SL	04/16/25 07:46
Total/NA	Analysis	9320		1	713893	SWS	EET SL	04/23/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/08/25 14:36

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Laboratory: Eurofins St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	373	12-01-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
9315	PrecSep-21	Water	Radium-226
9320	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

Method Summary

Client: GHD Services Inc.

Job ID: 310-302066-2

Project/Site: MEC Neal North-Background

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Environment Testing
America



310-302066 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GTHD Services</u>			
City/State:	<u>Des Moines</u>	<u>IA</u>	Project:
Receipt Information			
Date/Time Received:	<u>3-14-25</u>	<u>0900</u>	Received By:
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>1</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.1</u>		Corrected Temp (°C): <u>0.1</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GHD Services</u>			
City/State:	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>3.14.25</u>	TIME <u>0900</u>	Received By: <u>CGL</u>
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>2</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>4.1</u>		Corrected Temp (°C): <u>4.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE. If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			
<u>MW 2235-GW-0325 not received</u>			

Chain of Custody Record

214 DSM



Environmental Testing

Client Information		Lab PM		Carrier Tracking No(s)		COC No:									
Client Contact: Kevin Armstrong		Zach Sindert		State of Origin: Iowa		Page: Page 1 of 1									
Company: GHD Services Inc.		E-Mail: zach.sindert@ghd.com		Job #:		Job #:									
Address: 11228 Aurora Avenue		City: Des Moines		State, Zip: IA, 50322-7905		Phone: 515-414-3935									
Email: Kevin.Armstrong@ghd.com		Project #: MEC Neal North-Background		Site: Neal North CCR		SSON#: 12576482-002									
Due Date Requested:		TAT Requested (days): Standard		Compliance Project: ☐ Yes ☒ No		PO #: 340-017045									
WO #: 12576482-004 01		Project #: 31017263		SSON#: 12576482-002											
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Viewers, Solid, On-wastebill, EPA-Tissue, As Air)	Field Filtered Sample (Yes or No)	9316_Ra226 - Standard Target List	9320_Ra228 - Standard Target List	9064A_ORGFM_28D - Chloride, Fluoride & Sulfate	6020B_7470A - Appendix III and IV Metals	2640C_Calcd, SM4500_H+	6020B - Dissolved Fe and Mn (field-filtered)	9064A_ORGFM_48H SHORT HOLD	6020B_7470A - Appendix III and IV Metals + Iron and Manganese	Total Number of Containers	Special Instructions/Note:
MW13R-GW-0325	3/11/25	1940	G	Water	N	X	X	X	X	X	X	X	X	X	
MW27-GW-0325	3/12/25	1905	G	Water	N	X	X	X	X	X	X	X	X	X	
MW29R-GW-0325	3/12/25	1750	G	Water	N	X	X	X	X	X	X	X	X	X	
MW23S-GW-0325	3/13/25	1035	G	Water	Y	X	X	X	X	X	X	X	X	X	Short Hold
MW231SR-GW-0325	3/13/25	0905	G	Water	Y	X	X	X	X	X	X	X	X	X	Short Hold
DP01-GW-0325	3/17/25	---	G	Water	N	X	X	X	X	X	X	X	X	X	
PT															
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)															
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months															
Special Instructions/QC Requirements, Database Facility Code 11114842-GD-MidAmeri															
Possible Hazard Identification		Unknown		Radiological		Time:		Method of Shipment:							
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B		Date/Time: 3/13/25 1710		Company: GHD		Received by: CAC		Date/Time: 3/14/25 0905							
Deliverable Requested I, II, III, IV, Other (specify)		Date/Time:		Company:		Received by:		Date/Time:							
Empty Kit Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:							
Relinquished by: Paige Richardson		Date/Time:		Company:		Received by:		Date/Time:							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:							
Custody Seals Intact: ☐ Yes ☒ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:											

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-302066-2

Login Number: 302066

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-302066-2

Login Number: 302066

List Number: 2

Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis

List Creation: 03/17/25 12:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls

Tracer/Carrier Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North-Background

Job ID: 310-302066-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
310-302066-1	MW13R-GW-0325	90.2	
310-302066-1 MS	MW13R-GW-0325	88.1	
310-302066-1 MSD	MW13R-GW-0325	88.6	
310-302066-2	MW27-GW-0325	82.6	
310-302066-3	MW29R-GW-0325	86.9	
310-302066-5	MW231SR-GW-0325	93.2	
310-302066-6	DP01-GW-0325	89.9	
310-302066-7	MW223S-GW-0325	92.9	
LCS 160-712637/2-A	Lab Control Sample	87.6	
MB 160-712637/1-A	Method Blank	87.6	
Tracer/Carrier Legend			
Ba = Barium			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-302066-1	MW13R-GW-0325	90.2	85.2
310-302066-1 MS	MW13R-GW-0325	88.1	81.5
310-302066-1 MSD	MW13R-GW-0325	88.6	84.1
310-302066-2	MW27-GW-0325	82.6	80.4
310-302066-3	MW29R-GW-0325	86.9	79.3
310-302066-5	MW231SR-GW-0325	93.2	86.0
310-302066-6	DP01-GW-0325	89.9	80.7
310-302066-7	MW223S-GW-0325	92.9	84.5
LCS 160-712638/2-A	Lab Control Sample	87.6	86.7
MB 160-712638/1-A	Method Blank	87.6	83.4
Tracer/Carrier Legend			
Ba = Barium			
Y = Y Carrier			



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 4/21/2025 8:53:59 AM

JOB DESCRIPTION

Neal North Closed CCR Monofill

JOB NUMBER

310-302361-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Generated
4/21/2025 8:53:59 AM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Job ID: 310-302361-1

Eurofins Cedar Falls

Job Narrative 310-302361-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/19/2025 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 0.6°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW01R-GW-0325 (310-302361-1), MW03R-GW-0325 (310-302361-2), MW05R-GW-0325 (310-302361-3), MW19-GW-0325 (310-302361-4), MW21-GW-0325 (310-302361-5) and DP05-GW-0325 (310-302361-6). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

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Case Narrative

Client: GHD Services Inc.
Project: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Job ID: 310-302361-2

Eurofins Cedar Falls

Job Narrative 310-302361-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/19/2025 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 0.6°C.

Gas Flow Proportional Counter

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

Rad

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

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Sample Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-302361-1	MW01R-GW-0325	Water	03/17/25 17:40	03/19/25 15:10
310-302361-2	MW03R-GW-0325	Water	03/17/25 18:35	03/19/25 15:10
310-302361-3	MW05R-GW-0325	Water	03/17/25 18:30	03/19/25 15:10
310-302361-4	MW19-GW-0325	Water	03/17/25 19:45	03/19/25 15:10
310-302361-5	MW21-GW-0325	Water	03/17/25 19:25	03/19/25 15:10
310-302361-6	DP05-GW-0325	Water	03/17/25 00:00	03/19/25 15:10

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW01R-GW-0325

Lab Sample ID: 310-302361-1

Date Collected: 03/17/25 17:40

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37		5.0	2.3	mg/L			03/28/25 19:28	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 19:28	5
Sulfate	230		5.0	2.1	mg/L			03/28/25 19:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:14	1
Arsenic	0.054		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:14	1
Barium	0.12		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:14	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:14	1
Boron	0.45		0.10	0.076	mg/L		03/21/25 08:30	03/27/25 13:25	1
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:14	1
Calcium	170		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 17:14	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:14	1
Cobalt	0.00057		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:14	1
Lithium	0.087		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:14	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:14	1
Molybdenum	0.0034		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:14	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:14	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:14	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	940		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			03/19/25 20:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.353	U	0.215	0.215	1.00	0.353	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	81.9		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.579	U	0.351	0.352	1.00	0.579	pCi/L	03/24/25 07:36	04/18/25 11:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	81.9		30 - 110					03/24/25 07:36	04/18/25 11:33	1
Y Carrier	81.1		30 - 110					03/24/25 07:36	04/18/25 11:33	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW01R-GW-0325
Date Collected: 03/17/25 17:40
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-1
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.579	U	0.412	0.412	5.00	0.579	pCi/L		04/21/25 08:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW03R-GW-0325

Lab Sample ID: 310-302361-2

Date Collected: 03/17/25 18:35

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		5.0	2.3	mg/L			03/28/25 19:44	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 19:44	5
Sulfate	170		5.0	2.1	mg/L			03/28/25 19:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:17	1
Arsenic	0.042		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:17	1
Barium	0.20		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:17	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:17	1
Boron	0.55		0.10	0.076	mg/L		03/21/25 08:30	03/27/25 13:37	1
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:17	1
Calcium	150		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 17:17	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:17	1
Cobalt	0.00064		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:17	1
Lithium	0.087		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:17	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:17	1
Molybdenum	0.0019 J		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:17	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:17	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:17	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	760		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			03/19/25 19:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.358	U	0.184	0.184	1.00	0.358	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.4		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.812		0.391	0.398	1.00	0.524	pCi/L	03/24/25 07:36	04/18/25 11:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.4		30 - 110					03/24/25 07:36	04/18/25 11:35	1
Y Carrier	80.7		30 - 110					03/24/25 07:36	04/18/25 11:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW03R-GW-0325
Date Collected: 03/17/25 18:35
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-2
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.855		0.432	0.438	5.00	0.524	pCi/L		04/21/25 08:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW05R-GW-0325

Lab Sample ID: 310-302361-3

Date Collected: 03/17/25 18:30

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		5.0	2.3	mg/L			03/28/25 19:59	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 19:59	5
Sulfate	320		5.0	2.1	mg/L			03/28/25 19:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:19	1
Arsenic	0.031		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:19	1
Barium	0.14		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:19	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:19	1
Boron	0.37		0.10	0.076	mg/L		03/21/25 08:30	03/27/25 13:39	1
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:19	1
Calcium	160		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 17:19	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:19	1
Cobalt	0.00055		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:19	1
Lithium	0.074		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:19	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:19	1
Molybdenum	0.0036		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:19	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:19	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	930		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			03/19/25 19:55	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.270	U	0.151	0.151	1.00	0.270	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.7		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.561		0.354	0.358	1.00	0.522	pCi/L	03/24/25 07:36	04/18/25 11:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.7		30 - 110					03/24/25 07:36	04/18/25 11:35	1
Y Carrier	80.7		30 - 110					03/24/25 07:36	04/18/25 11:35	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW05R-GW-0325
Date Collected: 03/17/25 18:30
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-3
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.646		0.385	0.389	5.00	0.522	pCi/L		04/21/25 08:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW19-GW-0325

Lab Sample ID: 310-302361-4

Date Collected: 03/17/25 19:45

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		5.0	2.3	mg/L			03/28/25 20:15	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 20:15	5
Sulfate	1000		20	8.4	mg/L			03/28/25 20:30	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:21	1
Arsenic	0.0054		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:21	1
Barium	0.023		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:21	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:21	1
Boron	0.64		0.40	0.30	mg/L		03/21/25 08:30	03/27/25 13:42	4
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:21	1
Calcium	420		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 17:21	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:21	1
Cobalt	0.015		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:21	1
Lithium	0.28		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:21	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:21	1
Molybdenum	<0.0013		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:21	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:21	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2300		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.4	HF	1.0	1.0	SU			03/19/25 20:32	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.314	U	0.172	0.172	1.00	0.314	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	87.3		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.717		0.422	0.427	1.00	0.624	pCi/L	03/24/25 07:36	04/18/25 11:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	87.3		30 - 110					03/24/25 07:36	04/18/25 11:35	1
Y Carrier	82.2		30 - 110					03/24/25 07:36	04/18/25 11:35	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW19-GW-0325
Date Collected: 03/17/25 19:45
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-4
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.801		0.456	0.460	5.00	0.624	pCi/L		04/21/25 08:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW21-GW-0325

Lab Sample ID: 310-302361-5

Date Collected: 03/17/25 19:25

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		5.0	2.3	mg/L			03/28/25 21:17	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 21:17	5
Sulfate	1600		20	8.4	mg/L			03/28/25 21:33	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:33	1
Arsenic	0.00068	J	0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:33	1
Barium	0.019		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:33	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:33	1
Boron	0.46		0.40	0.30	mg/L		03/21/25 08:30	03/27/25 13:48	4
Cadmium	0.00029		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:33	1
Calcium	560		2.0	0.76	mg/L		03/21/25 08:30	03/27/25 13:48	4
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:33	1
Cobalt	0.00082		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:33	1
Lithium	0.35		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:33	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:33	1
Molybdenum	<0.0013		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:33	1
Selenium	0.0038	J	0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:33	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:33	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3000		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.4	HF	1.0	1.0	SU			03/19/25 20:19	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.462	U	0.216	0.216	1.00	0.462	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	84.6		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.716		0.397	0.403	1.00	0.571	pCi/L	03/24/25 07:36	04/18/25 11:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	84.6		30 - 110					03/24/25 07:36	04/18/25 11:35	1
Y Carrier	83.0		30 - 110					03/24/25 07:36	04/18/25 11:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW21-GW-0325
Date Collected: 03/17/25 19:25
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-5
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.622		0.452	0.457	5.00	0.571	pCi/L		04/21/25 08:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: DP05-GW-0325

Lab Sample ID: 310-302361-6

Date Collected: 03/17/25 00:00

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37		5.0	2.3	mg/L			03/28/25 21:48	5
Fluoride	<0.38		1.0	0.38	mg/L			03/28/25 21:48	5
Sulfate	230		5.0	2.1	mg/L			03/28/25 21:48	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 17:36	1
Arsenic	0.056		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 17:36	1
Barium	0.12		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 17:36	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 17:36	1
Boron	0.46		0.10	0.076	mg/L		03/21/25 08:30	03/27/25 13:51	1
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 17:36	1
Calcium	170		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 17:36	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 17:36	1
Cobalt	0.00059		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 17:36	1
Lithium	0.089		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 17:36	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 17:36	1
Molybdenum	0.0036		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 17:36	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 17:36	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 17:36	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 09:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	970		50	36	mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			03/19/25 20:23	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.500	U	0.302	0.302	1.00	0.500	pCi/L	03/24/25 07:33	04/18/25 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.6		30 - 110					03/24/25 07:33	04/18/25 16:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.682		0.387	0.392	1.00	0.554	pCi/L	03/24/25 07:36	04/18/25 11:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	82.6		30 - 110					03/24/25 07:36	04/18/25 11:35	1
Y Carrier	81.9		30 - 110					03/24/25 07:36	04/18/25 11:35	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: DP05-GW-0325
Date Collected: 03/17/25 00:00
Date Received: 03/19/25 15:10

Lab Sample ID: 310-302361-6
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.924		0.491	0.495	5.00	0.554	pCi/L		04/21/25 08:21	1

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-450143/3

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			03/28/25 15:04	1
Fluoride	<0.075		0.20	0.075	mg/L			03/28/25 15:04	1
Sulfate	<0.42		1.0	0.42	mg/L			03/28/25 15:04	1

Lab Sample ID: LCS 310-450143/4

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.95		mg/L		100	90 - 110
Fluoride	2.00	2.00		mg/L		100	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-449393/1-A

Matrix: Water

Analysis Batch: 449894

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0020	0.0010	mg/L		03/21/25 08:30	03/26/25 16:38	1
Arsenic	<0.00053		0.0020	0.00053	mg/L		03/21/25 08:30	03/26/25 16:38	1
Barium	<0.00066		0.0020	0.00066	mg/L		03/21/25 08:30	03/26/25 16:38	1
Beryllium	<0.00033		0.0010	0.00033	mg/L		03/21/25 08:30	03/26/25 16:38	1
Cadmium	<0.00010		0.00020	0.00010	mg/L		03/21/25 08:30	03/26/25 16:38	1
Calcium	<0.19		0.50	0.19	mg/L		03/21/25 08:30	03/26/25 16:38	1
Chromium	<0.0012		0.0050	0.0012	mg/L		03/21/25 08:30	03/26/25 16:38	1
Cobalt	<0.00017		0.00050	0.00017	mg/L		03/21/25 08:30	03/26/25 16:38	1
Lithium	<0.0025		0.010	0.0025	mg/L		03/21/25 08:30	03/26/25 16:38	1
Lead	<0.00026		0.00050	0.00026	mg/L		03/21/25 08:30	03/26/25 16:38	1
Molybdenum	<0.0013		0.0020	0.0013	mg/L		03/21/25 08:30	03/26/25 16:38	1
Selenium	<0.0014		0.0050	0.0014	mg/L		03/21/25 08:30	03/26/25 16:38	1
Thallium	<0.00057		0.0010	0.00057	mg/L		03/21/25 08:30	03/26/25 16:38	1

Lab Sample ID: MB 310-449393/1-A

Matrix: Water

Analysis Batch: 449985

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.076		0.10	0.076	mg/L		03/21/25 08:30	03/27/25 12:45	1

Lab Sample ID: LCS 310-449393/2-A

Matrix: Water

Analysis Batch: 449894

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.223		mg/L		111	80 - 120
Arsenic	0.200	0.203		mg/L		101	80 - 120
Barium	0.100	0.103		mg/L		103	80 - 120
Beryllium	0.100	0.0952		mg/L		95	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

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

Lab Sample ID: LCS 310-449393/2-A

Matrix: Water

Analysis Batch: 449894

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.100	0.0989		mg/L		99	80 - 120
Calcium	2.00	1.88		mg/L		94	80 - 120
Chromium	0.100	0.101		mg/L		101	80 - 120
Cobalt	0.100	0.107		mg/L		107	80 - 120
Lithium	0.200	0.205		mg/L		102	80 - 120
Lead	0.200	0.209		mg/L		105	80 - 120
Molybdenum	0.200	0.204		mg/L		102	80 - 120
Selenium	0.400	0.383		mg/L		96	80 - 120
Thallium	0.100	0.0880		mg/L		88	80 - 120

Lab Sample ID: LCS 310-449393/2-A

Matrix: Water

Analysis Batch: 449985

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.230		mg/L		115	80 - 120

Lab Sample ID: 310-302361-4 DU

Matrix: Water

Analysis Batch: 449894

Client Sample ID: MW19-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0010		<0.0010		mg/L		NC	20
Arsenic	0.0054		0.00528		mg/L		3	20
Barium	0.023		0.0222		mg/L		3	20
Beryllium	<0.00033		<0.00033		mg/L		NC	20
Cadmium	<0.00010		<0.00010		mg/L		NC	20
Calcium	420		405		mg/L		3	20
Chromium	<0.0012		<0.0012		mg/L		NC	20
Cobalt	0.015		0.0145		mg/L		3	20
Lithium	0.28		0.268		mg/L		5	20
Lead	<0.00026		<0.00026		mg/L		NC	20
Molybdenum	<0.0013		<0.0013		mg/L		NC	20
Selenium	<0.0014		<0.0014		mg/L		NC	20
Thallium	<0.00057		<0.00057		mg/L		NC	20

Lab Sample ID: 310-302361-4 DU

Matrix: Water

Analysis Batch: 449985

Client Sample ID: MW19-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	0.64		0.623		mg/L		3	20

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-450061/1-A
Matrix: Water
Analysis Batch: 450149

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 450061

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00011		0.00020	0.00011	mg/L		03/28/25 11:50	03/29/25 08:51	1

Lab Sample ID: LCS 310-450061/2-A
Matrix: Water
Analysis Batch: 450149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 450061

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.00167		mg/L		100	80 - 120

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

Lab Sample ID: MB 310-449414/1
Matrix: Water
Analysis Batch: 449414

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<36		50	36	mg/L			03/20/25 15:16	1

Lab Sample ID: LCS 310-449414/2
Matrix: Water
Analysis Batch: 449414

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	998		mg/L		100	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-449339/1
Matrix: Water
Analysis Batch: 449339

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

Lab Sample ID: 310-302361-6 DU
Matrix: Water
Analysis Batch: 449339

Client Sample ID: DP05-GW-0325
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.7	HF	7.7		SU		0.05	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-709051/1-A
Matrix: Water
Analysis Batch: 713073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709051

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.308	U	0.170	0.170	1.00	0.308	pCi/L	03/24/25 07:33	04/18/25 15:58	1

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-709051/1-A
Matrix: Water
Analysis Batch: 713073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709051

	MB	MB									
Carrier	%Yield	Qualifier	Limits		Prepared	Analyzed	Dil Fac				
Barium	88.5		30 - 110		03/24/25 07:33	04/18/25 15:58	1				

Lab Sample ID: LCS 160-709051/2-A
Matrix: Water
Analysis Batch: 713073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709051

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226		9.58	8.392		1.18	1.00	0.280	pCi/L	88	75 - 125		
Carrier	LCS %Yield	LCS Qualifier	Limits									
Barium	87.5		30 - 110									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-709052/1-A
Matrix: Water
Analysis Batch: 713073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709052

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.529	U	0.300	0.301	1.00	0.529	pCi/L	03/24/25 07:36	04/18/25 11:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	88.5		30 - 110					03/24/25 07:36	04/18/25 11:33	1
Y Carrier	86.0		30 - 110					03/24/25 07:36	04/18/25 11:33	1

Lab Sample ID: LCS 160-709052/2-A
Matrix: Water
Analysis Batch: 713073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709052

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228		9.53	9.281		1.28	1.00	0.582	pCi/L	97	75 - 125		
Carrier	LCS %Yield	LCS Qualifier	Limits									
Barium	87.5		30 - 110									
Y Carrier	83.7		30 - 110									

QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

HPLC/IC

Analysis Batch: 450143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	9056A	
310-302361-2	MW03R-GW-0325	Total/NA	Water	9056A	
310-302361-3	MW05R-GW-0325	Total/NA	Water	9056A	
310-302361-4	MW19-GW-0325	Total/NA	Water	9056A	
310-302361-4	MW19-GW-0325	Total/NA	Water	9056A	
310-302361-5	MW21-GW-0325	Total/NA	Water	9056A	
310-302361-5	MW21-GW-0325	Total/NA	Water	9056A	
310-302361-6	DP05-GW-0325	Total/NA	Water	9056A	
MB 310-450143/3	Method Blank	Total/NA	Water	9056A	
LCS 310-450143/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 449393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	3005A	
310-302361-2	MW03R-GW-0325	Total/NA	Water	3005A	
310-302361-3	MW05R-GW-0325	Total/NA	Water	3005A	
310-302361-4	MW19-GW-0325	Total/NA	Water	3005A	
310-302361-5	MW21-GW-0325	Total/NA	Water	3005A	
310-302361-6	DP05-GW-0325	Total/NA	Water	3005A	
MB 310-449393/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-302361-4 DU	MW19-GW-0325	Total/NA	Water	3005A	

Analysis Batch: 449894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	6020B	449393
310-302361-2	MW03R-GW-0325	Total/NA	Water	6020B	449393
310-302361-3	MW05R-GW-0325	Total/NA	Water	6020B	449393
310-302361-4	MW19-GW-0325	Total/NA	Water	6020B	449393
310-302361-5	MW21-GW-0325	Total/NA	Water	6020B	449393
310-302361-6	DP05-GW-0325	Total/NA	Water	6020B	449393
MB 310-449393/1-A	Method Blank	Total/NA	Water	6020B	449393
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	6020B	449393
310-302361-4 DU	MW19-GW-0325	Total/NA	Water	6020B	449393

Analysis Batch: 449985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	6020B	449393
310-302361-2	MW03R-GW-0325	Total/NA	Water	6020B	449393
310-302361-3	MW05R-GW-0325	Total/NA	Water	6020B	449393
310-302361-4	MW19-GW-0325	Total/NA	Water	6020B	449393
310-302361-5	MW21-GW-0325	Total/NA	Water	6020B	449393
310-302361-6	DP05-GW-0325	Total/NA	Water	6020B	449393
MB 310-449393/1-A	Method Blank	Total/NA	Water	6020B	449393
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	6020B	449393
310-302361-4 DU	MW19-GW-0325	Total/NA	Water	6020B	449393

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Metals

Prep Batch: 450061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	7470A	
310-302361-2	MW03R-GW-0325	Total/NA	Water	7470A	
310-302361-3	MW05R-GW-0325	Total/NA	Water	7470A	
310-302361-4	MW19-GW-0325	Total/NA	Water	7470A	
310-302361-5	MW21-GW-0325	Total/NA	Water	7470A	
310-302361-6	DP05-GW-0325	Total/NA	Water	7470A	
MB 310-450061/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-450061/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 450149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	7470A	450061
310-302361-2	MW03R-GW-0325	Total/NA	Water	7470A	450061
310-302361-3	MW05R-GW-0325	Total/NA	Water	7470A	450061
310-302361-4	MW19-GW-0325	Total/NA	Water	7470A	450061
310-302361-5	MW21-GW-0325	Total/NA	Water	7470A	450061
310-302361-6	DP05-GW-0325	Total/NA	Water	7470A	450061
MB 310-450061/1-A	Method Blank	Total/NA	Water	7470A	450061
LCS 310-450061/2-A	Lab Control Sample	Total/NA	Water	7470A	450061

General Chemistry

Analysis Batch: 449339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302361-2	MW03R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302361-3	MW05R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302361-4	MW19-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302361-5	MW21-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302361-6	DP05-GW-0325	Total/NA	Water	SM 4500 H+ B	
LCS 310-449339/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-302361-6 DU	DP05-GW-0325	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 449414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	SM 2540C	
310-302361-2	MW03R-GW-0325	Total/NA	Water	SM 2540C	
310-302361-3	MW05R-GW-0325	Total/NA	Water	SM 2540C	
310-302361-4	MW19-GW-0325	Total/NA	Water	SM 2540C	
310-302361-5	MW21-GW-0325	Total/NA	Water	SM 2540C	
310-302361-6	DP05-GW-0325	Total/NA	Water	SM 2540C	
MB 310-449414/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-449414/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 709051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	PrecSep-21	
310-302361-2	MW03R-GW-0325	Total/NA	Water	PrecSep-21	
310-302361-3	MW05R-GW-0325	Total/NA	Water	PrecSep-21	
310-302361-4	MW19-GW-0325	Total/NA	Water	PrecSep-21	

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Rad (Continued)

Prep Batch: 709051 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-5	MW21-GW-0325	Total/NA	Water	PrecSep-21	
310-302361-6	DP05-GW-0325	Total/NA	Water	PrecSep-21	
MB 160-709051/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-709051/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 709052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302361-1	MW01R-GW-0325	Total/NA	Water	PrecSep_0	
310-302361-2	MW03R-GW-0325	Total/NA	Water	PrecSep_0	
310-302361-3	MW05R-GW-0325	Total/NA	Water	PrecSep_0	
310-302361-4	MW19-GW-0325	Total/NA	Water	PrecSep_0	
310-302361-5	MW21-GW-0325	Total/NA	Water	PrecSep_0	
310-302361-6	DP05-GW-0325	Total/NA	Water	PrecSep_0	
MB 160-709052/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-709052/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW01R-GW-0325

Lab Sample ID: 310-302361-1

Date Collected: 03/17/25 17:40

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 19:28
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:14
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:25
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:12
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:36
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:33
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Client Sample ID: MW03R-GW-0325

Lab Sample ID: 310-302361-2

Date Collected: 03/17/25 18:35

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 19:44
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:17
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:37
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:14
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 19:51
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:35
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Client Sample ID: MW05R-GW-0325

Lab Sample ID: 310-302361-3

Date Collected: 03/17/25 18:30

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 19:59
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:19

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW05R-GW-0325

Lab Sample ID: 310-302361-3

Date Collected: 03/17/25 18:30

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:39
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:17
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 19:55
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:35
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Client Sample ID: MW19-GW-0325

Lab Sample ID: 310-302361-4

Date Collected: 03/17/25 19:45

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 20:15
Total/NA	Analysis	9056A		20	450143	QTZ5	EET CF	03/28/25 20:30
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:21
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		4	449985	NFT2	EET CF	03/27/25 13:42
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:19
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:32
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:35
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Client Sample ID: MW21-GW-0325

Lab Sample ID: 310-302361-5

Date Collected: 03/17/25 19:25

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 21:17
Total/NA	Analysis	9056A		20	450143	QTZ5	EET CF	03/28/25 21:33
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:33
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		4	449985	NFT2	EET CF	03/27/25 13:48

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Client Sample ID: MW21-GW-0325

Lab Sample ID: 310-302361-5

Date Collected: 03/17/25 19:25

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:21
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:19
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:35
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Client Sample ID: DP05-GW-0325

Lab Sample ID: 310-302361-6

Date Collected: 03/17/25 00:00

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 21:48
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:36
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:51
Total/NA	Prep	7470A			450061	QTZ5	EET CF	03/28/25 11:50
Total/NA	Analysis	7470A		1	450149	QTZ5	EET CF	03/29/25 09:23
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:23
Total/NA	Prep	PrecSep-21			709051	OGC	EET SL	03/24/25 07:33
Total/NA	Analysis	9315		1	713079	FLC	EET SL	04/18/25 16:10
Total/NA	Prep	PrecSep_0			709052	OGC	EET SL	03/24/25 07:36
Total/NA	Analysis	9320		1	713073	FLC	EET SL	04/18/25 11:35
Total/NA	Analysis	Ra226_Ra228		1	713498	FLC	EET SL	04/21/25 08:21

Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020B	3005A	Water	Lithium

Laboratory: Eurofins St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	373	12-01-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9315	PrecSep-21	Water	Radium-226
9320	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

Method Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

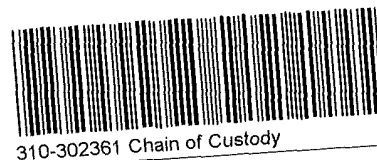
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



310-302361 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GeH D Services</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>3-19-25</u>	<u>1510</u>	<u>CGC</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee			
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☒ No If yes: Cooler # <u>1</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.6</u>		Corrected Temp (°C): <u>0.6</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			



Environment Testing
America

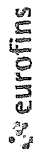
Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GeHD Services</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>3-19-25</u>	<u>1510</u>	<u>CGC</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☒ No If yes: Cooler # <u>2</u> of <u>2</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.1</u>		Corrected Temp (°C): <u>0.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Chain of Custody Record

DSM214



Client Information Client Contact: <u>Kevin Armstrong</u> Company: <u>GHD Services Inc.</u>		Address: <u>11228 Aurora Avenue</u> City: <u>Des Moines</u> State, Zip: <u>IA, 50322-7905</u> Phone: <u>515-414-3935</u> Email: <u>Kevin.Armstrong@ghd.com</u>		Project Name: <u>Neal North Closed CCR Monofill (IDNR)</u> Site: <u>Neal North Closed CCR Monofill</u>		Due Date Requested: TAT Requested (days): <u>Standard</u> Compliance Project: <u>Δ Yes Δ No</u> PO #: <u>340-017045</u> WO #: <u>12576482-004 01</u> Project #: <u>31017263</u> SSOW#: <u>12576482-002</u>		Sampler: <u>PURP Richardsman L&S</u> Lab PM: <u>Zach Bindert</u> E-Mail: <u>zach.bindert@iowadep.us.com</u> State of Origin: <u>Iowa</u> Carrier Tracking No(s): Page: <u>Page 1 of 1</u> Job #:		COC No: Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:				
Analysis Requested														
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226 - Standard Target List	9320_Ra228 - Standard Target List	9066A_ORGFM_28D - Chloride, Fluoride & Sulfate	6020B_7470A - Appendix III and IV Metals	2640C_Calcd, SM4500_H+	Total Number of Containers	Special Instructions/Note:
MW01R-GW-0325	3/17/25	1740	G	Water	N	N	X	X	X	X	X	X	5	
MW03R-GW-0325	3/17/25	1835	G	Water	N	N	X	X	X	X	X	X	5	
MW05R-GW-0325	3/17/25	1830	G	Water	N	N	X	X	X	X	X	X	5	
MW19-GW-0325	3/17/25	1945	G	Water	N	N	X	X	X	X	X	X	5	
MW21-GW-0325	3/17/25	1925	G	Water	N	N	X	X	X	X	X	X	5	
DP05-GW-0325	3/17/25	—	G	Water	N	N	X	X	X	X	X	X	5	
Possible Hazard Identification														
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological														
Deliverable Requested 1, II, III, IV, Other (specify)														
Empty Kit Relinquished by														
Relinquished by		Date/Time:	Relinquished by		Date/Time:	Relinquished by		Date/Time:	Relinquished by		Date/Time:	Relinquished by		Date/Time:
<u>PURP Richardsman</u>		<u>3/19/25</u>	<u>PURP Richardsman</u>		<u>3/19/25</u>	<u>PURP Richardsman</u>		<u>3/19/25</u>	<u>PURP Richardsman</u>		<u>3/19/25</u>	<u>PURP Richardsman</u>		<u>3/19/25</u>
Company			Company			Company			Company			Company		
Special Instructions/QC Requirements, Database Facility Code 11114842-GD-MidAment														
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
☐ Return To Client ☐ Disposal By Lab Archive For _____ Months														
Method of Shipment														
Cooler Temperature(s) °C and Other Remarks:														

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-302361-1

Login Number: 302361

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bunker, Xavier M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls

Tracer/Carrier Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill

Job ID: 310-302361-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
310-302361-1	MW01R-GW-0325	81.9	
310-302361-2	MW03R-GW-0325	82.4	
310-302361-3	MW05R-GW-0325	89.7	
310-302361-4	MW19-GW-0325	87.3	
310-302361-5	MW21-GW-0325	84.6	
310-302361-6	DP05-GW-0325	82.6	
LCS 160-709051/2-A	Lab Control Sample	87.5	
MB 160-709051/1-A	Method Blank	88.5	
Tracer/Carrier Legend			
Ba = Barium			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-302361-1	MW01R-GW-0325	81.9	81.1
310-302361-2	MW03R-GW-0325	82.4	80.7
310-302361-3	MW05R-GW-0325	89.7	80.7
310-302361-4	MW19-GW-0325	87.3	82.2
310-302361-5	MW21-GW-0325	84.6	83.0
310-302361-6	DP05-GW-0325	82.6	81.9
LCS 160-709052/2-A	Lab Control Sample	87.5	83.7
MB 160-709052/1-A	Method Blank	88.5	86.0
Tracer/Carrier Legend			
Ba = Barium			
Y = Y Carrier			



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 3/31/2025 8:00:00 AM

JOB DESCRIPTION

Neal North Active CCR Monofill
MEC Neal North Active Monofill

JOB NUMBER

310-302362-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Generated
3/31/2025 8:00:00 AM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: Neal North Active CCR Monofill

Job ID: 310-302362-1

Job ID: 310-302362-1

Eurofins Cedar Falls

Job Narrative 310-302362-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 3/19/2025 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW23R-GW-0325 (310-302362-2), MW25-GW-0325 (310-302362-3), MW57R-GW-0325 (310-302362-4), MW59S-GW-0325 (310-302362-5), MW60S-GW-0325 (310-302362-6) and DP04-GW-0325 (310-302362-7). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: MW11R-GW-0325 (310-302362-1). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.

Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-302362-1	MW11R-GW-0325	Water	03/17/25 13:50	03/19/25 15:10
310-302362-2	MW23R-GW-0325	Water	03/17/25 15:10	03/19/25 15:10
310-302362-3	MW25-GW-0325	Water	03/17/25 12:25	03/19/25 15:10
310-302362-4	MW57R-GW-0325	Water	03/17/25 14:10	03/19/25 15:10
310-302362-5	MW59S-GW-0325	Water	03/17/25 15:50	03/19/25 15:10
310-302362-6	MW60S-GW-0325	Water	03/17/25 17:20	03/19/25 15:10
310-302362-7	DP04-GW-0325	Water	03/17/25 00:00	03/19/25 15:10

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW11R-GW-0325

Lab Sample ID: 310-302362-1

Date Collected: 03/17/25 13:50

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/28/25 22:04	5
Fluoride	<1.00		1.00		mg/L			03/28/25 22:04	5
Sulfate	86.9		5.00		mg/L			03/28/25 22:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.172		0.100		mg/L		03/21/25 08:30	03/27/25 13:08	1
Calcium	123		0.500		mg/L		03/21/25 08:30	03/26/25 16:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	530		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.9	HF	1.0		SU			03/19/25 20:57	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW23R-GW-0325

Lab Sample ID: 310-302362-2

Date Collected: 03/17/25 15:10

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.9		5.00		mg/L			03/25/25 10:02	5
Fluoride	<1.00		1.00		mg/L			03/25/25 10:02	5
Sulfate	241		5.00		mg/L			03/25/25 10:02	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.208		0.100		mg/L		03/21/25 08:30	03/27/25 13:11	1
Calcium	191		0.500		mg/L		03/21/25 08:30	03/26/25 17:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	958		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			03/19/25 20:08	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW25-GW-0325

Lab Sample ID: 310-302362-3

Date Collected: 03/17/25 12:25

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/25/25 10:17	5
Fluoride	<1.00		1.00		mg/L			03/25/25 10:17	5
Sulfate	394		5.00		mg/L			03/25/25 10:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.512		0.100		mg/L		03/21/25 08:30	03/27/25 13:14	1
Calcium	197		0.500		mg/L		03/21/25 08:30	03/26/25 17:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1130		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/19/25 19:59	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW57R-GW-0325

Lab Sample ID: 310-302362-4

Date Collected: 03/17/25 14:10

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		5.00		mg/L			03/25/25 10:33	5
Fluoride	<1.00		1.00		mg/L			03/25/25 10:33	5
Sulfate	274		5.00		mg/L			03/25/25 10:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.362		0.100		mg/L		03/21/25 08:30	03/27/25 13:00	1
Calcium	205		0.500		mg/L		03/21/25 08:30	03/26/25 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1080		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/19/25 20:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW59S-GW-0325

Lab Sample ID: 310-302362-5

Date Collected: 03/17/25 15:50

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.96		5.00		mg/L			03/25/25 11:20	5
Fluoride	<1.00		1.00		mg/L			03/25/25 11:20	5
Sulfate	124		5.00		mg/L			03/25/25 11:20	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.235		0.100		mg/L		03/21/25 08:30	03/27/25 13:17	1
Calcium	157		0.500		mg/L		03/21/25 08:30	03/26/25 17:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	748		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			03/19/25 20:44	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW60S-GW-0325

Lab Sample ID: 310-302362-6

Date Collected: 03/17/25 17:20

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.56		5.00		mg/L			03/25/25 11:35	5
Fluoride	<1.00		1.00		mg/L			03/25/25 11:35	5
Sulfate	137		5.00		mg/L			03/25/25 11:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.194		0.100		mg/L		03/21/25 08:30	03/27/25 13:19	1
Calcium	135		0.500		mg/L		03/21/25 08:30	03/26/25 17:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	648		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/19/25 20:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: DP04-GW-0325

Lab Sample ID: 310-302362-7

Date Collected: 03/17/25 00:00

Matrix: Water

Date Received: 03/19/25 15:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.07		5.00		mg/L			03/25/25 11:51	5
Fluoride	<1.00		1.00		mg/L			03/25/25 11:51	5
Sulfate	85.5		5.00		mg/L			03/25/25 11:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.168		0.100		mg/L		03/21/25 08:30	03/27/25 13:22	1
Calcium	134		0.500		mg/L		03/21/25 08:30	03/26/25 17:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	558		50.0		mg/L			03/20/25 15:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			03/19/25 20:52	1

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-449797/3

Matrix: Water

Analysis Batch: 449797

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/25/25 09:31	1
Fluoride	<0.200		0.200		mg/L			03/25/25 09:31	1
Sulfate	<1.00		1.00		mg/L			03/25/25 09:31	1

Lab Sample ID: LCS 310-449797/4

Matrix: Water

Analysis Batch: 449797

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.622		mg/L		96	90 - 110
Fluoride	2.00	1.945		mg/L		97	90 - 110
Sulfate	10.0	9.669		mg/L		97	90 - 110

Lab Sample ID: 310-302362-4 MS

Matrix: Water

Analysis Batch: 449797

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	17.5		25.0	39.82		mg/L		89	80 - 120
Fluoride	<1.00		5.00	4.886		mg/L		98	80 - 120
Sulfate	274		25.0	290.2	4	mg/L		65	80 - 120

Lab Sample ID: 310-302362-4 MSD

Matrix: Water

Analysis Batch: 449797

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	17.5		25.0	39.84		mg/L		89	80 - 120	0	15
Fluoride	<1.00		5.00	5.010		mg/L		100	80 - 120	2	15
Sulfate	274		25.0	290.0	4	mg/L		64	80 - 120	0	15

Lab Sample ID: MB 310-450143/3

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/28/25 15:04	1
Fluoride	<0.200		0.200		mg/L			03/28/25 15:04	1
Sulfate	<1.00		1.00		mg/L			03/28/25 15:04	1

Lab Sample ID: LCS 310-450143/4

Matrix: Water

Analysis Batch: 450143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.951		mg/L		100	90 - 110
Fluoride	2.00	2.005		mg/L		100	90 - 110
Sulfate	10.0	10.19		mg/L		102	90 - 110

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QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-449393/1-A

Matrix: Water

Analysis Batch: 449894

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.500		0.500		mg/L		03/21/25 08:30	03/26/25 16:38	1

Lab Sample ID: MB 310-449393/1-A

Matrix: Water

Analysis Batch: 449985

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 449393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		03/21/25 08:30	03/27/25 12:45	1

Lab Sample ID: LCS 310-449393/2-A

Matrix: Water

Analysis Batch: 449894

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	1.883		mg/L		94	80 - 120

Lab Sample ID: LCS 310-449393/2-A

Matrix: Water

Analysis Batch: 449985

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.2301		mg/L		115	80 - 120

Lab Sample ID: 310-302362-4 MS

Matrix: Water

Analysis Batch: 449894

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	205		2.00	198.1	4	mg/L		-332	75 - 125

Lab Sample ID: 310-302362-4 MS

Matrix: Water

Analysis Batch: 449985

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.362		0.200	0.5479		mg/L		93	75 - 125

Lab Sample ID: 310-302362-4 MSD

Matrix: Water

Analysis Batch: 449894

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	205		2.00	210.2	4	mg/L		274	75 - 125	6	20

Lab Sample ID: 310-302362-4 MSD

Matrix: Water

Analysis Batch: 449985

Client Sample ID: MW57R-GW-0325

Prep Type: Total/NA

Prep Batch: 449393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.362		0.200	0.5436		mg/L		91	75 - 125	1	20

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

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

Lab Sample ID: MB 310-449414/1
Matrix: Water
Analysis Batch: 449414

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			03/20/25 15:16	1

Lab Sample ID: LCS 310-449414/2
Matrix: Water
Analysis Batch: 449414

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	998.0		mg/L		100	88 - 110

Lab Sample ID: 310-302362-2 DU
Matrix: Water
Analysis Batch: 449414

Client Sample ID: MW23R-GW-0325
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	958		944.0		mg/L		1	16

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-449339/1
Matrix: Water
Analysis Batch: 449339

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

Lab Sample ID: 310-302362-4 DU
Matrix: Water
Analysis Batch: 449339

Client Sample ID: MW57R-GW-0325
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.7		SU		0.4	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

HPLC/IC

Analysis Batch: 449797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-2	MW23R-GW-0325	Total/NA	Water	9056A	
310-302362-3	MW25-GW-0325	Total/NA	Water	9056A	
310-302362-4	MW57R-GW-0325	Total/NA	Water	9056A	
310-302362-5	MW59S-GW-0325	Total/NA	Water	9056A	
310-302362-6	MW60S-GW-0325	Total/NA	Water	9056A	
310-302362-7	DP04-GW-0325	Total/NA	Water	9056A	
MB 310-449797/3	Method Blank	Total/NA	Water	9056A	
LCS 310-449797/4	Lab Control Sample	Total/NA	Water	9056A	
310-302362-4 MS	MW57R-GW-0325	Total/NA	Water	9056A	
310-302362-4 MSD	MW57R-GW-0325	Total/NA	Water	9056A	

Analysis Batch: 450143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	9056A	
MB 310-450143/3	Method Blank	Total/NA	Water	9056A	
LCS 310-450143/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 449393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	3005A	
310-302362-2	MW23R-GW-0325	Total/NA	Water	3005A	
310-302362-3	MW25-GW-0325	Total/NA	Water	3005A	
310-302362-4	MW57R-GW-0325	Total/NA	Water	3005A	
310-302362-5	MW59S-GW-0325	Total/NA	Water	3005A	
310-302362-6	MW60S-GW-0325	Total/NA	Water	3005A	
310-302362-7	DP04-GW-0325	Total/NA	Water	3005A	
MB 310-449393/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-302362-4 MS	MW57R-GW-0325	Total/NA	Water	3005A	
310-302362-4 MSD	MW57R-GW-0325	Total/NA	Water	3005A	

Analysis Batch: 449894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	6020B	449393
310-302362-2	MW23R-GW-0325	Total/NA	Water	6020B	449393
310-302362-3	MW25-GW-0325	Total/NA	Water	6020B	449393
310-302362-4	MW57R-GW-0325	Total/NA	Water	6020B	449393
310-302362-5	MW59S-GW-0325	Total/NA	Water	6020B	449393
310-302362-6	MW60S-GW-0325	Total/NA	Water	6020B	449393
310-302362-7	DP04-GW-0325	Total/NA	Water	6020B	449393
MB 310-449393/1-A	Method Blank	Total/NA	Water	6020B	449393
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	6020B	449393
310-302362-4 MS	MW57R-GW-0325	Total/NA	Water	6020B	449393
310-302362-4 MSD	MW57R-GW-0325	Total/NA	Water	6020B	449393

Analysis Batch: 449985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	6020B	449393
310-302362-2	MW23R-GW-0325	Total/NA	Water	6020B	449393

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QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Metals (Continued)

Analysis Batch: 449985 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-3	MW25-GW-0325	Total/NA	Water	6020B	449393
310-302362-4	MW57R-GW-0325	Total/NA	Water	6020B	449393
310-302362-5	MW59S-GW-0325	Total/NA	Water	6020B	449393
310-302362-6	MW60S-GW-0325	Total/NA	Water	6020B	449393
310-302362-7	DP04-GW-0325	Total/NA	Water	6020B	449393
MB 310-449393/1-A	Method Blank	Total/NA	Water	6020B	449393
LCS 310-449393/2-A	Lab Control Sample	Total/NA	Water	6020B	449393
310-302362-4 MS	MW57R-GW-0325	Total/NA	Water	6020B	449393
310-302362-4 MSD	MW57R-GW-0325	Total/NA	Water	6020B	449393

General Chemistry

Analysis Batch: 449339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-2	MW23R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-3	MW25-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-4	MW57R-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-5	MW59S-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-6	MW60S-GW-0325	Total/NA	Water	SM 4500 H+ B	
310-302362-7	DP04-GW-0325	Total/NA	Water	SM 4500 H+ B	
LCS 310-449339/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-302362-4 DU	MW57R-GW-0325	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 449414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-302362-1	MW11R-GW-0325	Total/NA	Water	SM 2540C	
310-302362-2	MW23R-GW-0325	Total/NA	Water	SM 2540C	
310-302362-3	MW25-GW-0325	Total/NA	Water	SM 2540C	
310-302362-4	MW57R-GW-0325	Total/NA	Water	SM 2540C	
310-302362-5	MW59S-GW-0325	Total/NA	Water	SM 2540C	
310-302362-6	MW60S-GW-0325	Total/NA	Water	SM 2540C	
310-302362-7	DP04-GW-0325	Total/NA	Water	SM 2540C	
MB 310-449414/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-449414/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-302362-2 DU	MW23R-GW-0325	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW11R-GW-0325

Lab Sample ID: 310-302362-1

Date Collected: 03/17/25 13:50

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	450143	QTZ5	EET CF	03/28/25 22:04
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 16:53
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:08
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:57

Client Sample ID: MW23R-GW-0325

Lab Sample ID: 310-302362-2

Date Collected: 03/17/25 15:10

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 10:02
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:02
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:11
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:08

Client Sample ID: MW25-GW-0325

Lab Sample ID: 310-302362-3

Date Collected: 03/17/25 12:25

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 10:17
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:05
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:14
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 19:59

Client Sample ID: MW57R-GW-0325

Lab Sample ID: 310-302362-4

Date Collected: 03/17/25 14:10

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 10:33
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 16:43
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:00

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Client Sample ID: MW57R-GW-0325

Lab Sample ID: 310-302362-4

Date Collected: 03/17/25 14:10

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:48

Client Sample ID: MW59S-GW-0325

Lab Sample ID: 310-302362-5

Date Collected: 03/17/25 15:50

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 11:20
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:07
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:17
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:44

Client Sample ID: MW60S-GW-0325

Lab Sample ID: 310-302362-6

Date Collected: 03/17/25 17:20

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 11:35
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:10
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:19
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:40

Client Sample ID: DP04-GW-0325

Lab Sample ID: 310-302362-7

Date Collected: 03/17/25 00:00

Matrix: Water

Date Received: 03/19/25 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449797	QTZ5	EET CF	03/25/25 11:51
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449894	NFT2	EET CF	03/26/25 17:12
Total/NA	Prep	3005A			449393	F5MW	EET CF	03/21/25 08:30
Total/NA	Analysis	6020B		1	449985	NFT2	EET CF	03/27/25 13:22
Total/NA	Analysis	SM 2540C		1	449414	XJ7V	EET CF	03/20/25 15:16
Total/NA	Analysis	SM 4500 H+ B		1	449339	MDU9	EET CF	03/19/25 20:52

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Neal North Active CCR Monofill

Job ID: 310-302362-1

Laboratory: Eurofins Cedar Falls

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

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

1
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Method Summary

Client: GHD Services Inc.

Job ID: 310-302362-1

Project/Site: Neal North Active CCR Monofill

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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



Environment Testing
America



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: GHD Services			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE 3-19-25	TIME 1510	Received By: CGC
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID. _____			
Multiple Coolers? ☐ Yes ☒ No If yes: Cooler # _____ of _____			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: B		Correction Factor (°C) 0	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) 2.0		Corrected Temp (°C): 2.0	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C).			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Chain of Custody Record

2 JSM

Client Information		Sampler: <u>Paul Edwards</u>		Lab PM: <u>Zach Bindert</u>		Carrier Tracking No(s):		COC No:			
Client Contact: <u>Kevin Armstrong</u>		Phone: <u>712-898-9031</u>		E-Mail: <u>z.bindert@us.com</u>		State of Origin: <u>Iowa</u>		Page: <u>Page 1 of 1</u>			
Company: <u>GHD Services Inc.</u>		PWSID: <u>112-898-9031</u>						Job #:			
Address: <u>11228 Aurora Avenue</u>		Due Date Requested:		Analysis Requested				Preservation Codes:			
City: <u>Des Moines</u>		TAT Requested (days): <u>Standard</u>						A - HCL M - Hexane N - None O - AsNaO2 P - Zn Acetate Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)			
State, Zip: <u>IA, 50322-7905</u>		Compliance Project: <u>Δ Yes Δ No</u>									
Phone: <u>515-414-3935</u>		PO #: <u>340-017045</u>									
Email: <u>Kevin.Armstrong@ghd.com</u>		WO #: <u>12576482-004 01</u>									
Project Name: <u>MEC Neal North Active Monofill</u>		Project #: <u>31017263</u>									
Site: <u>Neal North Active CCR Monofill</u>		SSOW #: <u>12576482-002</u>									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, T=tissue, A=air)	Field Filtered Sample (Yes or No)	9056A_ORGFM_28D - Chloride, Fluoride & Sulfate	6020B - Boron and Calcium	2540C - Cad, Cd, SM4500_H+	Perform MS/MSD (Yes or No)	Special Instructions/Note:
MW11R-GW-0325	3/17/25	1350	G	Water	N	N	X	X	X	N	Appendix III analytes
MW23R-GW-0325	3/17/25	1510	G	Water	N	N	X	X	X	N	Appendix III analytes
MW25-GW-0325	3/17/25	1225	G	Water	N	N	X	X	X	N	Appendix III analytes
MW57R-GW-0325	3/17/25	1410	G	Water	N	N	X	X	X	N	Appendix III analytes
MW59S-GW-0325	3/17/25	1550	G	Water	N	N	X	X	X	N	Appendix III analytes
MW60S-GW-0325	3/17/25	1720	G	Water	N	N	X	X	X	N	Appendix III analytes
DP04-GW-0325	3/17/25	—	G	Water	N	N	X	X	X	N	Appendix III analytes
Possible Hazard Identification		Poison B	Unknown	Radiological	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
☐ Non-Hazard		Flammable	Skin Irritant	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months							
Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/QC Requirements. Database Facility Code 11114642-GD-MidAmeri									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <u>Paul Edwards</u>		Date/Time: <u>3/19/25 1500</u>		Company: <u>GHD</u>		Received by: <u>Kevin Armstrong</u>		Date/Time: <u>3/19/25 1510</u>		Company: <u>Bio-Rad</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:							

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-302362-1

Login Number: 302362

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bunker, Xavier M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 6/9/2025 3:00:28 PM Revision 1

JOB DESCRIPTION

MEC Neal North - Additional May 2025
MEC Neal North - Additional May 2025

JOB NUMBER

310-306944-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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6/9/2025 3:00:28 PM
Revision 1

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Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Job ID: 310-306944-1

Eurofins Cedar Falls

Job Narrative
310-306944-1

REVISION

The report being provided is a revision of the original report sent on 6/9/2025. The report (revision 1) is being revised due to This report was revised 6/09/2025. Boron removed from the target list..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 5/21/2025 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C.

HPLC/IC

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-306944-1	MW59S-GW-0525	Water	05/19/25 15:30	05/21/25 16:00
310-306944-2	MW21-GW-0525	Water	05/19/25 16:15	05/21/25 16:00
310-306944-3	MW05R-GW-0525	Water	05/20/25 09:50	05/21/25 16:00
310-306944-4	MW19-GW-0525	Water	05/19/25 17:35	05/21/25 16:00
310-306944-5	MW57R-GW-0525	Water	05/20/25 09:00	05/21/25 16:00
310-306944-6	MW60S-GW-0525	Water	05/19/25 14:10	05/21/25 16:00
310-306944-7	MW231SR-GW-0525	Water	05/20/25 11:10	05/21/25 16:00
310-306944-8	DP01-GW-0525	Water	05/20/25 00:00	05/21/25 16:00

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW59S-GW-0525
Date Collected: 05/19/25 15:30
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	143		0.500		mg/L		05/23/25 09:30	05/29/25 14:53	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.2	HF	1.0		SU			05/21/25 18:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW21-GW-0525

Lab Sample ID: 310-306944-2

Date Collected: 05/19/25 16:15

Matrix: Water

Date Received: 05/21/25 16:00

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1690		100		mg/L			05/29/25 12:32	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	441		0.500		mg/L		05/23/25 09:30	05/28/25 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2730		50.0		mg/L			05/22/25 16:52	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	6.8	HF	1.0		SU			05/21/25 18:54	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW05R-GW-0525
Date Collected: 05/20/25 09:50
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-3
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			05/21/25 18:46	1

- 1
- 2
- 3
- 4
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- 10
- 11
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Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW19-GW-0525
Date Collected: 05/19/25 17:35
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-4
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	6.6	HF	1.0		SU			05/21/25 18:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW57R-GW-0525
Date Collected: 05/20/25 09:00
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-5
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			05/21/25 18:48	1

- 1
- 2
- 3
- 4
- 5
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- 7
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- 11
- 12
- 13

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW60S-GW-0525
Date Collected: 05/19/25 14:10
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-6
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.2	HF	1.0		SU			05/21/25 18:52	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW231SR-GW-0525
Date Collected: 05/20/25 11:10
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-7
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.2	HF	1.0		SU			05/21/25 18:50	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: DP01-GW-0525
Date Collected: 05/20/25 00:00
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-8
Matrix: Water

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			05/21/25 18:44	1

- 1
- 2
- 3
- 4
- 5
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- 12
- 13

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-456121/3

Matrix: Water

Analysis Batch: 456121

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.00		1.00		mg/L			05/28/25 10:40	1

Lab Sample ID: LCS 310-456121/4

Matrix: Water

Analysis Batch: 456121

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	10.12		mg/L		101	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-455526/1-A

Matrix: Water

Analysis Batch: 456144

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 455526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.500		0.500		mg/L		05/23/25 09:30	05/29/25 14:47	1

Lab Sample ID: LCS 310-455526/2-A

Matrix: Water

Analysis Batch: 456144

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 455526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	6.00	5.066		mg/L		84	80 - 120

Lab Sample ID: 310-306944-1 MS

Matrix: Water

Analysis Batch: 456023

Client Sample ID: MW59S-GW-0525

Prep Type: Total/NA

Prep Batch: 455526

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	91.5	*-	6.00	137.8	4	mg/L		771	75 - 125

Lab Sample ID: 310-306944-1 MSD

Matrix: Water

Analysis Batch: 456023

Client Sample ID: MW59S-GW-0525

Prep Type: Total/NA

Prep Batch: 455526

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	91.5	*-	6.00	138.6	4	mg/L		784	75 - 125	1	20

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

Lab Sample ID: MB 310-455527/1

Matrix: Water

Analysis Batch: 455527

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			05/22/25 16:52	1

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

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

Lab Sample ID: LCS 310-455527/2

Matrix: Water

Analysis Batch: 455527

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	972.0		mg/L		97	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-455357/1

Matrix: Water

Analysis Batch: 455357

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	98 - 102

Lab Sample ID: 310-306944-3 DU

Matrix: Water

Analysis Batch: 455357

Client Sample ID: MW05R-GW-0525

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.3	HF	7.3		SU		0.3	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

HPLC/IC

Analysis Batch: 456121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-2	MW21-GW-0525	Total/NA	Water	9056A	
MB 310-456121/3	Method Blank	Total/NA	Water	9056A	
LCS 310-456121/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 455526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-1	MW59S-GW-0525	Total/NA	Water	3005A	
310-306944-2	MW21-GW-0525	Total/NA	Water	3005A	
MB 310-455526/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-455526/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-306944-1 MS	MW59S-GW-0525	Total/NA	Water	3005A	
310-306944-1 MSD	MW59S-GW-0525	Total/NA	Water	3005A	

Analysis Batch: 456023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-2	MW21-GW-0525	Total/NA	Water	6020B	455526
310-306944-1 MS	MW59S-GW-0525	Total/NA	Water	6020B	455526
310-306944-1 MSD	MW59S-GW-0525	Total/NA	Water	6020B	455526

Analysis Batch: 456144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-1	MW59S-GW-0525	Total/NA	Water	6020B	455526
MB 310-455526/1-A	Method Blank	Total/NA	Water	6020B	455526
LCS 310-455526/2-A	Lab Control Sample	Total/NA	Water	6020B	455526

General Chemistry

Analysis Batch: 455357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-1	MW59S-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-2	MW21-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-3	MW05R-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-4	MW19-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-5	MW57R-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-6	MW60S-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-7	MW231SR-GW-0525	Total/NA	Water	SM 4500 H+ B	
310-306944-8	DP01-GW-0525	Total/NA	Water	SM 4500 H+ B	
LCS 310-455357/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-306944-3 DU	MW05R-GW-0525	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 455527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-306944-2	MW21-GW-0525	Total/NA	Water	SM 2540C	
MB 310-455527/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-455527/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW59S-GW-0525

Lab Sample ID: 310-306944-1

Date Collected: 05/19/25 15:30

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			455526	QTZ5	EET CF	05/23/25 09:30
Total/NA	Analysis	6020B		1	456144	NFT2	EET CF	05/29/25 14:53
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:51

Client Sample ID: MW21-GW-0525

Lab Sample ID: 310-306944-2

Date Collected: 05/19/25 16:15

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		100	456121	QTZ5	EET CF	05/29/25 12:32
Total/NA	Prep	3005A			455526	QTZ5	EET CF	05/23/25 09:30
Total/NA	Analysis	6020B		1	456023	NFT2	EET CF	05/28/25 19:03
Total/NA	Analysis	SM 2540C		1	455527	MDU9	EET CF	05/22/25 16:52
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:54

Client Sample ID: MW05R-GW-0525

Lab Sample ID: 310-306944-3

Date Collected: 05/20/25 09:50

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:46

Client Sample ID: MW19-GW-0525

Lab Sample ID: 310-306944-4

Date Collected: 05/19/25 17:35

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:53

Client Sample ID: MW57R-GW-0525

Lab Sample ID: 310-306944-5

Date Collected: 05/20/25 09:00

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:48

Client Sample ID: MW60S-GW-0525

Lab Sample ID: 310-306944-6

Date Collected: 05/19/25 14:10

Matrix: Water

Date Received: 05/21/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:52

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Client Sample ID: MW231SR-GW-0525
Date Collected: 05/20/25 11:10
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:50

Client Sample ID: DP01-GW-0525
Date Collected: 05/20/25 00:00
Date Received: 05/21/25 16:00

Lab Sample ID: 310-306944-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	455357	W9YR	EET CF	05/21/25 18:44

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2540C		Water	Total Dissolved Solids
SM 4500 H+ B		Water	pH

Method Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North - Additional May 2025

Job ID: 310-306944-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

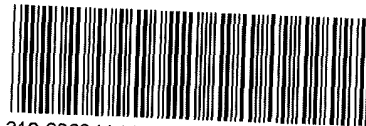
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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



Environment Testing
America



310-306944 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: GHD Services			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE 5.21.25	TIME 1600	Received By: CLC
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☐ Yes ☒ No If yes: Cooler # _____ of _____			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: AA		Correction Factor (°C): 0	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): 0.1		Corrected Temp (°C): 0.1	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

[illegible]

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-306944-1

Login Number: 306944

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 10/17/2025 2:19:28 PM

JOB DESCRIPTION

MEC Neal North Energy Center CCR
MEC Neal North-Background

JOB NUMBER

310-315980-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Job ID: 310-315980-1

Eurofins Cedar Falls

Job Narrative 310-315980-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/18/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW13R-GW-0925 (310-315980-1), MW27-GW-0925 (310-315980-2), MW29R-GW-0925 (310-315980-3) and DP01-GW-0925 (310-315980-6). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Job ID: 310-315980-2

Eurofins Cedar Falls

Job Narrative 310-315980-2

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/18/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C.

Gas Flow Proportional Counter

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

Rad

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

Eurofins Cedar Falls

Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Job ID: 310-315980-3

Eurofins Cedar Falls

Job Narrative 310-315980-3

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/18/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C.

HPLC/IC

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-315980-1	MW13R-GW-0925	Water	09/17/25 15:15	09/18/25 09:50	Iowa
310-315980-2	MW27-GW-0925	Water	09/16/25 17:10	09/18/25 09:50	Iowa
310-315980-3	MW29R-GW-0925	Water	09/16/25 18:55	09/18/25 09:50	Iowa
310-315980-4	MW223S-GW-0925	Water	09/17/25 10:40	09/18/25 09:50	Iowa
310-315980-5	MW231SR-GW-0925	Water	09/17/25 10:50	09/18/25 09:50	Iowa
310-315980-6	DP01-GW-0925	Water	09/17/25 00:00	09/18/25 09:50	Iowa

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW13R-GW-0925

Lab Sample ID: 310-315980-1

Date Collected: 09/17/25 15:15

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.0		5.00		mg/L			09/24/25 17:36	5
Fluoride	<1.00		1.00		mg/L			09/24/25 17:36	5
Sulfate	47.4		5.00		mg/L			09/24/25 17:36	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 14:55	1
Arsenic	0.0503		0.00200		mg/L		09/23/25 08:45	09/25/25 14:55	1
Barium	0.217		0.00200		mg/L		09/23/25 08:45	09/25/25 14:55	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 14:55	1
Boron	0.131		0.100		mg/L		09/23/25 08:45	09/26/25 14:01	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 14:55	1
Calcium	141		0.500		mg/L		09/23/25 08:45	09/25/25 14:55	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 14:55	1
Cobalt	0.000946		0.000500		mg/L		09/23/25 08:45	09/25/25 14:55	1
Lithium	0.0743		0.0100		mg/L		09/23/25 08:45	09/25/25 14:55	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 14:55	1
Molybdenum	0.00445		0.00200		mg/L		09/23/25 08:45	09/25/25 14:55	1
Selenium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 14:55	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 14:55	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/23/25 11:55	09/24/25 10:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	540		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			09/18/25 11:39	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.491		0.256	0.260	1.00	0.326	pCi/L	09/23/25 07:52	10/15/25 23:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.6		30 - 110					09/23/25 07:52	10/15/25 23:04	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.662	U	0.432	0.436	1.00	0.662	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.6		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	75.1		30 - 110					09/23/25 07:56	10/15/25 12:06	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW13R-GW-0925
Date Collected: 09/17/25 15:15
Date Received: 09/18/25 09:50

Lab Sample ID: 310-315980-1
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.09		0.502	0.508	5.00	0.662	pCi/L		10/17/25 13:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW27-GW-0925

Lab Sample ID: 310-315980-2

Date Collected: 09/16/25 17:10

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.5		5.00		mg/L			09/25/25 10:50	5
Fluoride	<1.00		1.00		mg/L			09/25/25 10:50	5
Sulfate	53.7		5.00		mg/L			09/25/25 10:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:12	1
Arsenic	0.0759		0.00200		mg/L		09/23/25 08:45	09/25/25 15:12	1
Barium	0.183		0.00200		mg/L		09/23/25 08:45	09/25/25 15:12	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:12	1
Boron	0.274		0.100		mg/L		09/23/25 08:45	09/26/25 14:09	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 15:12	1
Calcium	160		0.500		mg/L		09/23/25 08:45	09/25/25 15:12	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:12	1
Cobalt	0.000796		0.000500		mg/L		09/23/25 08:45	09/25/25 15:12	1
Lithium	0.106		0.0100		mg/L		09/23/25 08:45	09/25/25 15:12	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 15:12	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:12	1
Selenium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:12	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/23/25 11:55	09/24/25 10:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	658		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			09/18/25 11:43	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.281	U	0.188	0.189	1.00	0.281	pCi/L	09/23/25 07:52	10/15/25 23:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/23/25 07:52	10/15/25 23:04	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.03		0.440	0.450	1.00	0.581	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	78.5		30 - 110					09/23/25 07:56	10/15/25 12:06	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW27-GW-0925

Lab Sample ID: 310-315980-2

Date Collected: 09/16/25 17:10

Matrix: Water

Date Received: 09/18/25 09:50

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.25		0.478	0.488	5.00	0.581	pCi/L		10/17/25 13:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW29R-GW-0925

Lab Sample ID: 310-315980-3

Date Collected: 09/16/25 18:55

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.73		5.00		mg/L			09/25/25 11:01	5
Fluoride	<1.00		1.00		mg/L			09/25/25 11:01	5
Sulfate	133		5.00		mg/L			09/25/25 11:01	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:15	1
Arsenic	0.0281		0.00200		mg/L		09/23/25 08:45	09/25/25 15:15	1
Barium	0.240		0.00200		mg/L		09/23/25 08:45	09/25/25 15:15	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:15	1
Boron	0.173		0.100		mg/L		09/23/25 08:45	09/26/25 14:11	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 15:15	1
Calcium	203		0.500		mg/L		09/23/25 08:45	09/25/25 15:15	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:15	1
Cobalt	0.00250		0.000500		mg/L		09/23/25 08:45	09/25/25 15:15	1
Lithium	0.0941		0.0100		mg/L		09/23/25 08:45	09/25/25 15:15	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 15:15	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:15	1
Selenium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:15	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/23/25 11:55	09/24/25 10:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	850		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.0	HF	1.0		SU			09/18/25 11:42	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.327	U	0.217	0.219	1.00	0.327	pCi/L	09/23/25 07:52	10/15/25 23:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.4		30 - 110					09/23/25 07:52	10/15/25 23:07	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.03		0.446	0.456	1.00	0.595	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.4		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	77.4		30 - 110					09/23/25 07:56	10/15/25 12:06	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW29R-GW-0925

Lab Sample ID: 310-315980-3

Date Collected: 09/16/25 18:55

Matrix: Water

Date Received: 09/18/25 09:50

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.29		0.496	0.506	5.00	0.595	pCi/L		10/17/25 13:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW223S-GW-0925

Lab Sample ID: 310-315980-4

Date Collected: 09/17/25 10:40

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.8		1.00		mg/L			09/18/25 11:51	1
Nitrate as N	<0.200		0.200		mg/L			09/18/25 11:51	1
Fluoride	<0.200		0.200		mg/L			09/18/25 11:51	1
Sulfate	222		20.0		mg/L			09/18/25 15:29	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:27	1
Arsenic	0.0503		0.00200		mg/L		09/23/25 08:45	09/25/25 15:27	1
Barium	0.240		0.00200		mg/L		09/23/25 08:45	09/25/25 15:27	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:27	1
Boron	0.180		0.100		mg/L		09/23/25 08:45	09/26/25 14:14	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 15:27	1
Calcium	200		0.500		mg/L		09/23/25 08:45	09/25/25 15:27	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:27	1
Cobalt	0.00131		0.000500		mg/L		09/23/25 08:45	09/25/25 15:27	1
Iron	17.3		0.100		mg/L		09/23/25 08:45	09/25/25 15:27	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 15:27	1
Lithium	0.0692		0.0100		mg/L		09/23/25 08:45	09/25/25 15:27	1
Manganese	3.24		0.0100		mg/L		09/23/25 08:45	09/25/25 15:27	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:27	1
Selenium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:27	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	7.78		0.100		mg/L		09/29/25 09:00	10/01/25 17:16	1
Manganese	3.09		0.0100		mg/L		09/29/25 09:00	10/01/25 17:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/29/25 12:45	09/30/25 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	3.48		1.00		mg/L			09/23/25 19:41	1
Total Dissolved Solids (SM 2540C)	778		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.0	HF	1.0		SU			09/18/25 11:45	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.313	U	0.200	0.201	1.00	0.313	pCi/L	09/23/25 07:52	10/15/25 23:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	88.3		30 - 110					09/23/25 07:52	10/15/25 23:07	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW223S-GW-0925

Lab Sample ID: 310-315980-4

Date Collected: 09/17/25 10:40

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.914		0.410	0.418	1.00	0.541	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	88.3		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	80.0		30 - 110					09/23/25 07:56	10/15/25 12:06	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.456	0.464	5.00	0.541	pCi/L		10/17/25 13:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW231SR-GW-0925

Lab Sample ID: 310-315980-5

Date Collected: 09/17/25 10:50

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.3		1.00		mg/L			09/18/25 12:05	1
Nitrate as N	0.225		0.200		mg/L			09/18/25 12:05	1
Fluoride	<0.200		0.200		mg/L			09/18/25 12:05	1
Sulfate	110		20.0		mg/L			09/18/25 15:42	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:30	1
Arsenic	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:30	1
Barium	0.0865		0.00200		mg/L		09/23/25 08:45	09/25/25 15:30	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:30	1
Boron	0.221		0.100		mg/L		09/23/25 08:45	09/26/25 14:16	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 15:30	1
Calcium	171		0.500		mg/L		09/23/25 08:45	09/25/25 15:30	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:30	1
Cobalt	0.00305		0.000500		mg/L		09/23/25 08:45	09/25/25 15:30	1
Iron	2.66		0.100		mg/L		09/23/25 08:45	09/25/25 15:30	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 15:30	1
Lithium	0.0846		0.0100		mg/L		09/23/25 08:45	09/25/25 15:30	1
Manganese	0.889		0.0100		mg/L		09/23/25 08:45	09/25/25 15:30	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:30	1
Selenium	0.00580		0.00500		mg/L		09/23/25 08:45	09/25/25 15:30	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2.75		0.100		mg/L		09/29/25 09:00	10/01/25 17:19	1
Manganese	0.912		0.0100		mg/L		09/29/25 09:00	10/01/25 17:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/29/25 12:45	09/30/25 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	3.62		1.00		mg/L			09/23/25 22:06	1
Total Dissolved Solids (SM 2540C)	740		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.0	HF	1.0		SU			09/18/25 11:44	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.318		0.186	0.188	1.00	0.239	pCi/L	09/23/25 07:52	10/16/25 09:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/23/25 07:52	10/16/25 09:40	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW231SR-GW-0925

Lab Sample ID: 310-315980-5

Date Collected: 09/17/25 10:50

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.945		0.402	0.412	1.00	0.520	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	78.9		30 - 110					09/23/25 07:56	10/15/25 12:06	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.443	0.453	5.00	0.520	pCi/L		10/17/25 13:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: DP01-GW-0925

Lab Sample ID: 310-315980-6

Date Collected: 09/17/25 00:00

Matrix: Water

Date Received: 09/18/25 09:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.2		5.00		mg/L			09/25/25 11:12	5
Fluoride	<1.00		1.00		mg/L			09/25/25 11:12	5
Sulfate	103		5.00		mg/L			09/25/25 11:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:32	1
Arsenic	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:32	1
Barium	0.0890		0.00200		mg/L		09/23/25 08:45	09/25/25 15:32	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:32	1
Boron	0.231		0.100		mg/L		09/23/25 08:45	09/26/25 14:19	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 15:32	1
Calcium	177		0.500		mg/L		09/23/25 08:45	09/25/25 15:32	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 15:32	1
Cobalt	0.00311		0.000500		mg/L		09/23/25 08:45	09/25/25 15:32	1
Lithium	0.0869		0.0100		mg/L		09/23/25 08:45	09/25/25 15:32	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 15:32	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 15:32	1
Selenium	0.00597		0.00500		mg/L		09/23/25 08:45	09/25/25 15:32	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 15:32	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/29/25 12:45	09/30/25 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	648		50.0		mg/L			09/19/25 17:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			09/18/25 11:56	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.329	U	0.205	0.206	1.00	0.329	pCi/L	09/23/25 07:52	10/16/25 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.9		30 - 110					09/23/25 07:52	10/16/25 09:41	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.739		0.380	0.386	1.00	0.530	pCi/L	09/23/25 07:56	10/15/25 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.9		30 - 110					09/23/25 07:56	10/15/25 12:06	1
Y Carrier	81.9		30 - 110					09/23/25 07:56	10/15/25 12:06	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: DP01-GW-0925
Date Collected: 09/17/25 00:00
Date Received: 09/18/25 09:50

Lab Sample ID: 310-315980-6
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228										
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.936		0.432	0.438	5.00	0.530	pCi/L		10/17/25 13:48	1

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-467490/3

Matrix: Water

Analysis Batch: 467490

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/18/25 10:43	1
Nitrate as N	<0.200		0.200		mg/L			09/18/25 10:43	1
Fluoride	<0.200		0.200		mg/L			09/18/25 10:43	1
Sulfate	<1.00		1.00		mg/L			09/18/25 10:43	1

Lab Sample ID: LCS 310-467490/4

Matrix: Water

Analysis Batch: 467490

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.09		mg/L		101	90 - 110
Nitrate as N	2.00	2.054		mg/L		103	90 - 110
Fluoride	2.00	2.091		mg/L		105	90 - 110
Sulfate	10.0	10.13		mg/L		101	90 - 110

Lab Sample ID: MB 310-467960/3

Matrix: Water

Analysis Batch: 467960

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/24/25 14:06	1
Fluoride	<0.200		0.200		mg/L			09/24/25 14:06	1
Sulfate	<1.00		1.00		mg/L			09/24/25 14:06	1

Lab Sample ID: LCS 310-467960/4

Matrix: Water

Analysis Batch: 467960

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.309		mg/L		93	90 - 110
Fluoride	2.00	2.029		mg/L		101	90 - 110
Sulfate	10.0	10.05		mg/L		101	90 - 110

Lab Sample ID: 310-315980-1 MS

Matrix: Water

Analysis Batch: 467960

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	11.0		25.0	33.55		mg/L		90	80 - 120
Fluoride	<1.00		5.00	5.621		mg/L		112	80 - 120
Sulfate	47.4		25.0	76.91		mg/L		118	80 - 120

Lab Sample ID: 310-315980-1 MSD

Matrix: Water

Analysis Batch: 467960

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11.0		25.0	34.11		mg/L		92	80 - 120	2	15
Fluoride	<1.00		5.00	5.687		mg/L		114	80 - 120	1	15
Sulfate	47.4		25.0	74.95		mg/L		110	80 - 120	3	15

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-467526/1-A

Matrix: Water

Analysis Batch: 468018

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 14:50	1
Arsenic	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 14:50	1
Barium	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 14:50	1
Beryllium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 14:50	1
Cadmium	<0.000200		0.000200		mg/L		09/23/25 08:45	09/25/25 14:50	1
Calcium	<0.500		0.500		mg/L		09/23/25 08:45	09/25/25 14:50	1
Chromium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 14:50	1
Cobalt	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 14:50	1
Iron	<0.100		0.100		mg/L		09/23/25 08:45	09/25/25 14:50	1
Lead	<0.000500		0.000500		mg/L		09/23/25 08:45	09/25/25 14:50	1
Lithium	<0.0100		0.0100		mg/L		09/23/25 08:45	09/25/25 14:50	1
Manganese	<0.0100		0.0100		mg/L		09/23/25 08:45	09/25/25 14:50	1
Molybdenum	<0.00200		0.00200		mg/L		09/23/25 08:45	09/25/25 14:50	1
Selenium	<0.00500		0.00500		mg/L		09/23/25 08:45	09/25/25 14:50	1
Thallium	<0.00100		0.00100		mg/L		09/23/25 08:45	09/25/25 14:50	1

Lab Sample ID: MB 310-467526/1-A

Matrix: Water

Analysis Batch: 468195

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/23/25 08:45	09/26/25 13:56	1

Lab Sample ID: LCS 310-467526/2-A

Matrix: Water

Analysis Batch: 468018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2154		mg/L		108	80 - 120
Arsenic	0.200	0.1977		mg/L		99	80 - 120
Barium	0.100	0.09794		mg/L		98	80 - 120
Beryllium	0.100	0.1013		mg/L		101	80 - 120
Cadmium	0.100	0.1039		mg/L		104	80 - 120
Calcium	2.00	1.978		mg/L		99	80 - 120
Chromium	0.100	0.1039		mg/L		104	80 - 120
Cobalt	0.100	0.1000		mg/L		100	80 - 120
Iron	0.200	0.1983		mg/L		99	80 - 120
Lead	0.200	0.2045		mg/L		102	80 - 120
Lithium	0.200	0.2016		mg/L		101	80 - 120
Manganese	0.100	0.09386		mg/L		94	80 - 120
Molybdenum	0.200	0.2180		mg/L		109	80 - 120
Selenium	0.400	0.3951		mg/L		99	80 - 120
Thallium	0.100	0.1028		mg/L		103	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

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

Lab Sample ID: LCS 310-467526/2-A
Matrix: Water
Analysis Batch: 468195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 467526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.2152		mg/L		108	80 - 120

Lab Sample ID: 310-315980-1 MS
Matrix: Water
Analysis Batch: 468018

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA
Prep Batch: 467526

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2201		mg/L		110	75 - 125
Arsenic	0.0503		0.200	0.2586		mg/L		104	75 - 125
Barium	0.217		0.100	0.3169		mg/L		100	75 - 125
Beryllium	<0.00100		0.100	0.1046		mg/L		105	75 - 125
Cadmium	<0.000200		0.100	0.1018		mg/L		102	75 - 125
Calcium	141		2.00	140.2	4	mg/L		-39	75 - 125
Chromium	<0.00500		0.100	0.1029		mg/L		103	75 - 125
Cobalt	0.000946		0.100	0.09703		mg/L		96	75 - 125
Lithium	0.0743		0.200	0.2754		mg/L		101	75 - 125
Lead	<0.000500		0.200	0.1962		mg/L		98	75 - 125
Molybdenum	0.00445		0.200	0.2219		mg/L		109	75 - 125
Selenium	<0.00500		0.400	0.4119		mg/L		103	75 - 125
Thallium	<0.00100		0.100	0.09398		mg/L		94	75 - 125

Lab Sample ID: 310-315980-1 MS
Matrix: Water
Analysis Batch: 468195

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA
Prep Batch: 467526

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.131		0.200	0.3551		mg/L		112	75 - 125

Lab Sample ID: 310-315980-1 MSD
Matrix: Water
Analysis Batch: 468018

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA
Prep Batch: 467526

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Antimony	<0.00200		0.200	0.2238		mg/L		112	75 - 125	2	20
Arsenic	0.0503		0.200	0.2615		mg/L		106	75 - 125	1	20
Barium	0.217		0.100	0.3208		mg/L		104	75 - 125	1	20
Beryllium	<0.00100		0.100	0.1039		mg/L		104	75 - 125	1	20
Cadmium	<0.000200		0.100	0.1029		mg/L		103	75 - 125	1	20
Calcium	141		2.00	142.4	4	mg/L		68	75 - 125	2	20
Chromium	<0.00500		0.100	0.1047		mg/L		105	75 - 125	2	20
Cobalt	0.000946		0.100	0.09849		mg/L		98	75 - 125	1	20
Lithium	0.0743		0.200	0.2748		mg/L		100	75 - 125	0	20
Lead	<0.000500		0.200	0.1995		mg/L		100	75 - 125	2	20
Molybdenum	0.00445		0.200	0.2260		mg/L		111	75 - 125	2	20
Selenium	<0.00500		0.400	0.4147		mg/L		104	75 - 125	1	20
Thallium	<0.00100		0.100	0.09552		mg/L		96	75 - 125	2	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

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

Lab Sample ID: 310-315980-1 MSD

Matrix: Water

Analysis Batch: 468195

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Prep Batch: 467526

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.131		0.200	0.3687		mg/L		119	75 - 125	4	20

Lab Sample ID: MB 310-468136/1-A

Matrix: Water

Analysis Batch: 468610

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.100		0.100		mg/L		09/29/25 09:00	10/01/25 16:16	1
Manganese	<0.0100		0.0100		mg/L		09/29/25 09:00	10/01/25 16:16	1

Lab Sample ID: LCS 310-468136/2-A

Matrix: Water

Analysis Batch: 468610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	0.200	0.2052		mg/L		103	80 - 120
Manganese	0.100	0.09492		mg/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-467595/1-A

Matrix: Water

Analysis Batch: 467781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467595

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/23/25 11:55	09/24/25 10:13	1

Lab Sample ID: LCS 310-467595/2-A

Matrix: Water

Analysis Batch: 467781

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467595

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001653		mg/L		99	80 - 120

Lab Sample ID: 310-315980-1 MS

Matrix: Water

Analysis Batch: 467781

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Prep Batch: 467595

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.000200		0.00167	0.001663		mg/L		100	80 - 120

Lab Sample ID: 310-315980-1 MSD

Matrix: Water

Analysis Batch: 467781

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Prep Batch: 467595

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001681		mg/L		101	80 - 120	1	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 310-468227/1-A
Matrix: Water
Analysis Batch: 468446

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468227

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/29/25 12:45	09/30/25 13:51	1

Lab Sample ID: LCS 310-468227/2-A
Matrix: Water
Analysis Batch: 468446

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001611		mg/L		97	80 - 120

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

Lab Sample ID: MB 310-467741/11
Matrix: Water
Analysis Batch: 467741

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00		mg/L			09/23/25 14:17	1

Lab Sample ID: LCS 310-467741/12
Matrix: Water
Analysis Batch: 467741

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.69		mg/L		107	85 - 115

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

Lab Sample ID: MB 310-467364/1
Matrix: Water
Analysis Batch: 467364

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/19/25 17:23	1

Lab Sample ID: LCS 310-467364/2
Matrix: Water
Analysis Batch: 467364

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	938.0		mg/L		94	89 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-467144/1
Matrix: Water
Analysis Batch: 467144

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-315980-1 DU
Matrix: Water
Analysis Batch: 467144

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	7.1	HF	7.1		SU		0.3	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-737252/1-A
Matrix: Water
Analysis Batch: 740742

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 737252

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.282	U	0.139	0.139	1.00	0.282	pCi/L	09/23/25 07:52	10/15/25 23:01	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.1		30 - 110					09/23/25 07:52	10/15/25 23:01	1

Lab Sample ID: LCS 160-737252/2-A
Matrix: Water
Analysis Batch: 740742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 737252

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.57	9.526		1.23	1.00	0.380	pCi/L	99	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Barium	93.1		30 - 110						

Lab Sample ID: 310-315980-1 MS
Matrix: Water
Analysis Batch: 740742

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA
Prep Batch: 737252

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	0.491		9.56	9.032		1.20	1.00	0.277	pCi/L	89	60 - 140
Carrier	MS %Yield	MS Qualifier	Limits								
Barium	88.6		30 - 110								

Lab Sample ID: 310-315980-1 MSD
Matrix: Water
Analysis Batch: 740742

Client Sample ID: MW13R-GW-0925
Prep Type: Total/NA
Prep Batch: 737252

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.491		9.50	9.427		1.23	1.00	0.328	pCi/L	94	60 - 140	0.16	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Barium	91.6		30 - 110										

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-737253/1-A

Matrix: Water

Analysis Batch: 740746

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 737253

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.584	U	0.357	0.359	1.00	0.584	pCi/L	09/23/25 07:56	10/15/25 11:56	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.1		30 - 110					09/23/25 07:56	10/15/25 11:56	1
Y Carrier	76.6		30 - 110					09/23/25 07:56	10/15/25 11:56	1

Lab Sample ID: LCS 160-737253/2-A

Matrix: Water

Analysis Batch: 740746

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 737253

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228		8.01	8.949		1.25	1.00	0.558	pCi/L	112	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Barium	93.1		30 - 110							
Y Carrier	78.9		30 - 110							

Lab Sample ID: 310-315980-1 MS

Matrix: Water

Analysis Batch: 740745

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Prep Batch: 737253

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	<0.662	U	8.00	10.24		1.45	1.00	0.640	pCi/L	121	60 - 140
Carrier	MS %Yield	MS Qualifier	Limits								
Barium	88.6		30 - 110								
Y Carrier	70.3		30 - 110								

Lab Sample ID: 310-315980-1 MSD

Matrix: Water

Analysis Batch: 740745

Client Sample ID: MW13R-GW-0925

Prep Type: Total/NA

Prep Batch: 737253

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	<0.662	U	7.95	8.479		1.23	1.00	0.577	pCi/L	99	60 - 140	0.66	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Barium	91.6		30 - 110										
Y Carrier	75.9		30 - 110										

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

HPLC/IC

Analysis Batch: 467490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Total/NA	Water	9056A	
310-315980-4	MW223S-GW-0925	Total/NA	Water	9056A	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	9056A	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	9056A	
MB 310-467490/3	Method Blank	Total/NA	Water	9056A	
LCS 310-467490/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 467960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	9056A	
310-315980-2	MW27-GW-0925	Total/NA	Water	9056A	
310-315980-3	MW29R-GW-0925	Total/NA	Water	9056A	
310-315980-6	DP01-GW-0925	Total/NA	Water	9056A	
MB 310-467960/3	Method Blank	Total/NA	Water	9056A	
LCS 310-467960/4	Lab Control Sample	Total/NA	Water	9056A	
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	9056A	
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	9056A	

Metals

Prep Batch: 467526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	3005A	
310-315980-2	MW27-GW-0925	Total/NA	Water	3005A	
310-315980-3	MW29R-GW-0925	Total/NA	Water	3005A	
310-315980-4	MW223S-GW-0925	Total/NA	Water	3005A	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	3005A	
310-315980-6	DP01-GW-0925	Total/NA	Water	3005A	
MB 310-467526/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-467526/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	3005A	
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	3005A	

Prep Batch: 467595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	7470A	
310-315980-2	MW27-GW-0925	Total/NA	Water	7470A	
310-315980-3	MW29R-GW-0925	Total/NA	Water	7470A	
MB 310-467595/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-467595/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	7470A	
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	7470A	

Analysis Batch: 467781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	7470A	467595
310-315980-2	MW27-GW-0925	Total/NA	Water	7470A	467595
310-315980-3	MW29R-GW-0925	Total/NA	Water	7470A	467595
MB 310-467595/1-A	Method Blank	Total/NA	Water	7470A	467595
LCS 310-467595/2-A	Lab Control Sample	Total/NA	Water	7470A	467595
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	7470A	467595

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Metals (Continued)

Analysis Batch: 467781 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	7470A	467595

Analysis Batch: 468018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	6020B	467526
310-315980-2	MW27-GW-0925	Total/NA	Water	6020B	467526
310-315980-3	MW29R-GW-0925	Total/NA	Water	6020B	467526
310-315980-4	MW223S-GW-0925	Total/NA	Water	6020B	467526
310-315980-5	MW231SR-GW-0925	Total/NA	Water	6020B	467526
310-315980-6	DP01-GW-0925	Total/NA	Water	6020B	467526
MB 310-467526/1-A	Method Blank	Total/NA	Water	6020B	467526
LCS 310-467526/2-A	Lab Control Sample	Total/NA	Water	6020B	467526
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	6020B	467526
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	6020B	467526

Prep Batch: 468136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Dissolved	Water	3005A	
310-315980-5	MW231SR-GW-0925	Dissolved	Water	3005A	
MB 310-468136/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-468136/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 468195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	6020B	467526
310-315980-2	MW27-GW-0925	Total/NA	Water	6020B	467526
310-315980-3	MW29R-GW-0925	Total/NA	Water	6020B	467526
310-315980-4	MW223S-GW-0925	Total/NA	Water	6020B	467526
310-315980-5	MW231SR-GW-0925	Total/NA	Water	6020B	467526
310-315980-6	DP01-GW-0925	Total/NA	Water	6020B	467526
MB 310-467526/1-A	Method Blank	Total/NA	Water	6020B	467526
LCS 310-467526/2-A	Lab Control Sample	Total/NA	Water	6020B	467526
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	6020B	467526
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	6020B	467526

Prep Batch: 468227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Total/NA	Water	7470A	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	7470A	
310-315980-6	DP01-GW-0925	Total/NA	Water	7470A	
MB 310-468227/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-468227/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 468446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Total/NA	Water	7470A	468227
310-315980-5	MW231SR-GW-0925	Total/NA	Water	7470A	468227
310-315980-6	DP01-GW-0925	Total/NA	Water	7470A	468227
MB 310-468227/1-A	Method Blank	Total/NA	Water	7470A	468227
LCS 310-468227/2-A	Lab Control Sample	Total/NA	Water	7470A	468227

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Metals

Analysis Batch: 468610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Dissolved	Water	6020B	468136
310-315980-5	MW231SR-GW-0925	Dissolved	Water	6020B	468136
MB 310-468136/1-A	Method Blank	Total/NA	Water	6020B	468136
LCS 310-468136/2-A	Lab Control Sample	Total/NA	Water	6020B	468136

General Chemistry

Analysis Batch: 467144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-315980-2	MW27-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-315980-3	MW29R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-315980-4	MW223S-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-315980-6	DP01-GW-0925	Total/NA	Water	SM 4500 H+ B	
LCS 310-467144/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-315980-1 DU	MW13R-GW-0925	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 467364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	SM 2540C	
310-315980-2	MW27-GW-0925	Total/NA	Water	SM 2540C	
310-315980-3	MW29R-GW-0925	Total/NA	Water	SM 2540C	
310-315980-4	MW223S-GW-0925	Total/NA	Water	SM 2540C	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	SM 2540C	
310-315980-6	DP01-GW-0925	Total/NA	Water	SM 2540C	
MB 310-467364/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467364/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 467741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-4	MW223S-GW-0925	Total/NA	Water	9060A	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	9060A	
MB 310-467741/11	Method Blank	Total/NA	Water	9060A	
LCS 310-467741/12	Lab Control Sample	Total/NA	Water	9060A	

Rad

Prep Batch: 737252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-2	MW27-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-3	MW29R-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-4	MW223S-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-6	DP01-GW-0925	Total/NA	Water	PrecSep-21	
MB 160-737252/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-737252/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	PrecSep-21	
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	PrecSep-21	

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Rad

Prep Batch: 737253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-315980-1	MW13R-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-2	MW27-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-3	MW29R-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-4	MW223S-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-5	MW231SR-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-6	DP01-GW-0925	Total/NA	Water	PrecSep_0	
MB 160-737253/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-737253/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-315980-1 MS	MW13R-GW-0925	Total/NA	Water	PrecSep_0	
310-315980-1 MSD	MW13R-GW-0925	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW13R-GW-0925

Lab Sample ID: 310-315980-1

Date Collected: 09/17/25 15:15

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	467960	QTZ5	EET CF	09/24/25 17:36
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:01
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 14:55
Total/NA	Prep	7470A			467595	RLT9	EET CF	09/23/25 11:55
Total/NA	Analysis	7470A		1	467781	RLT9	EET CF	09/24/25 10:18
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:39
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740742	SWS	EET SL	10/15/25 23:04
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Client Sample ID: MW27-GW-0925

Lab Sample ID: 310-315980-2

Date Collected: 09/16/25 17:10

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	467960	QTZ5	EET CF	09/25/25 10:50
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:09
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 15:12
Total/NA	Prep	7470A			467595	RLT9	EET CF	09/23/25 11:55
Total/NA	Analysis	7470A		1	467781	RLT9	EET CF	09/24/25 10:24
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:43
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740742	SWS	EET SL	10/15/25 23:04
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Client Sample ID: MW29R-GW-0925

Lab Sample ID: 310-315980-3

Date Collected: 09/16/25 18:55

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	467960	QTZ5	EET CF	09/25/25 11:01
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:11

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW29R-GW-0925

Lab Sample ID: 310-315980-3

Date Collected: 09/16/25 18:55

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 15:15
Total/NA	Prep	7470A			467595	RLT9	EET CF	09/23/25 11:55
Total/NA	Analysis	7470A		1	467781	RLT9	EET CF	09/24/25 10:26
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:42
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740746	SWS	EET SL	10/15/25 23:07
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Client Sample ID: MW223S-GW-0925

Lab Sample ID: 310-315980-4

Date Collected: 09/17/25 10:40

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	467490	ZRI4	EET CF	09/18/25 11:51
Total/NA	Analysis	9056A		20	467490	ZRI4	EET CF	09/18/25 15:29
Dissolved	Prep	3005A			468136	QTZ5	EET CF	09/29/25 09:00
Dissolved	Analysis	6020B		1	468610	NFT2	EET CF	10/01/25 17:16
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:14
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 15:27
Total/NA	Prep	7470A			468227	RLT9	EET CF	09/29/25 12:45
Total/NA	Analysis	7470A		1	468446	RLT9	EET CF	09/30/25 14:25
Total/NA	Analysis	9060A		1	467741	WZC8	EET CF	09/23/25 19:41
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:45
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740746	SWS	EET SL	10/15/25 23:07
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Client Sample ID: MW231SR-GW-0925

Lab Sample ID: 310-315980-5

Date Collected: 09/17/25 10:50

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	467490	ZRI4	EET CF	09/18/25 12:05
Total/NA	Analysis	9056A		20	467490	ZRI4	EET CF	09/18/25 15:42

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Client Sample ID: MW231SR-GW-0925

Lab Sample ID: 310-315980-5

Date Collected: 09/17/25 10:50

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			468136	QTZ5	EET CF	09/29/25 09:00
Dissolved	Analysis	6020B		1	468610	NFT2	EET CF	10/01/25 17:19
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:16
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 15:30
Total/NA	Prep	7470A			468227	RLT9	EET CF	09/29/25 12:45
Total/NA	Analysis	7470A		1	468446	RLT9	EET CF	09/30/25 14:27
Total/NA	Analysis	9060A		1	467741	WZC8	EET CF	09/23/25 22:06
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:44
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740951	FLC	EET SL	10/16/25 09:40
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Client Sample ID: DP01-GW-0925

Lab Sample ID: 310-315980-6

Date Collected: 09/17/25 00:00

Matrix: Water

Date Received: 09/18/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	467960	QTZ5	EET CF	09/25/25 11:12
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468195	ZRI4	EET CF	09/26/25 14:19
Total/NA	Prep	3005A			467526	QTZ5	EET CF	09/23/25 08:45
Total/NA	Analysis	6020B		1	468018	NFT2	EET CF	09/25/25 15:32
Total/NA	Prep	7470A			468227	RLT9	EET CF	09/29/25 12:45
Total/NA	Analysis	7470A		1	468446	RLT9	EET CF	09/30/25 14:29
Total/NA	Analysis	SM 2540C		1	467364	HE7K	EET CF	09/19/25 17:23
Total/NA	Analysis	SM 4500 H+ B		1	467144	W9YR	EET CF	09/18/25 11:56
Total/NA	Prep	PrecSep-21			737252	JTR	EET SL	09/23/25 07:52
Total/NA	Analysis	9315		1	740951	FLC	EET SL	10/16/25 09:41
Total/NA	Prep	PrecSep_0			737253	JTR	EET SL	09/23/25 07:56
Total/NA	Analysis	9320		1	740745	SWS	EET SL	10/15/25 12:06
Total/NA	Analysis	Ra226_Ra228		1	740621	CAH	EET SL	10/17/25 13:48

Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020B	3005A	Water	Lithium

Laboratory: Eurofins St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	373	12-01-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9315	PrecSep-21	Water	Radium-226
9320	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

Method Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
9060A	Organic Carbon, Total (TOC)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Environment Testing
America



310-315980 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GHP</u>			
City/State:	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>9/18/25</u>	TIME <u>0450</u>	Received By: <u>BP</u>
Delivery Type. ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	☒ Yes ☐ No	If yes: Cooler ID. <u>9/18/25</u>	
Multiple Coolers?	☒ Yes ☒ No	If yes: Cooler # <u>1</u> of <u>3</u>	
Cooler Custody Seals Present?	☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No	
Sample Custody Seals Present?	☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No	
Trip Blank Present?	☐ Yes ☒ No	If yes. Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>AA</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>5.6</u>		Corrected Temp (°C): <u>5.6</u>	
• Sample Container Temperature			
Container(s) used	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Chain of Custody Record

214 DSM



Sampler Paula P. Pichardo		Lab PM Zach Bindert	Carrier Tracking No(s):		COC No:																		
Client Contact Kevin Armstrong		Phone: 712-2019-0131	E-Mail: zach.bindert@eurofins.com		Page: Page 1 of 1																		
Company GHD Services Inc.		PMSID:		Job #:																			
Address: 11228 Aurora Avenue		State of Origin Iowa																					
City Des Moines		Analysis Requested																					
State, Zip: IA, 50322-7905		Due Date Requested:																					
Phone: 515-414-3935		TAT Requested (days): Standard																					
Email: Kevin.Armstrong@ghd.com		Compliance Project: ☐ Yes ☐ No																					
Project Name: MEC Neal North-Background		PO #: 340-017045																					
Site: Neal North CCR		WO #: 12576482-004 01																					
		Project #: 31017263																					
		SSOW#: 12576482-002																					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9316_Ra226 - Standard Target List	9320_Ra228 - Standard Target List	9066A_ORGFM_28D - Chloride, Fluoride & Sulfate	6020B_7470A - Appendix III and IV Metals	2540C_Calcd, SM4500_H+	6020B - Dissolved Fe and Mn (field-filtered)	9060A - TOC Duplicates	9066A_ORGFM_48H SHORT HOLD	6020B_7470A - Appendix III and IV Metals + Iron and Manganese	Total Number of containers	Special Instructions/Note:					
MW13R-GW-0925	9/17/25	1515	G	Water	N	X	X	X	X	X	X	X	X	X	X	X	X	15					
MW27-GW-0925	9/10/25	1710	G	Water	N	X	X	X	X	X	X	X	X	X	X	X	X	5					
MW29R-GW-0925	9/10/25	1855	G	Water	N	X	X	X	X	X	X	X	X	X	X	X	X	5					
MW223S-GW-0925	9/17/25	1040	G	Water	Y	X	X	X	X	X	X	X	X	X	X	X	X	9	Short Hold				
MW231SR-GW-0925	9/17/25	1050	G	Water	Y	X	X	X	X	X	X	X	X	X	X	X	X	9	Short Hold				
DP01-GW-0925	9/17/25	-	G	Water	N	X	X	X	X	X	X	X	X	X	X	X	X	5					
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological																							
Deliverable Requested 1, II, III, IV, Other (specify)																							
Empty Kit Relinquished by																							
Relinquished by Paula Pichardo		Date/Time 9/17/25 1015		Company GHD		Received by		Date/Time		Company		Relinquished by		Date/Time		Company		Relinquished by		Date/Time		Company	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:		Method of Shipment:		Time:		Special Instructions/QC Requirements. Database Facility Code 1114642-GD-MidAmn		Return To Client		Disposal By Lab		Archive For		Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-315980-1

Login Number: 315980

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls

Tracer/Carrier Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Energy Center CCR

Job ID: 310-315980-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

			Percent Yield (Acceptance Limits)					
		Ba						
Lab Sample ID	Client Sample ID	(30-110)						
310-315980-1	MW13R-GW-0925	89.6						
310-315980-1 MS	MW13R-GW-0925	88.6						
310-315980-1 MSD	MW13R-GW-0925	91.6						
310-315980-2	MW27-GW-0925	91.1						
310-315980-3	MW29R-GW-0925	90.4						
310-315980-4	MW223S-GW-0925	88.3						
310-315980-5	MW231SR-GW-0925	91.1						
310-315980-6	DP01-GW-0925	91.9						
LCS 160-737252/2-A	Lab Control Sample	93.1						
MB 160-737252/1-A	Method Blank	90.1						
Tracer/Carrier Legend								
Ba = Barium								

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Ba	Y						
Lab Sample ID	Client Sample ID	(30-110)	(30-110)						
310-315980-1	MW13R-GW-0925	89.6	75.1						
310-315980-1 MS	MW13R-GW-0925	88.6	70.3						
310-315980-1 MSD	MW13R-GW-0925	91.6	75.9						
310-315980-2	MW27-GW-0925	91.1	78.5						
310-315980-3	MW29R-GW-0925	90.4	77.4						
310-315980-4	MW223S-GW-0925	88.3	80.0						
310-315980-5	MW231SR-GW-0925	91.1	78.9						
310-315980-6	DP01-GW-0925	91.9	81.9						
LCS 160-737253/2-A	Lab Control Sample	93.1	78.9						
MB 160-737253/1-A	Method Blank	90.1	76.6						
Tracer/Carrier Legend									
Ba = Barium									
Y = Y Carrier									



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 10/22/2025 12:53:00 PM

JOB DESCRIPTION

Neal North Closed CCR Monofill (IDNR)
MEC Neal North Closed Monofill

JOB NUMBER

310-316241-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Generated
10/22/2025 12:53:00 PM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016



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Case Narrative

Client: GHD Services Inc.
Project: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Job ID: 310-316241-1

Eurofins Cedar Falls

Job Narrative 310-316241-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/22/2025 4:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.8°C, 2.1°C, 2.8°C and 3.1°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW01R-GW-0925 (310-316241-1), MW03R-GW-0925 (310-316241-2), MW05R-GW-0925 (310-316241-3), MW19-GW-0925 (310-316241-4), MW21-GW-0925 (310-316241-5) and DP05-GW-0925 (310-316241-6). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Case Narrative

Client: GHD Services Inc.
Project: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Job ID: 310-316241-2

Eurofins Cedar Falls

Job Narrative 310-316241-2

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/22/2025 4:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.8°C, 2.1°C, 2.8°C and 3.1°C.

Gas Flow Proportional Counter

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

Rad

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.

Job ID: 310-316241-1

Project/Site: Neal North Closed CCR Monofill (IDNR)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-316241-1	MW01R-GW-0925	Water	09/19/25 09:15	09/22/25 16:05	Iowa
310-316241-2	MW03R-GW-0925	Water	09/19/25 11:00	09/22/25 16:05	Iowa
310-316241-3	MW05R-GW-0925	Water	09/19/25 12:15	09/22/25 16:05	Iowa
310-316241-4	MW19-GW-0925	Water	09/19/25 10:00	09/22/25 16:05	Iowa
310-316241-5	MW21-GW-0925	Water	09/19/25 09:10	09/22/25 16:05	Iowa
310-316241-6	DP05-GW-0925	Water	09/19/25 00:00	09/22/25 16:05	Iowa

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW01R-GW-0925

Lab Sample ID: 310-316241-1

Date Collected: 09/19/25 09:15

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.8		5.00		mg/L			09/26/25 16:04	5
Fluoride	<1.00		1.00		mg/L			09/26/25 16:04	5
Sulfate	189		5.00		mg/L			09/26/25 16:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:16	1
Arsenic	0.0528		0.00200		mg/L		09/30/25 09:00	10/03/25 18:16	1
Barium	0.101		0.00200		mg/L		09/30/25 09:00	10/03/25 18:16	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:16	1
Boron	0.415		0.100		mg/L		09/30/25 09:00	10/03/25 18:16	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:16	1
Calcium	155		0.500		mg/L		09/30/25 09:00	10/03/25 18:16	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:16	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:16	1
Lithium	0.0806		0.0100		mg/L		09/30/25 09:00	10/03/25 18:16	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:16	1
Molybdenum	0.00478		0.00200		mg/L		09/30/25 09:00	10/03/25 18:16	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:16	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	890		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			09/23/25 00:09	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.307	U	0.183	0.184	1.00	0.307	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.725		0.384	0.390	1.00	0.543	pCi/L	09/24/25 15:25	10/21/25 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.1		30 - 110					09/24/25 15:25	10/21/25 09:57	1
Y Carrier	83.0		30 - 110					09/24/25 15:25	10/21/25 09:57	1

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW01R-GW-0925
Date Collected: 09/19/25 09:15
Date Received: 09/22/25 16:05

Lab Sample ID: 310-316241-1
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.863		0.425	0.431	5.00	0.543	pCi/L		10/22/25 12:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW03R-GW-0925

Lab Sample ID: 310-316241-2

Date Collected: 09/19/25 11:00

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.02		5.00		mg/L			09/26/25 16:17	5
Fluoride	<1.00		1.00		mg/L			09/26/25 16:17	5
Sulfate	166		5.00		mg/L			09/26/25 16:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:33	1
Arsenic	0.0372		0.00200		mg/L		09/30/25 09:00	10/03/25 18:33	1
Barium	0.195		0.00200		mg/L		09/30/25 09:00	10/03/25 18:33	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:33	1
Boron	0.474		0.100		mg/L		09/30/25 09:00	10/03/25 18:33	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:33	1
Calcium	132		0.500		mg/L		09/30/25 09:00	10/03/25 18:33	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:33	1
Cobalt	0.000530		0.000500		mg/L		09/30/25 09:00	10/03/25 18:33	1
Lithium	0.0802		0.0100		mg/L		09/30/25 09:00	10/03/25 18:33	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:33	1
Molybdenum	0.00241		0.00200		mg/L		09/30/25 09:00	10/03/25 18:33	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:33	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:33	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	680		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			09/23/25 00:20	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.324	U	0.164	0.164	1.00	0.324	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.0		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.01		0.453	0.462	1.00	0.612	pCi/L	09/24/25 15:25	10/21/25 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.0		30 - 110					09/24/25 15:25	10/21/25 09:57	1
Y Carrier	78.5		30 - 110					09/24/25 15:25	10/21/25 09:57	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW03R-GW-0925
Date Collected: 09/19/25 11:00
Date Received: 09/22/25 16:05

Lab Sample ID: 310-316241-2
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.03		0.482	0.490	5.00	0.612	pCi/L		10/22/25 12:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW05R-GW-0925

Lab Sample ID: 310-316241-3

Date Collected: 09/19/25 12:15

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.06		5.00		mg/L			09/26/25 16:31	5
Fluoride	<1.00		1.00		mg/L			09/26/25 16:31	5
Sulfate	121		5.00		mg/L			09/26/25 16:31	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:36	1
Arsenic	0.0286		0.00200		mg/L		09/30/25 09:00	10/03/25 18:36	1
Barium	0.0972		0.00200		mg/L		09/30/25 09:00	10/03/25 18:36	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:36	1
Boron	0.208		0.100		mg/L		09/30/25 09:00	10/03/25 18:36	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:36	1
Calcium	109		0.500		mg/L		09/30/25 09:00	10/03/25 18:36	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:36	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:36	1
Lithium	0.0686		0.0100		mg/L		09/30/25 09:00	10/03/25 18:36	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:36	1
Molybdenum	0.00445		0.00200		mg/L		09/30/25 09:00	10/03/25 18:36	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:36	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:36	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 10:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	556		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			09/23/25 00:25	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.271	U	0.171	0.172	1.00	0.271	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.9		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.529	U	0.346	0.348	1.00	0.529	pCi/L	09/24/25 15:25	10/21/25 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.9		30 - 110					09/24/25 15:25	10/21/25 09:57	1
Y Carrier	76.6		30 - 110					09/24/25 15:25	10/21/25 09:57	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW05R-GW-0925
Date Collected: 09/19/25 12:15
Date Received: 09/22/25 16:05

Lab Sample ID: 310-316241-3
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.609		0.386	0.388	5.00	0.529	pCi/L		10/22/25 12:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW19-GW-0925

Lab Sample ID: 310-316241-4

Date Collected: 09/19/25 10:00

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.3		5.00		mg/L			09/26/25 16:45	5
Fluoride	<1.00		1.00		mg/L			09/26/25 16:45	5
Sulfate	854		50.0		mg/L			09/27/25 09:29	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:38	1
Arsenic	0.00443		0.00200		mg/L		09/30/25 09:00	10/03/25 18:38	1
Barium	0.0189		0.00200		mg/L		09/30/25 09:00	10/03/25 18:38	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:38	1
Boron	0.554		0.100		mg/L		09/30/25 09:00	10/03/25 18:38	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:38	1
Calcium	364		0.500		mg/L		09/30/25 09:00	10/03/25 18:38	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:38	1
Cobalt	0.00858		0.000500		mg/L		09/30/25 09:00	10/03/25 18:38	1
Lithium	0.257		0.0100		mg/L		09/30/25 09:00	10/03/25 18:38	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:38	1
Molybdenum	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:38	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:38	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:38	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 10:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2130		250		mg/L			09/26/25 12:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			09/23/25 00:34	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.397	U	0.216	0.216	1.00	0.397	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.833		0.385	0.393	1.00	0.520	pCi/L	09/24/25 15:25	10/21/25 09:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					09/24/25 15:25	10/21/25 09:58	1
Y Carrier	80.0		30 - 110					09/24/25 15:25	10/21/25 09:58	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW19-GW-0925
Date Collected: 09/19/25 10:00
Date Received: 09/22/25 16:05

Lab Sample ID: 310-316241-4
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.899		0.441	0.448	5.00	0.520	pCi/L		10/22/25 12:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW21-GW-0925

Lab Sample ID: 310-316241-5

Date Collected: 09/19/25 09:10

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.51		5.00		mg/L			09/26/25 16:58	5
Fluoride	<1.00		1.00		mg/L			09/26/25 16:58	5
Sulfate	1180		50.0		mg/L			09/27/25 09:42	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:41	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:41	1
Barium	0.0174		0.00200		mg/L		09/30/25 09:00	10/03/25 18:41	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:41	1
Boron	0.348		0.100		mg/L		09/30/25 09:00	10/03/25 18:41	1
Cadmium	0.000245		0.000200		mg/L		09/30/25 09:00	10/03/25 18:41	1
Calcium	437		0.500		mg/L		09/30/25 09:00	10/03/25 18:41	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:41	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:41	1
Lithium	0.308		0.0100		mg/L		09/30/25 09:00	10/03/25 18:41	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:41	1
Molybdenum	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:41	1
Selenium	0.0153		0.00500		mg/L		09/30/25 09:00	10/03/25 18:41	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:41	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 10:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2350		50.0		mg/L			09/25/25 14:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.4	HF	1.0		SU			09/23/25 00:38	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.298	U	0.137	0.137	1.00	0.298	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.9		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.840		0.428	0.435	1.00	0.606	pCi/L	09/24/25 15:25	10/21/25 09:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	90.9		30 - 110					09/24/25 15:25	10/21/25 09:58	1
Y Carrier	78.9		30 - 110					09/24/25 15:25	10/21/25 09:58	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW21-GW-0925

Lab Sample ID: 310-316241-5

Date Collected: 09/19/25 09:10

Matrix: Water

Date Received: 09/22/25 16:05

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.810		0.449	0.456	5.00	0.606	pCi/L		10/22/25 12:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: DP05-GW-0925

Lab Sample ID: 310-316241-6

Date Collected: 09/19/25 00:00

Matrix: Water

Date Received: 09/22/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.3		5.00		mg/L			09/26/25 17:12	5
Fluoride	<1.00		1.00		mg/L			09/26/25 17:12	5
Sulfate	192		5.00		mg/L			09/26/25 17:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:44	1
Arsenic	0.0532		0.00200		mg/L		09/30/25 09:00	10/03/25 18:44	1
Barium	0.100		0.00200		mg/L		09/30/25 09:00	10/03/25 18:44	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:44	1
Boron	0.388		0.100		mg/L		09/30/25 09:00	10/03/25 18:44	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:44	1
Calcium	152		0.500		mg/L		09/30/25 09:00	10/03/25 18:44	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:44	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:44	1
Lithium	0.0802		0.0100		mg/L		09/30/25 09:00	10/03/25 18:44	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:44	1
Molybdenum	0.00452		0.00200		mg/L		09/30/25 09:00	10/03/25 18:44	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:44	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 10:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	876		50.0		mg/L			09/25/25 14:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			09/23/25 00:42	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.368	U	0.184	0.184	1.00	0.368	pCi/L	09/24/25 15:19	10/21/25 21:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.8		30 - 110					09/24/25 15:19	10/21/25 21:17	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.667	U	0.431	0.435	1.00	0.667	pCi/L	09/24/25 15:25	10/21/25 09:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	86.8		30 - 110					09/24/25 15:25	10/21/25 09:58	1
Y Carrier	76.6		30 - 110					09/24/25 15:25	10/21/25 09:58	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: DP05-GW-0925
Date Collected: 09/19/25 00:00
Date Received: 09/22/25 16:05

Lab Sample ID: 310-316241-6
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.667	U	0.469	0.472	5.00	0.667	pCi/L		10/22/25 12:32	1

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-468164/3

Matrix: Water

Analysis Batch: 468164

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/26/25 12:02	1
Fluoride	<0.200		0.200		mg/L			09/26/25 12:02	1
Sulfate	<1.00		1.00		mg/L			09/26/25 12:02	1

Lab Sample ID: LCS 310-468164/4

Matrix: Water

Analysis Batch: 468164

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.18		mg/L		102	90 - 110
Fluoride	2.00	2.099		mg/L		105	90 - 110
Sulfate	10.0	10.50		mg/L		105	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-468307/1-A

Matrix: Water

Analysis Batch: 468963

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Barium	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Boron	<0.100		0.100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Calcium	<0.500		0.500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Lithium	<0.0100		0.0100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Molybdenum	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:10	1

Lab Sample ID: LCS 310-468307/2-A

Matrix: Water

Analysis Batch: 468963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2015		mg/L		101	80 - 120
Arsenic	0.200	0.2016		mg/L		101	80 - 120
Barium	0.100	0.09352		mg/L		94	80 - 120
Beryllium	0.100	0.09844		mg/L		98	80 - 120
Boron	0.200	0.2159		mg/L		108	80 - 120
Cadmium	0.100	0.09359		mg/L		94	80 - 120
Calcium	2.00	2.051		mg/L		103	80 - 120
Chromium	0.100	0.09596		mg/L		96	80 - 120
Cobalt	0.100	0.09515		mg/L		95	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

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

Lab Sample ID: LCS 310-468307/2-A
Matrix: Water
Analysis Batch: 468963

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.200	0.2083		mg/L		104	80 - 120
Lead	0.200	0.1942		mg/L		97	80 - 120
Molybdenum	0.200	0.2107		mg/L		105	80 - 120
Selenium	0.400	0.3714		mg/L		93	80 - 120
Thallium	0.100	0.09888		mg/L		99	80 - 120

Lab Sample ID: 310-316241-1 MS
Matrix: Water
Analysis Batch: 468963

Client Sample ID: MW01R-GW-0925
Prep Type: Total/NA
Prep Batch: 468307

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2098		mg/L		105	75 - 125
Arsenic	0.0528		0.200	0.2612		mg/L		104	75 - 125
Barium	0.101		0.100	0.2039		mg/L		102	75 - 125
Beryllium	<0.00100		0.100	0.09985		mg/L		100	75 - 125
Boron	0.415		0.200	0.6270		mg/L		106	75 - 125
Cadmium	<0.000200		0.100	0.09817		mg/L		98	75 - 125
Calcium	155		2.00	157.5	4	mg/L		143	75 - 125
Chromium	<0.00500		0.100	0.09617		mg/L		96	75 - 125
Cobalt	<0.000500		0.100	0.09282		mg/L		92	75 - 125
Lithium	0.0806		0.200	0.2810		mg/L		100	75 - 125
Lead	<0.000500		0.200	0.1841		mg/L		92	75 - 125
Molybdenum	0.00478		0.200	0.2174		mg/L		106	75 - 125
Selenium	<0.00500		0.400	0.3950		mg/L		99	75 - 125
Thallium	<0.00100		0.100	0.08791		mg/L		88	75 - 125

Lab Sample ID: 310-316241-1 MSD
Matrix: Water
Analysis Batch: 468963

Client Sample ID: MW01R-GW-0925
Prep Type: Total/NA
Prep Batch: 468307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Antimony	<0.00200		0.200	0.2072		mg/L		104	75 - 125	1	20
Arsenic	0.0528		0.200	0.2572		mg/L		102	75 - 125	2	20
Barium	0.101		0.100	0.2013		mg/L		100	75 - 125	1	20
Beryllium	<0.00100		0.100	0.09786		mg/L		98	75 - 125	2	20
Boron	0.415		0.200	0.6195		mg/L		102	75 - 125	1	20
Cadmium	<0.000200		0.100	0.09591		mg/L		96	75 - 125	2	20
Calcium	155		2.00	156.8	4	mg/L		110	75 - 125	0	20
Chromium	<0.00500		0.100	0.09415		mg/L		94	75 - 125	2	20
Cobalt	<0.000500		0.100	0.09093		mg/L		91	75 - 125	2	20
Lithium	0.0806		0.200	0.2773		mg/L		98	75 - 125	1	20
Lead	<0.000500		0.200	0.1825		mg/L		91	75 - 125	1	20
Molybdenum	0.00478		0.200	0.2136		mg/L		104	75 - 125	2	20
Selenium	<0.00500		0.400	0.3819		mg/L		95	75 - 125	3	20
Thallium	<0.00100		0.100	0.08997		mg/L		90	75 - 125	2	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-468529/1-A
Matrix: Water
Analysis Batch: 468697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/01/25 15:10	10/02/25 09:15	1

Lab Sample ID: LCS 310-468529/2-A
Matrix: Water
Analysis Batch: 468697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001663		mg/L		100	80 - 120

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

Lab Sample ID: MB 310-467795/1
Matrix: Water
Analysis Batch: 467795

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/24/25 13:08	1

Lab Sample ID: LCS 310-467795/2
Matrix: Water
Analysis Batch: 467795

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	994.0		mg/L		99	89 - 110

Lab Sample ID: MB 310-467966/1
Matrix: Water
Analysis Batch: 467966

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/25/25 14:31	1

Lab Sample ID: LCS 310-467966/2
Matrix: Water
Analysis Batch: 467966

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	962.0		mg/L		96	89 - 110

Lab Sample ID: MB 310-468084/1
Matrix: Water
Analysis Batch: 468084

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/26/25 12:50	1

QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

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

Lab Sample ID: LCS 310-468084/2
Matrix: Water
Analysis Batch: 468084

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	916.0		mg/L		92	89 - 110

Lab Sample ID: 310-316241-4 DU
Matrix: Water
Analysis Batch: 468084

Client Sample ID: MW19-GW-0925
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2130		2020		mg/L		5	13

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-467536/1
Matrix: Water
Analysis Batch: 467536

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	98 - 102

Lab Sample ID: 310-316241-3 DU
Matrix: Water
Analysis Batch: 467536

Client Sample ID: MW05R-GW-0925
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.7	HF	7.8		SU		0.2	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-737502/1-A
Matrix: Water
Analysis Batch: 741557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 737502

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.415	U	0.205	0.205	1.00	0.415	pCi/L	09/24/25 15:19	10/21/25 21:16	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	77.7		30 - 110					09/24/25 15:19	10/21/25 21:16	1

Lab Sample ID: LCS 160-737502/2-A
Matrix: Water
Analysis Batch: 741557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 737502

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.57	9.693		1.27	1.00	0.348	pCi/L	101	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Barium	87.8		30 - 110						

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QC Sample Results

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-737503/1-A
Matrix: Water
Analysis Batch: 741557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 737503

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.8615		0.458	0.465	1.00	0.652	pCi/L	09/24/25 15:25	10/21/25 09:57	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	77.7		30 - 110					09/24/25 15:25	10/21/25 09:57	1
Y Carrier	82.6		30 - 110					09/24/25 15:25	10/21/25 09:57	1

Lab Sample ID: LCS 160-737503/2-A
Matrix: Water
Analysis Batch: 741557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 737503

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	7.99	8.247		1.22	1.00	0.650	pCi/L	103	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Barium	87.8		30 - 110						
Y Carrier	78.9		30 - 110						

QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

HPLC/IC

Analysis Batch: 468164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	9056A	
310-316241-2	MW03R-GW-0925	Total/NA	Water	9056A	
310-316241-3	MW05R-GW-0925	Total/NA	Water	9056A	
310-316241-4	MW19-GW-0925	Total/NA	Water	9056A	
310-316241-4	MW19-GW-0925	Total/NA	Water	9056A	
310-316241-5	MW21-GW-0925	Total/NA	Water	9056A	
310-316241-5	MW21-GW-0925	Total/NA	Water	9056A	
310-316241-6	DP05-GW-0925	Total/NA	Water	9056A	
MB 310-468164/3	Method Blank	Total/NA	Water	9056A	
LCS 310-468164/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 468307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	3005A	
310-316241-2	MW03R-GW-0925	Total/NA	Water	3005A	
310-316241-3	MW05R-GW-0925	Total/NA	Water	3005A	
310-316241-4	MW19-GW-0925	Total/NA	Water	3005A	
310-316241-5	MW21-GW-0925	Total/NA	Water	3005A	
310-316241-6	DP05-GW-0925	Total/NA	Water	3005A	
MB 310-468307/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-468307/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-316241-1 MS	MW01R-GW-0925	Total/NA	Water	3005A	
310-316241-1 MSD	MW01R-GW-0925	Total/NA	Water	3005A	

Prep Batch: 468529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	7470A	
310-316241-2	MW03R-GW-0925	Total/NA	Water	7470A	
310-316241-3	MW05R-GW-0925	Total/NA	Water	7470A	
310-316241-4	MW19-GW-0925	Total/NA	Water	7470A	
310-316241-5	MW21-GW-0925	Total/NA	Water	7470A	
310-316241-6	DP05-GW-0925	Total/NA	Water	7470A	
MB 310-468529/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-468529/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 468697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	7470A	468529
310-316241-2	MW03R-GW-0925	Total/NA	Water	7470A	468529
310-316241-3	MW05R-GW-0925	Total/NA	Water	7470A	468529
310-316241-4	MW19-GW-0925	Total/NA	Water	7470A	468529
310-316241-5	MW21-GW-0925	Total/NA	Water	7470A	468529
310-316241-6	DP05-GW-0925	Total/NA	Water	7470A	468529
MB 310-468529/1-A	Method Blank	Total/NA	Water	7470A	468529
LCS 310-468529/2-A	Lab Control Sample	Total/NA	Water	7470A	468529

Analysis Batch: 468963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	6020B	468307

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QC Association Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Metals (Continued)

Analysis Batch: 468963 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-2	MW03R-GW-0925	Total/NA	Water	6020B	468307
310-316241-3	MW05R-GW-0925	Total/NA	Water	6020B	468307
310-316241-4	MW19-GW-0925	Total/NA	Water	6020B	468307
310-316241-5	MW21-GW-0925	Total/NA	Water	6020B	468307
310-316241-6	DP05-GW-0925	Total/NA	Water	6020B	468307
MB 310-468307/1-A	Method Blank	Total/NA	Water	6020B	468307
LCS 310-468307/2-A	Lab Control Sample	Total/NA	Water	6020B	468307
310-316241-1 MS	MW01R-GW-0925	Total/NA	Water	6020B	468307
310-316241-1 MSD	MW01R-GW-0925	Total/NA	Water	6020B	468307

General Chemistry

Analysis Batch: 467536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316241-2	MW03R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316241-3	MW05R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316241-4	MW19-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316241-5	MW21-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316241-6	DP05-GW-0925	Total/NA	Water	SM 4500 H+ B	
LCS 310-467536/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-316241-3 DU	MW05R-GW-0925	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 467795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	SM 2540C	
310-316241-2	MW03R-GW-0925	Total/NA	Water	SM 2540C	
310-316241-3	MW05R-GW-0925	Total/NA	Water	SM 2540C	
MB 310-467795/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467795/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 467966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-5	MW21-GW-0925	Total/NA	Water	SM 2540C	
310-316241-6	DP05-GW-0925	Total/NA	Water	SM 2540C	
MB 310-467966/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467966/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 468084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-4	MW19-GW-0925	Total/NA	Water	SM 2540C	
MB 310-468084/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-468084/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-316241-4 DU	MW19-GW-0925	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 737502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	PrecSep-21	
310-316241-2	MW03R-GW-0925	Total/NA	Water	PrecSep-21	
310-316241-3	MW05R-GW-0925	Total/NA	Water	PrecSep-21	

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QC Association Summary

Client: GHD Services Inc.

Job ID: 310-316241-1

Project/Site: Neal North Closed CCR Monofill (IDNR)

Rad (Continued)

Prep Batch: 737502 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-4	MW19-GW-0925	Total/NA	Water	PrecSep-21	
310-316241-5	MW21-GW-0925	Total/NA	Water	PrecSep-21	
310-316241-6	DP05-GW-0925	Total/NA	Water	PrecSep-21	
MB 160-737502/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-737502/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 737503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316241-1	MW01R-GW-0925	Total/NA	Water	PrecSep_0	
310-316241-2	MW03R-GW-0925	Total/NA	Water	PrecSep_0	
310-316241-3	MW05R-GW-0925	Total/NA	Water	PrecSep_0	
310-316241-4	MW19-GW-0925	Total/NA	Water	PrecSep_0	
310-316241-5	MW21-GW-0925	Total/NA	Water	PrecSep_0	
310-316241-6	DP05-GW-0925	Total/NA	Water	PrecSep_0	
MB 160-737503/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-737503/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW01R-GW-0925

Lab Sample ID: 310-316241-1

Date Collected: 09/19/25 09:15

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 16:04
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:16
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 09:55
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:09
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:57
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Client Sample ID: MW03R-GW-0925

Lab Sample ID: 310-316241-2

Date Collected: 09/19/25 11:00

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 16:17
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:33
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 10:01
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:20
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:57
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Client Sample ID: MW05R-GW-0925

Lab Sample ID: 310-316241-3

Date Collected: 09/19/25 12:15

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 16:31
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:36
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 10:04
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:25

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: MW05R-GW-0925

Lab Sample ID: 310-316241-3

Date Collected: 09/19/25 12:15

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:57
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Client Sample ID: MW19-GW-0925

Lab Sample ID: 310-316241-4

Date Collected: 09/19/25 10:00

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 16:45
Total/NA	Analysis	9056A		50	468164	QTZ5	EET CF	09/27/25 09:29
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:38
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 10:06
Total/NA	Analysis	SM 2540C		1	468084	TGN5	EET CF	09/26/25 12:50
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:34
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Client Sample ID: MW21-GW-0925

Lab Sample ID: 310-316241-5

Date Collected: 09/19/25 09:10

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 16:58
Total/NA	Analysis	9056A		50	468164	QTZ5	EET CF	09/27/25 09:42
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:41
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 10:08
Total/NA	Analysis	SM 2540C		1	467966	TGN5	EET CF	09/25/25 14:31
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:38
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Client Sample ID: DP05-GW-0925

Lab Sample ID: 310-316241-6

Date Collected: 09/19/25 00:00

Matrix: Water

Date Received: 09/22/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468164	QTZ5	EET CF	09/26/25 17:12
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:44
Total/NA	Prep	7470A			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	7470A		1	468697	RLT9	EET CF	10/02/25 10:10
Total/NA	Analysis	SM 2540C		1	467966	TGN5	EET CF	09/25/25 14:31
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:42
Total/NA	Prep	PrecSep-21			737502	JTR	EET SL	09/24/25 15:19
Total/NA	Analysis	9315		1	741557	FLC	EET SL	10/21/25 21:17
Total/NA	Prep	PrecSep_0			737503	JTR	EET SL	09/24/25 15:25
Total/NA	Analysis	9320		1	741557	FLC	EET SL	10/21/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	741768	EMH	EET SL	10/22/25 12:32

Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020B	3005A	Water	Lithium

Laboratory: Eurofins St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	373	12-01-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9315	PrecSep-21	Water	Radium-226
9320	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

Method Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

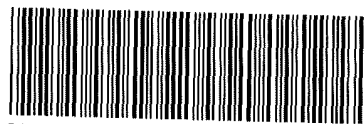
Laboratory References:

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

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Environment Testing
America



310-316241 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>GHD</u>			
City/State	<u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By <u>BP</u>
Delivery Type. ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other. _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C) <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C). <u>2.1</u>		Corrected Temp (°C) <u>2.1</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C).			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>GHP</u>			
City/State:	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received:	DATE <u>4/22/25</u>	TIME <u>1605</u>	Received By: <u>BP</u>
Delivery Type ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID.			
Multiple Coolers? ☒ Yes ☐ No If yes Cooler # <u>2</u> of <u>4</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant. ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.8</u>		Corrected Temp (°C): <u>1.8</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>GHD</u>			
City/State	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By <u>BP</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other.			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes Cooler ID.
Multiple Coolers?		☒ Yes ☐ No	If yes. Cooler # <u>3</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes. Which VOA samples are in cooler? ↓
Temperature Record			
Coolant. ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE			
Thermometer ID <u>R</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>2.8</u>		Corrected Temp (°C) <u>2.8</u>	
• Sample Container Temperature			
Container(s) used	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client. <u>BHD</u>			
City/State.	<u>Des Moines</u>	STATE <u>IA</u>	Project
Receipt Information			
Date/Time Received:	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By: <u>BP</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes Cooler ID
Multiple Coolers?		☒ Yes ☐ No	If yes Cooler # <u>4</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet Ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>3.1</u>		Corrected Temp (°C): <u>3.1</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE. If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Chain of Custody Record

DSM214

Eurofins

7M to 10M

Client Information		Sampler: <u>Paula E. Hanzel</u>		Lab PM: <u>Zach Bindert</u>		Carrier Tracking No(s):		COC No:	
Client Contact: <u>Kevin Armstrong</u>		Phone: <u>712-898-9031</u>		E-Mail: <u>zach.bindert@eurofins.com</u>		State of Origin: <u>Iowa</u>		Page: <u>Page 1 of 1</u>	
Company: <u>GHD Services Inc.</u>		PWSID:		Analysis Requested		Job #:		Preservation Codes:	
Address: <u>11228 Aurora Avenue</u>		Due Date Requested:		TAT Requested (days): <u>Standard</u>		Compliance Project: <u>Δ Yes Δ No</u>		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
City: <u>Des Moines</u>		PO #: <u>340-017045</u>		WO #: <u>12576482-004 01</u>		Project #: <u>31017263</u>		M - Hexane N - None O - AshNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Tizma Z - other (specify)	
State, Zip: <u>IA, 50322-7905</u>		Phone: <u>515-414-3935</u>		Email: <u>Kevin.Armstrong@ghd.com</u>		Project Name: <u>Neal North Closed CCR Monofill (IDNR)</u>		Total Number of containers	
Site: <u>Neal North Closed CCR Monofill</u>		SSOW#: <u>12576482-002</u>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastefoil, STAT=stasis, Asch)	
MW01R-GW-0925		9/19/25		0915		G		Water	
MW03R-GW-0925		9/19/25		1100		G		Water	
MW05R-GW-0925		9/19/25		1215		G		Water	
MW19-GW-0925		9/19/25		1000		G		Water	
MW21-GW-0925		9/19/25		0910		G		Water	
DP05-GW-0925		9/19/25		—		G		Water	
Possible Hazard Identification		Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒ Radiological ☐		Deliverable Requested I, II, III, IV, Other (specify)		Empty Kit Relinquished by		Relinquished by <u>Paula Richmond</u>	
Date/Time: <u>9/22/25 1030</u>		Date/Time: <u>9/22/25 1030</u>		Date/Time: <u>9/22/25 1030</u>		Date/Time: <u>9/22/25 1030</u>		Date/Time: <u>9/22/25 1030</u>	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-316241-1

Login Number: 316241

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Eurofins Cedar Falls

Tracer/Carrier Summary

Client: GHD Services Inc.
Project/Site: Neal North Closed CCR Monofill (IDNR)

Job ID: 310-316241-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
310-316241-1	MW01R-GW-0925	91.1	
310-316241-2	MW03R-GW-0925	86.0	
310-316241-3	MW05R-GW-0925	90.9	
310-316241-4	MW19-GW-0925	94.2	
310-316241-5	MW21-GW-0925	90.9	
310-316241-6	DP05-GW-0925	86.8	
LCS 160-737502/2-A	Lab Control Sample	87.8	
MB 160-737502/1-A	Method Blank	77.7	
Tracer/Carrier Legend			
Ba = Barium			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-316241-1	MW01R-GW-0925	91.1	83.0
310-316241-2	MW03R-GW-0925	86.0	78.5
310-316241-3	MW05R-GW-0925	90.9	76.6
310-316241-4	MW19-GW-0925	94.2	80.0
310-316241-5	MW21-GW-0925	90.9	78.9
310-316241-6	DP05-GW-0925	86.8	76.6
LCS 160-737503/2-A	Lab Control Sample	87.8	78.9
MB 160-737503/1-A	Method Blank	77.7	82.6
Tracer/Carrier Legend			
Ba = Barium			
Y = Y Carrier			



ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Armstrong
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 10/6/2025 11:06:19 AM

JOB DESCRIPTION

MEC Neal North Active Monofill
MEC Neal North Active Monofill

JOB NUMBER

310-316242-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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10/6/2025 11:06:19 AM

Authorized for release by
Zach Bindert, Senior Project Manager
Zach.Bindert@et.eurofinsus.com
(319)595-2016

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Case Narrative

Client: GHD Services Inc.
Project: MEC Neal North Active Monofill

Job ID: 310-316242-1

Job ID: 310-316242-1

Eurofins Cedar Falls

Job Narrative 310-316242-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/19/2025 4:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.8°C, 2.1°C, 2.8°C and 3.1°C.

HPLC/IC

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW11R-GW-0925 (310-316242-1), MW23R-GW-0925 (310-316242-2), MW57R-GW-0925 (310-316242-3), MW59S-GW-0925 (310-316242-4), MW60S-GW-0925 (310-316242-5) and DP04-GW-0925 (310-316242-6). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-316242-1	MW11R-GW-0925	Water	09/19/25 11:00	09/19/25 16:05	Iowa
310-316242-2	MW23R-GW-0925	Water	09/19/25 12:30	09/19/25 16:05	Iowa
310-316242-3	MW57R-GW-0925	Water	09/19/25 13:45	09/19/25 16:05	Iowa
310-316242-4	MW59S-GW-0925	Water	09/19/25 08:15	09/19/25 16:05	Iowa
310-316242-5	MW60S-GW-0925	Water	09/18/25 19:00	09/19/25 16:05	Iowa
310-316242-6	DP04-GW-0925	Water	09/19/25 00:00	09/19/25 16:05	Iowa

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW11R-GW-0925

Lab Sample ID: 310-316242-1

Date Collected: 09/19/25 11:00

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/26/25 13:47	5
Fluoride	<1.00		1.00		mg/L			09/26/25 13:47	5
Sulfate	74.0		5.00		mg/L			09/26/25 13:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.159		0.100		mg/L		09/26/25 09:00	09/28/25 22:13	1
Calcium	110		0.500		mg/L		09/26/25 09:00	09/28/25 22:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	474		50.0		mg/L			09/25/25 14:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			09/23/25 00:47	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW23R-GW-0925

Lab Sample ID: 310-316242-2

Date Collected: 09/19/25 12:30

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.2		5.00		mg/L			09/26/25 13:58	5
Fluoride	<1.00		1.00		mg/L			09/26/25 13:58	5
Sulfate	298		5.00		mg/L			09/26/25 13:58	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.216		0.100		mg/L		09/26/25 09:00	09/28/25 22:16	1
Calcium	194		0.500		mg/L		09/26/25 09:00	09/28/25 22:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	960		50.0		mg/L			09/25/25 14:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.6	HF	1.0		SU			09/23/25 00:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW57R-GW-0925

Lab Sample ID: 310-316242-3

Date Collected: 09/19/25 13:45

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.2		5.00		mg/L			09/26/25 14:09	5
Fluoride	<1.00		1.00		mg/L			09/26/25 14:09	5
Sulfate	323		5.00		mg/L			09/26/25 14:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.309		0.100		mg/L		09/30/25 09:00	10/03/25 16:51	1
Calcium	224		0.500		mg/L		09/30/25 09:00	10/03/25 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1180		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.6	HF	1.0		SU			09/23/25 01:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW59S-GW-0925

Lab Sample ID: 310-316242-4

Date Collected: 09/19/25 08:15

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.43		5.00		mg/L			09/26/25 14:43	5
Fluoride	<1.00		1.00		mg/L			09/26/25 14:43	5
Sulfate	117		5.00		mg/L			09/26/25 14:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.195		0.100		mg/L		09/30/25 09:00	10/03/25 17:02	1
Calcium	147		0.500		mg/L		09/30/25 09:00	10/03/25 17:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	718		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.6	HF	1.0		SU			09/23/25 00:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW60S-GW-0925

Lab Sample ID: 310-316242-5

Date Collected: 09/18/25 19:00

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.66		5.00		mg/L			09/26/25 15:16	5
Fluoride	<1.00		1.00		mg/L			09/26/25 15:16	5
Sulfate	142		5.00		mg/L			09/26/25 15:16	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.155		0.100		mg/L		09/30/25 09:00	10/03/25 17:05	1
Calcium	122		0.500		mg/L		09/30/25 09:00	10/03/25 17:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	640		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.7	HF	1.0		SU			09/23/25 01:00	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: DP04-GW-0925

Lab Sample ID: 310-316242-6

Date Collected: 09/19/25 00:00

Matrix: Water

Date Received: 09/19/25 16:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/26/25 15:27	5
Fluoride	<1.00		1.00		mg/L			09/26/25 15:27	5
Sulfate	71.7		5.00		mg/L			09/26/25 15:27	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.133		0.100		mg/L		09/30/25 09:00	10/03/25 17:08	1
Calcium	110		0.500		mg/L		09/30/25 09:00	10/03/25 17:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	502		50.0		mg/L			09/24/25 13:08	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	1.0		SU			09/23/25 01:11	1

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-468159/3

Matrix: Water

Analysis Batch: 468159

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/26/25 10:50	1
Fluoride	<0.200		0.200		mg/L			09/26/25 10:50	1
Sulfate	<1.00		1.00		mg/L			09/26/25 10:50	1

Lab Sample ID: LCS 310-468159/4

Matrix: Water

Analysis Batch: 468159

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.378		mg/L		94	90 - 110
Fluoride	2.00	2.045		mg/L		102	90 - 110
Sulfate	10.0	10.10		mg/L		101	90 - 110

Lab Sample ID: 310-316242-3 MS

Matrix: Water

Analysis Batch: 468159

Client Sample ID: MW57R-GW-0925

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	19.2		25.0	43.14		mg/L		96	80 - 120
Fluoride	<1.00		5.00	5.471		mg/L		109	80 - 120
Sulfate	323		25.0	338.8	4	mg/L		64	80 - 120

Lab Sample ID: 310-316242-3 MSD

Matrix: Water

Analysis Batch: 468159

Client Sample ID: MW57R-GW-0925

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	19.2		25.0	40.68		mg/L		86	80 - 120	6	15
Fluoride	<1.00		5.00	5.508		mg/L		110	80 - 120	1	15
Sulfate	323		25.0	337.7	4	mg/L		59	80 - 120	0	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-467992/1-A

Matrix: Water

Analysis Batch: 468336

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/26/25 09:00	09/29/25 17:00	1
Calcium	<0.500		0.500		mg/L		09/26/25 09:00	09/29/25 17:00	1

Lab Sample ID: LCS 310-467992/2-A

Matrix: Water

Analysis Batch: 468336

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.2248		mg/L		112	80 - 120
Calcium	2.00	2.158		mg/L		108	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

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

Lab Sample ID: MB 310-468303/1-A

Matrix: Water

Analysis Batch: 468963

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 468303

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/30/25 09:00	10/03/25 16:40	1
Calcium	<0.500		0.500		mg/L		09/30/25 09:00	10/03/25 16:40	1

Lab Sample ID: LCS 310-468303/2-A

Matrix: Water

Analysis Batch: 468963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 468303

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.1920		mg/L		96	80 - 120
Calcium	2.00	2.094		mg/L		105	80 - 120

Lab Sample ID: 310-316242-3 MS

Matrix: Water

Analysis Batch: 468963

Client Sample ID: MW57R-GW-0925

Prep Type: Total/NA

Prep Batch: 468303

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.309		0.200	0.5022		mg/L		97	75 - 125
Calcium	224		2.00	223.0	4	mg/L		-73	75 - 125

Lab Sample ID: 310-316242-3 MSD

Matrix: Water

Analysis Batch: 468963

Client Sample ID: MW57R-GW-0925

Prep Type: Total/NA

Prep Batch: 468303

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.309		0.200	0.5046		mg/L		98	75 - 125	0	20
Calcium	224		2.00	226.0	4	mg/L		78	75 - 125	1	20

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

Lab Sample ID: MB 310-467795/1

Matrix: Water

Analysis Batch: 467795

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/24/25 13:08	1

Lab Sample ID: LCS 310-467795/2

Matrix: Water

Analysis Batch: 467795

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	994.0		mg/L		99	89 - 110

Lab Sample ID: MB 310-467966/1

Matrix: Water

Analysis Batch: 467966

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			09/25/25 14:31	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

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

Lab Sample ID: LCS 310-467966/2

Matrix: Water

Analysis Batch: 467966

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	962.0		mg/L		96	89 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-467536/1

Matrix: Water

Analysis Batch: 467536

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	98 - 102

Lab Sample ID: LCS 310-467536/28

Matrix: Water

Analysis Batch: 467536

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	98 - 102

Lab Sample ID: 310-316242-3 DU

Matrix: Water

Analysis Batch: 467536

Client Sample ID: MW57R-GW-0925

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.6	HF	7.6		SU		0.4	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

HPLC/IC

Analysis Batch: 468159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-1	MW11R-GW-0925	Total/NA	Water	9056A	
310-316242-2	MW23R-GW-0925	Total/NA	Water	9056A	
310-316242-3	MW57R-GW-0925	Total/NA	Water	9056A	
310-316242-4	MW59S-GW-0925	Total/NA	Water	9056A	
310-316242-5	MW60S-GW-0925	Total/NA	Water	9056A	
310-316242-6	DP04-GW-0925	Total/NA	Water	9056A	
MB 310-468159/3	Method Blank	Total/NA	Water	9056A	
LCS 310-468159/4	Lab Control Sample	Total/NA	Water	9056A	
310-316242-3 MS	MW57R-GW-0925	Total/NA	Water	9056A	
310-316242-3 MSD	MW57R-GW-0925	Total/NA	Water	9056A	

Metals

Prep Batch: 467992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-1	MW11R-GW-0925	Total/NA	Water	3005A	
310-316242-2	MW23R-GW-0925	Total/NA	Water	3005A	
MB 310-467992/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-467992/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 468211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-1	MW11R-GW-0925	Total/NA	Water	6020B	467992
310-316242-2	MW23R-GW-0925	Total/NA	Water	6020B	467992

Prep Batch: 468303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-3	MW57R-GW-0925	Total/NA	Water	3005A	
310-316242-4	MW59S-GW-0925	Total/NA	Water	3005A	
310-316242-5	MW60S-GW-0925	Total/NA	Water	3005A	
310-316242-6	DP04-GW-0925	Total/NA	Water	3005A	
MB 310-468303/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-468303/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-316242-3 MS	MW57R-GW-0925	Total/NA	Water	3005A	
310-316242-3 MSD	MW57R-GW-0925	Total/NA	Water	3005A	

Analysis Batch: 468336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-467992/1-A	Method Blank	Total/NA	Water	6020B	467992
LCS 310-467992/2-A	Lab Control Sample	Total/NA	Water	6020B	467992

Analysis Batch: 468963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-3	MW57R-GW-0925	Total/NA	Water	6020B	468303
310-316242-4	MW59S-GW-0925	Total/NA	Water	6020B	468303
310-316242-5	MW60S-GW-0925	Total/NA	Water	6020B	468303
310-316242-6	DP04-GW-0925	Total/NA	Water	6020B	468303
MB 310-468303/1-A	Method Blank	Total/NA	Water	6020B	468303
LCS 310-468303/2-A	Lab Control Sample	Total/NA	Water	6020B	468303
310-316242-3 MS	MW57R-GW-0925	Total/NA	Water	6020B	468303
310-316242-3 MSD	MW57R-GW-0925	Total/NA	Water	6020B	468303

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

General Chemistry

Analysis Batch: 467536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-1	MW11R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316242-2	MW23R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316242-3	MW57R-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316242-4	MW59S-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316242-5	MW60S-GW-0925	Total/NA	Water	SM 4500 H+ B	
310-316242-6	DP04-GW-0925	Total/NA	Water	SM 4500 H+ B	
LCS 310-467536/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCS 310-467536/28	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-316242-3 DU	MW57R-GW-0925	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 467795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-3	MW57R-GW-0925	Total/NA	Water	SM 2540C	
310-316242-4	MW59S-GW-0925	Total/NA	Water	SM 2540C	
310-316242-5	MW60S-GW-0925	Total/NA	Water	SM 2540C	
310-316242-6	DP04-GW-0925	Total/NA	Water	SM 2540C	
MB 310-467795/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467795/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 467966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316242-1	MW11R-GW-0925	Total/NA	Water	SM 2540C	
310-316242-2	MW23R-GW-0925	Total/NA	Water	SM 2540C	
MB 310-467966/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467966/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW11R-GW-0925

Lab Sample ID: 310-316242-1

Date Collected: 09/19/25 11:00

Matrix: Water

Date Received: 09/19/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 13:47
Total/NA	Prep	3005A			467992	QTZ5	EET CF	09/26/25 09:00
Total/NA	Analysis	6020B		1	468211	NFT2	EET CF	09/28/25 22:13
Total/NA	Analysis	SM 2540C		1	467966	TGN5	EET CF	09/25/25 14:31
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:47

Client Sample ID: MW23R-GW-0925

Lab Sample ID: 310-316242-2

Date Collected: 09/19/25 12:30

Matrix: Water

Date Received: 09/19/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 13:58
Total/NA	Prep	3005A			467992	QTZ5	EET CF	09/26/25 09:00
Total/NA	Analysis	6020B		1	468211	NFT2	EET CF	09/28/25 22:16
Total/NA	Analysis	SM 2540C		1	467966	TGN5	EET CF	09/25/25 14:31
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:51

Client Sample ID: MW57R-GW-0925

Lab Sample ID: 310-316242-3

Date Collected: 09/19/25 13:45

Matrix: Water

Date Received: 09/19/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 14:09
Total/NA	Prep	3005A			468303	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 16:51
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 01:19

Client Sample ID: MW59S-GW-0925

Lab Sample ID: 310-316242-4

Date Collected: 09/19/25 08:15

Matrix: Water

Date Received: 09/19/25 16:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 14:43
Total/NA	Prep	3005A			468303	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 17:02
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 00:55

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Client Sample ID: MW60S-GW-0925
Date Collected: 09/18/25 19:00
Date Received: 09/19/25 16:05

Lab Sample ID: 310-316242-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 15:16
Total/NA	Prep	3005A			468303	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 17:05
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 01:00

Client Sample ID: DP04-GW-0925
Date Collected: 09/19/25 00:00
Date Received: 09/19/25 16:05

Lab Sample ID: 310-316242-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	468159	QTZ5	EET CF	09/26/25 15:27
Total/NA	Prep	3005A			468303	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 17:08
Total/NA	Analysis	SM 2540C		1	467795	TGN5	EET CF	09/24/25 13:08
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 01:11

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: MEC Neal North Active Monofill

Job ID: 310-316242-1

Laboratory: Eurofins Cedar Falls

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

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

1
2
3
4
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13

Method Summary

Client: GHD Services Inc.

Job ID: 310-316242-1

Project/Site: MEC Neal North Active Monofill

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

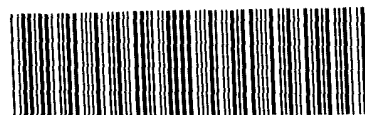
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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



Environment Testing
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310-316242 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>GHD</u>			
City/State:	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By <u>BP</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID.
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant. ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID. <u>R</u>		Correction Factor (°C) <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>2.1</u>		Corrected Temp (°C) <u>2.1</u>	
• Sample Container Temperature			
Container(s) used.	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			



Environment Testing
America

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here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GHD</u>			
City/State:	<u>Des Moines</u>	STATE: <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE: <u>4/22/25</u>	TIME: <u>1605</u>	Received By: <u>BP</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID.
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>2</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.8</u>		Corrected Temp (°C): <u>1.8</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>GHD</u>			
City/State.	CITY <u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received.	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By <u>BP</u>
Delivery Type. ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes. Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes. Cooler # <u>3</u> of <u>4</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes. Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes. Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes. Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant. ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>20</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>2.8</u>		Corrected Temp (°C): <u>2.8</u>	
• Sample Container Temperature			
Container(s) used.	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			



Environment Testing
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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>BHD</u>			
City/State:	<u>Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>4/22/25</u>	TIME <u>1605</u>	Received By: <u>BP</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>4</u> of <u>4</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>±0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>3.1</u>		Corrected Temp (°C): <u>3.1</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Client Information Client Contact: Kevin Armstrong Company: GHD Services Inc. Address: 11228 Aurora Avenue City: Des Moines State, Zip: IA, 50322-7905 Phone: 515-414-3935 Email: Kevin.Armstrong@ghd.com Project Name: IMEC Neal North Active Monofill Site: Neal North Active CCR Monofill		Sampler: Zach Bindert Lab PM: Zach Bindert E-Mail: zach.bindert@iut.rofin.us.com State of Origin: Iowa Carrier Tracking No(s): Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard Compliance Project: ☐ Yes ☐ No PO #: 340-017045 WO #: 12576482-004 01 Project #: 31017263 SSOW#: 12576482-002		Analysis Requested Perform MS/MSD (Yes or No) ☒ Yes ☐ No 9059A - ORGFM - 28D - Chloride, Fluoride & Sulfate 6020B - Boron and Calcium 2540C - Cadmium, SM4500 - H+	
Sample Identification MW11R-GW-0925 MW23R-GW-0925 MW25-GW-0925 MW57R-GW-0925 MW59S-GW-0925 MW60S-GW-0925 DP04-GW-0925		Sample Date 9/19/25 9/19/25 9/19/25 9/19/25 9/18/25 9/19/25	
Sample Type G G G G G G		Sample Time 1100 1230 1345 0815 1900 —	
Matrix (W=Water, S=solid, G=Gravel) Water Water Water Water Water Water		Preservation Code: G G G G G G	
Field Filtered Sample (Yes or No) ☒ Yes ☐ No		Field Filtered Sample (Yes or No) ☒ Yes ☐ No	
Special Instructions/Note: Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes		Special Instructions/Note: Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes Appendix III analytes	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months Special Instructions/QC Requirements Database Facility Code 11114642-GD-MidAmeri	
Empty Kit Relinquished by Relinquished by: Doug Richardson Relinquished by: Relinquished by:		Received by Received by: Ken Henzel Received by: BP Received by:	
Custody Seals Intact: A Yes ☐ A No ☐		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-316242-1

Login Number: 316242

List Source: Eurofins Cedar Falls

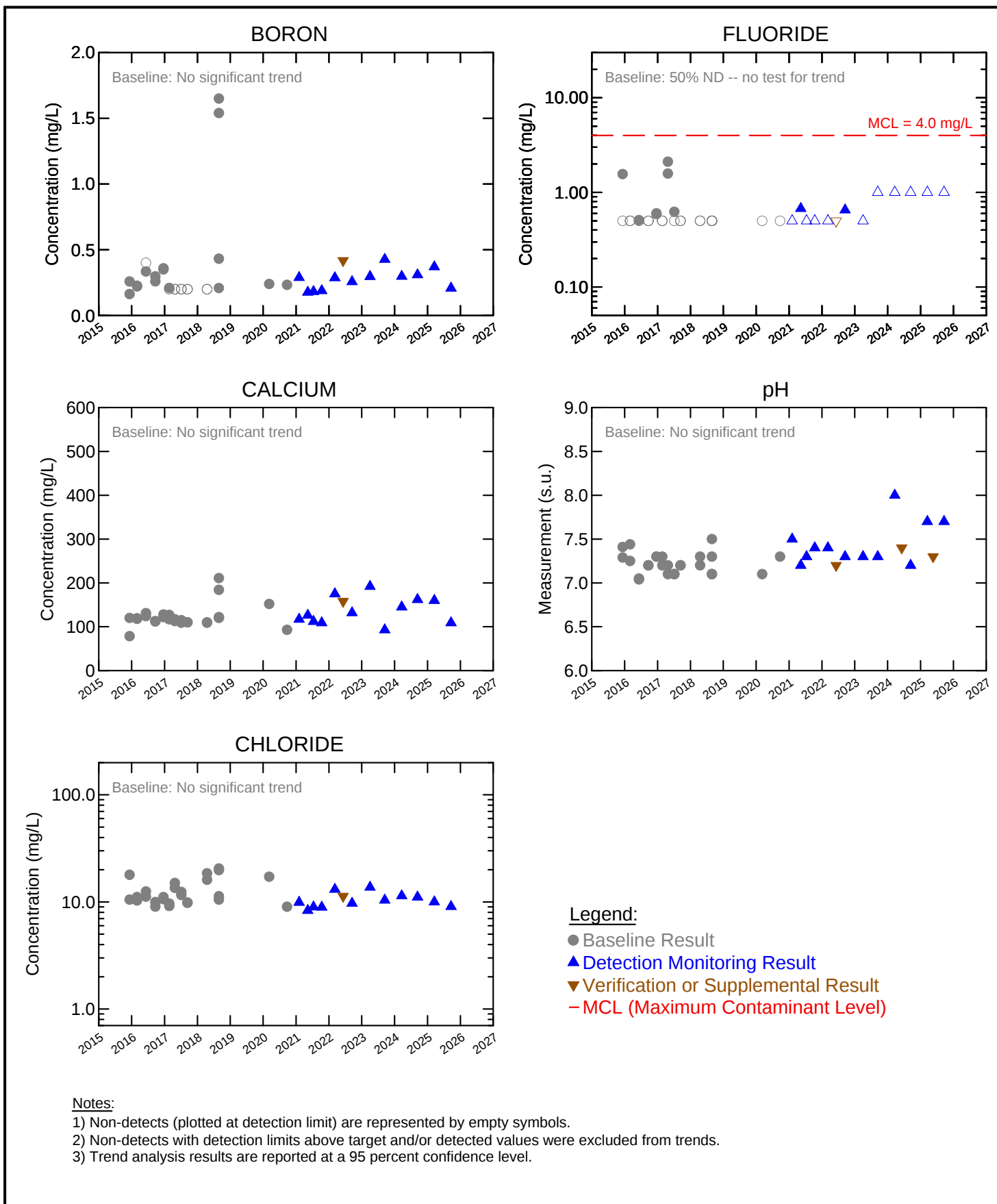
List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C

Time Series Graphs

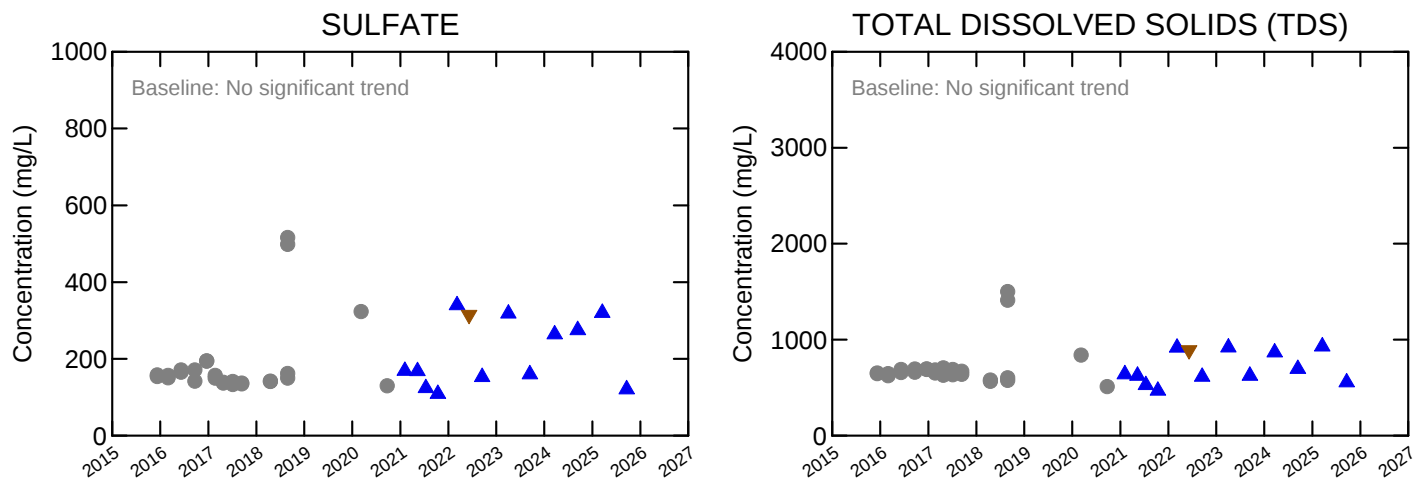


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-5R -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 1.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

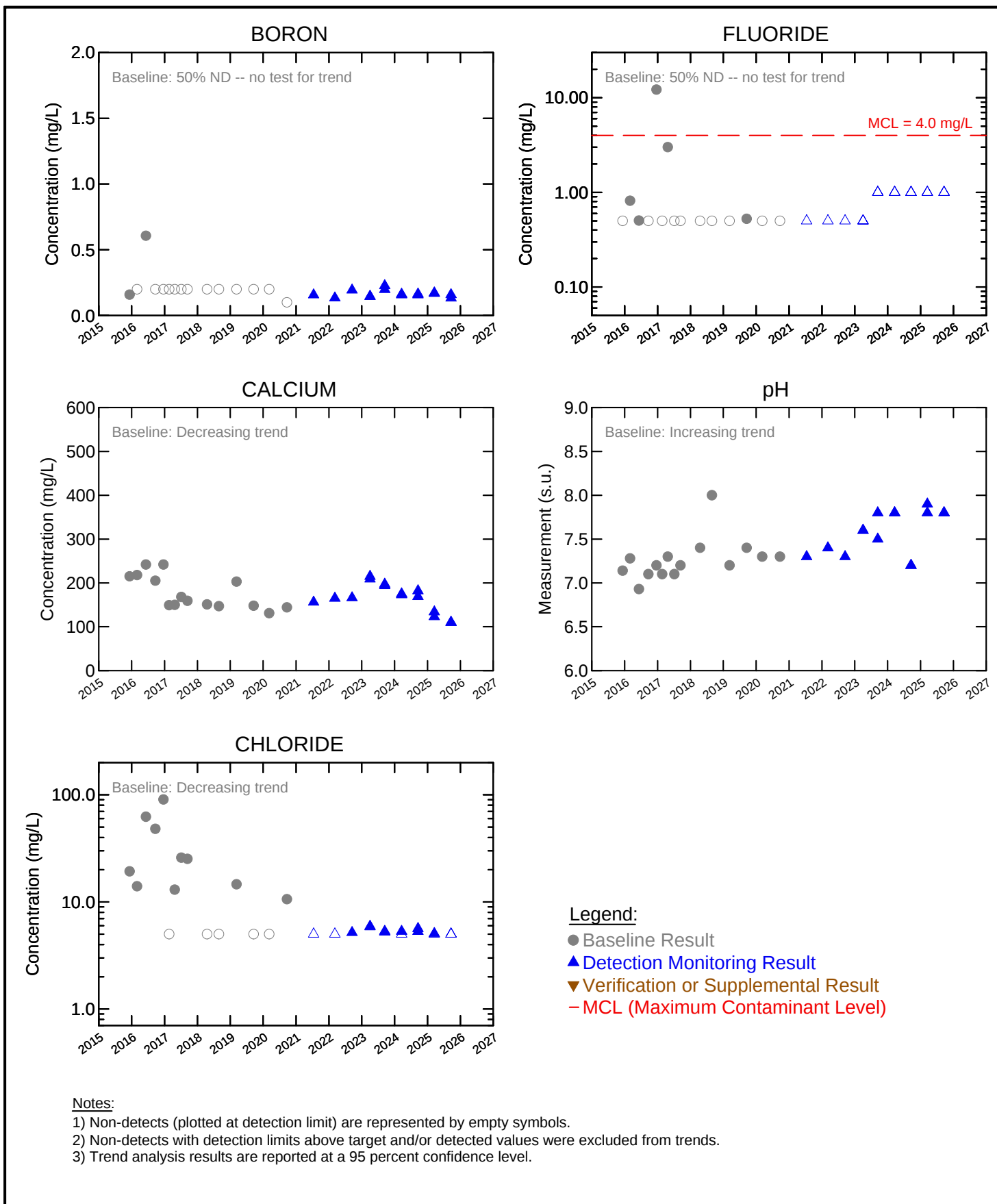


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-5R -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 1.b

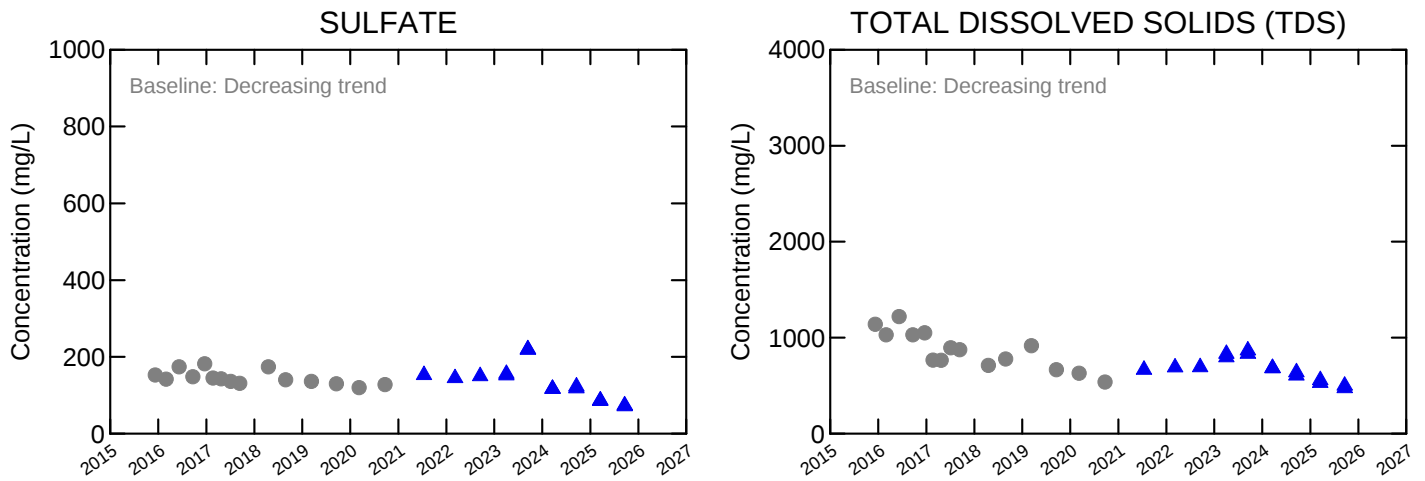


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-11 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 2.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

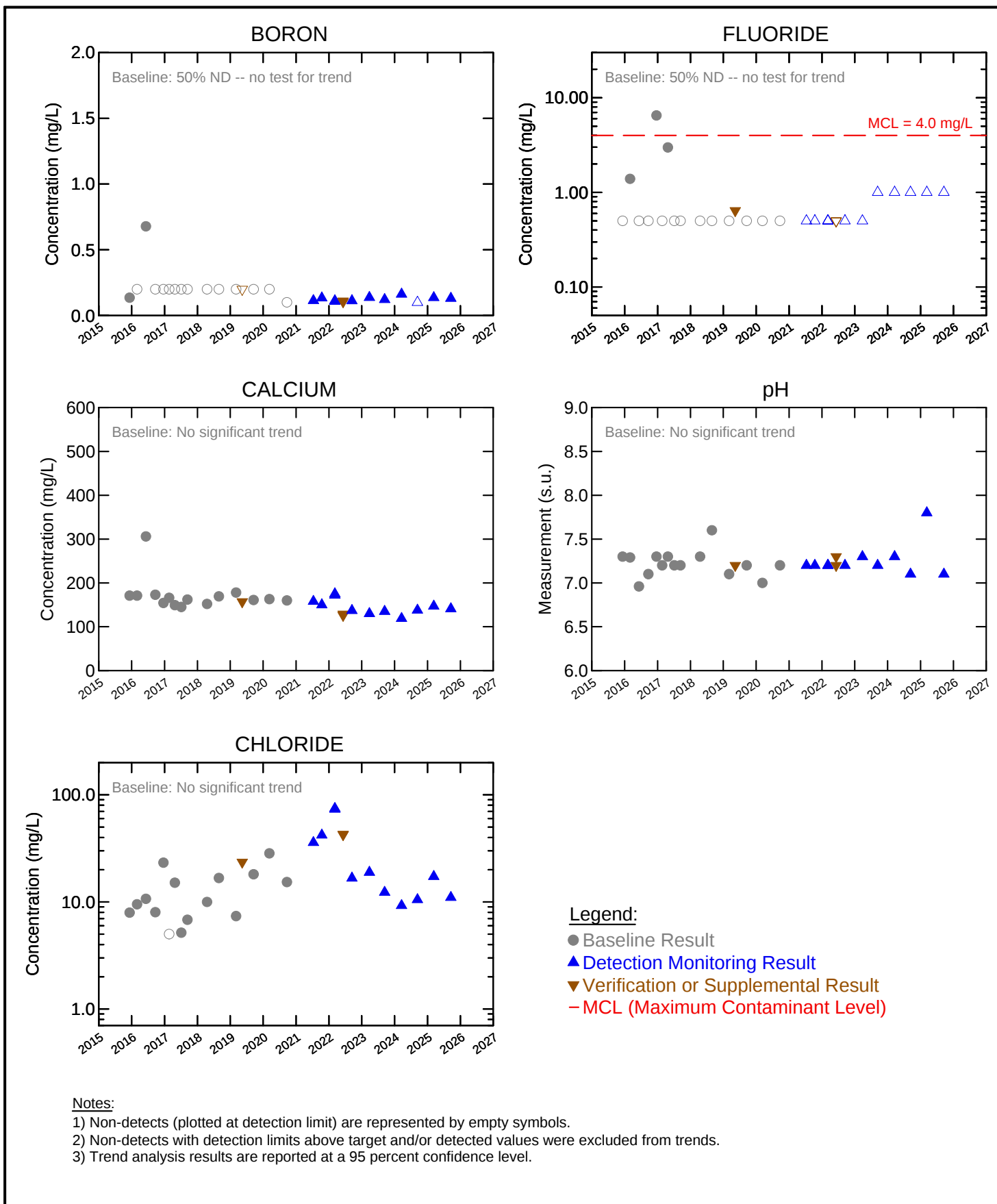


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-11 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 2.b

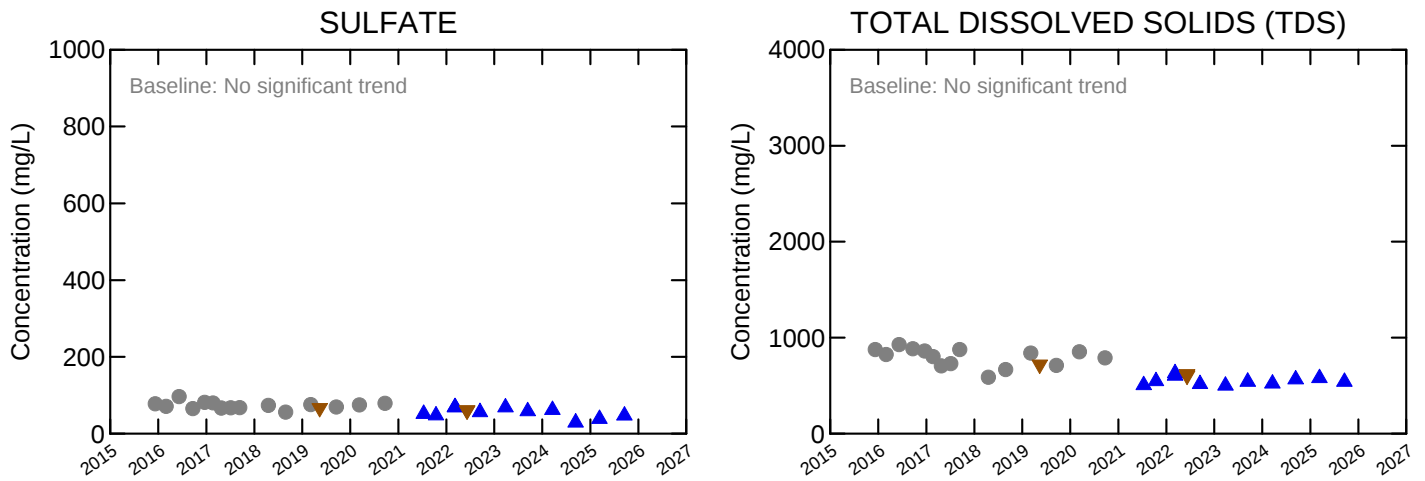


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-13 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 3.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

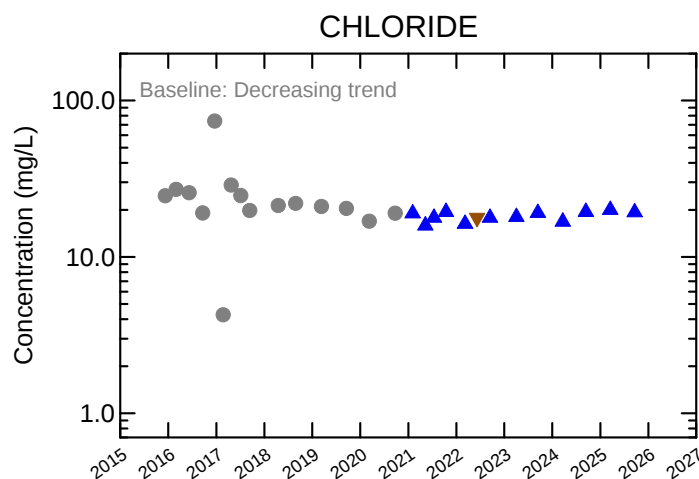
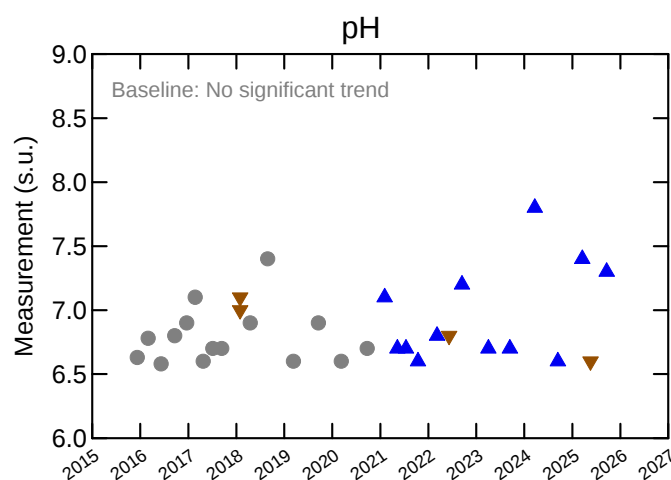
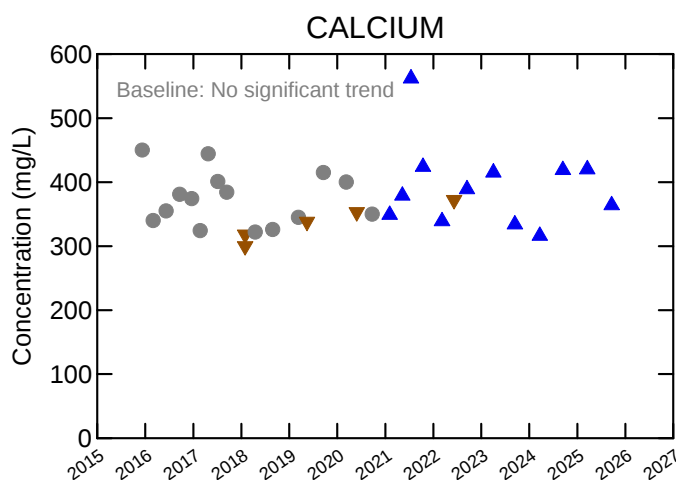
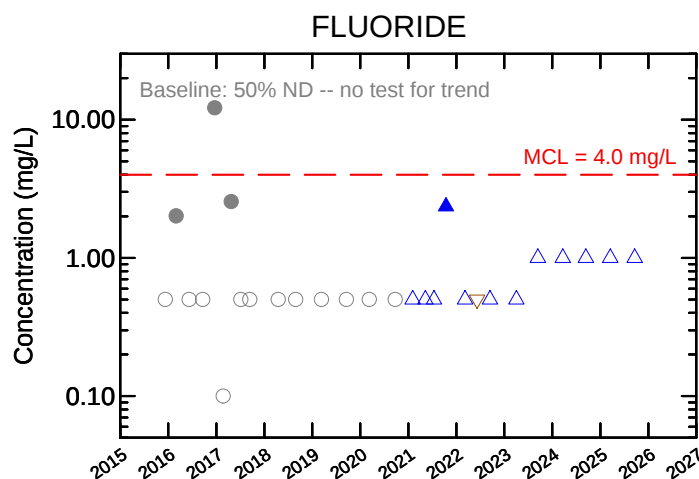
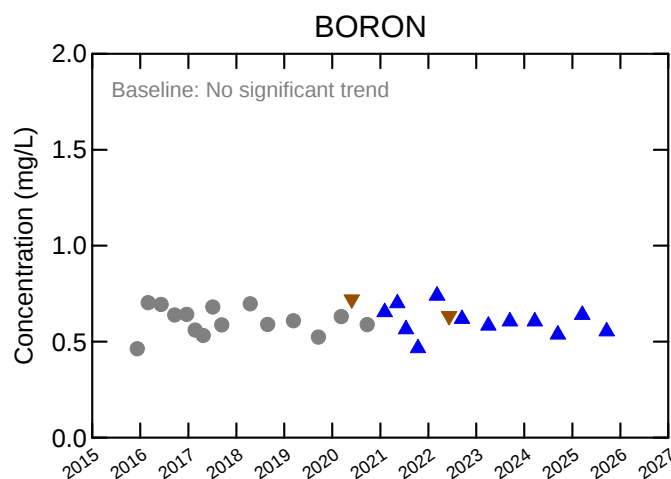


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-13 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 3.b



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result
- MCL (Maximum Contaminant Level)

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

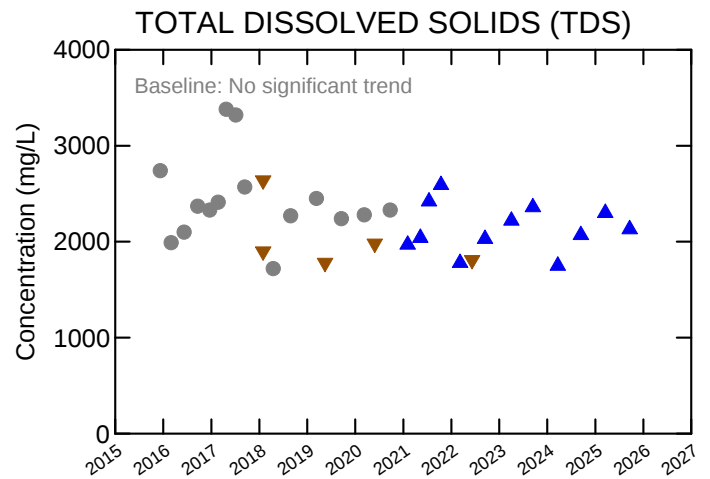
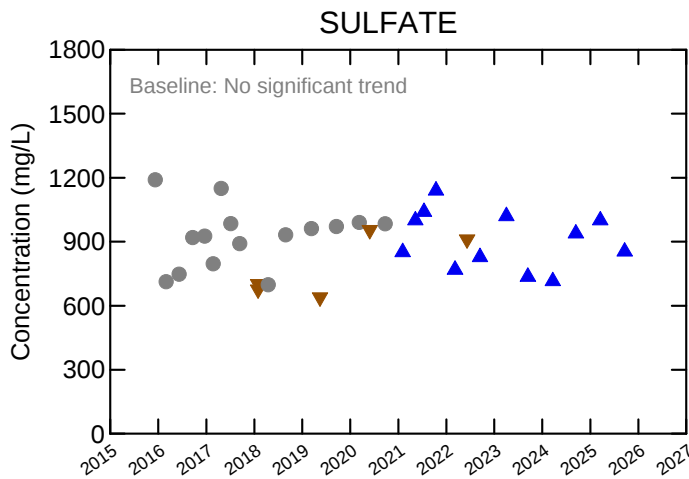


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

MW-19 -- APPENDIX III PARAMETERS ANALYTE CONCENTRATION vs. TIME

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 4.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

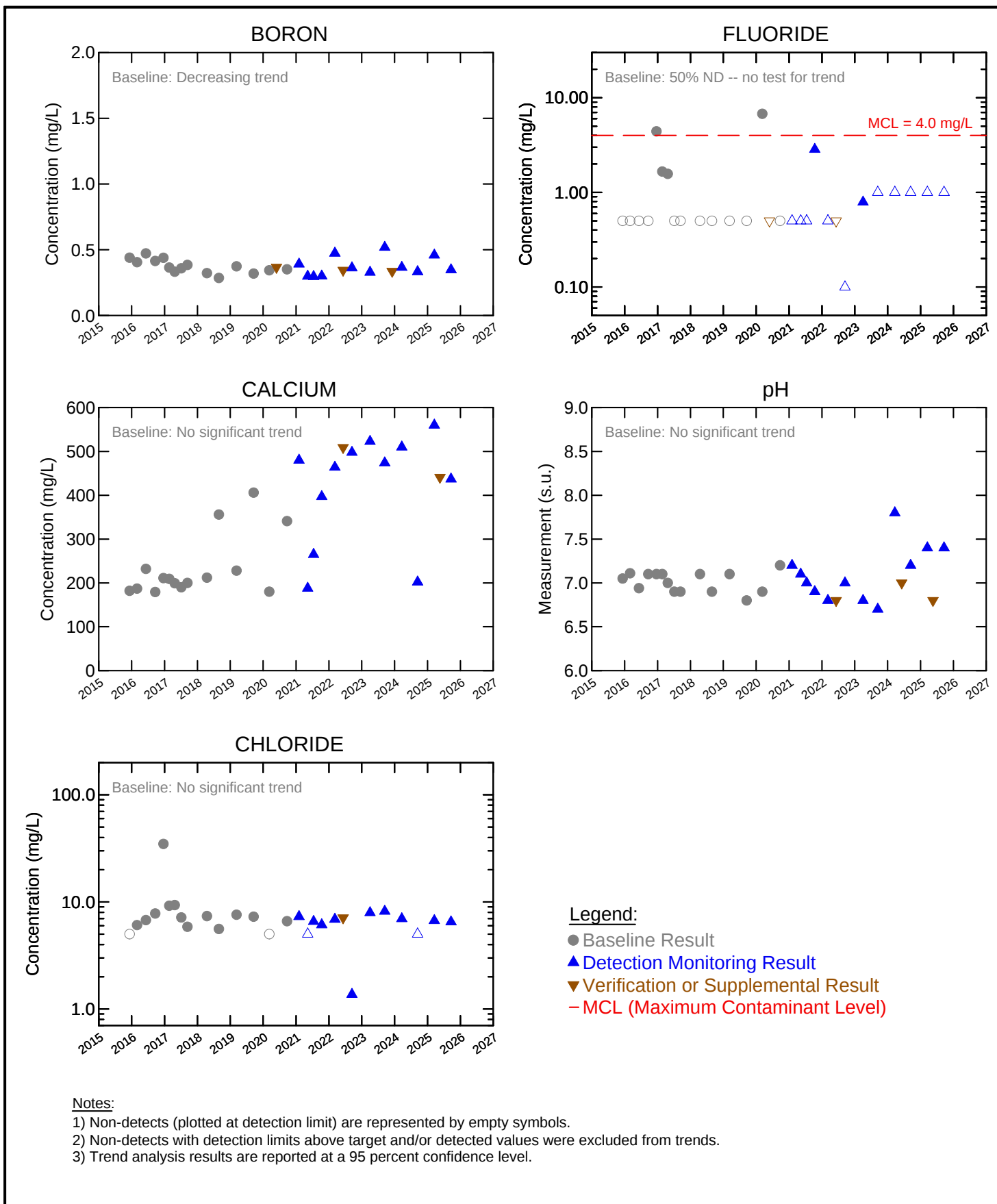


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-19 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 4.b

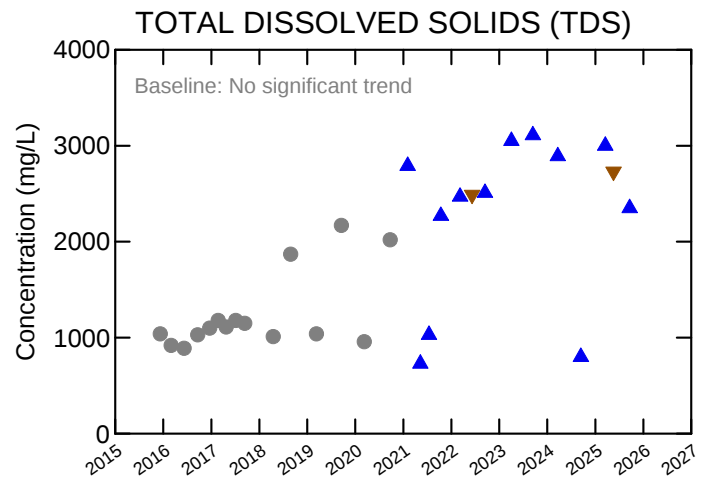
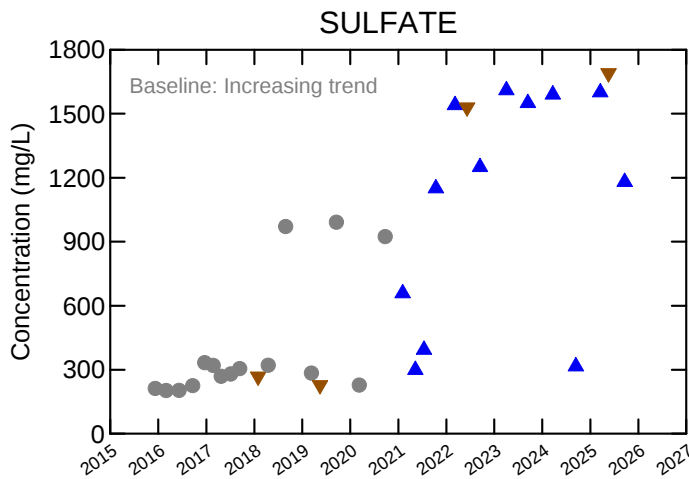


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-21 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 5.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

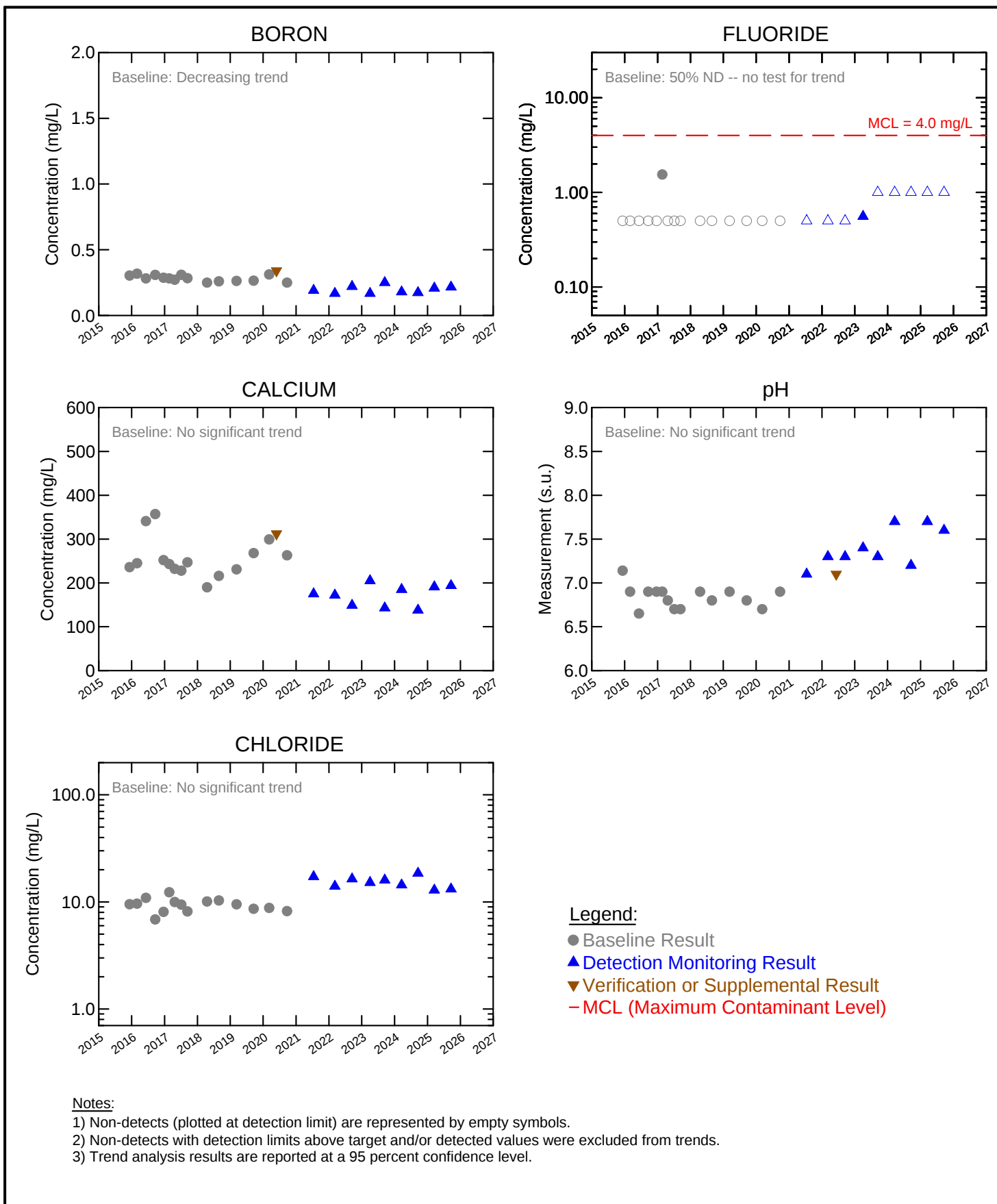


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-21 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 5.b

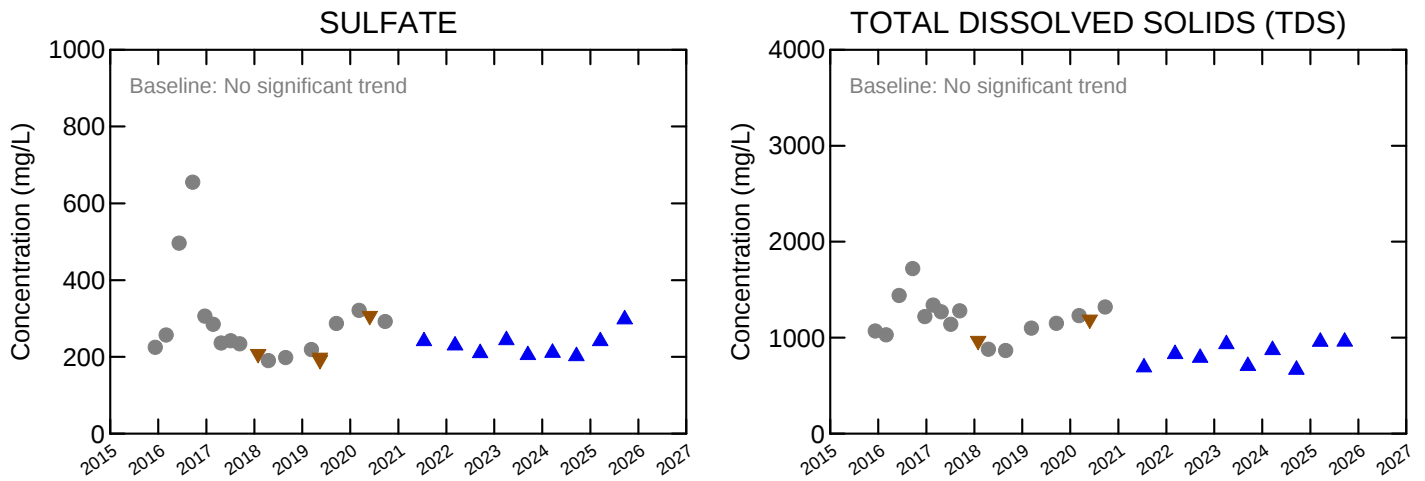


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-23 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 6.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

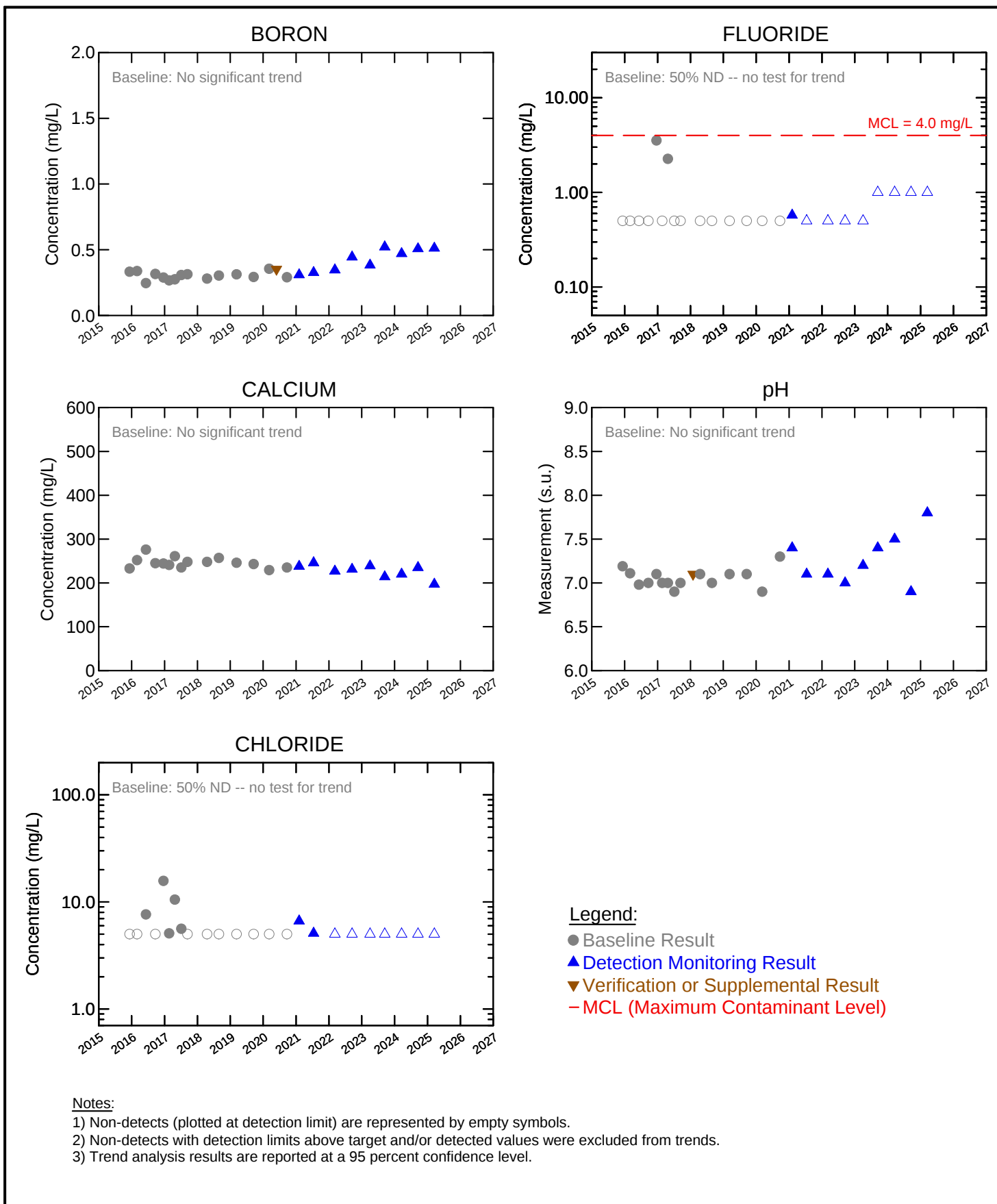


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-23 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 6.b

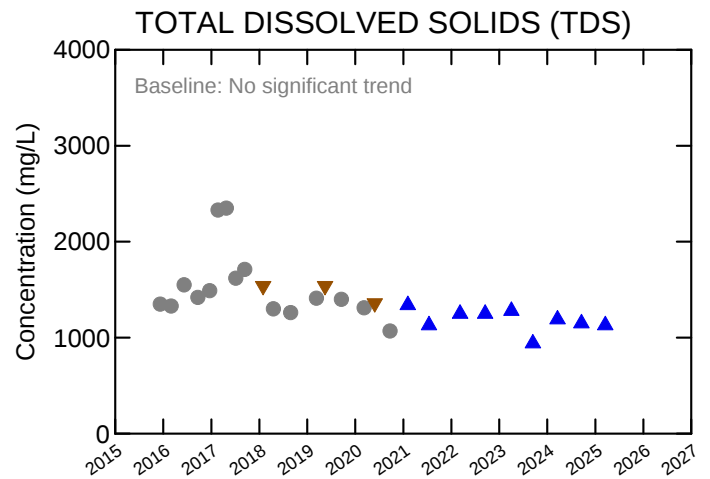
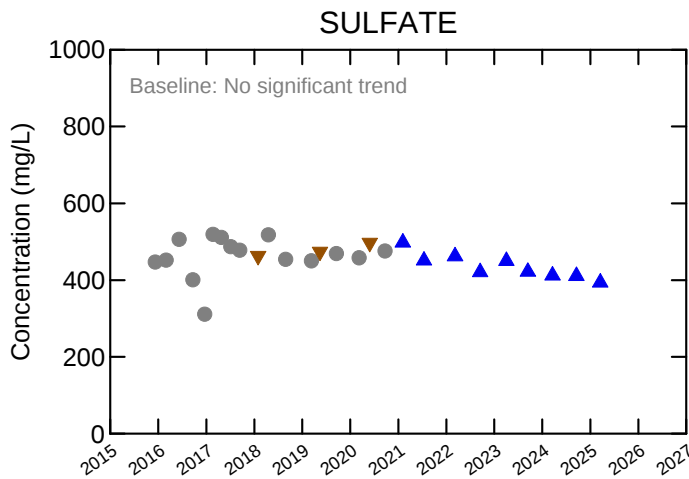


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-25 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 7.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

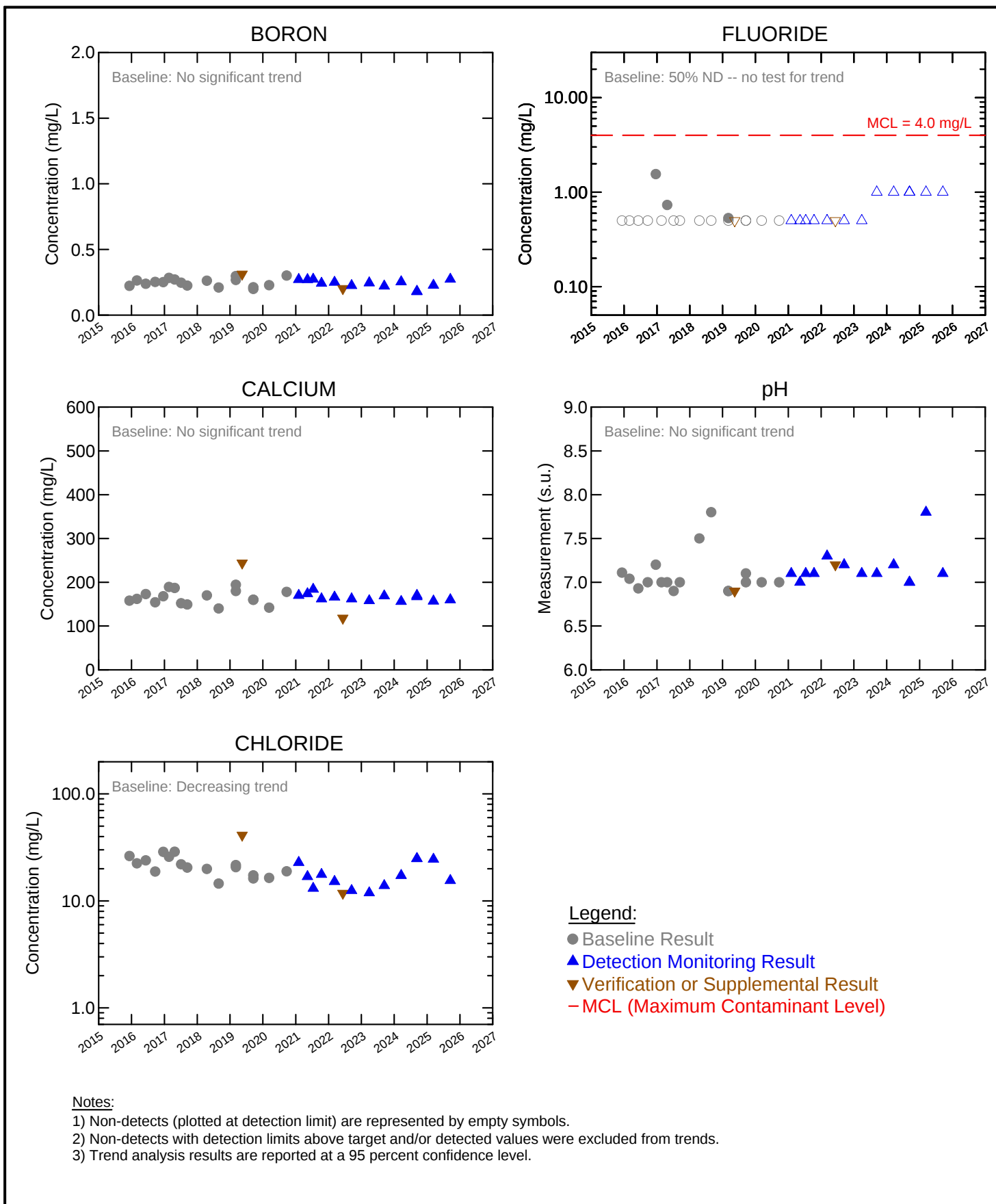


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-25 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 7.b

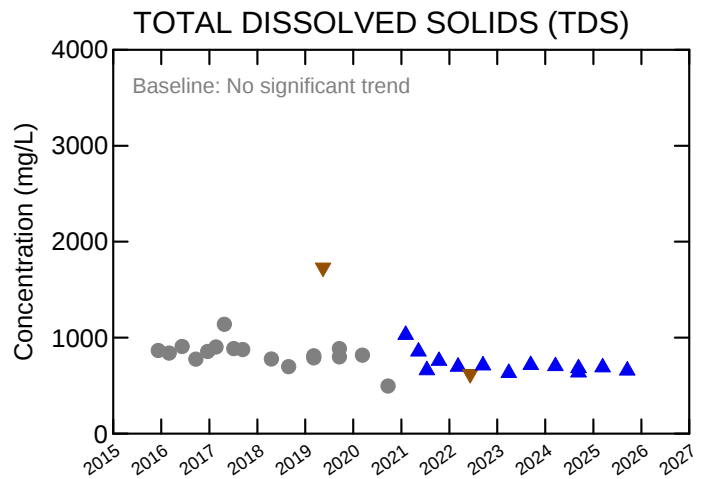
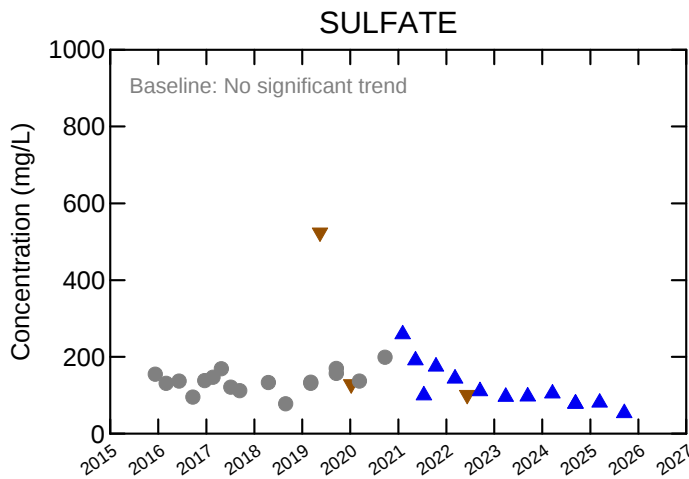


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-27 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 8.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

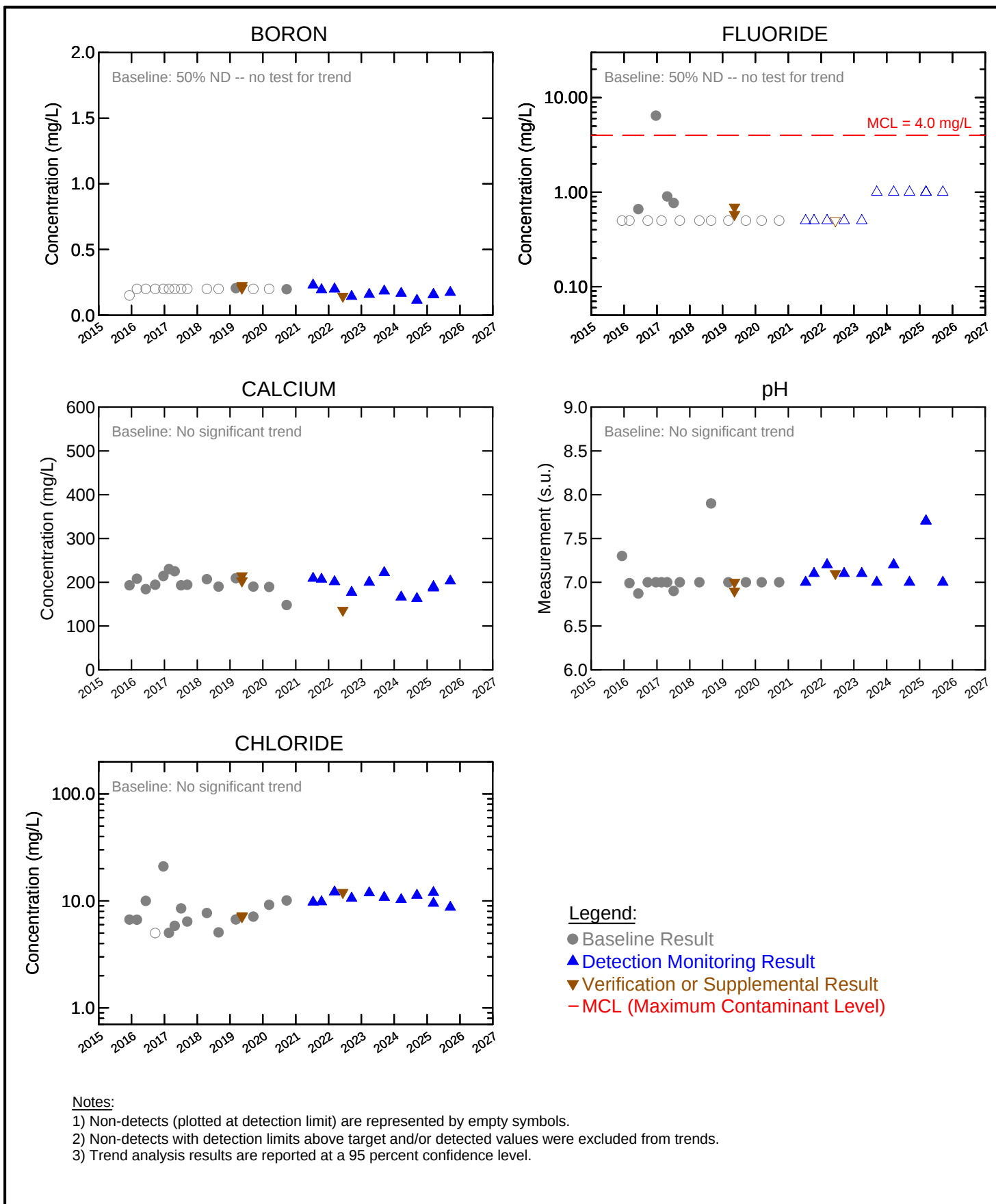


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-27 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 8.b

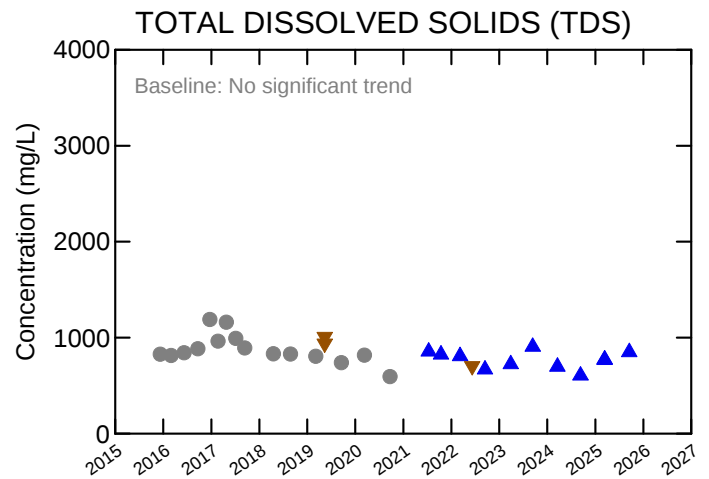
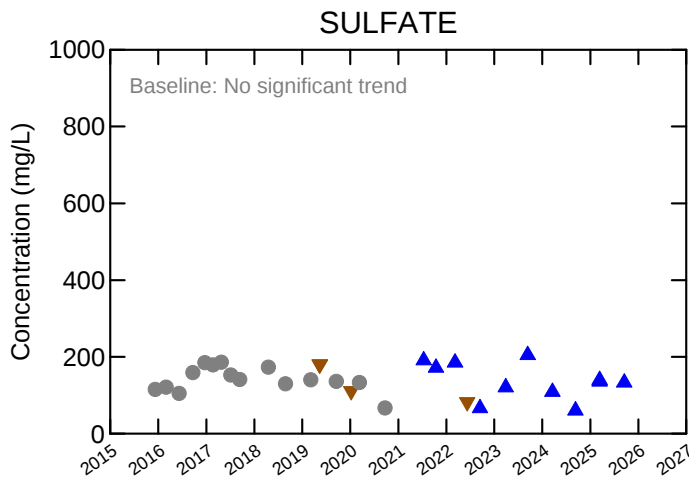


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-29 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 9.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

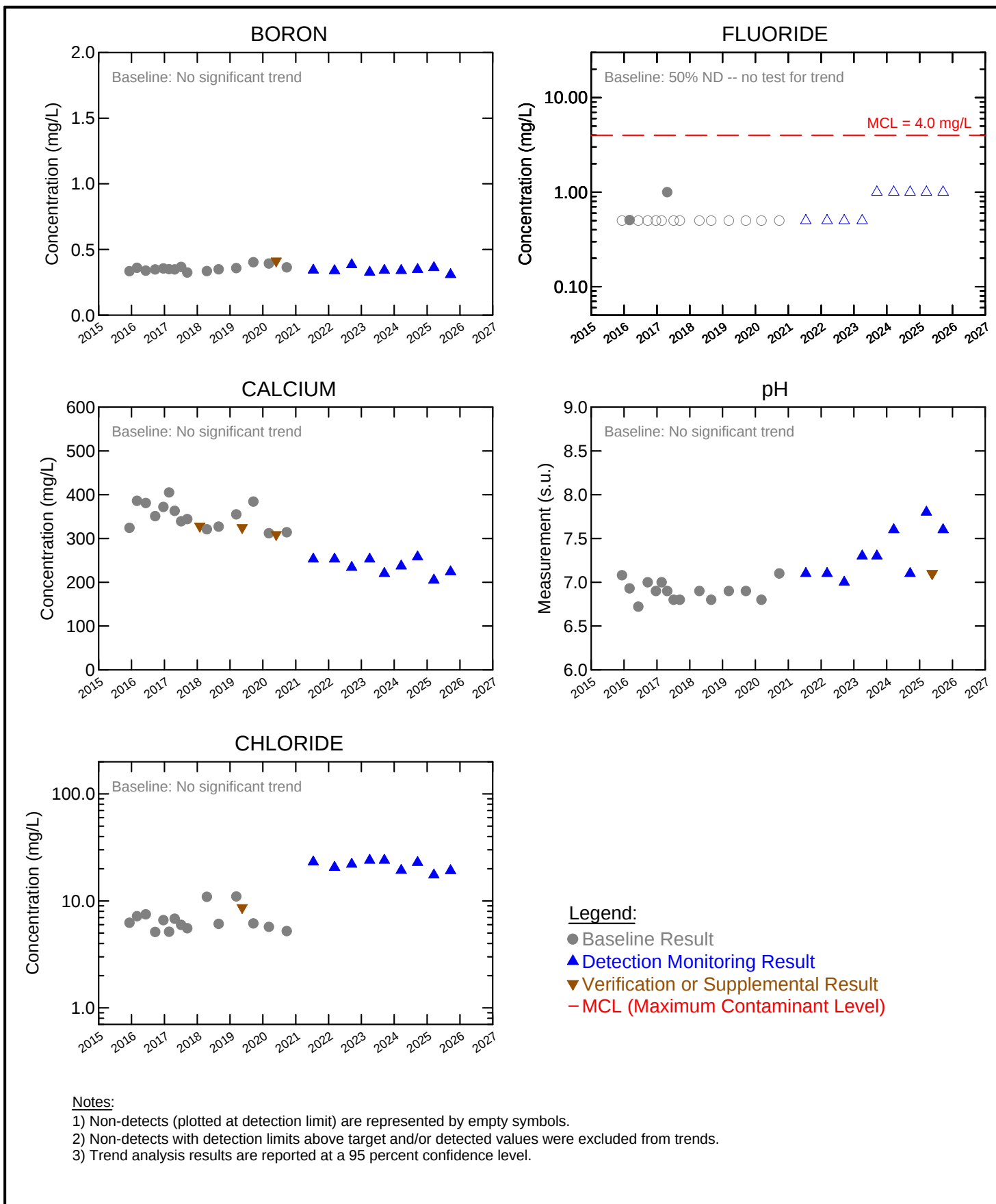


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-29 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 9.b

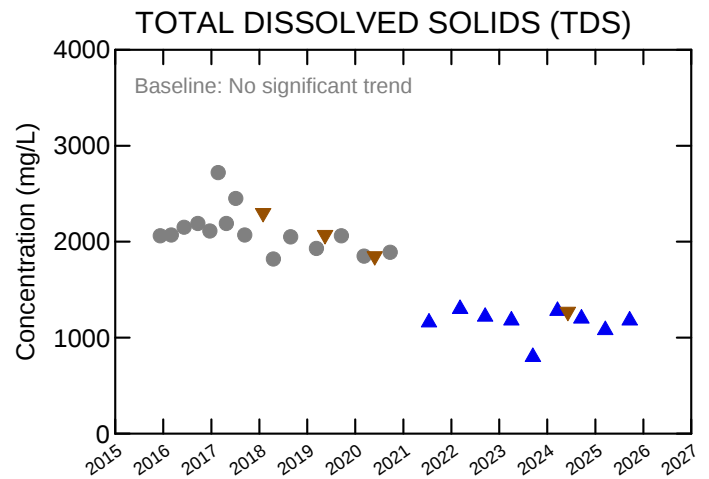
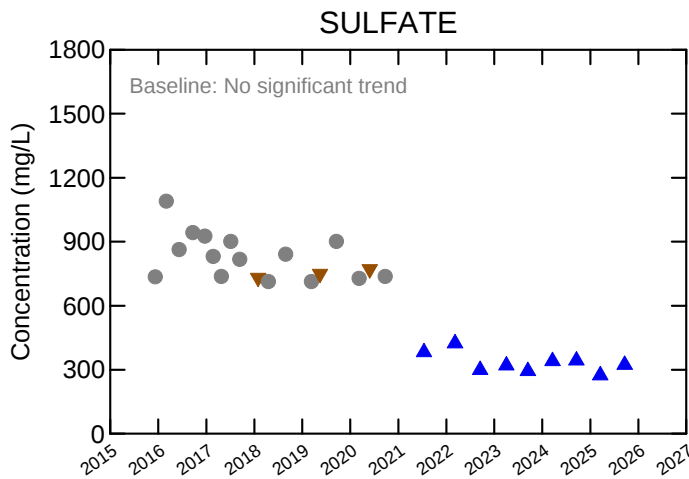


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-57 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 10.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

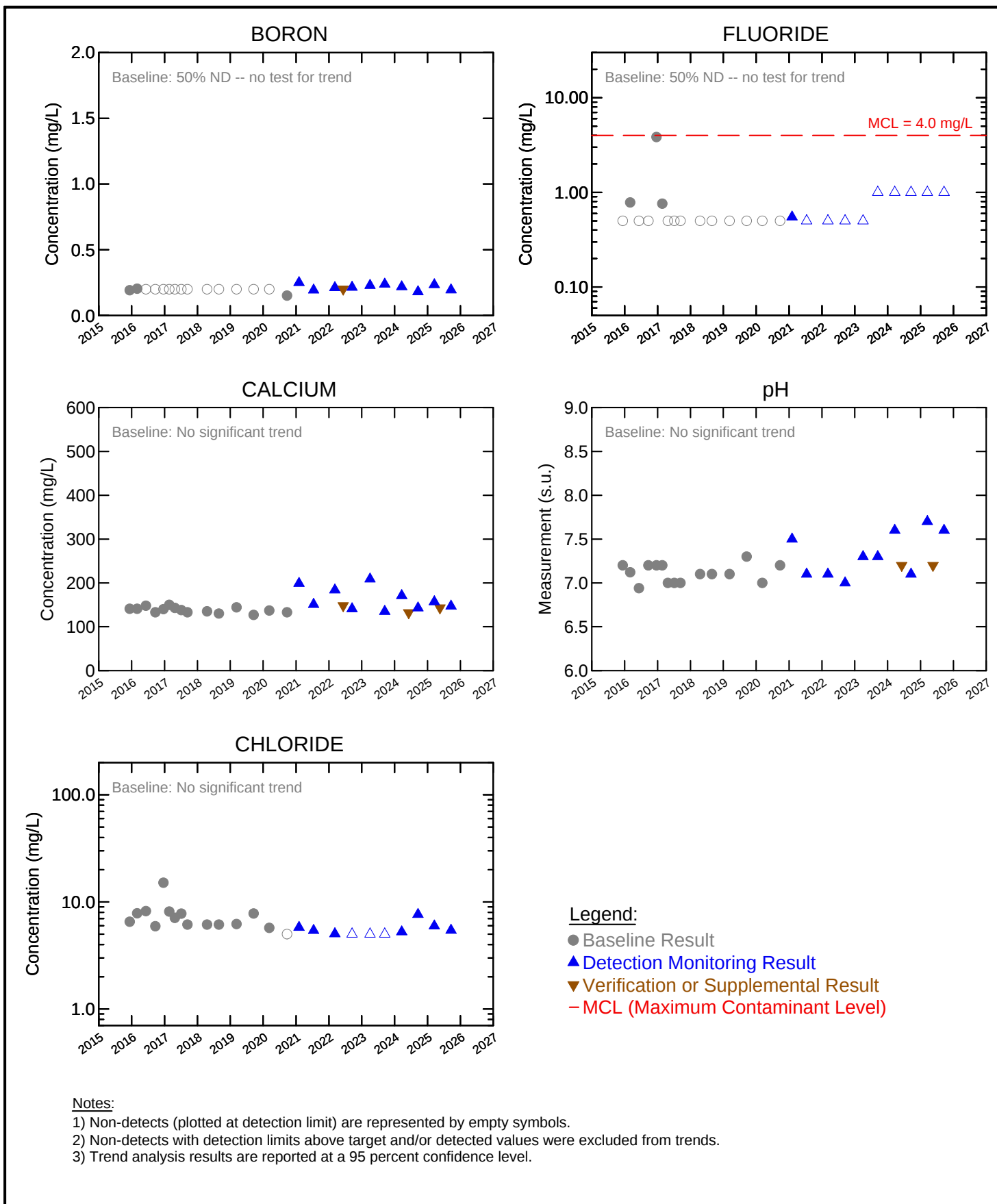


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-57 -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 10.b

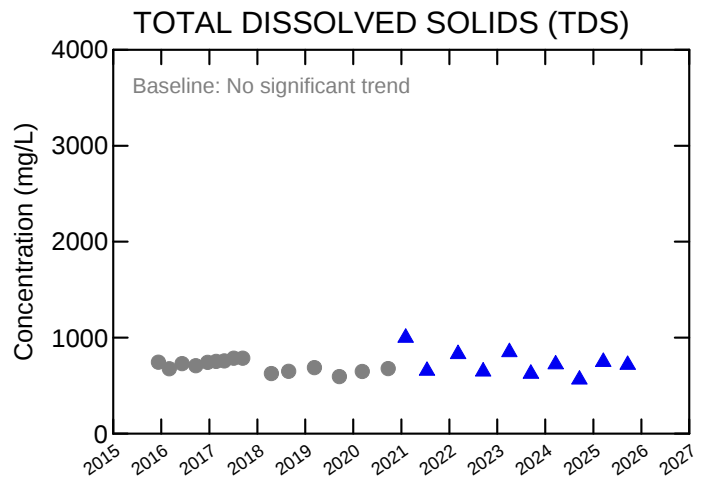
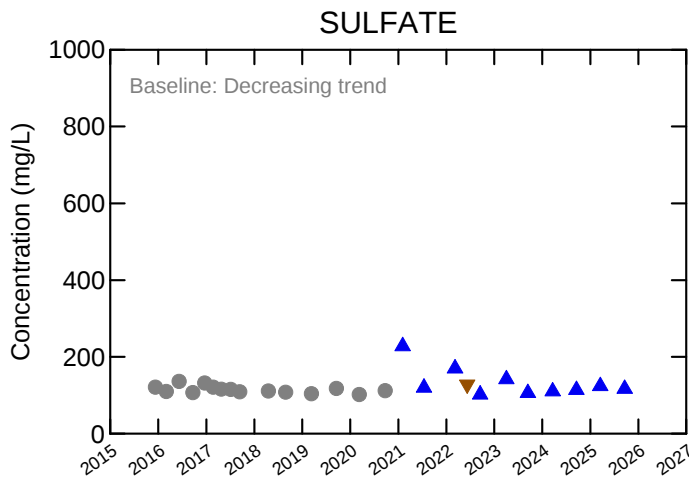


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-59S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 11.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

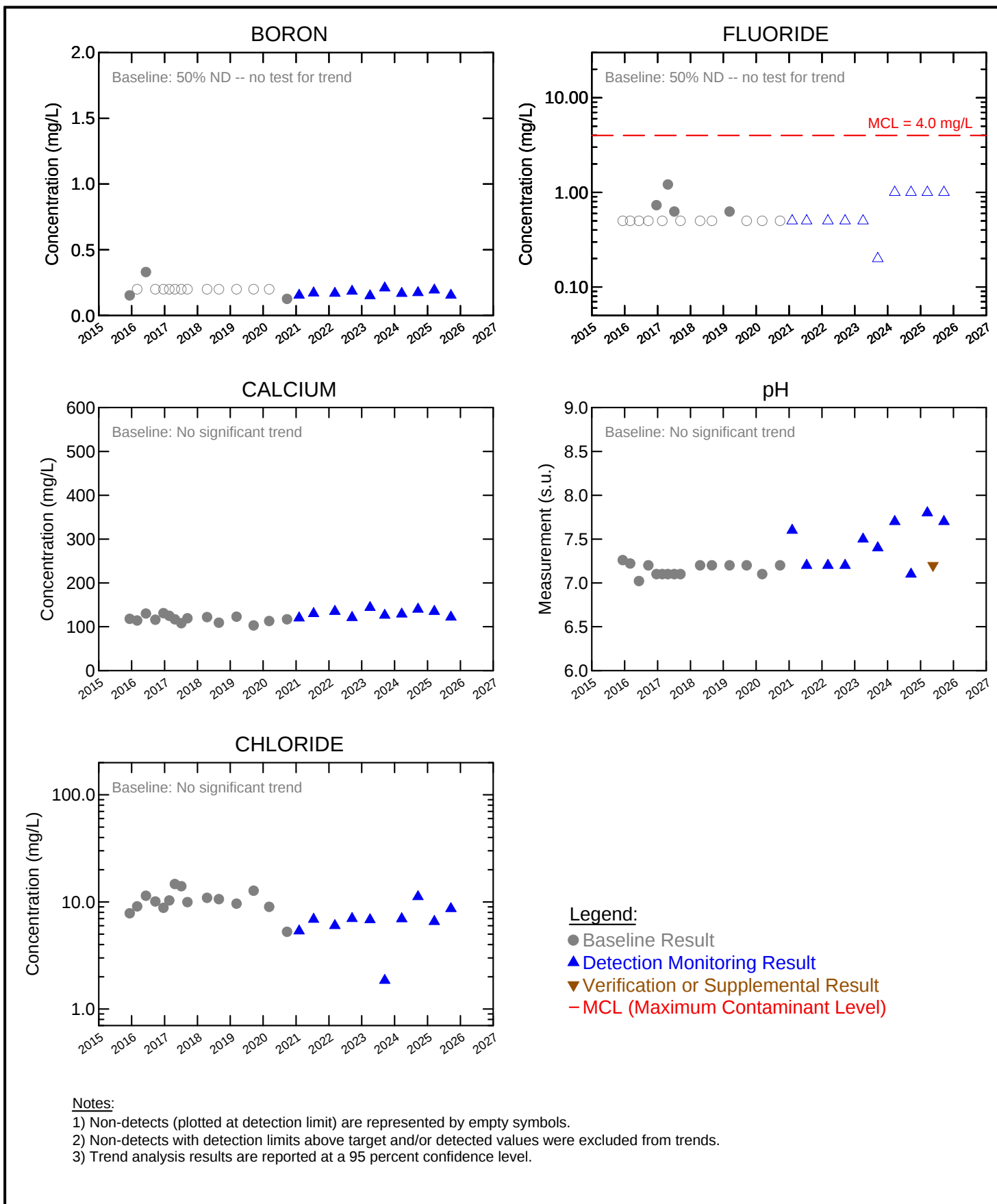


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-59S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 11.b

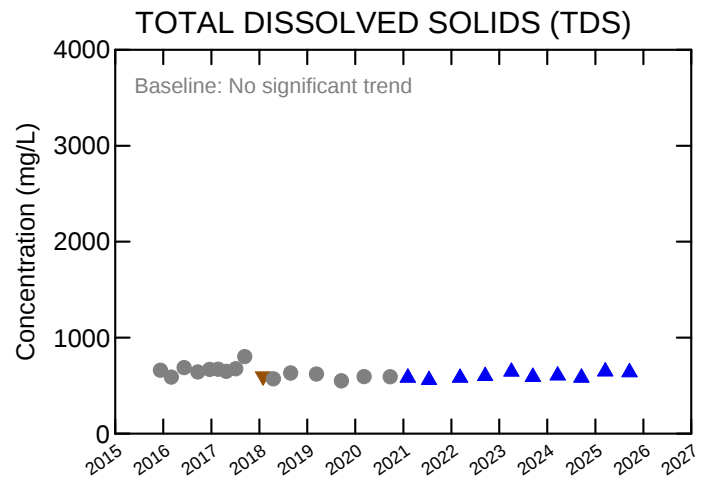
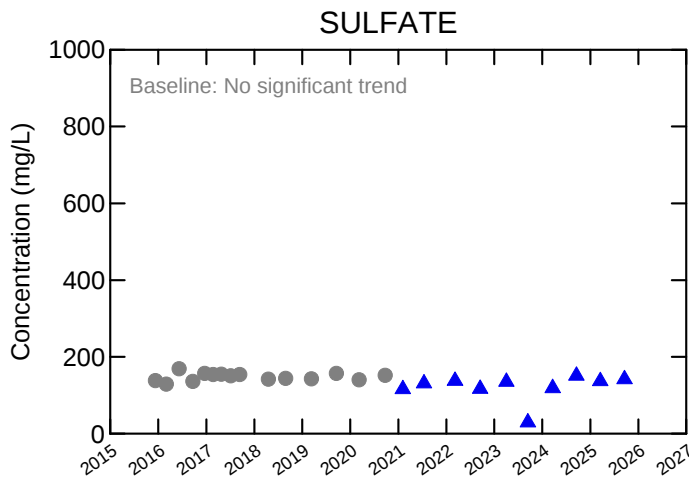


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-60S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 12.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

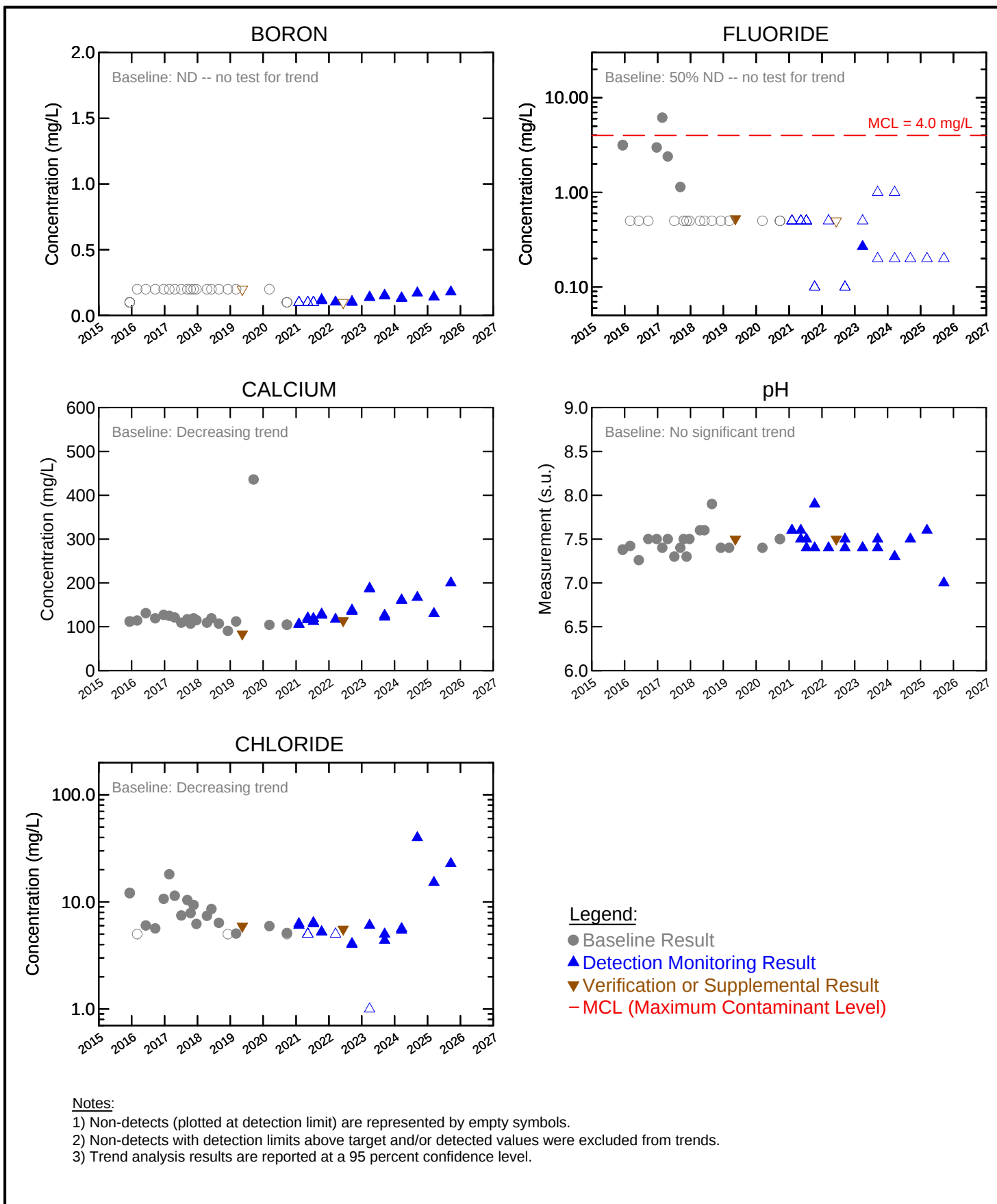


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-60S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 12.b

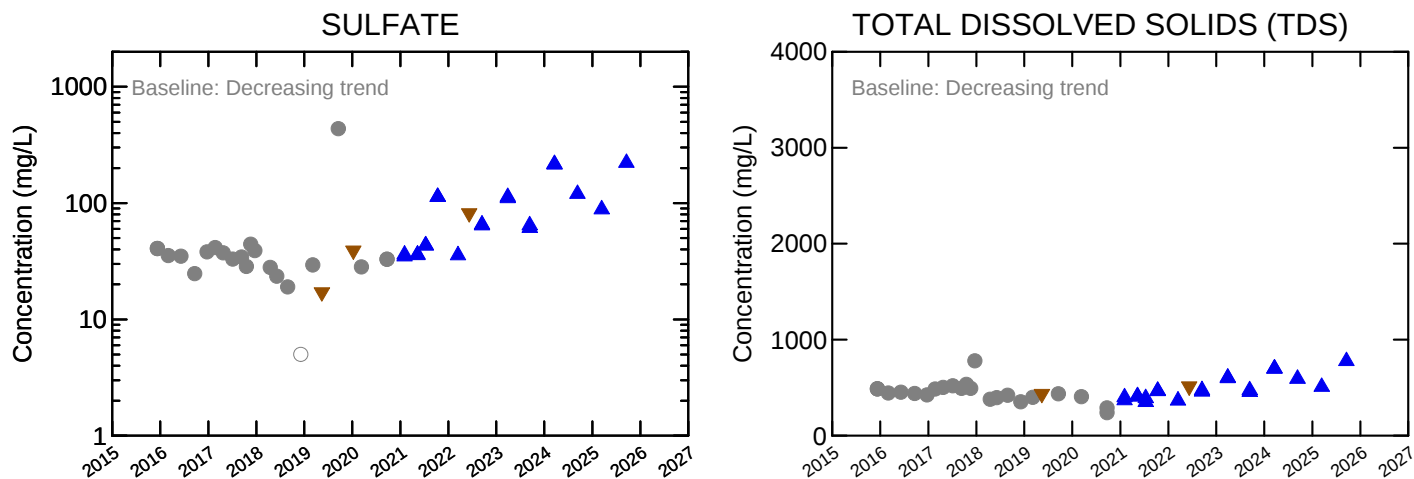


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-223S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 13.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.

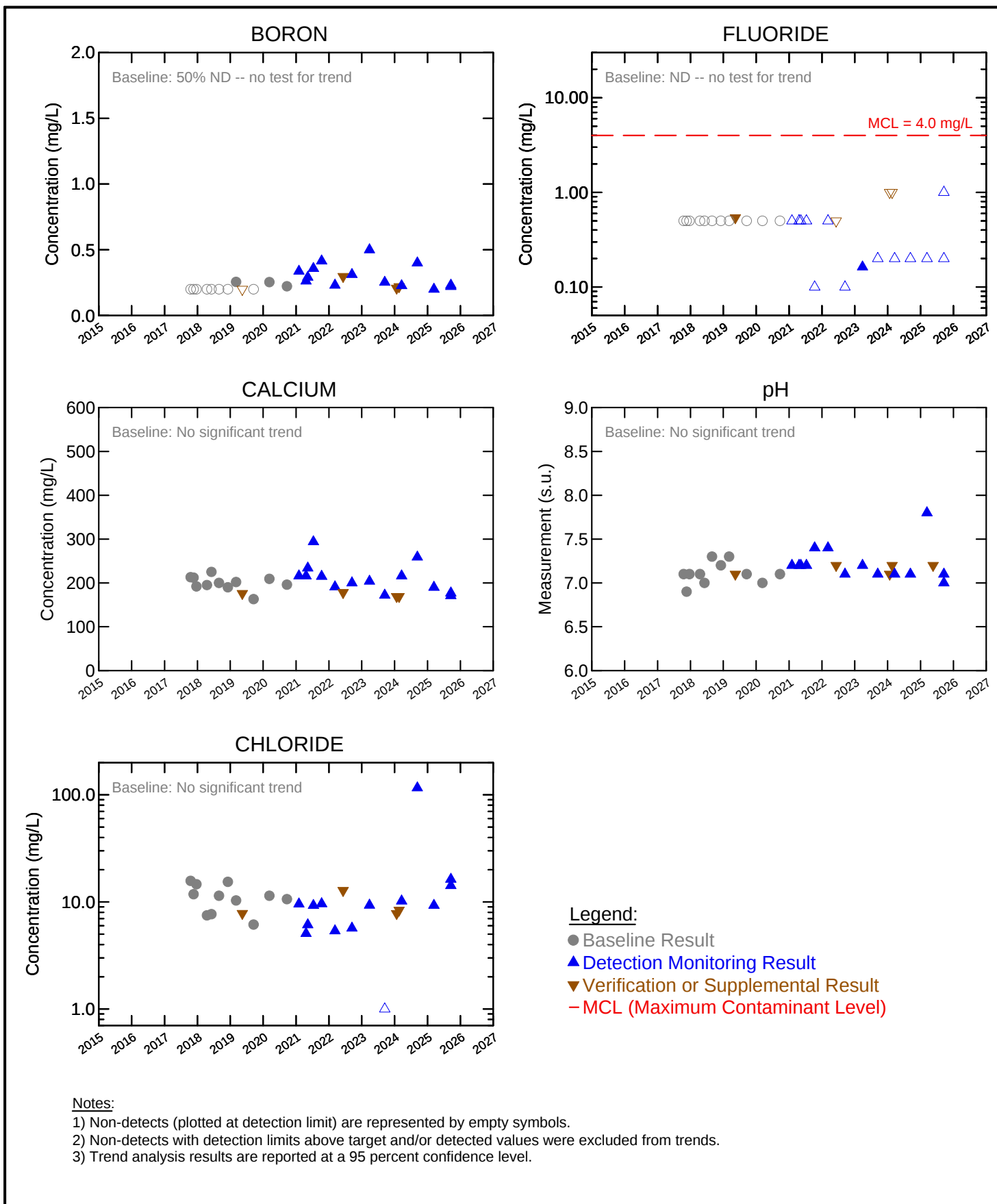


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-223S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 13.b

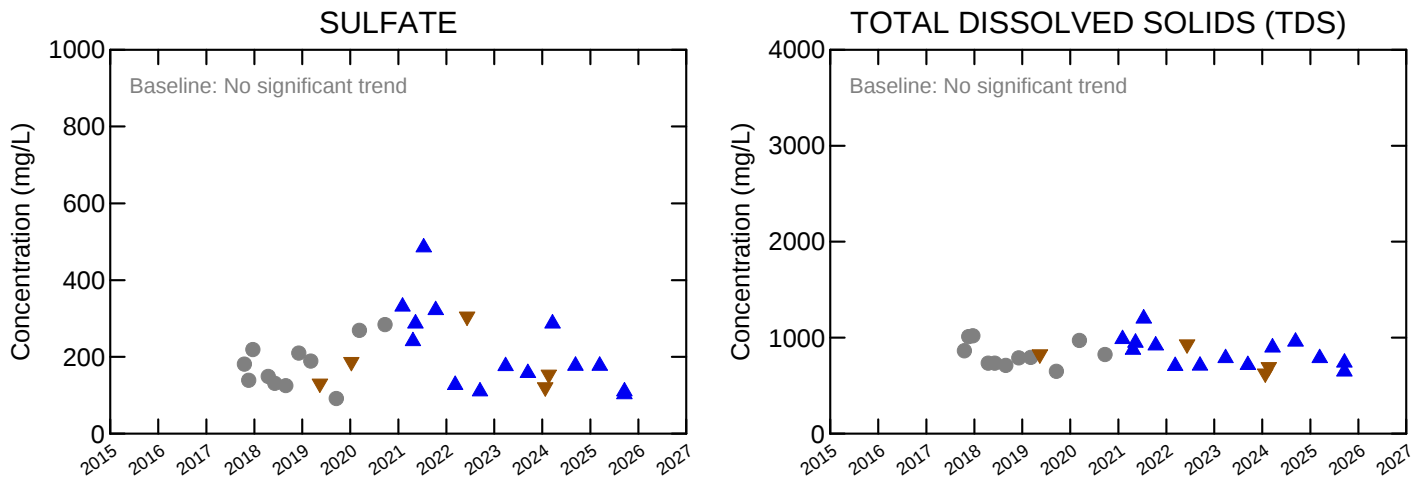


MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-231S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Jan 29, 2026**

FIGURE 14.a



Legend:

- Baseline Result
- ▲ Detection Monitoring Result
- ▼ Verification or Supplemental Result

Notes:

- 1) Non-detects (plotted at detection limit) are represented by empty symbols.
- 2) Non-detects with detection limits above target and/or detected values were excluded from trends.
- 3) Trend analysis results are reported at a 95 percent confidence level.



MidAmerican Energy Company
Neal North CCR Active Monofill
Sergeant Bluff, Iowa

**MW-231S -- APPENDIX III PARAMETERS
ANALYTE CONCENTRATION vs. TIME**

Project No. **12576482**
Date: **Dec 01, 2025**

FIGURE 14.b

Appendix D

**Groundwater Analytical Data (December
2015 through 2025)**

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:			MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R		
Sample ID:			MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R	DP-01	MW-5R		
Sample Date:			12/10/2015	12/10/2015	3/2/2016	3/2/2016	6/8/2016	6/8/2016	9/21/2016	9/21/2016	12/20/2016	12/20/2016	2/23/2017	2/23/2017	4/26/2017	4/26/2017	7/6/2017	7/6/2017	9/13/2017	9/13/2017	4/18/2018	4/18/2018	8/28/2018	8/28/2018	3/12/2019	9/18/2019	
GWPS			(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		(Duplicate)		
Parameters	Units																										
Appendix III																											
Boron	mg/L	NA	0.163 J	0.259	0.226	0.221	0.400 U	0.335	0.298	0.260	0.350	0.359	0.210	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1.65	1.54	0.209	0.432	
Calcium	mg/L	NA	78.4	120	119	118	124	131	112	113	122	128	117	127	113	117	115	109	110	110	109	110	211	184	122	120	
Chloride	mg/L	NA	10.5 J	17.9 J	11.1	10.3	12.5	11.2	9.98	9.03	11.1	10.6	9.16	9.66	15.0	13.5	11.6	12.4	9.87	9.81	18.5 J-	16.1 J-	19.8	20.5	10.5	11.3	
Fluoride	mg/L	4.0	0.500 U	1.56 J	0.500 U	0.500 U	0.509	0.500 U	0.500 U	0.500 U	0.589	0.601	0.500 U	0.500 U	2.11 J	1.58 J	0.500 U	0.623	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	
pH, lab	s.u.	NA	7.29 J	7.41 J	7.44 J	7.25 J	7.04 J	7.05 J	7.2 J	7.2 J	7.3 J	7.3 J	7.3 J	7.2 J	7.2 J	7.1 J	7.1 J	7.1 J	7.2 J	7.2 J	7.3 J	7.2 J	7.1 J	7.1 J	7.5 J	7.3 J	
Sulfate	mg/L	NA	158	154	157	151	165	171	171	142	195	194	150	157	137	139	141	133	137	135	142	141	498	516	150	162	
Total dissolved solids (TDS)	mg/L	NA	646	652	646	624	658	690	694	660	690	696	652	684	706	630	634	690	640	672	566	580	1500	1410	604	575	
Appendix IV																											
Antimony	mg/L	0.006	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	
Arsenic	mg/L	0.0695	0.0225	0.0236	0.0159	0.0168	0.0250	0.0268	0.0284	0.0335	0.0241	0.0242	0.0288	0.0288	0.0326	0.0353	0.0360	0.0297	--	--	--	--	--	--	--	--	
Barium	mg/L	2.0	0.174	0.186	0.155	0.156	0.182	0.184	0.199	0.206	0.115	0.128	0.199	0.199	0.206	0.218	0.205	0.190	--	--	--	--	--	--	--	--	
Beryllium	mg/L	0.004	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	
Cadmium	mg/L	0.005	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	
Chromium	mg/L	0.1	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	
Cobalt	mg/L	0.00694	0.000609	0.000650	0.000704	0.000700	0.00100 U	0.000537	0.000527	0.000521	0.000615	0.000603	0.000527	0.000500	0.000500 U	0.000508	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	
Lead	mg/L	0.015	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	
Lithium	mg/L	0.196	0.0782	0.0680	0.0630	0.0657	0.0626	0.0617	0.0625	0.0616	0.0638	0.0628	0.0641	0.0500 U	0.0604	0.0575	0.0653	0.0640	--	--	--	--	--	--	--	--	
Mercury	mg/L	0.002	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--	
Molybdenum	mg/L	0.100	0.00402	0.00420	0.00381	0.00393	0.00400 U	0.00371	0.00376	0.00389	0.00353	0.00370	0.00420	0.00410	0.00409	0.00419	0.00400	0.00362	--	--	--	--	--	--	--	--	
Selenium	mg/L	0.128	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	
Thallium	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	
Radium-226 & 228	pCi/L	5	0.352 U	0.685 U	0.484	0.550	0.144 U	0.544	0.563	0.255 U	0.779	0.842	0.263 U	0.722	0.225 U	0.126 U	0.738	0.735	--	--	--	--	--	--	--	--	
Other																											
Aluminum	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron (dissolved)	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese (dissolved)	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Radium-226	pCi/L	NA	0.0585 U	0.0178 U	0.0632 U	0.253	0.192	0.195	0.207	0.196	0.220 U	0.308 U	0.227	0.213	0.212	0.0435 U	0.179	0.178	--	--	--	--	--	--	--	--	
Radium-228	pCi/L	NA	0.293 U	0.667 U	0.421 U	0.297 U	-0.0484 U	0.350	0.356 U	0.0585 U	0.558 U	0.534	0.0361 U	0.509	0.0135 U	0.0822 U	0.559	0.557	--	--	--	--	--	--	--	--	
Nitrate (as N)	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TOC average duplicates	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total organic carbon (TOC)	mg/L	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R	MW-5R
Sample ID:		MW-5R-GW-0320	DP-04-GW-0320	MW5R-GW-0520	MW005R-GW-0920	MW005R-GW-1220	MW05R-GW-0221	MW005R-GW-0521	MW05R-GW-0721	MW005R-GW-1021	MW05R-GW-0322	MW05R-GW-0622	MW05R-GW-0922	MW05R-GW-0323	MW05R-GW-0923	MW05R-GW-0324	MW05R-GW-0624
Sample Date:		3/9/2020	3/9/2020	5/27/2020	9/23/2020	12/10/2020	2/4/2021	5/11/2021	7/14/2021	10/13/2021	3/8/2022	6/8/2022	9/15/2022	4/3/2023	9/13/2023	3/20/2024	6/5/2024
			(Duplicate)														
Parameters	Units																
Appendix III																	
Boron	mg/L	0.240	0.222	--	0.233	0.243	0.289	0.177	0.182 J	0.189	0.287	0.418	0.257	0.297	0.427	0.298	--
Calcium	mg/L	152	153	134	92.8	112	117	126	112	109	175	158	132	192	92.9	145	--
Chloride	mg/L	17.2	12.3	--	9.02	8.71	9.92	8.33	8.97	8.94	13.1	11.3	9.73	13.7	10.4	11.4	--
Fluoride	mg/L	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	0.675	0.500 U	0.500 U	0.500 U	0.500 U	0.652	0.500 U	1.00 U	1.00 U	--
pH, lab	s.u.	7.1 J	7.1 J	--	7.3 J	7.2 J	7.5 J	7.2 J	7.3 J	7.4 J	7.4 J	7.2 J	7.3 J	7.3 J	7.3 J	8.0 J	7.4 J
Sulfate	mg/L	323	288	274	130	138	169	168	124	109	340	315	153	318	160	264	--
Total dissolved solids (TDS)	mg/L	840	844	822	512	632	640	626	528	470	918	892	614	920	626	868	--
Appendix IV																	
Antimony	mg/L	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	0.00200 U	--
Arsenic	mg/L	--	--	--	0.0335	0.0279	0.0446	0.0337	0.0351	0.0347	0.0378	0.0345	--	--	0.0283	0.0330	--
Barium	mg/L	--	--	--	0.165	0.142	0.195	0.206	0.182	0.180	0.278	0.161	--	--	0.100	0.143	--
Beryllium	mg/L	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	0.00100 U	--
Cadmium	mg/L	--	--	--	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	--	--	0.000200 U	0.000200 U	--
Chromium	mg/L	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	0.00500 U	--
Cobalt	mg/L	--	--	--	0.000500 U	0.000604	0.000550	0.000613	0.000543	0.000500 U	0.000730	0.000613	--	--	0.000500 U	0.000662	--
Lead	mg/L	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	0.000500 U	0.000500 U	--
Lithium	mg/L	--	--	--	0.0565	0.0649	0.0695	0.0717	0.0697	0.0489	0.0808	0.0723	--	--	0.0578	0.0734	--
Mercury	mg/L	--	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	0.000200 U	0.000200 U	--
Molybdenum	mg/L	--	--	--	0.00394	0.00394	0.00448	0.00401	0.00423	0.00363	0.00355	0.00383	--	--	0.00393	0.00361	--
Selenium	mg/L	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	0.00500 U	--
Thallium	mg/L	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	0.00100 U	--
Radium-226 & 228	pCi/L	--	--	--	0.683 U	0.274 U	-0.0292 U	0.732	0.734	0.669	0.608	0.491 U	--	--	1.04	0.447 U	--
Other																	
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	0.485	0.228 U	0.156 U	0.297	0.0928 U	0.228 U	0.158 U	0.164	--	--	0.173	0.229	--
Radium-228	pCi/L	--	--	--	0.197 U	0.0458 U	-0.185 U	0.435	0.641	0.441 U	0.451	0.327 U	--	--	0.865	0.217 U	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																	
U - Not detected at the associated																	
J - Estimated concentration.																	
UJ - Not detected; associated repr																	

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-5R	MW-5R	MW-5R	MW-5R	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11
Sample ID:		MW05R-GW-0924	MW05R-GW-0325	MW05R-GW-0525	MW05R-GW-0925	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11-GW-0320	MW011-GW-0920	MW11R-GW-0721	MW11R-GW-0322
Sample Date:		9/12/2024	3/17/2025	5/20/2025	9/19/2025	12/10/2015	3/2/2016	6/8/2016	9/21/2016	12/20/2016	2/21/2017	4/24/2017	7/7/2017	9/13/2017	4/18/2018	8/28/2018	3/12/2019	9/18/2019	3/9/2020	9/22/2020	7/15/2021	3/8/2022
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.310	0.37	--	0.208	0.159 J	0.200 U	0.607	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.100 U	0.157	0.134
Calcium	mg/L	162	160	--	109	215	218	242	205	242	149	150	168	159	151	147	203	148	131	144	156	165
Chloride	mg/L	11.1	10	--	9.06	19.3	14.0	62.4	48.1	90.6	5.00 U	13.0	25.9	25.2	5.00 UJ	5.00 U	14.6	5.00 U	5.00 U	10.6	5.00 U	5.00 U
Fluoride	mg/L	1.00 U	1.0 U	--	1.00 U	0.500 U	0.816	0.504	0.500 U	12.2	0.500 U	3.01	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.526	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.2 J	7.7 J	7.3 J	7.7 J	7.14 J	7.28 J	6.93 J	7.1 J	7.2 J	7.1 J	7.3 J	7.1 J	7.2 J	7.4 J	8.0 J	7.2 J	7.4 J	7.3 J	7.3 J	7.3 J	7.4 J
Sulfate	mg/L	275	320	--	121	153	142	174	148	182	145	143	136	131	174	140	136	130	120	128	153	145
Total dissolved solids (TDS)	mg/L	696	930	--	556	1140	1030	1220	1030	1050	766	764	894	874	710	778	916	666	630	538	666	690
Appendix IV																						
Antimony	mg/L	0.00200 U	0.0020 U	--	0.00200 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.0291	0.031	--	0.0286	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--
Barium	mg/L	0.126	0.14	--	0.0972	0.126	0.119	0.0701	0.110	0.122	0.0821	0.0906	0.0997	--	--	--	--	--	--	--	--	--
Beryllium	mg/L	0.00100 U	0.0010 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	0.000200 U	0.00020 U	--	0.000200 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--
Chromium	mg/L	0.00500 U	0.0050 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	0.000694	0.00055	--	0.000500 U	0.000500 U	0.000500 U	0.000662	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--
Lead	mg/L	0.000500 U	0.00050 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--
Lithium	mg/L	0.0725	0.074	--	0.0686	0.144	0.123	0.101	0.123	0.141	0.115	0.102	0.116	--	--	--	--	--	--	--	--	--
Mercury	mg/L	0.000200 U	0.00020 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--	--
Molybdenum	mg/L	0.00357	0.0036	--	0.00445	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--
Selenium	mg/L	0.00500 U	0.0050 U	--	0.00500 U	0.115	0.135	0.00524	0.152	0.121	0.313	0.161	0.196	--	--	--	--	--	--	--	--	--
Thallium	mg/L	0.00100 U	0.0010 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	0.774 U	0.646	--	0.609	0.583	0.278 U	0.0548 U	0.201 U	0.0936 U	3.56	0.199 U	0.530	--	--	--	--	--	--	--	--	--
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.130 U	0.0855	--	0.160	0.231	0.119 U	0.0487 U	0.0687 U	0.253 U	1.90	0.122	0.152	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	0.774 U	0.561	--	0.449	0.351 U	0.159 U	0.00608 U	0.132 U	-0.160 U	1.66	0.0770 U	0.379	--	--	--	--	--	--	--	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
Sample ID:		MW11R-GW-0922	MW11R-GW-0323	DP04-GW-0323	MW11R-GW-0923	DP04-GW-0923	MW11R-GW-0324	DP04-GW-0324	MW11R-GW-0924	DP04-GW-0924	MW11R-GW-0325	DP04-GW-0325	MW11R-GW-0925	DP04-GW-0925	MW-13	MW-13	MW-13	MW-13	MW-13
Sample Date:		9/15/2022	4/3/2023	4/3/2023 (Duplicate)	9/13/2023	9/13/2023 (Duplicate)	3/19/2024	3/19/2024 (Duplicate)	9/17/2024	9/17/2024 (Duplicate)	3/17/2025	3/17/2025 (Duplicate)	9/19/2025	9/19/2025 (Duplicate)	12/10/2015	3/2/2016	6/8/2016	9/21/2016	12/20/2016
Sample Date:																			2/21/2017
Parameters	Units																		
Appendix III																			
Boron	mg/L	0.194	0.145	0.146	0.227	0.198	0.157	0.162	0.164	0.157	0.172	0.168	0.159	0.133	0.136 J	0.200 U	0.678	0.200 U	0.200 U
Calcium	mg/L	166	215	209	194	197	173	175	182	169	123	134	110	110	171	171	306	173	154
Chloride	mg/L	5.18	5.86	5.93	5.32	5.23	5.32	5.00 U	5.30	5.65	5.00 U	5.07	5.00 U	5.00 U	7.93	9.48	10.7	8.01	23.2
Fluoride	mg/L	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U	1.39	0.500 U	0.500 U	6.49
pH, lab	s.u.	7.3 J	7.6 J	7.6 J	7.8 J	7.5 J	7.8 J	7.8 J	7.2 J	7.2 J	7.9 J	7.8 J	7.8 J	7.8 J	7.30 J	7.29 J	6.96 J	7.1 J	7.3 J
Sulfate	mg/L	150	152	156	220	219	117	123	117	86.9	117	85.5	74.0	71.7	77.9	71.1	96.5	65.6	81.5
Total dissolved solids (TDS)	mg/L	694	796	832	834	868	684	684	606	640	530	558	474	502	876	824	928	884	860
Appendix IV																			
Antimony	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Arsenic	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Barium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.157	0.132	0.0588	0.136	0.119
Beryllium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Chromium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.00235	0.000500 U	0.000500 U
Lead	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000640	0.000500 U	0.000500 U
Lithium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.121	0.107	0.119	0.105	0.122
Mercury	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00226	0.00272	0.00200 U	0.00200 U	0.00304
Selenium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.139	0.129	0.106	0.0643	0.128
Thallium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.309 U	0.438	0.218 U	0.187 U	0.155 U
Other																			
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.149	0.198	0.104	0.237	0.0924 U
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	0.160 U	0.240 U	0.114 U	-0.0504 U	0.0629 U
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																			
U - Not detected at the associated																			
J - Estimated concentration.																			
UJ - Not detected; associated repr																			

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
Sample ID:		MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW13-GW-0519	MW13-GW-0919	MW13-GW-0120	MW13-GW-0320	MW13-GW-0920	MW013-GW-1220	MW13R-GW-0721	MW013R-GW-1021	MW13R-GW-0322	DP01-GW-0322	MW13R-GW-0622	DP01-GW-0622	MW13R-GW-0922
Sample Date:		4/26/2017	7/6/2017	9/13/2017	4/18/2018	8/28/2018	3/7/2019	5/14/2019	9/17/2019	1/8/2020	3/11/2020	9/22/2020	12/9/2020	7/13/2021	10/14/2021	3/8/2022	3/9/2022 (Duplicate)	6/8/2022	6/8/2022 (Duplicate)	9/14/2022
Parameters	Units																			
Appendix III																				
Boron	mg/L	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	0.200 U	0.100 U	0.139	0.114	0.134	0.108	0.112	0.105	0.110	0.113
Calcium	mg/L	149	145	162	152	169	178	157	161	--	163	160	205	158	150	175	172	129	126	137
Chloride	mg/L	15.1	5.16	6.81	9.99 J-	16.7	7.37	23.5	18.1	--	28.4	15.3	15.3	35.9 J-	42.1	73.3	74.6	42.8	42.5	16.7
Fluoride	mg/L	2.98	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.641	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.3 J	7.2 J	7.2 J	7.3 J	7.6 J	7.1 J	7.2 J	7.2 J	--	7.0 J	7.2 J	7.4 J	7.2 J	7.2 J	7.2 J	7.2 J	7.2 J	7.3 J	7.2 J
Sulfate	mg/L	66.7	67.2	68.0	73.9	56.1	75.8	67.0	69.5	73.2	74.7	79.0	74.9	51.6	47.5	68.4	69.5	61.1	60.8	56.4
Total dissolved solids (TDS)	mg/L	706	730	876	588	668	840	720	710	--	852	790	862	506	548	604	630	620	606	518
Appendix IV																				
Antimony	mg/L	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Arsenic	mg/L	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.0382	0.0472	0.0512	0.0498	0.0457	0.0441	0.0459
Barium	mg/L	0.121	0.121	--	0.121	0.151	0.142	--	0.134	0.163	0.137	0.119	0.221	0.253	0.236	0.272	0.262	0.262	0.262	0.211
Beryllium	mg/L	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000500 U	0.000500 U	--	0.000500 U	--	0.000500 U	--	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000227	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U
Chromium	mg/L	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.00335	0.00125	0.00141	0.00137	0.00110	0.00107	0.000940
Lead	mg/L	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.0962	0.109	--	0.0991	0.0986	0.115	--	0.0888	0.104	0.106	0.0982	0.130	0.0806	0.0582	0.0900	0.0868	0.0841	0.0816	0.0830
Mercury	mg/L	0.000200 U	0.000200 U	--	0.000200 U	--	0.000200 U	--	0.000200 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00387	0.00470	--	0.00398	0.00494	0.00218	--	0.00200 U	0.00200 U	0.00200 U	0.00231	0.00200 U	0.00420	0.00286	0.00321	0.00309	0.00359	0.00407	0.00395
Selenium	mg/L	0.0177	0.0386	--	0.0108	0.0356	0.144	0.0245	0.0580	0.0560	0.0733	0.0982	0.111	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.202 U	0.439	--	0.232 U	0.388	0.579	0.584	1.04	--	0.433 U	0.595 U	0.735	1.53	1.12	0.794	1.16	0.878	1.22	1.73
Other																				
Aluminum	mg/L	--	--	--	--	--	--	--	--	0.0500 U	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	0.100 U	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.0289 U	0.0941	--	0.273	0.221	0.247	0.254	0.0614 U	--	0.105 U	0.599	0.305	0.584	0.433	0.217 U	0.497	0.336	0.320	0.229 U
Radium-228	pCi/L	0.173 U	0.345	--	-0.0407 U	0.168 U	0.332	0.330 U	0.982	--	0.328 U	-0.00338 U	0.430	0.947	0.683	0.577	0.658	0.542	0.903	1.50
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																				
U - Not detected at the associated																				
J - Estimated concentration.																				
UJ - Not detected; associated repr																				

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
Sample ID:		MW13R-GW-0323	MW13R-GW-0923	MW13R-GW-0324	MW13R-GW-0924	MW13R-GW-0325	MW13R-GW-0925	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
Sample Date:		3/27/2023	9/12/2023	3/18/2024	9/11/2024	3/11/2025	9/17/2025	12/10/2015	3/2/2016	6/8/2016	9/20/2016	12/20/2016	2/22/2017	4/24/2017	7/7/2017	9/13/2017	1/30/2018	1/30/2018	4/17/2018	8/28/2018	3/12/2019	MW-19-GW-0519	MW-19
		(Duplicate)																					
Parameters	Units																						
Appendix III																							
Boron	mg/L	0.138	0.122 J+	0.163	0.100 U	0.136	0.131	0.463 J	0.703	0.694	0.639	0.642	0.561	0.532	0.681	0.587	--	--	0.697	0.590	0.609	--	0.524
Calcium	mg/L	130	135	119	138	147	141	450	340	355	381	374	324	444	401	384	300	318	322	326	345	338	415
Chloride	mg/L	18.9	12.3	9.26	10.5	17.3	11.0	24.6	27.0	25.7	19.1	73.9	4.26	28.8	24.7	19.8	--	--	21.3 J-	22.0	21.0	--	20.4
Fluoride	mg/L	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U	2.01	0.500 U	0.500 U	12.2	0.100 U	2.55	0.500 U	0.500 U	--	--	0.500 U	0.500 U	0.500 U	--	0.500 U
pH, lab	s.u.	7.3 J	7.2 J	7.3 J	7.1 J	7.8 J	7.1 J	6.63 J	6.78 J	6.58 J	6.8 J	6.9 J	7.1 J	6.6 J	6.7 J	6.7 J	7.0 J	7.1 J	6.9 J	7.4 J	6.6 J	--	6.9 J
Sulfate	mg/L	68.4	58.6	61.8	29.0	38.7	47.4	1190	712	748	919	926	796	1150	985	891	676	702	698	932	961	639	971
Total dissolved solids (TDS)	mg/L	502	542	522	566	580	540	2740	1990	2100	2370	2330	2410	3380	3320	2570	1900	2640	1720	2270	2450	1780	2240
Appendix IV																							
Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Arsenic	mg/L	0.0510	0.0483 J+	0.0521	0.0426	0.0592	0.0503	0.00669	0.00267	0.00200 U	0.00314	0.00232	0.00200 U	0.00335	0.00200 U	--	--	--	--	--	--	--	--
Barium	mg/L	0.200	0.210 J+	0.212	0.228	0.226	0.217	0.0246	0.0296	0.0268	0.0242	0.0236	0.0248	0.0262	0.0230	--	--	--	--	--	--	--	--
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Cadmium	mg/L	0.000211	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--
Cobalt	mg/L	0.00105	0.000806 J+	0.000733	0.000874	0.00102	0.000946	0.0179	0.00360	0.00557	0.0106	0.00821	0.00585	0.0115	0.00828	--	--	--	--	--	--	--	--
Lead	mg/L	0.000593	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--
Lithium	mg/L	0.0873	0.0880 J+	0.0884	0.0906	0.0846	0.0743	0.327	0.224	0.222	0.257	0.179	0.232	0.266	0.252	--	--	--	--	--	--	--	--
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--
Molybdenum	mg/L	0.00492	0.00411 J+	0.00413	0.00362	0.00377	0.00445	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.0114	0.00689	0.00500 U	0.00500 U	0.00740	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--
Thallium	mg/L	0.00146	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	1.18	0.996	1.01	1.18 J	0.828	1.09	0.623 U	0.577	0.522	0.255 U	0.614	0.246 U	0.252 U	0.374	--	--	--	--	--	--	--	--
Other																							
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.281	0.293	0.340	0.316 J	0.296	0.491	0.119	0.157	0.226	0.191	0.287 U	0.0408 U	0.154	0.117	--	--	--	--	--	--	--	--
Radium-228	pCi/L	0.902 J+	0.703	0.669	0.541 UJ	0.532	0.595	0.504 U	0.420 U	0.296 U	0.0641 U	0.327 U	0.206 U	0.0982 U	0.257 U	--	--	--	--	--	--	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																							
U - Not detected at the associated																							
J - Estimated concentration.																							
UJ - Not detected; associated repr																							

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
Sample ID:		MW-19-GW-0320	MW19-GW-0520	MW019-GW-0920	MW019-GW-1220	MW019-GW-0221	MW019-GW-0521	MW19-GW-0721	MW019-GW-1021	MW19-GW-0322	MW19-GW-0622	MW19-GW-0922	MW19-GW-0323	MW19-GW-0923	MW19-GW-0324	MW19-GW-0924	MW19-GW-0325
Sample Date:		3/10/2020	5/28/2020	9/23/2020	12/9/2020	2/3/2021	5/10/2021	7/15/2021	10/14/2021	3/8/2022	6/8/2022	9/14/2022	4/3/2023	9/13/2023	3/21/2024	9/13/2024	3/17/2025
Parameters	Units																
Appendix III																	
Boron	mg/L	0.631	0.721	0.589	0.672	0.654	0.701	0.565 J	0.466	0.740	0.634	0.619	0.584	0.606	0.606	0.538	0.64
Calcium	mg/L	400	353	350	301	349	379	562	424	339	372	389	415	334	316	419	420
Chloride	mg/L	16.9	--	19.0	17.4	19.0	15.9	17.8	19.4	16.3	17.8	17.8	18.0	19.1	16.8	19.4	20
Fluoride	mg/L	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	2.36	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	1.0 U
pH, lab	s.u.	6.6 J	--	6.7 J	6.9 J	7.1 J	6.7 J	6.7 J	6.6 J	6.8 J	6.8 J	7.2 J	6.7 J	6.7 J	7.8 J	6.6 J	7.4 J
Sulfate	mg/L	990	955	984	607	851	1000	1040	1140	769	911	828	1020	736	715	939	1000
Total dissolved solids (TDS)	mg/L	2280	1980	2330	1570	1970	2040	2420	2590	1780	1810	2030	2220	2360	1750	2070	2300
Appendix IV																	
Antimony	mg/L	--	--	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	0.00200 U	0.00200 U	0.0020 U
Arsenic	mg/L	--	--	0.00413	0.00200 U	0.00367	0.00415	0.00821	0.00523	0.00357	0.00340	--	--	0.00298	0.00458	0.00666	0.0054
Barium	mg/L	--	--	0.0227	0.0251	0.0208	0.0221	0.0214	0.0207	0.0230	0.0229	--	--	0.0166	0.0202	0.0197	0.023
Beryllium	mg/L	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	0.00100 U	0.00100 U	0.0010 U
Cadmium	mg/L	--	--	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	--	--	0.000200 U	0.000200 U	0.000200 U	0.00020 U
Chromium	mg/L	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	0.00500 U	0.00500 U	0.0050 U
Cobalt	mg/L	--	--	0.0107	0.00389	0.00890	0.0103	0.0225	0.0121	0.00806	0.00845	--	--	0.00670	0.00755	0.0127	0.015
Lead	mg/L	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000747	0.000500 U	--	--	0.000500 U	0.000500 U	0.000500 U	0.00050 U
Lithium	mg/L	--	--	0.222	0.239	0.273	0.245	0.300	0.200	0.254	0.254	--	--	0.234	0.239	0.255	0.28
Mercury	mg/L	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	0.000200 U	0.000200 U	0.000200 U	0.00020 U
Molybdenum	mg/L	--	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	0.00200 U	0.00200 U	0.0020 U
Selenium	mg/L	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	0.00932	0.00500 U	0.0050 U
Thallium	mg/L	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	0.00100 U	0.00100 U	0.0010 U
Radium-226 & 228	pCi/L	--	--	0.920	0.383 U	0.720	0.123 U	0.662	0.815	0.777	0.456 U	--	--	0.984	0.514 U	0.984 U	0.801
Other																	
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	0.340	0.133 U	0.0371 U	-0.0305 U	0.155	0.288 U	0.145 U	0.0152 U	--	--	0.101 U	0.176 U	0.178 U	0.0840
Radium-228	pCi/L	--	--	0.580	0.250 U	0.682 J+	0.153 U	0.508	0.527 U	0.632	0.441 U	--	--	0.882	0.338 U	0.984 U	0.717
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																	
U - Not detected at the associated																	
J - Estimated concentration.																	
UJ - Not detected; associated repr																	

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-19	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
Sample ID:		MW19-GW-0925	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21-GW-0519	MW-21	MW-21-GW-0320	MW21-GW-0520	MW021-GW-0920	MW021-GW-1220	MW021-GW-0221
Sample Date:		9/19/2025	12/10/2015	3/2/2016	6/8/2016	9/20/2016	12/20/2016	2/22/2017	4/24/2017	7/7/2017	9/13/2017	1/30/2018	4/17/2018	8/28/2018	3/12/2019	5/16/2019	9/18/2019	3/10/2020	5/28/2020	9/23/2020	12/9/2020	2/3/2021
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.554	0.440 J	0.406	0.472	0.415	0.439	0.365	0.333	0.359	0.385	--	0.322	0.286	0.374	--	0.319	0.344	0.367	0.352	0.359	0.391
Calcium	mg/L	364	182	187	232	179	211	209	199	190	200	--	212	356	228	--	406	180	--	341	438	480
Chloride	mg/L	19.3	5.00 U	6.08	6.77	7.79	34.8	9.21	9.34	7.16	5.85	--	7.37 J-	5.59	7.60	--	7.27	5.00 U	--	6.61	7.63	7.30
Fluoride	mg/L	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	4.41	1.66	1.57	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	--	0.500 U	6.75	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.3 J	7.05 J	7.11 J	6.94 J	7.1 J	7.1 J	7.1 J	7.0 J	6.9 J	6.9 J	--	7.1 J	6.9 J	7.1 J	--	6.8 J	6.9 J	--	7.2 J	6.8 J	7.2 J
Sulfate	mg/L	854	212	202	203	225	333	320	269	280	305	268	321	971	284	228	991	228	--	924	1250	658
Total dissolved solids (TDS)	mg/L	2130	1040	920	890	1030	1100	1180	1110	1180	1150	--	1010	1870	1040	--	2170	958	--	2020	2520	2790
Appendix IV																						
Antimony	mg/L	0.00200 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00400 U
Arsenic	mg/L	0.00443	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U
Barium	mg/L	0.0189	0.0536	0.0422	0.0534	0.0452	0.0482	0.0495	0.0426	0.0407	--	--	--	--	--	--	--	--	--	0.0290	0.0301	0.0280
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000200 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	0.000173	0.000100 U	0.000100 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.00858	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	0.000510	0.000956	0.00664
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000980	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.257	0.221	0.193	0.170	0.206	0.243	0.227	0.199	0.214	--	--	--	--	--	--	--	--	--	0.244	0.316	0.332
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000296	--	--	--	--	--	--	--	--	--	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00719	0.00500 U	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.899	0.306 U	0.660	0.379	0.204 U	0.206 U	0.201 U	0.450	0.431	--	--	--	--	--	--	--	--	--	1.17	0.471 U	0.120 U
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.0656	0.127	0.108 U	0.107	0.108 U	0.299 U	0.0915 U	0.0676 U	0.117	--	--	--	--	--	--	--	--	--	0.637	0.0426 U	0.105 U
Radium-228	pCi/L	0.833	0.179 U	0.552	0.272 U	0.0957 U	-0.0930 U	0.109 U	0.382	0.315	--	--	--	--	--	--	--	--	--	0.538	0.428	0.0154 U
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-23	MW-23	MW-23
Sample ID:		MW021-GW-0521	MW21-GW-0721	MW021-GW-1021	MW21-GW-0322	MW21-GW-0622	MW21-GW-0922	MW21-GW-0323	MW21-GW-0923	MW21-GW-1223	MW21-GW-0324	MW21-GW-0624	MW21-GW-0924	MW21-GW-0325	MW21-GW-0525	MW21-GW-0925	MW-23	MW-23	MW-23
Sample Date:		5/10/2021	7/15/2021	10/13/2021	3/8/2022	6/8/2022	9/14/2022	4/3/2023	9/13/2023	12/5/2023	3/21/2024	6/5/2024	9/13/2024	3/17/2025	5/19/2025	9/19/2025	12/10/2015	3/2/2016	6/8/2016
Parameters	Units																		
Appendix III																			
Boron	mg/L	0.299	0.297 J	0.301	0.474	0.345	0.363	0.329	0.519	0.337	0.366	--	0.333	0.46	--	0.348	0.304 J	0.318	0.282
Calcium	mg/L	188	265	397	464	509	498	523	474	--	510	--	202	560	441	437	236	245	341
Chloride	mg/L	5.00 U	6.58	6.12	6.88	7.11	1.37	7.94	8.18	--	6.98	--	5.00 U	6.7	--	6.51	9.53	9.63	10.9
Fluoride	mg/L	0.500 U	0.500 U	2.85	0.500 U	0.500 U	0.100 U	0.791	1.00 U	--	1.00 U	--	1.00 U	1.0 U	--	1.00 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.1 J	7.0 J	6.9 J	6.8 J	6.8 J	7.0 J	6.8 J	6.7 J	--	7.8 J	7.0 J	7.2 J	7.4 J	6.8 J	7.4 J	7.14 J	6.90 J	6.65 J
Sulfate	mg/L	299	393	1150	1540	1530	1250	1610	1550	--	1590	--	316	1600	1690	1180	225	257	496
Total dissolved solids (TDS)	mg/L	730	1030	2270	2470	2490	2510	3050	3110	--	2890	--	800	3000	2730	2350	1070	1030	1440
Appendix IV																			
Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	--	0.00200 U	--	0.00200 U	0.0011 J	--	0.00200 U	0.00100 U	0.00100 U	0.00100 U
Arsenic	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	--	0.00200 U	--	0.00200 U	0.00068 J	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Barium	mg/L	0.0561	0.0639	0.0372	0.0222	0.0187	--	--	0.0139	--	0.0133	--	0.0420	0.019	--	0.0174	0.0523	0.0581	0.0549
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	--	0.00100 U	--	0.00100 U	0.0010 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000100 U	0.000100 U	0.000121	0.000100 U	0.000100 U	--	--	0.000346	--	0.000200 U	--	0.000200 U	0.00029	--	0.000245	0.000500 U	0.000500 U	0.000500 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	--	0.00500 U	--	0.00500 U	0.0050 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.000500 U	0.000500 U	0.000500 U	0.00397	0.00151	--	--	0.000983	--	0.000500 U	--	0.000500 U	0.00082	--	0.000500 U	0.00234	0.00205	0.00200
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000899	0.000500 U	--	--	0.000500 U	--	0.000500 U	--	0.000500 U	0.00050 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.188	0.233	0.208	0.334	0.321	--	--	0.301	--	0.328	--	0.205	0.35	--	0.308	0.172	0.136	0.169
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	0.000200 U	--	0.000200 U	--	0.000200 U	0.00020 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	0.00200 U	--	0.00200 U	--	0.00200 U	0.0020 U	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Selenium	mg/L	0.0398	0.00549	0.00500 U	0.00500 U	0.00500 U	--	--	0.00500 U	--	0.00500 U	--	0.191	0.0038 J	--	0.0153	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	0.00100 U	--	0.00100 U	--	0.00100 U	0.0010 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.291 U	0.546	0.696	0.353	0.626	--	--	1.17	--	0.405 U	--	0.757 U	0.622	--	0.810	0.480	0.201 U	0.407
Other																			
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.0783 U	0.101 U	0.102 U	0.122 U	0.0459 U	--	--	0.0132 U	--	0.0642 U	--	0.151 U	-0.0938	--	-0.0294	0.159	0.0877 U	0.0631 U
Radium-228	pCi/L	0.213 U	0.444	0.594	0.230 U	0.580	--	--	1.15	--	0.340 U	--	0.757 U	0.716	--	0.840	0.321 U	0.113 U	0.344 U
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																			
U - Not detected at the associated																			
J - Estimated concentration.																			
UJ - Not detected; associated repr																			

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23
Sample ID:		MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23-GW-0519	DP-02	MW-23	MW-23-GW-0320	MW23-GW-0520	MW023-GW-0920	MW23R-GW-0721	MW23R-GW-0322	MW23R-GW-0622	MW23R-GW-0922	MW23R-GW-0323	
Sample Date:		9/20/2016	12/21/2016	2/22/2017	4/24/2017	7/6/2017	9/13/2017	1/30/2018	4/18/2018	8/28/2018	3/12/2019	5/16/2019	(Duplicate)	9/18/2019	3/9/2020	5/28/2020	9/23/2020	7/15/2021	3/8/2022	6/9/2022	9/15/2022	4/3/2023	
Parameters	Units																						
Appendix III																							
Boron	mg/L	0.309	0.287	0.282	0.272	0.310	0.284	--	0.250	0.260	0.263	--	--	0.265	0.312	0.341	0.250	0.191	0.168	--	0.221	0.168	
Calcium	mg/L	357	252	243	232	228	247	--	190	216	231	--	--	268	299	312	263	175	172	--	149	205	
Chloride	mg/L	6.86	8.07	12.3	9.98	9.43	8.16	--	10.1 J-	10.3	9.51	--	--	8.62	8.78	--	8.21	17.2	14.0	--	16.4	15.2	
Fluoride	mg/L	0.500 U	0.500 U	1.54	0.500 U	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	--	--	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	--	0.500 U	0.558	
pH, lab	s.u.	6.9 J	6.9 J	6.9 J	6.8 J	6.7 J	6.7 J	--	6.9 J	6.8 J	6.9 J	--	--	6.8 J	6.7 J	--	6.9 J	7.1 J	7.3 J	7.1 J	7.3 J	7.4 J	
Sulfate	mg/L	655	306	285	236	242	234	208	190	198	219	198	192	287	321	307	292	241	230	--	210	244	
Total dissolved solids (TDS)	mg/L	1720	1220	1340	1270	1140	1280	968	880	866	1100	--	--	1150	1230	1190	1320	690	830	--	790	934	
Appendix IV																							
Antimony	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Arsenic	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Barium	mg/L	0.0360	0.0445	0.0635	0.0594	0.0558	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Cadmium	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Cobalt	mg/L	0.00216	0.00106	0.00256	0.00244	0.00134	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Lithium	mg/L	0.193	0.182	0.151	0.113	0.146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Selenium	mg/L	0.0149	0.105	0.00500 U	0.00500 U	0.0264	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Radium-226 & 228	pCi/L	0.313 U	0.378 U	0.330 U	0.0666 U	0.341	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Other																							
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Radium-226	pCi/L	0.201	0.361 U	0.138	0.121	0.0878	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Radium-228	pCi/L	0.112 U	0.0168 U	0.192 U	-0.0542 U	0.253 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Notes:																							
U - Not detected at the associated																							
J - Estimated concentration.																							
UJ - Not detected; associated repr																							

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-23	MW-23	MW-23	MW-23	MW-23	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25
Sample ID:		MW23R-GW-0923	MW23R-GW-0324	MW23R-GW-0924	MW23R-GW-0325	MW23R-GW-0925	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25
Sample Date:		9/13/2023	3/19/2024	9/17/2024	3/17/2025	9/19/2025	12/10/2015	3/2/2016	6/8/2016	9/21/2016	12/20/2016	2/21/2017	4/26/2017	7/7/2017	9/13/2017	1/30/2018	4/18/2018	8/28/2018	3/12/2019	5/16/2019	9/18/2019	3/9/2020
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.251	0.180	0.174	0.208	0.216	0.333 J	0.338	0.246	0.316	0.289	0.267	0.275	0.308	0.314	--	0.281	0.304	0.313	--	0.293	0.355
Calcium	mg/L	143	185	138	191	194	233	252	276	245	244	241	261	235	248	--	248	257	246	--	243	229
Chloride	mg/L	16.0	14.4	18.5	12.9	13.2	5.00 U	5.00 U	7.64	5.00 U	15.7	5.08	10.5	5.62	5.00 U	--	5.00 UJ	5.00 U	5.00 U	--	5.00 U	5.00 U
Fluoride	mg/L	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	3.54	0.500 U	2.26	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	--	0.500 U	0.500 U
pH, lab	s.u.	7.3 J	7.7 J	7.2 J	7.7 J	7.6 J	7.19 J	7.11 J	6.98 J	7.0 J	7.1 J	7.0 J	7.0 J	6.9 J	7.0 J	7.1 J	7.1 J	7.0 J	7.1 J	--	7.1 J	6.9 J
Sulfate	mg/L	205	211	202	241	298	447	452	506	401	311	519	511	487	478	463	518	454	450	474	469	458
Total dissolved solids (TDS)	mg/L	706	872	666	958	960	1350	1330	1550	1420	1490	2330	2350	1620	1710	1540	1300	1260	1410	1540	1400	1310
Appendix IV																						
Antimony	mg/L	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	0.0306	0.0303	0.0278	0.0269	0.0253	0.0276	0.0285	0.0256	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	0.000577	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--
Lithium	mg/L	--	--	--	--	--	0.286	0.261	0.236	0.259	0.274	0.247	0.240	0.270	--	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--
Molybdenum	mg/L	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	0.258	0.326	0.287	0.194	0.201	0.221	0.240	0.181	--	--	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	--	--	--	--	--	0.298 U	0.322 U	0.244 U	0.494	0.304 U	0.177 U	0.253 U	0.749	--	--	--	--	--	--	--	--
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	0.135	0.216 U	0.0967 U	0.135	0.226 U	0.117 U	0.134	0.105	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	0.163 U	0.105 U	0.148 U	0.359 U	0.0776 U	0.0599 U	0.118 U	0.644	--	--	--	--	--	--	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27
Sample ID:		MW25-GW-0520	MW025-GW-0920	MW-025-GW-0221	MW25-GW-0721	MW25-GW-0322	MW25-GW-0922	MW25-GW-0323	MW25R-GW-0923	MW25-GW-0324	MW25-GW-0924	MW25-GW-0325	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27
Sample Date:		5/28/2020	9/22/2020	2/4/2021	7/15/2021	3/8/2022	9/15/2022	4/3/2023	9/13/2023	3/19/2024	9/17/2024	3/17/2025	12/10/2015	3/2/2016	6/8/2016	9/21/2016	12/20/2016	2/21/2017	4/26/2017	7/6/2017	9/13/2017
Parameters		Units																			
Appendix III																					
Boron	mg/L	0.352	0.291	0.310	0.327	0.347	0.445	0.384	0.522	0.471	0.508	0.512	0.223 J	0.264	0.239	0.253	0.252	0.284	0.271	0.247	0.225
Calcium	mg/L	--	235	238	246	227	231	239	214	220	235	197	158	162	173	154	168	189	187	152	149
Chloride	mg/L	--	5.00 U	6.64	5.10	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	26.3	22.4	23.9	18.8	28.7	25.8	28.8	22.0	20.5
Fluoride	mg/L	--	0.500 U	0.575	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.55	0.500 U	0.731	0.500 U	0.500 U
pH, lab	s.u.	--	7.3 J	7.4 J	7.1 J	7.1 J	7.0 J	7.2 J	7.4 J	7.5 J	6.9 J	7.8 J	7.11 J	7.04 J	6.93 J	7.0 J	7.2 J	7.0 J	7.0 J	6.9 J	7.0 J
Sulfate	mg/L	497	476	498	451	462	421	450	422	412	411	394	155	131	137	95.2	138	147	169	121	112
Total dissolved solids (TDS)	mg/L	1360	1070	1340	1130	1250	1250	1280	940	1190	1150	1130	866	840	908	776	856	904	1140	886	876
Appendix IV																					
Antimony	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--
Arsenic	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.0682	0.0641	0.0679	0.0609	0.0677	0.0565	0.0594	0.0593	--
Barium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.187	0.146	0.160	0.137	0.132	0.126	0.136	0.142	--
Beryllium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--
Cadmium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--
Chromium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00513	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--
Cobalt	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00102	0.000771	0.000734	0.000837	0.000691	0.000742	0.000773	0.000663	--
Lead	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--
Lithium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.136	0.134	0.127	0.132	0.165	0.171	0.165	0.141	--
Mercury	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--
Molybdenum	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--
Selenium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--
Thallium	mg/L	--	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--
Radium-226 & 228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	0.486	0.778	0.612	0.377 U	0.743	0.876	0.386 U	0.654	--
Other																					
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--	--	--	0.268	0.351	0.294	0.242	0.553	0.241	0.241	0.319	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	0.218 U	0.427	0.318 U	0.135 U	0.190 U	0.635	0.145 U	0.335	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																					
U - Not detected at the associated																					
J - Estimated concentration.																					
UJ - Not detected; associated repr																					

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27
Sample ID:		MW-27	MW-27	MW-27	DP-02	MW-27-GW-0519	MW-27-GW-0919	DP02-GW-0919	MW27-GW-0120	MW-27-GW-0320	MW027-GW-0920	MW027-GW-1220	MW027-GW-0221	MW027-GW-0521	MW27-GW-0721	MW027-GW-1021	MW27-GW-0322	MW27-GW-0622	MW27-GW-0922
Sample Date:		4/18/2018	8/28/2018	3/7/2019	3/7/2019 (Duplicate)	5/16/2019	9/17/2019	9/17/2019 (Duplicate)	1/8/2020	3/11/2020	9/22/2020	12/9/2020	2/3/2021	5/11/2021	7/14/2021	10/14/2021	3/8/2022	6/9/2022	9/14/2022
Parameters	Units																		
Appendix III																			
Boron	mg/L	0.262	0.211	0.268	0.297	0.313	0.200	0.212	--	0.228	0.302	0.305	0.272	0.271	0.274	0.243	0.251	0.203	0.226
Calcium	mg/L	170	140	180	194	244	160	160	--	142	178	212	170	174	184	162	166	118	162
Chloride	mg/L	19.9 J-	14.5	20.7	21.6	41.2	17.3	16.2	--	16.4	18.9	28.5	22.9	16.9	13.1 J-	17.7	15.2	11.8	12.5
Fluoride	mg/L	0.500 U	0.500 U	0.500 U	0.532	0.500 U	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.5 J	7.8 J	6.9 J	6.9 J	6.9 J	7.0 J	7.1 J	--	7.0 J	7.0 J	7.1 J	7.1 J	7.0 J	7.1 J	7.1 J	7.3 J	7.2 J	7.2 J
Sulfate	mg/L	133	78.0	131	134	524	170	157	129	137	199	311	259	191	100	175	144	101	111
Total dissolved solids (TDS)	mg/L	778	698	790	810	1730	886	800	--	818	496	1160	1030	856	662	760	698	622	712
Appendix IV																			
Antimony	mg/L	0.00100 U	--	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Arsenic	mg/L	0.0605	0.0726	0.0644	0.0700	--	0.00208	0.00265	0.00749	0.00444	0.00527	0.00773	0.00796	0.0146	0.0101	0.0202	0.0310	0.0414	0.0359
Barium	mg/L	0.139	0.185	0.125	0.135	--	0.0854	0.0880	0.102	0.0905	0.0847	0.109	0.0876	0.106	0.109	0.103	0.107	0.123	0.124
Beryllium	mg/L	0.00100 U	--	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000500 U	--	0.000500 U	0.000500 U	--	0.000100 U	0.000146	0.000100 U	0.000100 U	0.000114	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.000669	0.000685	0.000680	0.000710	--	0.00107	0.00114	0.00149	0.00144	0.00154	0.00142	0.00102	0.000977	0.000940	0.000759	0.000666	0.000699	0.000650
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.149	0.113	0.163	0.173	--	0.136	0.134	0.124	0.141	0.196	0.243	0.187	0.169	0.187	0.115	0.159	0.118	0.141
Mercury	mg/L	0.000200 U	--	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	--	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.403	0.473	0.443	0.641	--	1.30	0.645	--	0.607	1.02	0.728	0.675	0.573	0.898	0.803	1.14	0.361 U	1.15
Other																			
Aluminum	mg/L	--	--	--	--	--	--	--	0.0500 U	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	1.51	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.312	0.385	0.241	0.167	--	0.153	0.238	--	0.147 U	0.511	0.149 U	0.217	0.0884 U	0.130	0.260 U	0.301	0.220	0.268
Radium-228	pCi/L	0.0912 U	0.0874 U	0.201 U	0.474	--	1.15	0.408	--	0.461 U	0.508 U	0.579	0.458 U	0.485	0.768	0.543 U	0.834	0.140 U	0.880
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
U - Not detected at the associated
J - Estimated concentration.
UJ - Not detected; associated repr

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29
Sample ID:		MW27-GW-0323	MW27-GW-0923	MW27-GW-0324	MW27-GW-0924	DP01-GW-0924	MW27-GW-0325	MW27-GW-0925	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29
Sample Date:		3/29/2023	9/12/2023	3/18/2024	9/10/2024	9/10/2024 (Duplicate)	3/12/2025	9/16/2025	12/10/2015	3/2/2016	6/8/2016	9/21/2016	12/21/2016	2/21/2017	4/26/2017	7/6/2017	9/13/2017	4/18/2018	8/27/2018	3/7/2019	5/14/2019	5/14/2019 (Duplicate)
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.246	0.222 J+	0.254	0.179	0.182	0.228	0.274	0.150 UJ	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.205	0.206	0.226
Calcium	mg/L	158	169	156	167	170	157	160	193	208	184	194	214	230	225	193	194	207	190	209	203	215
Chloride	mg/L	11.9	13.9	17.3	24.9	24.8	24.5	15.5	6.69	6.66	10.0	5.00 U	21.0	5.02	5.84	8.50	6.40	7.70 J-	5.07	6.70	7.28	7.11
Fluoride	mg/L	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U	0.500 U	0.661	0.500 U	6.44	0.500 U	0.901	0.768	0.500 U	0.500 U	0.500 U	0.500 U	0.581	0.694
pH, lab	s.u.	7.1 J	7.1 J	7.2 J	7.0 J	7.0 J	7.8 J	7.1 J	7.30 J	6.99 J	6.87 J	7.0 J	7.0 J	7.0 J	7.0 J	6.9 J	7.0 J	7.0 J	7.9 J	7.0 J	6.9 J	7.0 J
Sulfate	mg/L	96.4	97.1	105	78.4	78.3	81.1	53.7	115	121	105	159	185	179	186	153	141	173	130	140	181	181
Total dissolved solids (TDS)	mg/L	634	716	704	682	638	692	658	828	814	842	884	1190	964	1160	992	892	832	830	806	940	1010
Appendix IV																						
Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	--
Arsenic	mg/L	0.0513	0.0616 J+	0.0591	0.0663	0.0675	0.0613	0.0759	0.00229	0.00256	0.0432	0.00472	0.00470	0.00504	0.00931	0.00779	--	0.0113	0.0127	0.00200 U	--	--
Barium	mg/L	0.130	0.164 J+	0.156	0.176	0.181	0.158	0.183	0.258	0.239	0.216	0.244	0.266	0.254	0.261	0.213	--	0.246	0.253	0.250	--	--
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	--
Cadmium	mg/L	0.000200 U	0.000207 J+	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	--	0.000500 U	--	--
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	0.0681	0.00500 U	0.00500 U	--	--
Cobalt	mg/L	0.000561	0.000978 J+	0.000537	0.000849	0.000867	0.000635	0.000796	0.00189	0.00214	0.00496	0.00165	0.00157	0.00531	0.00747	0.00332	--	0.00670	0.00422	0.00121	--	--
Lead	mg/L	0.000500 U	0.000513 J+	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	--	--
Lithium	mg/L	0.129	0.113 J+	0.126	0.105	0.105	0.110	0.106	0.110	0.0926	0.0898	0.0982	0.112	0.108	0.101	0.110	--	0.110	0.103	0.105	--	--
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	--	0.000200 U	--	--
Molybdenum	mg/L	0.00200 U	0.00284 J+	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00254	0.00200 U	0.00200 U	0.00200 U	0.00255	0.00200 U	--	0.0357	0.00200 U	0.00200 U	--	--
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00593	0.00500 U	0.00500 U	0.00500 U	0.0106	0.00500 U	0.00500 U	0.0237	--	0.00500 U	0.0321	0.0329	0.00500 U	--
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	--	--
Radium-226 & 228	pCi/L	0.0863 U	1.46	0.650	0.647 U	0.806 J	0.257	1.25	0.0395 U	1.06	0.606	0.454	0.786	0.667	0.405	0.853	--	1.00	0.835	0.775	--	--
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.0601 U	0.265	0.231	0.242 J	0.328 J	0.217	0.217	0.218	0.300	0.300	0.280	0.249 U	0.327	0.175	0.270	--	0.326	0.360	0.200	--	--
Radium-228	pCi/L	0.0262 U	1.20	0.419 U	0.647 U	0.573 U	0.0400	1.03	-0.179 U	0.757	0.306 U	0.174 U	0.537 U	0.341 U	0.231 U	0.582	--	0.679	0.475 U	0.575	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29
Sample ID:		MW29-GW-0919	MW29-GW-0120	MW29-GW-0320	DP-03-GW-0320	MW29-GW-0920	MW29-GW-1220	MW29R-GW-0721	MW029R-GW-1021	MW29R-GW-0322	MW29R-GW-0622	MW29R-GW-0922	MW29R-GW-0323	MW29R-GW-0923	MW29R-GW-0324	MW29R-GW-0924	MW29R-GW-0325	DP01-GW-0325
Sample Date:		9/17/2019	1/8/2020	3/11/2020	3/11/2020 (Duplicate)	9/22/2020	12/9/2020	7/13/2021	10/14/2021	3/8/2022	6/9/2022	9/14/2022	3/29/2023	9/12/2023	3/18/2024	9/10/2024	3/12/2025	3/12/2025 (Duplicate)
Parameters	Units																	
Appendix III																		
Boron	mg/L	0.200 U	--	0.200 U	0.200 U	0.197	0.183	0.230	0.194	0.199	0.144	0.143	0.158	0.184 J+	0.166	0.114	0.158	0.156
Calcium	mg/L	190	--	189	174	148	167	209	207	201	136	177	200	222	166	163	187	190
Chloride	mg/L	7.12	--	9.20	9.09	10.1	10.6	9.75 J-	9.81	12.1	12.0	10.6	11.9	10.8	10.3	11.3	12.0	9.49
Fluoride	mg/L	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
pH, lab	s.u.	7.0 J	--	7.0 J	7.0 J	7.0 J	7.2 J	7.0 J	7.1 J	7.2 J	7.1 J	7.1 J	7.1 J	7.0 J	7.2 J	7.0 J	7.7 J	7.7 J
Sulfate	mg/L	136	111	133	133	67.0	69.8	191	172	185	82.3	66.4	121	205	109	60.4	140	136
Total dissolved solids (TDS)	mg/L	740	--	818	806	594	676	856	826	808	704	670	724	906	698	606	774	768
Appendix IV																		
Antimony	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Arsenic	mg/L	0.00283	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00762	0.0206	0.0273	0.0314	0.0320	0.0240	0.0258	0.0233 J+	0.0311	0.0277	0.0240	0.0241
Barium	mg/L	0.224	0.185	0.241	0.221	0.195	0.226	0.289	0.271	0.268	0.255	0.226	0.261	0.248 J+	0.228	0.206	0.213	0.222
Beryllium	mg/L	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Chromium	mg/L	0.00500 U	--	0.00500 U	0.0102	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.00404	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.00269	0.00694	0.00442	0.00354	0.00254	0.00251	0.00265	0.00270 J+	0.00279	0.00217	0.00280	0.00285
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.0961	0.0818	0.105	0.0986	0.0934	0.112	0.131	0.0865	0.126	0.101	0.103	0.109	0.118 J+	0.103	0.0908	0.0957	0.0968
Mercury	mg/L	0.000200 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00335	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00232	0.00205 J+	0.00200	0.00200 U	0.00200 U	0.00200 U
Selenium	mg/L	0.00500 U	0.129	0.0423	0.0381	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.633	--	0.699	0.260 U	1.67	0.579	1.79	0.865	1.18	1.33	0.937	0.842	1.15	1.19	1.00 J	0.696	0.568
Other																		
Aluminum	mg/L	--	0.0500 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	0.209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	0.215	--	0.223 U	0.0669 UJ	0.829	0.311 U	0.640	0.464	0.383	0.286	0.399	0.269	0.312	0.374	0.318 J	0.178	0.164
Radium-228	pCi/L	0.418 U	--	0.476 U	0.193 U	0.842	0.269 U	1.14	0.401 U	0.798	1.04	0.537 U	0.573 U	0.841	0.816	0.541 U	0.519	0.403
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																		
U - Not detected at the associated																		
J - Estimated concentration.																		
UJ - Not detected; associated repr																		

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-29	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57
Sample ID:		MW29R-GW-0925	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57-GW-0519	MW-57	MW-57-GW-0320	MW57-GW-0520	MW057-GW-0920	MW57R-GW-0721	MW57R-GW-0322
Sample Date:		9/16/2025	12/10/2015	3/3/2016	6/8/2016	9/21/2016	12/21/2016	2/22/2017	4/26/2017	7/6/2017	9/13/2017	1/30/2018	4/18/2018	8/28/2018	3/12/2019	5/16/2019	9/18/2019	3/9/2020	5/28/2020	9/23/2020	7/15/2021	3/8/2022
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.173	0.335 J	0.361	0.339	0.348	0.355	0.350	0.348	0.367	0.325	--	0.336	0.349	0.358	--	0.403	0.393	0.413	0.364	0.343	0.339
Calcium	mg/L	203	324	386	381	351	372	405	363	339	344	328	321	327	355	325	384	312	309	314	253	253
Chloride	mg/L	8.73	6.24	7.19	7.48	5.12	6.61	5.14	6.80	5.97	5.55	--	10.9 J-	6.10	11.0	8.65	6.16	5.71	--	5.22	23.1	20.6
Fluoride	mg/L	1.00 U	0.500 U	0.507	0.500 U	0.500 U	0.500 U	0.500 U	1.00	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U	--	0.500 U	0.500 U	--	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.0 J	7.08 J	6.93 J	6.72 J	7.0 J	6.9 J	7.0 J	6.9 J	6.8 J	6.8 J	--	6.9 J	6.8 J	6.9 J	--	6.9 J	6.8 J	--	7.1 J	7.1 J	7.1 J
Sulfate	mg/L	133	735	1090	863	942	926	831	737	901	817	731	713	841	713	750	901	728	771	737	382	424
Total dissolved solids (TDS)	mg/L	850	2060	2070	2150	2190	2110	2720	2190	2450	2070	2300	1820	2050	1930	2070	2060	1850	1850	1890	1160	1300
Appendix IV																						
Antimony	mg/L	0.00200 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	
Arsenic	mg/L	0.0281	0.0213	0.0380	0.0321	0.0261	0.0410	0.0429	0.0600	0.0338	--	--	--	--	--	--	--	--	--	--	--	
Barium	mg/L	0.240	0.0576	0.0950	0.0705	0.0668	0.0857	0.101	0.105	0.0647	--	--	--	--	--	--	--	--	--	--	--	
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	
Cadmium	mg/L	0.000200 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	
Cobalt	mg/L	0.00250	0.00303	0.00392	0.00359	0.00331	0.00327	0.00416	0.00367	0.00328	--	--	--	--	--	--	--	--	--	--	--	
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	
Lithium	mg/L	0.0941	0.234	0.231	0.217	0.243	0.235	0.253	0.229	0.255	--	--	--	--	--	--	--	--	--	--	--	
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--	--	--	--	
Molybdenum	mg/L	0.00200 U	0.00377	0.00444	0.00300	0.00351	0.00350	0.00404	0.00413	0.00239	--	--	--	--	--	--	--	--	--	--	--	
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	
Radium-226 & 228	pCi/L	1.29	0.0730 U	0.401	0.363	0.215 U	1.10	0.650	0.447	0.281 U	--	--	--	--	--	--	--	--	--	--	--	
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Radium-226	pCi/L	0.260	0.0380 U	0.178 U	0.0856	0.137 U	0.503	0.204	0.137	0.154	--	--	--	--	--	--	--	--	--	--	--	
Radium-228	pCi/L	1.03	0.0350 U	0.223 U	0.277 U	0.0786 U	0.592	0.446 U	0.311 U	0.127 U	--	--	--	--	--	--	--	--	--	--	--	
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-57	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S
Sample ID:		MW57R-GW-0922	MW57R-GW-0323	MW57R-GW-0923	MW57R-GW-0324	MW57R-GW-0624	MW57R-GW-0924	MW57R-GW-0325	MW57R-GW-0525	DP01-GW-0525	MW57R-GW-0925	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S
Sample Date:		9/15/2022	4/3/2023	9/13/2023	3/19/2024	6/5/2024	9/17/2024	3/17/2025	5/20/2025	5/20/2025 (Duplicate)	9/19/2025	12/11/2015	3/3/2016	6/8/2016	9/21/2016	12/20/2016	2/22/2017	4/26/2017	7/6/2017	9/13/2017	4/18/2018
Parameters	Units																				
Appendix III																					
Boron	mg/L	0.384	0.327	0.341	0.340	--	0.348	0.362	--	--	0.309	0.192 J	0.204	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Calcium	mg/L	234	253	220	237	--	258	205	--	--	224	141	141	148	133	140	150	143	138	133	135
Chloride	mg/L	22.0	24.0	24.0	19.3	--	22.9	17.5	--	--	19.2	6.53	7.83	8.21	5.93	15.1	8.12	7.10	7.77	6.13	6.13 J-
Fluoride	mg/L	0.500 U	0.500 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	--	1.00 U	0.500 U	0.781	0.500 U	0.500 U	3.84	0.759	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.0 J	7.3 J	7.3 J	7.6 J	--	7.1 J	7.8 J	7.1 J	7.1 J	7.6 J	7.20 J	7.12 J	6.94 J	7.2 J	7.2 J	7.2 J	7.0 J	7.0 J	7.0 J	7.1 J
Sulfate	mg/L	299	320	294	340	--	343	274	--	--	323	121	110	136	107	132	121	116	115	109	111
Total dissolved solids (TDS)	mg/L	1220	1180	800	1280	1270	1200	1080	--	--	1180	744	676	730	708	742	752	758	786	786	626
Appendix IV																					
Antimony	mg/L	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--
Arsenic	mg/L	--	--	--	--	--	--	--	--	--	--	0.0845	0.0909	0.0759	0.0785	0.0942	0.0879	0.0870	0.0804	--	--
Barium	mg/L	--	--	--	--	--	--	--	--	--	--	0.400	0.356	0.344	0.330	0.349	0.387	0.370	0.345	--	--
Beryllium	mg/L	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--
Cadmium	mg/L	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--
Chromium	mg/L	--	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--
Cobalt	mg/L	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--
Lead	mg/L	--	--	--	--	--	--	--	--	--	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--
Lithium	mg/L	--	--	--	--	--	--	--	--	--	--	0.0992	0.0943	0.0873	0.0947	0.0933	0.0897	0.0885	0.101	--	--
Mercury	mg/L	--	--	--	--	--	--	--	--	--	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--
Molybdenum	mg/L	--	--	--	--	--	--	--	--	--	--	0.00279	0.00308	0.00282	0.00269	0.00250	0.00286	0.00302	0.00245	--	--
Selenium	mg/L	--	--	--	--	--	--	--	--	--	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--
Thallium	mg/L	--	--	--	--	--	--	--	--	--	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--
Radium-226 & 228	pCi/L	--	--	--	--	--	--	--	--	--	--	0.603	0.636	0.828	0.915	1.36	0.861	1.14	1.34	--	--
Other																					
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--	--	0.227	0.427	0.461	0.310	0.399 U	0.315	0.285	0.332	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--	--	0.376 U	0.209 U	0.367	0.605	0.964	0.545	0.854	1.01	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																					
U - Not detected at the associated																					
J - Estimated concentration.																					
UJ - Not detected; associated repr																					

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S	MW-59S
Sample ID:		MW-59S	MW-59S	MW-59S	MW-59S-GW-0320	MW059S-GW-0920	MW-059S-GW-0221	MW59S-GW-0721	MW59S-GW-0322	MW59S-GW-0622	MW59S-GW-0922	MW59S-GW-0323	MW59S-GW-0923	MW59S-GW-0324	MW59S-GW-0624	MW59S-GW-0924	MW59S-GW-0325	MW59S-GW-0525
Sample Date:		8/28/2018	3/12/2019	9/18/2019	3/10/2020	9/23/2020	2/3/2021	7/15/2021	3/8/2022	6/9/2022	9/15/2022	4/3/2023	9/13/2023	3/20/2024	6/5/2024	9/17/2024	3/17/2025	5/19/2025
Parameters	Units																	
Appendix III																		
Boron	mg/L	0.200 U	0.200 U	0.200 U	0.200 U	0.151	0.251	0.194	0.212	0.201	0.215	0.229	0.239	0.219	--	0.181	0.235	--
Calcium	mg/L	130	144	127	137	133	199	151	184	148	141	209	135	171	132	143	157	143
Chloride	mg/L	6.14	6.21	7.80	5.73	5.00 U	5.79	5.42	5.04	--	5.00 U	5.00 U	5.00 U	5.26	--	7.64	5.96	--
Fluoride	mg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.549	0.500 U	0.500 U	--	0.500 U	0.500 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--
pH, lab	s.u.	7.1 J	7.1 J	7.3 J	7.0 J	7.2 J	7.5 J	7.1 J	7.1 J	--	7.0 J	7.3 J	7.3 J	7.6 J	7.2 J	7.1 J	7.7 J	7.2 J
Sulfate	mg/L	108	104	118	102	112	228	120	170	128	102	142	106	110	--	114	124	--
Total dissolved solids (TDS)	mg/L	650	688	595	648	678	1000	656	830	--	648	850	626	722	--	564	748	--
Appendix IV																		
Antimony	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lithium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other																		
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																		
U - Not detected at the associated																		
J - Estimated concentration.																		
UJ - Not detected; associated repr																		

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-59S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S
Sample ID:		MW59S-GW-0925	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S	MW-60S-GW-0320	MW060S-GW-0920	MW-060S-GW-0221	MW60S-GW-0721	MW60S-GW-0322	MW60S-GW-0922
Sample Date:		9/19/2025	12/11/2015	3/3/2016	6/8/2016	9/21/2016	12/20/2016	2/22/2017	4/26/2017	7/6/2017	9/13/2017	1/30/2018	4/18/2018	8/28/2018	3/12/2019	9/18/2019	3/9/2020	9/23/2020	2/4/2021	7/15/2021	3/8/2022	9/15/2022
Parameters	Units																					
Appendix III																						
Boron	mg/L	0.195	0.153 J	0.200 U	0.330	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.127	0.155	0.172	0.169	0.185
Calcium	mg/L	147	118	114	130	116	131	125	117	108	119	--	122	109	123	103	113	117	120	130	135	121
Chloride	mg/L	5.43	7.83	9.08	11.4	10.1	8.81	10.3	14.7	14.0	9.97	--	10.9 J-	10.6	9.63	12.7	9.00	5.25	5.35	6.88	6.01	7.00
Fluoride	mg/L	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.732	0.500 U	1.21	0.627	0.500 U	--	0.500 U	0.500 U	0.627	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.6 J	7.26 J	7.22 J	7.02 J	7.2 J	7.1 J	7.1 J	7.1 J	7.1 J	7.1 J	--	7.2 J	7.2 J	7.2 J	7.2 J	7.1 J	7.2 J	7.6 J	7.2 J	7.2 J	7.2 J
Sulfate	mg/L	117	138	129	169	136	157	154	155	151	154	--	142	144	143	157	140	152	116	131	138	117
Total dissolved solids (TDS)	mg/L	718	660	590	688	642	670	672	650	676	804	598	572	632	622	550	594	592	584	560	582	602
Appendix IV																						
Antimony	mg/L	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/L	--	0.0251	0.0269	0.0254	0.0275	0.0280	0.0312	0.0282	0.0259	--	--	--	--	--	--	--	--	--	--	--	--
Barium	mg/L	--	0.152	0.119	0.123	0.118	0.124	0.135	0.126	0.112	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/L	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/L	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/L	--	0.00183	0.00111	0.000523	0.00114	0.00128	0.00128	0.00103	0.00111	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/L	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	--	--	--	--	--	--	--	--	--	--	--
Lithium	mg/L	--	0.0784	0.0730	0.0704	0.0690	0.0749	0.0673	0.0603	0.0705	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/L	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum	mg/L	--	0.00407	0.00385	0.00376	0.00376	0.00376	0.00397	0.00397	0.00332	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	mg/L	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	mg/L	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226 & 228	pCi/L	--	0.237 U	0.601	0.802	0.562	0.735	0.585	0.329 U	0.650	--	--	--	--	--	--	--	--	--	--	--	--
Other																						
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	0.0952	0.308	0.275	0.309	0.327 U	0.184	0.127	0.205	--	--	--	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	0.142 U	0.293 U	0.526	0.253 U	0.408 U	0.400 U	0.203 U	0.446	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																						
U - Not detected at the associated																						
J - Estimated concentration.																						
UJ - Not detected; associated repr																						

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S
Sample ID:	MW-223S	MW-223S	MW-223S	MW-223S-GW-0519	MW-223S-GW-0919	MW223S-GW-0120	MW-223S-GW-0320	MW223S-GW-0920	DP01-GW-0920	MW223S-GW-1220	MW223S-GW-0221	DP01-GW-0221	MW223S-GW-0521	DP01-GW-0521	MW223S-GW-0721	DP01-GW-0721	MW223S-GW-1021	
Sample Date:	8/28/2018	12/6/2018	3/7/2019	5/15/2019	9/17/2019	1/9/2020	3/11/2020	9/22/2020	9/22/2020 (Duplicate)	12/9/2020	2/2/2021	2/2/2021 (Duplicate)	5/11/2021	5/11/2021 (Duplicate)	7/13/2021	7/13/2021 (Duplicate)	10/12/2021	
Parameters	Units																	
Appendix III																		
Boron	mg/L	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	0.200 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.112
Calcium	mg/L	107	90.5	112	83.7	95.8	--	104	104	105	127	106	105	120	116	119	112	126
Chloride	mg/L	6.38	5.00 U	5.06	5.93	5.00 U	--	5.94	5.12	5.00 U	7.15	6.03	6.27	5.00 U	5.00 U	6.40 J-	6.26 J-	5.24
Fluoride	mg/L	0.500 U	0.500 U	0.500 U	0.526	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.100 U	
pH, lab	s.u.	7.9 J	7.4 J	7.4 J	7.5 J	7.5 J	--	7.4 J	7.5 J	7.5 J	7.4 J	7.6 J	7.6 J	7.6 J	7.5 J	7.5 J	7.4 J	7.9 J
Sulfate	mg/L	19.0	5.00 U	29.4	17.1		39.1	28.2	32.9	32.9	44.9	34.8	36.1	35.7	36.1	43.3	43.1	113
Total dissolved solids (TDS)	mg/L	422	352	400	436	318	--	406	240	290	524	402	370	412	408	352	392	464
Appendix IV																		
Antimony	mg/L	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Arsenic	mg/L	0.00665	0.00225	0.00203	--	0.00225	0.00202	0.00200 U	0.00200 U	0.00200 U	0.00206	0.00219	0.00220	0.00302	0.00347	0.00403	0.00346	0.00516
Barium	mg/L	0.261	0.166	0.194	--	0.198	0.199	0.183	0.203	0.209	0.253	0.236	0.233	0.264	0.262	0.281	0.258	0.314
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000500 U	0.000500 U	0.000500 U	--	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000123	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000712	0.000764	0.00104	0.000914	0.00118
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.0430	0.0324	0.0463	--	0.0371	0.0336	0.0426	0.0418	0.0416	0.0500	0.0517	0.0492	0.0544	0.0545	0.0572	0.0584	0.0544
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00315	0.00200 U	0.00200 U	--	0.00236	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00316	0.00221	0.00238	0.00218	0.00272	0.00258	0.00226	0.00239
Selenium	mg/L	0.00500 U	0.0256	0.00500 U	--	0.00500 U	0.00882	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.407	0.246	0.335 U	--	-0.108 U	--	0.414 U	1.37	0.449 U	0.497	0.0912 U	-0.0527 U	0.618	0.808	0.658	0.270 U	0.698
Other																		
Aluminum	mg/L	--	--	--	--	--	0.0500 U	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	0.493	--	--	--	--	--	--	--	--	--	--	1.91
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.69
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.70
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.59
Radium-226	pCi/L	0.329	0.110	0.0903	--	0.114	--	0.138 UJ	0.802	0.439	0.243 U	0.162	0.149	0.157 U	0.300	0.190	0.130	0.326 U
Radium-228	pCi/L	0.0777 U	0.137	0.245 U	--	-0.222 U	--	0.276 U	0.573	0.00972 U	0.253 U	-0.0706 U	-0.202 U	0.461	0.507	0.467	0.140 U	0.371 U
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.100 U
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.76
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
U - Not detected at the associated
J - Estimated concentration.
UJ - Not detected; associated repr

Sample Location:		MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-223S	MW-231S	MW-231S	MW-231S
Sample ID:		DP01-GW-1021	MW223S-GW-0322	MW223S-GW-0622	MW223S-GW-0922	DP01-GW-0922	MW223S-GW-0323	DP01-GW-0323	MW223S-GW-0923	DP01-GW-0923	MW223S-GW-0324	DP01-GW-0324	MW223S-GW-0924	MW223S-GW-0325	MW223S-GW-0925	MW-231S	MW-231S	MW-231S
Sample Date:		10/12/2021 (Duplicate)	3/15/2022	6/9/2022	9/14/2022	9/14/2022 (Duplicate)	3/29/2023	3/29/2023 (Duplicate)	9/12/2023	9/12/2023 (Duplicate)	3/19/2024	3/18/2024 (Duplicate)	9/10/2024	3/13/2025	9/17/2025	10/18/2017	11/20/2017	12/21/2017
Parameters	Units																	
Appendix III																		
Boron	mg/L	0.121	0.103	0.100 U	0.100	0.106	0.140	0.137	0.149 J+	0.154 J+	0.135	0.129	0.172	0.142	0.180	0.200 U	0.200 U	0.200 U
Calcium	mg/L	129	117	114	138	135	186	188	126	122	161	160	167	130	200	213	212	192
Chloride	mg/L	5.25	5.00 U	5.58	4.02	4.08	1.00 UJ	6.06 J	4.37	5.00	5.64	5.43	39.8	15.2	22.8	15.7	11.8	14.6
Fluoride	mg/L	0.100 U	0.500 U	0.500 U	0.100 U	0.100 U	0.269	0.500 U	0.200 U	1.00 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	0.500 U	0.500 U	0.500 U
pH, lab	s.u.	7.4 J	7.4 J	7.5 J	7.4 J	7.5 J	7.4 J	7.4 J	7.5 J	7.4 J	7.3 J	7.3 J	7.5 J	7.6 J	7.0 J	7.1 J	6.9 J	7.1 J
Sulfate	mg/L	113	35.6	81.8	65.5	64.3	113	110	64.3	61.1	214	217	120	88.5	222	181	139	219
Total dissolved solids (TDS)	mg/L	470	366	514	460	476	600	606	474	456	702	698	594	510	778	864	1010	1020
Appendix IV																		
Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00100 U	0.00100 U	0.00100 U
Arsenic	mg/L	0.00698	0.00929	0.00969	0.0117	0.0116	0.0172	0.0167	0.0133 J+	0.0132 J+	0.0155	0.0164	0.0124	0.0116	0.0503	0.00442	0.00409	0.00200 U
Barium	mg/L	0.348	0.282	0.341	0.330	0.314	0.377	0.382	0.256 J+	0.244 J+	0.289	0.286	0.186	0.166	0.240	0.234	0.223	0.147
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000500 U	0.000500 U	0.000500 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.00128	0.000653	0.000969	0.000905	0.000885	0.00107	0.00103	0.000667 J+	0.000638 J+	0.000913	0.000901	0.000728	0.000767	0.00131	0.00341	0.00292	0.000991
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.0581	0.0504	0.0581	0.0572	0.0565	0.0684	0.0674	0.0517 J+	0.0504 J+	0.0585	0.0575	0.0610	0.0540	0.0692	0.0824	0.0758	0.0691
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 UJ
Molybdenum	mg/L	0.00240	0.00246	0.00241	0.00265	0.00259	0.00296	0.00288	0.00305 J+	0.00291 J+	0.00228	0.00238	0.00237	0.00205	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00914	0.00789	0.0311
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.785	0.438	0.832	0.858	1.04	0.468 U	0.877	1.15	0.795	0.335 U	0.453 U	0.919 J	0.577	1.12	0.931	0.663	0.568
Other																		
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	2.57	--	--	4.15	4.04	5.90	--	2.96	--	6.17	--	3.58	5.79	17.3	--	--	--
Iron (dissolved)	mg/L	1.67	--	--	3.52	3.54	5.05	--	2.72	--	5.76	--	2.85	4.20	7.78	--	--	--
Manganese	mg/L	3.00	--	--	3.30	3.23	4.44	--	2.59	--	4.14	--	2.92	2.59	3.24	--	--	--
Manganese (dissolved)	mg/L	2.58	--	--	3.02	2.99	4.30	--	2.75	--	4.39	--	2.73	2.95	3.09	--	--	--
Radium-226	pCi/L	0.606	0.178	0.228	0.0979 U	0.333	0.332	0.420	0.293	0.377	-0.0135 U	0.125 U	0.162 U	0.159	0.205	0.476	0.319	0.187
Radium-228	pCi/L	0.179 U	0.261 U	0.604	0.760	0.704	0.137 U	0.458 U	0.855	0.418 U	0.349 U	0.328 U	0.593 U	0.418	0.914	0.455	0.343	0.382 U
Nitrate (as N)	mg/L	0.100 U	--	--	0.100 U	0.100 U	0.100 U	--	0.200 U	--	0.200 UJ	--	0.699	0.200 U	0.200 U	--	--	--
TOC average duplicates	mg/L	2.82	--	--	--	--	2.59	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	2.32	--	3.00	--	2.89	2.81	3.48	--	--	--
Notes:																		
U - Not detected at the associated																		
J - Estimated concentration.																		
UJ - Not detected; associated repr																		

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	
Sample ID:	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	
Sample Date:	4/17/2018	6/6/2018	8/29/2018	12/6/2018	3/6/2019	5/15/2019	9/17/2019	1/9/2020	3/11/2020	9/22/2020	12/9/2020	2/2/2021	4/22/2021	5/11/2021	7/13/2021	10/12/2021	3/9/2022	
Parameters	Units																	
Appendix III																		
Boron	mg/L	0.200 U	0.200 U	0.200 U	0.200 U	0.256	0.200 U	0.200 U	--	0.254	0.222	0.196	0.337	0.263	0.291	0.358	0.415	0.231
Calcium	mg/L	195	225	200	190	202	176	163	--	209	196	238	216	216	234	215	191	
Chloride	mg/L	7.48	7.68	11.4	15.4	10.3	7.82	6.15	--	11.4	10.6	12.8	9.58	5.08	6.12	9.27 J-	9.62	5.37
Fluoride	mg/L	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.540	0.500 U	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.100 U	0.500 U
pH, lab	s.u.	7.1 J	7.0 J	7.3 J	7.2 J	7.3 J	7.1 J	7.1 J	--	7.0 J	7.1 J	7.1 J	7.2 J	7.2 J	7.2 J	7.2 J	7.4 J	7.4 J
Sulfate	mg/L	149	131	125	210	189	131	91.6	187	269	284	299	331	241	287	485	322	127
Total dissolved solids (TDS)	mg/L	734	734	712	790	794	827	650	--	972	824	1000	986	876	948	1200	920	706
Appendix IV																		
Antimony	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U
Arsenic	mg/L	0.00674	0.00326	0.00269	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00850
Barium	mg/L	0.230	0.188	0.124	0.0902	0.137	--	0.187	0.122	0.214	0.0969	0.116	0.0903	0.137	0.120	0.0508	0.0875	0.125
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Cadmium	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000139	0.000119	0.000100 U	0.000100 U	0.000100 U	0.000100 U	0.000100 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	--	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U
Cobalt	mg/L	0.00399	0.00277	0.00141	0.000500 U	0.00239	--	0.00226	0.000500 U	0.00199	0.00225	0.000500 U	0.00188	0.00244	0.00188	0.000539	0.00216	0.00351
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U
Lithium	mg/L	0.0806	0.0857	0.0698	0.0547	0.0958	--	0.0822	0.0797	0.0960	0.0776	0.0929	0.0952	0.106	0.100	0.0994	0.102	0.109
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	--	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00201	0.00200 U	0.00200 U	0.00200 U	0.00242
Selenium	mg/L	0.00500 U	0.00530	0.00734	0.0443	0.00827	--	0.00500 U	0.0140	0.0126	0.0174	0.0144	0.0165	0.00500 U	0.00500 U	0.00984	0.00624	0.00500 U
Thallium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	--	0.00100 U	0.00100 U	0.00100 U	0.00122	0.00114	0.00100 U	0.00100 U	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.737	0.629	0.483	0.674	0.567	--	0.727	--	1.02	0.973	0.994	0.349 U	0.377 U	0.429 U	0.291 U	0.582	0.925
Other																		
Aluminum	mg/L	--	--	--	--	--	--	--	0.0500 U	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	--	--	--	--	--	--	0.100 U	--	--	--	--	--	--	--	0.699	--
Iron (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.745	--
Manganese	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.25	--
Manganese (dissolved)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.29	--
Radium-226	pCi/L	0.233	0.134 U	0.387	0.182	0.145	--	0.320	--	0.346 J-	0.292	0.366	0.115	0.174	0.136 U	0.130	0.202 U	0.351
Radium-228	pCi/L	0.504	0.495	0.0965 U	0.492	0.422 U	--	0.407	--	0.677	0.681	0.628	0.234 U	0.204 U	0.293 U	0.161 U	0.380 U	0.574
Nitrate (as N)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.37	--
TOC average duplicates	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.56	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Notes:																		
U - Not detected at the associated																		
J - Estimated concentration.																		
UJ - Not detected; associated report																		

Groundwater Analytical Results Summary
MidAmerican Energy Company
Neal North CCR Monofill
Sergeant Bluff, Iowa

Sample Location:		MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S	MW-231S
Sample ID:		MW231SR-GW-0622	MW231SR-GW-0922	MW231SR-GW-0323	MW231SR-GW-0923	MW231SR-GW-0124	MW231SR-GW-0224	MW231SR-GW-0324	MW231SR-GW-GW-0924	MW231SR-GW-0325	MW231SR-GW-0525	MW231SR-GW-0925	MW-231S
Sample Date:		6/8/2022	9/14/2022	3/28/2023	9/13/2023	1/23/2024	2/20/2024	3/19/2024	9/10/2024	3/13/2025	5/20/2025	9/17/2025	DP01-GW-0925
													(Duplicate)
Parameters	Units												
Appendix III													
Boron	mg/L	0.297	0.312	0.500	0.253	0.208	0.220 J	0.227	0.400	0.200	--	0.221	0.231
Calcium	mg/L	178	200	204	172	169	169	216	259	190	--	171	177
Chloride	mg/L	12.8	5.69	9.32	1.00 U	7.78	8.37	10.2	116	9.30	--	16.3	14.2
Fluoride	mg/L	0.500 U	0.100 U	0.163	0.200 U	1.00 U	1.00 U	0.200 U	0.200 U	0.200 U	--	0.200 U	1.00 U
pH, lab	s.u.	7.2 J	7.1 J	7.2 J	7.1 J	7.1 J	7.2 J	7.1 J	7.1 J	7.8 J	7.2 J	7.0 J	7.1 J
Sulfate	mg/L	305	110	176	158	121	154	287	177	177	--	110	103
Total dissolved solids (TDS)	mg/L	932	710	788	716	628	694	898	960	788	--	740	648
Appendix IV													
Antimony	mg/L	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U
Arsenic	mg/L	0.00440	0.0146	0.0121	0.00967	0.00460	0.00746	0.0112	0.00200 U	0.00229	--	0.00200 U	0.00200 U
Barium	mg/L	0.115	0.133	0.136	0.120	0.124	0.166	0.218	0.127	0.147	--	0.0865	0.0890
Beryllium	mg/L	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U
Cadmium	mg/L	0.000100 U	0.000100 U	0.000100 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U
Chromium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00500 U	--	0.00500 U	0.00500 U
Cobalt	mg/L	0.00275	0.00323	0.00330	0.00257	0.00251	0.00209	0.00347	0.00692	0.00253	--	0.00305	0.00311
Lead	mg/L	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	0.000500 U	--	0.000500 U	0.000500 U
Lithium	mg/L	0.0964	0.104	0.110	0.0851	0.0905	0.0805 J	0.103	0.0951	0.0856	--	0.0846	0.0869
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	0.000200 U	--	0.000200 U	0.000200 U
Molybdenum	mg/L	0.00200 U	0.00205	0.00347	0.00219	0.00222	0.00215	0.00248	0.00200 U	0.00200 U	--	0.00200 U	0.00200 U
Selenium	mg/L	0.00500 U	0.00500 U	0.00500 U	0.00500 U	0.00559	0.00500 U	0.00500 U	0.0117	0.00500 U	--	0.00580	0.00597
Thallium	mg/L	0.00100 U	0.00100 U	0.00147	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U	--	0.00100 U	0.00100 U
Radium-226 & 228	pCi/L	0.902	1.23	0.362 U	1.48	1.18	0.599	2.98	1.06 J	0.612	--	1.26	0.936
Other													
Aluminum	mg/L	--	--	--	--	--	--	--	--	--	--	--	--
Iron	mg/L	--	13.5	10.7	8.58	--	--	16.3	2.24	6.38	--	2.66	--
Iron (dissolved)	mg/L	--	7.43	10.8	2.26	--	--	13.0	2.43	5.53	--	2.75	--
Manganese	mg/L	--	1.50	1.24	1.28	--	--	1.88	1.10	1.07	--	0.889	--
Manganese (dissolved)	mg/L	--	1.29	1.31	0.717	--	--	1.76	1.10	1.21	--	0.912	--
Radium-226	pCi/L	0.166	0.348	0.281	0.138	0.316	0.327	0.345	0.336 J	0.258	--	0.318	0.197
Radium-228	pCi/L	0.736	0.885	0.0810 U	1.34	0.866	0.273 U	2.64	0.531 U	0.354	--	0.945	0.739
Nitrate (as N)	mg/L	--	0.112	0.100 U	0.445	--	--	0.200 UJ	1.03	0.200 U	--	0.225	--
TOC average duplicates	mg/L	--	--	2.44	--	--	--	--	--	--	--	--	--
Total organic carbon (TOC)	mg/L	--	--	--	3.03	--	--	3.14	2.57	3.73	--	3.62	--
Notes:													
U - Not detected at the associated													
J - Estimated concentration.													
UJ - Not detected; associated repr													



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→ The Power of Commitment